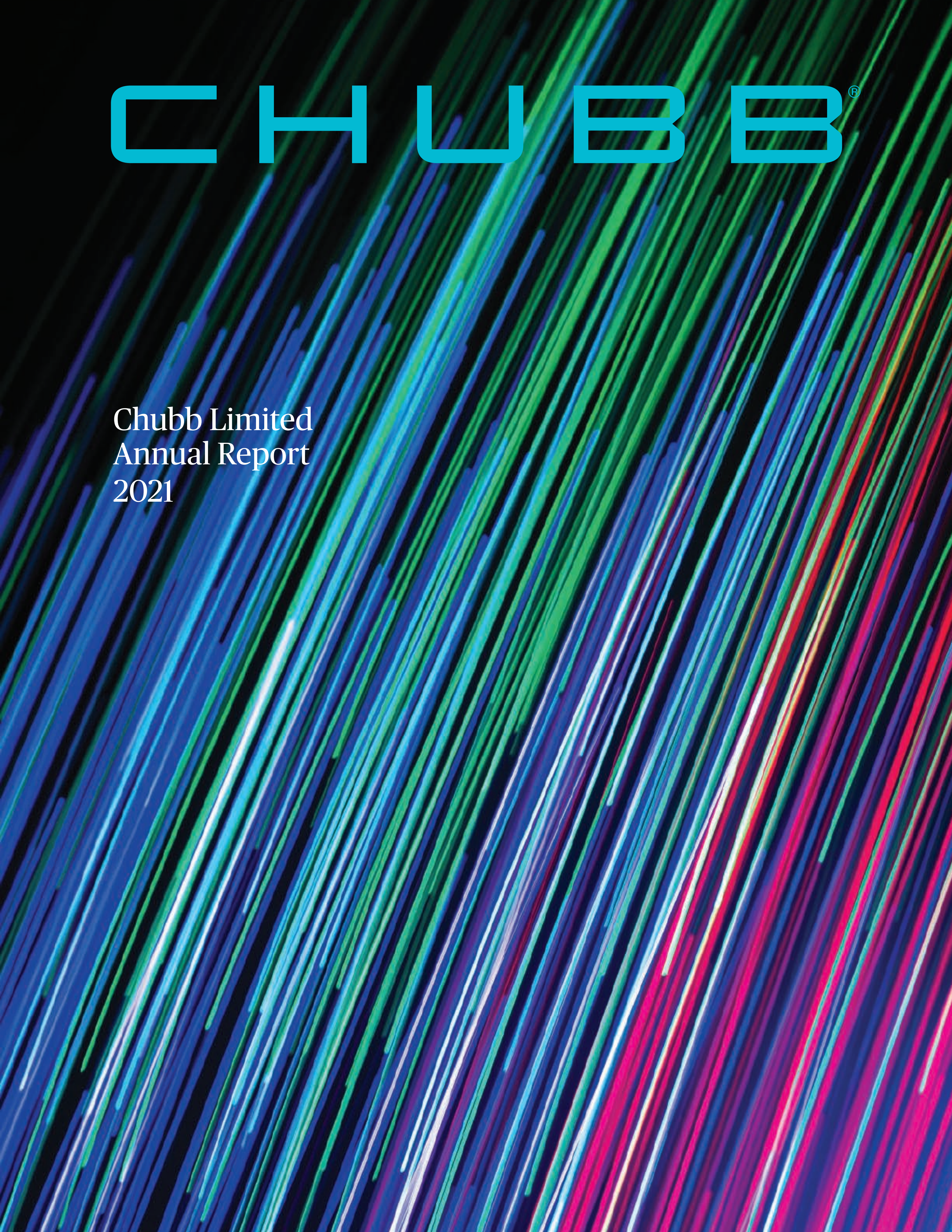


CHUBB®

Chubb Limited Annual Report 2021

Financial Summary

In millions of U.S. dollars except per share data and ratios	Year Ended Dec. 31, 2021	Year Ended Dec. 31, 2020	Percentage Change	Percentage Change Constant Dollars
Gross premiums written	$46,780	$41,261	13.4%	11.9%
Net premiums written	37,868	33,820	12.0%	10.5%
Net premiums earned	36,355	33,117	9.8%	8.3%
P&C combined ratio	89.1%	96.1%	NM	
P&C current accident year combined ratio excluding catastrophe losses	84.8%	86.7%	NM	
Net income	8,539	3,533	141.7%	
Core operating income	5,569	3,313	68.1%	
Diluted earnings per share - net income	19.27	7.79	147.4%	
Diluted earnings per share - core operating income	12.56	7.31	71.8%	
Total investments	122,323	118,669	3.1%	
Total assets	200,054	190,774	4.9%	
Shareholders' equity	59,714	59,441	0.5%	
Book value per share	139.99	131.88	6.1%	
Tangible book value per share	94.38	87.69	7.6%	
Return on equity	14.3%	6.2%	NM	
Core operating return on tangible equity	15.3%	9.8%	NM	
Core operating return on equity	9.9%	6.2%	NM	

This document contains non-GAAP financial measures. Refer to pages 46-48 for reconciliations to the most directly comparable GAAP measures.

NM–not meaningful

Evan G. Greenberg
Chairman and Chief Executive Officer
Chubb Group

2021 was a record year for Chubb and the best in our company's history. In my letter to you last year, I remarked that Chubb was entering a period of greater wealth creation, and in '21 it began to show, fueled by double-digit premium revenue growth and extraordinary underwriting results. As I look ahead, I am confident this pattern will continue, though I am naturally more cautious when considering the external environment with a war now raging in Europe involving a major nuclear power.

Outstanding shareholder wealth creation was the result of our excellent operating performance, including record net and core operating income on both a per share and dollar basis, record underwriting income, and record investment income. We produced the best organic premium growth since 2003 – when the company was a fraction of its size today – powered by our commercial lines businesses, which fully capitalized on property and casualty (P&C) underwriting conditions, and tempered by Covid-related headwinds to our consumer business. Overall, the growth was a standout performance that further demonstrated our exceptional capability in managing all stages of the commercial P&C cycle. We strengthened our balance sheet and focused on longer-term growth and competitive priorities, including strategic expansion, primarily in Asia, and our continued digitalization. The company has never been in better shape or better led at all levels of the organization.

The conditions in which we operated were anything but normal. The Covid-19 global pandemic continued, and persists as I write this, tearing through continents and countries for longer than anyone imagined. It disrupted economies and societies, leaving in its wake human suffering, social unrest, supply chain difficulties and inflation. Climate change and more frequent, more severe natural catastrophes challenged the insurance industry. Persistently low interest rates, a result of excessive and overly accommodative central bank policies, pressured investment returns. We dealt with what came our way and advanced with confidence and without complacency through the year and toward the future.

Chubb's excellent all-around results over the past year illustrate the company's clear-eyed vision and long-term view, vitality and ambition. We have kept a sharp focus on our strategic objectives: growing and diversifying our business, balanced by an iron-clad risk-taking discipline, while deepening our digital transformation. And we have done this on a global scale. In what, to say the least, have been unusual times for businesses and individuals everywhere, our company has distinguished itself. We have hardly skipped a beat in maintaining high levels of service and efficiency while generating strong returns to shareholders.

Our employees at all levels deserve immense credit. Our culture, skill, discipline, depth of management and organizational structure are clear strengths. My colleagues in the United States, Europe, Asia, Latin America and other parts of the world have truly risen to the occasion. In this year's letter, as I always do, I will describe Chubb's achievements and set out a vision of our future strategy and objectives. I will explain why we look to that future with clarity, conviction and optimism, particularly for the things we can manage, for the benefit of our shareholders, customers and employees.

While we are living through times that are, on the one hand, uncertain, risky and complicated, particularly now given war in Europe, there is also great opportunity, and we strive to take full advantage. As we manage risk at home and abroad, geopolitical and political strife, social divisions, economic uncertainty, climate change, and technological advances pose tough questions for the insurance industry and for liberal democracy and the free enterprise system that have sustained our way of life. An emerging multipolar world and, until the last two months, a lack of strong political leadership and unity among democracies, as well as an intensifying U.S.-China/Russia rivalry, are sources of concern.

As I write this, the world is watching the war unfold in Ukraine, a human tragedy of epic proportions and an event with profound geopolitical implications. The crisis is testing the leadership of liberal democracies, and it will change the world in ways we cannot yet predict. We abhor and reject on every level Russia's extraordinarily barbaric military actions in Ukraine, but we simply don't know the endgame. Before the Ukraine invasion, pressures were intensifying on the international trading system and on the liberal world order, which the U.S. has led since the middle of the last century. Will Ukraine be an enduring wake-up call while at the same time accelerate the move toward a multipolar world and a new Cold War between democracy and autocracy? As a global company, Chubb is in the thick of these trends but, frankly, we all are, as they deeply impact our country – including our peace and prosperity as citizens.

On the other hand, as I look forward, there is plenty of opportunity for growth now and over time in the commercial P&C market globally, constrained only by our underwriting discipline to earn a proper risk-adjusted return and management of risk. Consumer spending and travel should return to pre-Covid levels, which together with longer-term trends of an expanding middle class in many developed and developing nations will turn those headwinds into tailwinds for our large and diverse consumer businesses. The impact of inflation notwithstanding, as interest rates rise, our investment portfolio returns will rise, too. Our strategic investments, such as our acquisition of Cigna's accident and health (A&H) and life insurance business in the Asia-Pacific region and our increasing ownership in Huatai Insurance Group in China, will give us greater revenue and earning power. The digitalization of how we do business will provide a competitive advantage long into the future. All of this gives me confidence that we will not only benefit in the short term but are also well placed to take our company into the future.

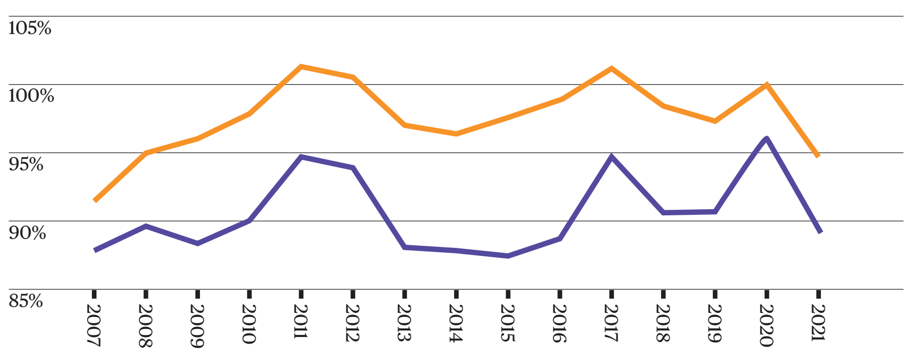
A year of outstanding, broad-based growth and profit

Chubb is the world's largest publicly traded P&C insurer by market capitalization. The company has increased its market cap by a factor of eight over the last 17 years, with a total shareholder return (share price appreciation plus dividends) of 637% over that period. We've grown our company's value by 12% on a compound annual basis versus the S&P's 9% over the same period. Almost 40% of our business is outside the U.S., and that proportion will increase during 2022 with the completion of our Cigna and, then, Huatai transactions. This forms part of what has been and continues to be our long-term objective for enhancing our presence in areas of the world with the greatest growth potential.

In the cyclical business of commercial P&C insurance, the test for Chubb is to flourish in favorable times while showing patience and continuing to execute our long-term growth plans when underwriting conditions are less favorable. Frankly, we have outperformed the industry regardless of conditions and have simply produced faster growth and better returns during the favorable phase of the cycle. The fact that Chubb can pride itself on a magnificent year in 2021 testifies not only to the past two to three years of profitable revenue growth and margin expansion during the current phase of the cycle. It also testifies to our virtues of patience and discipline in the latter half of the 2010s, when the cycle was in a softer phase and underwriting conditions were less favorable.

P&C Combined Ratio Versus Peers

The company's underwriting results have outperformed the average of its peers over the last 15 years.



Averages:	1 year	3 year	5 year	10 year	15 year
Peers[1]	94.6%	97.2%	98.3%	98.1%	97.5%
Chubb	89.1%	91.9%	92.2%	90.7%	90.5%

[1] Includes AIG, Allianz, AXA, CNA, HIG, QBE, TRV, Zurich.

Source: SNL and company disclosures

The benefits of our broad diversification, market-leading franchises, and command-and-control management of the commercial P&C cycle are there to see in our full-year 2021 results. First, we produced record core operating income of $5.57 billion, or $12.56 per share. This represents a per share increase of 72% compared with 2020, a year when the pandemic had a notable impact on our earnings, and an increase of 24% over 2019, the last pre-Covid year. We achieved record net income of $8.54 billion, or $19.27 per share, a per share increase of 147% over 2020.

Our total net after-tax weather-related catastrophe losses were $1.97 billion, or $4.44 per share, compared with $1.47 billion, or $3.24 per share, in 2020 and our five-year average of $1.58 billion, or $3.44 per share. Last year was the second costliest on record for the insurance industry in terms of natural catastrophes, with insured losses topping $120 billion globally. This underlines the importance of assessing catastrophe exposure thoughtfully and getting paid properly for the risk and volatility. Natural catastrophes are a growing risk that requires continuous management.

Second, we achieved record underwriting profit. Chubb's published P&C combined ratio was 89.1%, a result that is substantially better than the market average. We have maintained a record of excellence going back 15 years, a period in which our combined ratio has outperformed that of our peers by an average of seven percentage points. In fact, we have outperformed them over virtually any time period one selects. Our underlying current accident year combined ratio, which means the current year business, excluding catastrophe losses was 84.8% in 2021, nearly two points better than the prior year's 86.7% and a record result.

Third, we delivered exceptionally strong top-line premium revenue growth. P&C net premiums written globally grew in 2021 by 13% to $35.4 billion. This was driven by commercial lines growth of almost 18% as we capitalized on favorable underwriting conditions in much of the world, particularly North America, Europe and the U.K., and parts of Asia-Pacific. Again, our increase in premiums marked the strongest yearly organic growth we have registered in over 15 years.

Finally, record operating cash flow of $11.1 billion contributed to growth in our invested assets, which in turn supported record adjusted net investment income of $3.7 billion, up more than 3%. With an expected rise in interest rates, our investment income will increase over time. I'll have more to say about that later.

Commercial P&C and cycle management

The foundation of our success in 2021 was clearly the performance of our $26 billion global commercial P&C operations. Allow me to provide some perspective.

For the past six years or so leading up to mid-2019, we were not being paid well enough in many commercial lines portfolios because of unattractive world prices, terms and conditions. So, as a good underwriter does, we chose to forsake growth – painfully, I

"We have outperformed the industry regardless of conditions and have simply produced faster growth and better returns during the favorable phase of the cycle."

might add – for an underwriting profit. Quite a number of our competitors, on the other hand, in their pursuit of market share during the soft part of the commercial P&C cycle, inflicted damage on themselves (and, frankly, their customers, too) by underpricing risk and providing excessively broad coverage. As time passed and losses piled up, they had to put up more reserves to cover these losses. In turn, they became more risk averse and ultimately withdrew capacity. Chubb, on the other hand, remained consistent and disciplined. Our constant objective is to make sure that underwriting does not destroy book value, and we strive to earn an adequate risk-adjusted return, particularly over the entire cycle.

Commercial P&C market conditions eventually began to harden during 2019 and reached an apex in 2021. Needless to say, we were ready and waiting: We seized the opportunities arising from better pricing for risk. Chubb's reputation for consistency of underwriting and high-quality service, the diversity of our product range and geographic reach, the ambition of our leaders, the availability and presence of our people in spite of Covid, and our willingness and appetite to take risk while many were parked on the sidelines all came together, enabling us to turn favorable global underwriting conditions in many parts of the world to our advantage. Since the end of 2019, we have grown our commercial lines portfolio by nearly a third, or 13% on a compound annual basis. That growth added more than $5 billion of net premiums written to our top line. With insurance rates continuing to exceed loss costs in the vast majority of our major product areas – and they should given the difficult risk environment – our commercial lines growth will continue.

In consumer lines, our growth suffered from the continued impact of Covid on economic activity and consumer behavior, which varied by country. Our $9.7 billion global consumer P&C operations grew 2.3% for the year. Domestic and international travel was shut down for much of this period, reducing the demand for travel insurance. Businesses were disrupted, in full or in part, for months at a time. As a result, our employer-related business suffered. Consumer lines connected to consumer purchase activity were disrupted, too, as people bought fewer automobiles, cellphones, homes and other personal items.

Nevertheless, our consumer lines businesses are intrinsically strong and will recover as the pandemic eases, global economic growth gains pace, employers hire, consumer spending revives, and business and leisure travel picks up. We used the time during 2021 to add more distribution partnerships and products, so we have more growth capability when conditions improve. In the latter half of 2021, and continuing into 2022, we began to see evidence of an economic rebound. Premium growth in our large retail international A&H business accelerated in the third and fourth quarters, and by year-end was exceeding 5.5% in constant dollars – the best showing since the beginning of the pandemic.

Our balance sheet is exceptionally strong and conservatively managed. We finished the year with $76 billion in total capital, of which $60 billion is equity and $40 billion is tangible equity, that we have grown at a compound annual rate of 9% over the last 15 years. We had $124 billion in cash and invested assets at December 31. Net loss reserves, the most important part of our balance sheet, rose by $3.4 billion throughout 2021 and stand at $55.6 billion. Our paid-to-incurred ratio for the year, a measure that speaks to the strength of our loss reserves, was a very strong 81%. Chubb's core operating insurance companies enjoy credit ratings of AA from Standard & Poor's and A++ from AM Best. This financial strength gives our clients the confidence and assurance that we will be there to pay their claims while, along with our earning power, providing the wherewithal for further technological investments and global expansion.

Record growth and a favorable outlook globally

Chubb has approximately 31,000 employees and more than 500 offices in 54 countries and territories. We provide commercial insurance to businesses of all sizes and consumer insurance to individuals and families ranging from the high-net-worth to lower middle-income brackets. The depth of our local presence and the well-integrated design of our organization enable us to take advantage of opportunities arising from both cyclical and longer-term secular growth trends in the U.S., Europe, Asia, Latin America and other parts of the world.

In North America, the combination of favorable underwriting conditions and a robust recovery of the U.S. economy provided the positive backdrop against which our businesses thrived in 2021 and will continue to in 2022 and beyond. In the U.S., Chubb is the largest commercial P&C insurer, serving large corporations, middle-market companies and small businesses with traditional and hard-to-place specialty excess and surplus (E&S) lines products; the leading high-net-worth personal lines insurer; and the #1 crop insurer with a market share of about 20%. To put all of this in context, the U.S. represents about 30% of the global insurance market. Drawing on a combination of increased pricing, strong customer retention, and record new business, we have been able to grow our North American franchise by 27% since 2018.

Our $24 billion North America Insurance franchise is Chubb's largest division with substantial presence in the United States, Canada and Bermuda. P&C net premiums written in North America were up more than 12% during 2021, with commercial lines up nearly 16.5% and consumer lines flat. Since 2018, commercial P&C rates we charge in North America have increased by more than 40%, and it is sorely needed. Again, the loss environment is hardly standing still, and interest rates have remained at historic lows.

Starting with our business that serves America's largest domestic and multinational corporations: Our $6.4 billion Major Accounts division grew about 8.5% last year. Major Accounts provides a broad range of products and services, including traditional areas of P&C and A&H as well as specialties ranging from cyber to climate along with all forms of liability-related coverage, such as products liability, directors and officers (D&O), and errors and omissions (E&O). Although 98% of Fortune 1000 companies are already Chubb clients, there remains plenty of room for us to continue expanding our share. Almost half of the largest 5,000 U.S. companies buy three or fewer coverages from us.

Comparable to Major Accounts in size is our $6.6 billion Commercial Insurance division, which grew in 2021 by 15%, its strongest pace in almost 20 years. Middle-market and small companies represent the vast majority of the U.S. business economy, from publicly traded mid-size companies to single-location private firms. For our middle-market clients, we offer the broadest product range along with substantial expertise and risk engineering for more than two dozen specific industries, from healthcare and construction to life sciences and technology, all brought to bear through an extensive local branch and regional network.

Our North American excess and surplus lines business is called Westchester, and it distributes its extensive set of products, ranging from specialty property and liability offerings like product recall to coverage for railroads, through wholesale brokers. As more business found its way into the E&S marketplace during the hard market conditions, Westchester grabbed the opportunity and produced $2.8 billion in net premiums, growing more than 21%.

Chubb Bermuda specializes in very high limits of liability protection required by the largest U.S. corporations and, as such, is complementary to our Major Accounts division. In industries ranging from pharmaceuticals and energy to utilities, these clients are exposed to large class action litigation-related

"Since the end of 2019, we have grown our commercial lines portfolio by nearly a third. That growth added more than $5 billion of net premiums written to our top line."

claims and other legal exposures. So this division requires a very specific type of underwriting expertise. The original ACE company, Chubb Bermuda was founded in 1985 and has client relationships developed over almost 40 years. Chubb Bermuda grew by 18% in 2021.

Of special note is our Bermuda-based political risk subsidiary, Sovereign Risk, which celebrates its 25th anniversary in ’22. Sovereign is a leader in its highly specialized field and, together with its sister operation in London, makes Chubb one of the largest political risk and cross-border trade credit underwriters in the world.

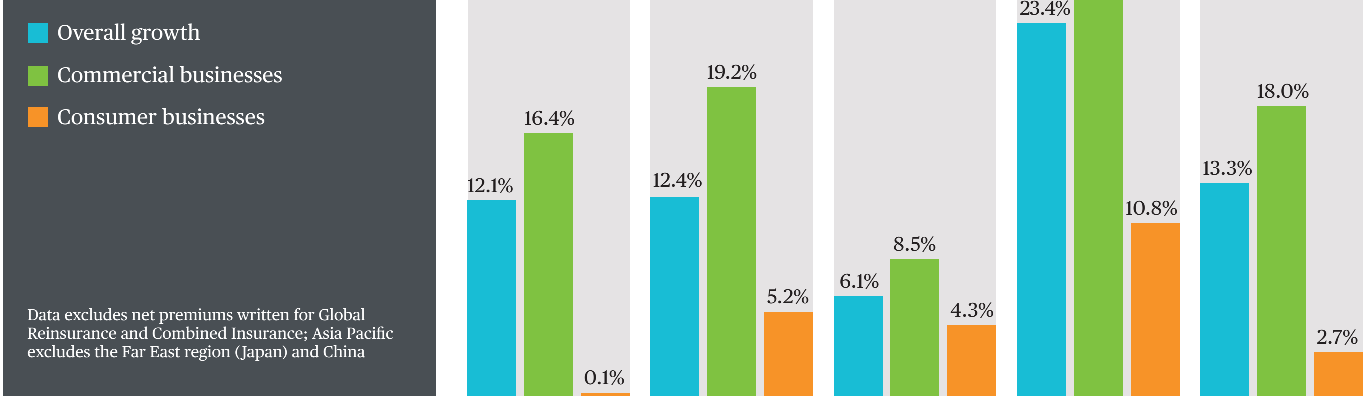
Agriculture is a $2.4 billion business for us. We are the leading insurer of crops for America’s farmers through Rain and Hail, and a leading agribusiness insurer for the nation’s farming and ranching communities. On the back of strong commodity prices and favorable growing conditions, Chubb’s agriculture segment had an excellent year for both growth and earnings, with premiums up 29%. Crop insurance is a public-private partnership with the U.S. government that operates with a proven model.

Turning to the consumer side, a prominent place in our North American operations belongs to Chubb Personal Risk Services (PRS), which provides a broad suite of traditional and specialty insurance products for affluent and successful individuals. With its rich coverage and extraordinary service levels, this business epitomizes the Chubb brand’s reputation for quality and is the leader in this niche sector with a share of about 60% among the specialist insurers that serve it. The $5 billion PRS franchise grew by only 1.7% in 2021. In the face of climate change, we have been reshaping the portfolio by reducing, for example, our homeowners insurance exposure in certain wildfire-prone areas of California and other Western states where we simply cannot get paid adequately to assume the increasing risks. Our main focus is on high-net-worth individuals and families, whom we call our Premier and Signature clients. With this select group, we use sophisticated pricing and analytic tools, and we offer digitally supported and enhanced personal services. For these clients, it’s about coverage and anytime-anywhere service over price, and here Chubb distinguishes itself. That segment grew more than 9.5% last year.

On the risk side, 2021 was hardly benign in North America. Last year was marked by numerous weather-related events and a legal environment that remains difficult. In the first instance, even with the increased catastrophe activity, the North America combined ratio was a world-class 85.6%, while

Premium Growth by Geography

Percentage change in P&C net premiums written in 2021 versus 2020



Data excludes net premiums written for Global Reinsurance and Combined Insurance; Asia Pacific excludes the Far East region (Japan) and China the current accident year combined ratio, excluding catastrophe losses, was 82.2%, two points better than in 2020. I will offer some thoughts later on how Chubb and the insurance industry in general should treat catastrophe losses in their financial reporting.

As a reminder, the well-known difficult legal environment comes from two principal sources. The first is litigation as a business, in which lawyers drive up insurance costs by cleverly twisting insurance contract language and testing new theories of legal liability. The abuse and metastasis of justice is partially fueled by increased litigation funding, another money-making investment class, valued at an estimated $39 billion worldwide, that provides a financial stake in litigation – a major portion of which is like betting on a horse race. The second source is "social inflation," which is set against a backdrop of rising wealth inequality, social justice and anti-corporate sentiment. Insurers and their insureds are portrayed as deep-pocketed goliaths and the trial bar as saviors. Ordinary citizens exercise their frustration through the jury system, encouraged by a populist narrative told by trial lawyers who hold themselves out as Robin Hoods of justice. The result is ever-more costly jury awards.

Excessive or abusive litigation is a tax on business and society. Pandemic-related business and courthouse closures had a temporary effect on loss patterns. As the pandemic recedes, however, underlying elevated frequency and severity of loss trends will reemerge, driven by everything from auto accidents to securities class action suits, from medical malpractice and professional liability claims to sexual abuse-related reviver statutes. Legal reform organizations, together with the business community and insurers, are fighting back state by state, but progress is slow. For example, forcing the disclosure of all funding sources of litigation is a modest but important reform slowly being adopted by states. While important, we cannot wait for tort reform at the federal level given the toxic political environment and level of trial bar political funding. Insurance pricing reflects this tough legal environment. Prices of liability insurance are increasing and will continue to increase given the exposure, and that, too, is a tax on business. We will continue to actively advocate for sensible reforms while aggressively defending our insureds against excessive and improper litigation when it occurs.

Europe leads company's growth in 2021

Outside North America, our $11 billion Overseas General Insurance division operates in 51 countries organized into four regions: Europe, Asia-Pacific, Japan and Latin America. With 360 offices overseas, Chubb competes in each country for local business of all kinds, both commercial and consumer. Fundamental to our success is an appreciation that no two regions, or countries within regions, are identical. Each has its own economic and political structures, social system, geographical features, language and culture. We are pretty good at understanding and discerning the distinct and evolving trends of each market and responding to the specific risks and opportunities that each represents. While there is great variability by region and country, the world outside the U.S., taken as a whole, is dynamic and full

"With its rich coverage and extraordinary service levels, Chubb Personal Risk Services epitomizes the brand's reputation for quality and is the leader in this niche sector."

of opportunity. Last year, Overseas General P&C net premiums written were up nearly 15%, or 11% in constant dollars. This included growth of 21.4% in commercial lines and 5.6% in consumer lines.

To a large degree, insurance markets, like capital markets, are global. The favorable pricing phase of the underwriting cycle propelled our commercial P&C businesses in a number of important international markets last year such as the U.K., Continental Europe and Australia. In fact, our Europe region, at more than $5 billion in size, represents Chubb's second-largest market after North America and produced the best growth in the entire company in 2021. Comprising separate retail and E&S wholesale divisions, Europe grew premiums 23% last year and 45% since 2018.

Our international retail division, which serves businesses of all types, from multinational corporations to medium-size and small companies, grew over 19% in 2021. Commercial lines account for more than 65% of this division's business and grew over 24% during the year. The U.K. and the Continent alone have grown more than 30% in size since 2018 and now generate nearly $5 billion in gross premiums – the equivalent of a major company in its own right. We are well placed to continue to capitalize on favorable market conditions in this region.

Our international E&S business, known as Chubb Global Markets (CGM), operates in the London wholesale market and Lloyd's. From airlines to oil rigs, from directors to political risk to property around the world, CGM is a recognized leader in the market. Naturally, we do our own individual account underwriting and set the terms and price for most of the risks we underwrite that other insurers follow. We leaned into the market last year with net premiums up an impressive 38% from 2020 to $1.3 billion. By the way, combining CGM with our U.S.-based Westchester operation, Chubb is a major player in the E&S wholesale market, writing more than $4 billion in premiums.

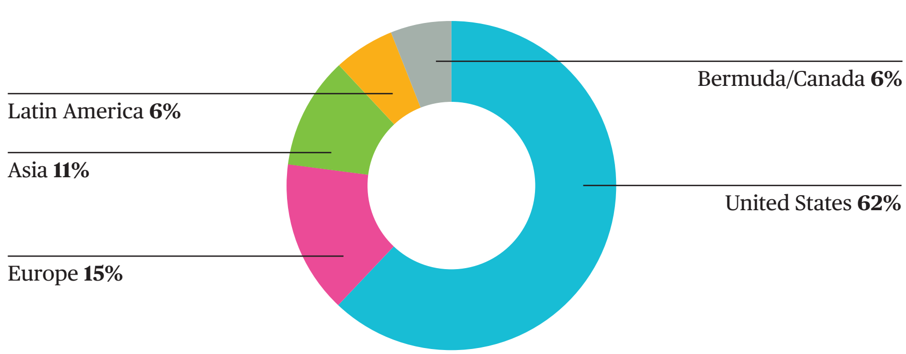
The pandemic has hit the Latin America region very hard, from both health and economic perspectives, exacerbating an already-present general political shift to the left in many countries – a trend that does not bode well for the future. In addition, as China has slowed, Latin America's commodity exports have as well, which has contributed to more economic hardship. Nevertheless, we grew premiums 6% and continued to invest in our consumer and digital capabilities with innovative digital platform partners. A new breed of young entrepreneurs is building business models using digital technologies, bypassing traditional players and infrastructure, and providing new paths of opportunity. Leading digital natives such as Nubank, Rappi, Mercado Libre and Kavak are all our partners. At the same time, we are transforming the digital journey and user experience with our long-term financial institution partners like Banco de Chile, Citibanamex and Banco Guayaquil.

A growing presence in Asia-Pacific

Chubb has a longstanding and well-established presence in the Asia-Pacific region with both non-life and life insurance businesses. In 2021, Asia-Pacific generated organic premium growth of about 12.5%, again driven by commercial lines, which grew more than 19%, primarily in Australia and certain parts of Asia.

Geographic Sources of Premium

2021 gross premiums written



The medium- and long-term outlook for the region is very promising. Today, Asia accounts for just over 40% of global economic output, but only 28% of the world insurance market. With a young and industrious population that is renowned for its work ethic and its family and savings orientation among large segments, Asia is the region of the world likely to generate the most wealth creation in coming decades. Businesses are being formed and the middle class continues to grow in numbers and financial weight. In addition, with the region's first-adopter attitude for all things digital, embracing digital innovation opens up vast opportunity over time for businesses of all sizes and greater access to consumers.

All of this represents significant opportunity for Chubb with a full range of commercial and consumer products, the latter of which include personal P&C, accident and health, and life insurance. Our protection and savings-oriented life and supplemental health products are well suited to the younger populations of Southeast Asia as well as the aging populations of North Asia. Including China, the Asian insurance market is expected to grow from $1.8 trillion to $3.8 trillion over the next 10 years or so.

As I mentioned earlier, consumer economic activity globally was impacted by the pandemic last year. Our $4 billion international consumer P&C business, however, began to pick up in the third and fourth quarters, in line with a recent recovery in commercial activity in Europe, Asia and, to a degree, Latin America. Across Asia and Latin America, we saw clear signs of recovery in growth in our large direct marketing business through banks, retailers and digital platforms. In Europe, a pick-up in consumer activity showed in resumed growth in what is now our $800 million cellphone insurance business, where we are the leader in that region. In our leisure travel insurance business, we began to see an increase in passenger counts in Europe and Latin America. And on the strategic front, our 100% digitally distributed business was up more than 50% versus prior year, and we expanded our footprint by adding several large partners. All in all, I expect growth in our consumer lines to improve materially in '22 if the world remains stable and pandemic conditions continue to recede.

Two acquisitions advance our strategy

In 2021, we further advanced a strategy we have been pursuing for years in the Asia-Pacific region by reaching agreement to acquire Cigna's supplemental A&H and life insurance operations. With this acquisition, expected to close in the first half of 2022, Asia's share of Chubb's global portfolio in net premiums will rise from about $4 billion, or 11% of Chubb's overall business, to $7 billion, or 18%. Our Asia life insurance company premiums will rise from about $1 billion to $4 billion, and our global A&H premiums from $3.8 billion to more than $6 billion.

In addition, we have signed agreements with shareholders that, when approved by regulators, will bring our ownership in Huatai Insurance Group in China to 86%. We will become the first foreign company to be granted

"The U.K. and the Continent alone have grown over 30% in size since 2018 and now generate nearly $5 billion in gross premiums – the equivalent of a major company in its own right."

permission to own a Chinese financial services holding company. While small, with $2 billion in revenue and $200 million in operating earnings, Huatai has separate P&C, life and asset management subsidiaries, nearly 19 million customers and more than 600 branches, and in time should become a meaningful contributor to our revenue and earnings. For Chubb, China is a market where the risks, though unquestionably high and arguably growing, are justified by potentially significant reward over time. We have a long-term view, and it will require time, patience and investment in capability.

Together, the addition of Cigna Asia and Huatai continues to advance our goal of greater product, customer and geographical diversification. Our current global product mix is 67% commercial and 33% consumer, but with the addition of Cigna and Huatai, consumer will rise to about 40%. As personal lines, A&H and life insurance account for a larger share of our operations – all of which are non-correlated to the commercial P&C cycle – our global business acquires better balance, improved resilience and greater optionality for growth. Chubb's expanding presence in China and the Asia-Pacific region underlines the importance of a stable macroeconomic, geopolitical and commercial environment in this part of the world.

With regard to acquisitions more broadly, we have a clear vision of what products and markets we want to concentrate on, generally speaking. We pull the trigger on an acquisition only if we are already engaged in and understand the business, are confident that there is an industrial logic, and there is a financial return that is attractive to the company and our shareholders. Our acquisitions are consistent with our enduring M&A philosophy, which is that they should enhance what we already do organically. After all, we are builders. We will continue to be guided by this approach, which has served us well over time.

The unique achievement represented by the ACE-Chubb merger of 2016 has become even more apparent now. At the time of the merger and for a number of years following, market conditions were soft, and growing revenue for the sake of market share was not necessarily a sign of strength. Since pricing conditions improved and our growth has accelerated, it is clear our success has been much greater than it would have been if Chubb and ACE had stayed on their separate paths. We have been able to step up and do things that would have been impossible without the merger. United, the company has been stronger because of our broader reach and our enhanced ability to take all kinds of risk. This has shown up in our top and bottom lines.

Measuring natural catastrophe exposures

Increased frequency of large and small weather-related events, from multiple perils and geographies, is the new normal of the insurance business. With the industry's insured natural catastrophe (CAT) losses of $120 billion, 2021 was the third consecutive year of elevated losses, second only to 2017's CAT losses of $146 billion. Some of the costliest disasters last year – the Texas freeze and Hurricane Ida in the U.S. and Storm Bernd in Europe – were simply part of what has become a normal and expected occurrence of increased catastrophic events, both large and small, related to all forms of weather – wind, water, fire and temperature-related. Every season is a CAT season now, as events that were classically associated with a specific time of year are occurring more regularly at all times of the year.

In order to understand the potential for weather-related loss arising from our aggregations of exposure, we use pretty sophisticated modeling tools – the best available. But no model is or can be absolutely accurate. Rather, models provide a more organized and insightful way of thinking that we constantly update and improve with the use of tools such as imagery technology, accumulated external and internal data, artificial intelligence and other methods. The impact of weather events is increasing because climate itself is changing, not simply due to carbon emissions, which are an overwhelming source, but also to other natural phenomena that occur over extended periods. For example, the level of hurricane activity in the Atlantic basin is influenced by the Atlantic Multidecadal Oscillation, or AMO, a condition that lasts many years and has occurred for millennia. Climate is complex and not well understood.

The severity of events is exacerbated by aging infrastructure that is not keeping pace with required resiliency as well as the enormous rise in property values concentrated in areas that combine demographic growth with higher risk geographies, such as coastal zones and woodland areas along the urban-rural continuum. In our way of thinking, virtually all geographies and properties are exposed to some combination of threats arising from increased weather-related events.

With that as context, we have two underwriting and risk management-related objectives. First, given all property business is climate-exposed, the price for each risk must reflect reality. That means understanding better the evolving exposures and perils driving loss, and then getting paid so we earn a proper risk-adjusted return. Given observable and projected realities, we continue to increase the dollar amount of our expected losses each year from weather. The second objective is to understand and/or manage accumulation of exposures against weather-related perils – whether modeled, less well modeled, or non-modeled – to conform with our appetite for risk and to know the limits of our appetite for loss. We continue to refine our portfolio management capabilities so that we can manage risk aggregation at an ever-more-granular level. The objective for us is faster, more dynamically risk-adjusted pricing and concentration management that appropriately reflect changes we observe.

In my judgment, investors and insurer managements have focused too much on the current accident year combined ratio excluding CATs. This is not the primary way of looking at the underwriting performance of an insurance company. Ex-CAT is an important measure of underlying health, but a secondary one. The industry and investment community should focus primarily on the published results, including CAT losses. The reason to focus on results excluding natural catastrophes made more sense when CAT events were more infrequent. This is not the case now – they and their attendant volatility are a regular and expected occurrence. By focusing more on ex-CAT, managements and investors are led to give a pass to inadequate pricing and underwriting, and it's a head fake. The CAT premium remains in the denominator and the losses are excluded from the numerator. The more CAT-levered, the better a company looks – what a great gig. I look at ex-CAT myself, but again, while important, it is a secondary measure that tells me other things.

Inflation, interest rates and investment income

Our government has injected some $6 trillion of stimulus into the economy since the start of the pandemic over two years ago. The Federal Reserve has also made some $4 trillion in asset purchases as part of quantitative easing and now has a stunning $9 trillion balance sheet, equal to 40% of GDP and limiting the Fed's flexibility in the event of a future crisis. At the outset, the government and the Fed did the right thing to adopt extraordinary measures in support of businesses and individuals, but these policies have long run their course, something I pointed to a year ago. Nearly every asset class today is overvalued due to the wall of money generated by the excessive fiscal and monetary stimulus, and, with the Fed tightening, we will pay the price as assets revalue.

The resulting demand plus the shortage of supply, exacerbated by supply chain disruptions and labor shortages, have led to a real inflation problem – which

"We are well prepared. As interest rates go up, Chubb's income will benefit as we reinvest at an improved and higher risk-adjusted rate."

at this writing is running 7.9%, the highest level in 40 years and more than three times the Fed's target. I doubt elevated inflation is simply a temporary phenomenon, given such broad-based supply- and demand-side pressures across the economy. And that's before the impact from the war in Ukraine. The Fed is behind the curve, but now beginning to respond. Interest rates are poised to rise and should continue, quantitative easing, or QE, is coming to an end, and credit spreads should begin to widen, particularly if the Fed begins to shrink their balance sheet, as they should. Of course, they are now forced to consider the impact of the war while trying to address inflation. They should have moved sooner.

We are well prepared. Our $122 billion investment portfolio is 87% fixed-income and of high quality. With a portfolio duration of about four years, every 100-basis-point increase in interest rates for us is worth about $1.2 billion in pre-tax investment income. As interest rates go up, Chubb's income will benefit as we reinvest at an improved and higher risk-adjusted rate.

A warning: Excessive deficits certainly matter, particularly when the borrowing is not for productive investment purposes. They crowd out private sector investment, sap our strength and flexibility to invest in what is important for competitiveness and security, threaten the dollar's status as the world's reserve currency and mortgage future generations. Further, continuing to monetize our debt using the Fed's balance sheet is unsustainable. When I think about what could trigger a crisis in financial markets, a geopolitical event coupled with the size of our deficit and overall financial leverage come to mind.

Strong shareholder returns

As I endlessly repeat, growth in tangible book value is the ultimate measure of shareholder wealth creation. For an insurance company, it is our most constraining factor. In 2021, Chubb's book and tangible book value grew, respectively, by 6.1% and 7.6% on a per-share basis and now stand at $139.99 and $94.38, both records. As the nearby chart illustrates, since 2003, Chubb has far outperformed when it comes to generating book and tangible book value per share despite plenty of risk-related events – which is our business. We have grown per share book and tangible book at a compound annual rate of 9.0% and 9.2%, respectively, and that is including the initially dilutive impact of acquisitions on tangible.

Our core operating return on equity (ROE) and core operating return on tangible equity last year were 9.9% and 15.3%, respectively. As a reminder, in contrast to most, we do not include the fair value mark on our private equity funds in core operating income, simply because PE gains are something we cannot control. Simply to illustrate for you to compare, if we did, our core operating ROE for the year would be 13.6%. By the way, over the last 10 years, our core operating ROE has averaged about 10% while the risk-free rate has averaged 2%. Our prudent retention of surplus capital has had the effect of diluting our ROE by about 150 basis points over that time. We are in a strong earnings growth period, and I expect, all things being equal because we are in the risk business, Chubb to achieve an ROE of about 13% and a tangible ROE of about 20% by 2023 on a deployed capital basis, with both likely heading north from there.

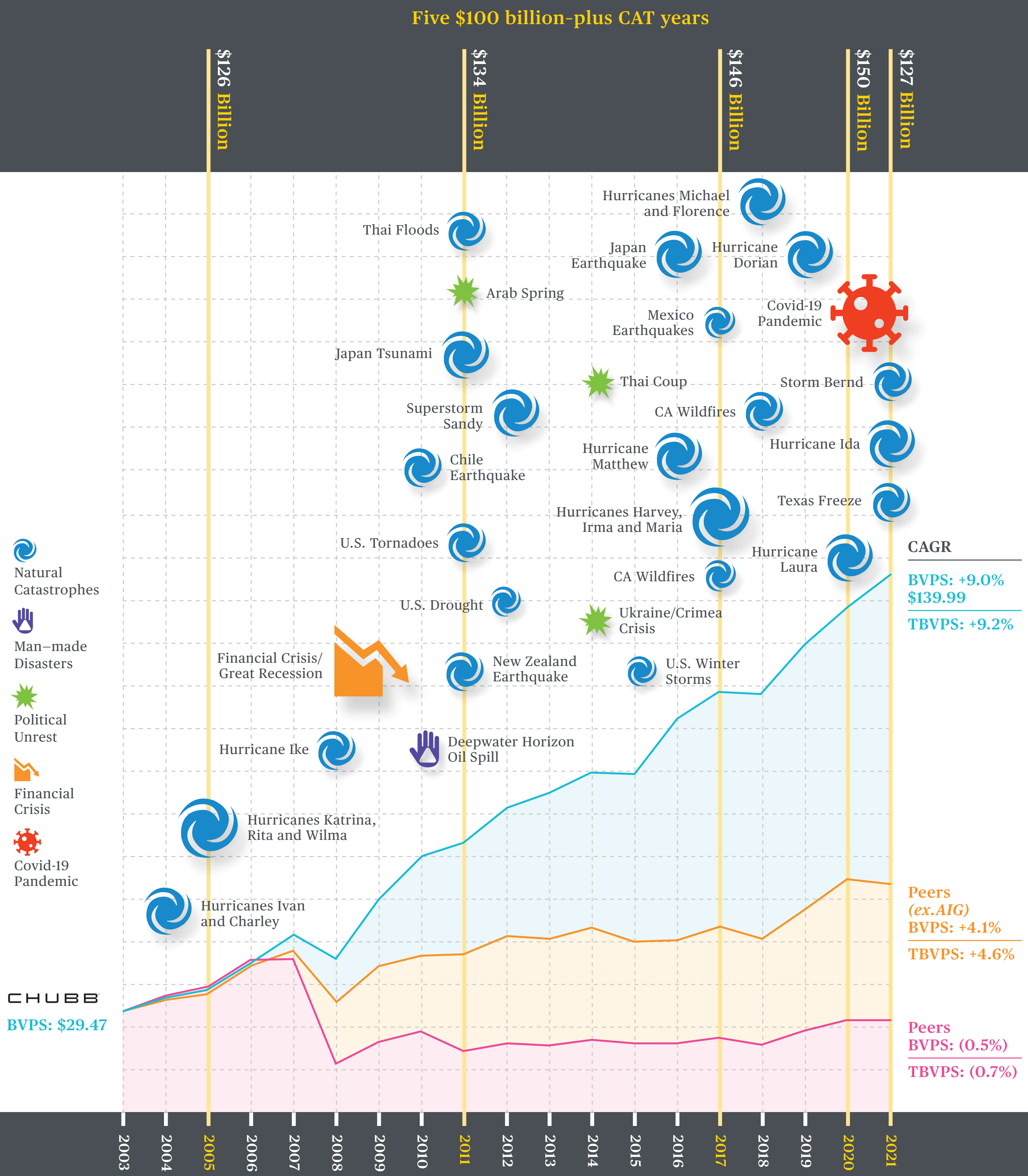
Chubb has an excellent track record of being good stewards of shareholder capital. Our policy is clear and unwavering: Beyond what we need for risk and growth, we return surplus capital to shareholders. We are patient, and dilution from surplus capital doesn't bother us. In 2021, we returned an extraordinary $6.3 billion to shareholders, equaling 112% of our core earnings. This included $4.9 billion in share repurchases and $1.4 billion in dividends. On top of our existing buyback program, which has varied over the years between $1.5 billion and $2.5 billion, we authorized a one-time $5 billion share repurchase program last year. As a designated "dividend aristocrat," we have increased our annual payouts for nearly three decades.

The importance of digitalization

Digitalization is not the future; it is the here and now and it is a commitment over time to transformation across the company in how we do everything. We are making good progress. There are two sides to this effort. One is the digital transformation of our existing businesses – our technology, our skill sets, the use of data and analytics, and the way we organize and who leads our businesses. The second aspect is the growth and vitality of our digital business, which was created from dust.

Sustained Book Value Per Share Growth in a World of Risk

Outstanding book value per share results since 2003 despite five $100 billion-plus CAT years and other major risk events



Peers: AIG, Allianz, AXA, CNA, Hartford, Travelers, Zurich

On the one hand, we are modernizing Chubb's infrastructure and foundational systems and deploying digital technology, data and analytics at scale around the world. We are accelerating the migration of legacy environments to the cloud, all of which is enhancing our ability for straight-through processing. By greatly scaling our analytics capabilities, we are enhancing our ability to select and price risk more insightfully. We are investing in specialized centers of excellence that enable our use of data for smarter decisions on underwriting and claims. We also continue to raise investment in cybersecurity and resilience. We have a vision to embrace a cloud-first, data-first and digital-first operating model, with real-time analytics embedded across the value chain to measure and improve how we do everything. Our Digital Transformation Officer, Julie Dillman, leads this effort, working with Sean Ringsted, our Chief Digital Business Officer and Chief Risk Officer, along with our other senior operating executives.

On the other hand, we are rapidly expanding our digital business unit, which is basically about generating revenue and income. The deployment of digital capabilities is reaping rewards in terms of digitally native partnerships and expanded traditional distribution networks. We have over 185 distribution partnerships with digital banks and fintechs as well as leaders in e-commerce, retail, travel, transportation, mobility, payments, communications and entertainment. As a result of our expanding network, we now have 19 million policies in force derived through these partnerships. Fully digital sales, which amounted to $145 million in 2019, exceeded $270 million in 2021. In 2022, we will achieve about $450 million in premiums and earn an underwriting profit.

Through the use of robotics, artificial intelligence and machine learning, Chubb is gaining deeper insights into underwriting and claims while eliminating low-value activities and driving efficiencies that we anticipate will reach $500 million in run-rate cost savings in 2023. We are already achieving current run-rate savings of more than half that amount.

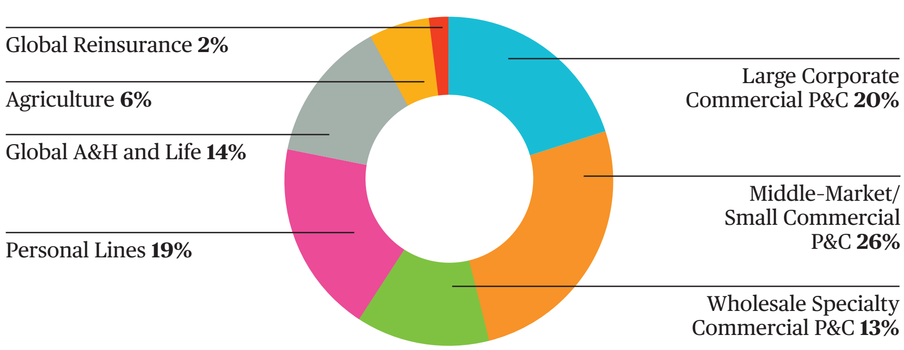
While we are investing hundreds of millions more in transformation, our focus rightly remains on our customers, both commercial and consumer. Our digital capabilities are turbocharging the experience and efficiency we provide them. The whole world is digitizing, so it's axiomatic that every company that wants to remain vital must transform.

Cyber: increasing risk versus industry management

We are one of the largest insurers of cyber-related risk. The accelerating digitalization of everything means that the world, both within and across our borders, is digitally connected. In parallel, cyber-attacks have grown exponentially in frequency and sophistication. Cyber criminals, both state and non-state actors, threaten infrastructure and supply chains of individual companies and entire industries – from theft and destruction of data to impoundment of systems and databases. Vectors and techniques of attack are iterating at a rapid pace. The government and private sector response is substantially reactionary and fundamentally remains defensive in nature. The potential for catastrophic loss of enormous scale is growing. Like a pandemic, a cyber-CAT event knows no geographic or temporal boundaries.

Premium Distribution by Product

2021 net premiums written



Insurers have a front row seat in providing cyber protection, both financial and pre- and post-event services, and encouraging the private sector to protect itself and increase its resiliency. In the face of a hostile environment, akin to the Wild West when criminals reigned and law enforcement was absent or incapable of stopping them, prices for cyber coverage have skyrocketed. But that alone is hardly the answer. The insurance industry, Chubb included, must evolve in its capabilities more rapidly if we are to assume and manage this risk responsibly. We are a part of the solution but no substitute for government and industry action to control the threat environment. From pre-event resiliency services to post-event loss management support, we are gaining greater underwriting insight into individual risk, enhancing the skills and tools we use – both digital and analytical – and improving our insight and management of cyber-CAT risk exposure.

For perspective, when cyber insurance began after the dawn of the digital age, it took the form of professional liability insurance, especially for software developers. But that was when the cyber loss environment was benign; the exposure was about systems-related failures due to errors. Individuals with cybersecurity, engineering, intelligence and hacker backgrounds are now center stage in the crafting of underwriting and the processes around it. Use of data and analytics, paired with surveillance tools that help us assess the risks and defensive capabilities of individual insureds, is improving but still limited.

I am concerned, despite all of the talk, that we are headed for a catastrophic cyber event, and this requires urgent action on behalf of governments, beginning with our own. The public and private sectors should work with other countries on establishing rules of the road and definitions similar to the Geneva Convention in defining acceptable cross-border behavior and consequences. The U.S. government should enforce laws around the payment of ransoms in cryptocurrencies that require you to know whom you are paying. Government-mandated reporting around cyber-attacks that reach a certain threshold of size would contribute to greater data sharing between the public and private sectors and provide more insight into the frequency and techniques of attacks. Cloud providers should be liable for the financial consequences of potential attacks against them, instead of passing the exposure to their customers, by requiring they hold them harmless.

Lastly, to better manage the catastrophe risk exposure of cyber at Chubb, we began last summer to roll out significant changes to the CAT exposure-related coverage we provide and how we provide it. We have introduced a new policy form that allows us to both provide and manage CAT-related exposures in a manner more similar to how we manage natural catastrophe risk. For cyber to be sustainable as a major and growing coverage area, management of CAT is something the industry must come to recognize. The industry has a finite balance sheet and cannot absorb what is, for practical purposes, infinite risk – a risk that has a strong likelihood of occurring.

"The whole world is digitizing, so it's axiomatic that every company that wants to remain vital must transform."

The war for talent

We have come through the disruptions of the last two years in better shape than we began. At our core, it's about the strong commitment and work ethic of Chubb employees, and their sense of purpose and belonging to something bigger than what each of us is individually. It is the signature of a Chubb citizen and our culture. It is a testament to our leaders at all levels and to their ability to inspire and sacrifice.

As with other companies, the backbone of Chubb's success has been supported by tools that enable us to collaborate in real time from many different places.

We are embracing a more flexible environment where employees share their time between working at the office and working from home. We have seen that working outside an office need not be a barrier to efficiency for many of our activities. The amount of time in an office versus remote work depends on a person's role. However, with that said, Chubb has a culture grounded in relationships and face-to-face contact.

As a company, we thrive on being with each other. A change of physical environment and being around colleagues is refreshing and energizing. We are fundamentally built around a work-from-office environment. We develop culture and communicate, train, mentor and innovate more effectively together, and, for most roles, we are more efficient in the broader sense of the word. In my judgment, working only from home, without a change of surroundings, ultimately makes most people stale and certainly doesn't foster a feeling of connection.

As quickly and safely as we could during a pandemic, we have leaned into a return-to-office schedule. In the U.S., for most of the second half of the year, 100% of Chubb offices were open, whereas in Europe, Asia and Latin America it ranged between 70% and 100%. Our clients and distribution partners noticed and appreciated our alert, ambitious and energetic customer-focused presence. At the end of the year, we had to take a pause, for a second time, because of rising infection rates. But by mid-February 2022, we are back meeting face-to-face with customers, brokers, agents and each other.

During 2021, employers in all industries faced labor shortages and increased staff turnover, coupled with increased employee demands and expectations. We aren't immune. Given our results and reputation, Chubb talent is highly sought after. While these trends are affecting everyone, we have substantial competitive attributes – a leading brand, scale, a global presence, a track record of success that offers great training, opportunity for professional development, advancement, and financial rewards; a company that is well led at all levels and offers authority along with individual accountability and opportunity. We are committed to ensuring a diverse group of ambitious people, regardless of race or gender, thrives. We are a place where people have confidence and pride in our culture and company, and we practice our craft at a high level of excellence. Our culture is self-selecting – it isn't for everybody. If you are ambitious, disciplined, take responsibility, are a decent human being and have a need to belong, you would likely thrive in our company, so give us a call.

In response to the labor market trends, we sharpened our focus on recruitment and retention. We hired more than 4,500 new employees in 2021, not only experienced people from outside but also early career hires, with large numbers just out of college or high school. We reassessed job requirements and determined that fewer roles require four-year college degrees, thus providing more opportunities to a greater pool of candidates. Employee turnover has also created opportunities for others to advance, and 4,700 employees globally were promoted last year. Turnover rates and vacancies have come down considerably, but we have more to do, and the so-called war for talent is hardly over.

Protecting society against the effects of climate change

Climate change is an existential threat for society at large. It affects businesses, individuals and communities in the U.S. and around the world. It is an assault on nature, destroying our natural habitat and biodiversity, and it is contributing to rising sea levels, higher sea surface temperatures, and greater frequency and destructiveness of extreme weather. Chubb is doing its part to help society manage the threat while also supporting humanity's journey toward a zero-carbon world.

In 2021, we announced our support for a global transition to a net-zero economy by 2050 and acknowledged our responsibility to encourage the transition. We are realistic, pragmatic and earnest about that responsibility. There is no magic bullet that will create a carbon-free economy in the short term, and the use of fossil fuels is unfortunately necessary during a transition period that will last many years. Our risk engineering, underwriting, investment, and philanthropic actions reflect this reality as society seeks to accelerate the transition away from fossil fuels. For example, we are prepared to make appropriate commitments on climate action and, in fact, have placed certain limits on fossil fuel underwriting, including coal and tar sands. But underwriting limitations must be balanced against the essential and core purpose of insurance, which is to provide risk protection for lawful activity. Any such limits on entire classes of activity interfere with this purpose and must be an exception based on an analytical, fact-based examination of realistic alternatives.

Chubb's policy regarding coal underwriting evolved from this process. We were the first U.S.-listed insurer to announce limits on coal underwriting and investments. In doing so, we considered a variety of factors related to the production and use of coal as well as the feasibility (including cost of alternatives to coal) and practicalities of the transition. Going forward, we will also not insure tar sands projects.

While we have placed certain limits on fossil fuel underwriting, insurers have a much more complex role to play in encouraging the transition away from fossil fuels than simply denying coverage to a particular activity. At Chubb, we do this through a proactive approach to climate issues in all aspects of our business:

• Chubb provides catastrophic protection to clients against losses globally arising from hurricanes, floods, tornadoes, wildfire and drought. These are perils that are growing in frequency and severity as a result of climate change. We use our expertise and extensive data regarding these perils to provide products and services to make clients more resilient. Our risk engineers bring deep technical knowledge to this work, including providing guidance on construction standards, wildfire land management and coastal protection.

• Chubb sends important climate-related price signals that help to encourage behaviors as to where people choose to live or locate their business in response to climate change. We expect, for example, that sea level rise, increased storm intensity and increased wildfire activity will lead to higher insured losses. Our pricing reflects that risk, potentially affecting both societal and individual behaviors and what actions are necessary to mitigate the risk – from the micro (e.g., moving away from a new hazard zone) to the macro (e.g., limiting greenhouse gas emissions).

• Product innovation is also important. We recognize that the pace of the transition away from fossil fuels is dependent on the development of alternatives, and we are a leader in the renewable energy sector, insuring

"Chubb is doing its part to help society manage the threat of climate change while also supporting humanity's journey toward a zero-carbon world."

a third of the top private innovation companies in clean technologies. We are also investing in companies that have promising new clean energy technologies. Insuring and investing in clean energy reflects our commitment to speeding up the transition from fossil fuels – we can't turn off the fossil fuel plants until there are realistic alternatives.

• Chubb's philanthropy further demonstrates our support of a net-zero economy. The Chubb Charitable Foundation, together with our employees, supports a range of environmental causes, including the Nature Conservancy, the Conservation Fund and Rainforest Trust, as well as volunteer activities in local communities around the world. Foundation grants help preserve sensitive lands and habitats, finance green business entrepreneurs, and support educational programs that promote a healthy and sustainable environment in the U.S. and around the world. To give just one example, we support a coral reef restoration project in the Mesoamerican Reef that resulted in transplanting 10,000 new coral colonies that provide a natural barrier to protect local areas from rising sea waters.

• Lastly, our environmental stewardship includes our operational carbon footprint. Even though our contribution to greenhouse gas (GHG) emissions is comparatively small, we have adopted science-based emissions reduction goals. At the end of 2019, we achieved the first of two goals by reducing emissions 22% from a 2016 baseline, exceeding our goal of 20% by 2025. Our second long-term goal is to reduce GHG emissions 40% by 2035, which is expected to result in the reduction of nearly 45,000 metric tons of CO_2 equivalent per year. Our goals are aligned with the two-degree Celsius target outlined in the Paris Climate Agreement, as well as the quantitatively supported science-based standards methodology of the United Nations Environmental Program.

While these actions demonstrate our strong commitment to helping society with a realistic transition to a net-zero economy, as a company we cannot ourselves make open-ended climate change pledges with uncertain, unknowable or unrealistic objectives. This includes some of the net-zero pledges that others have joined. We are committed to supporting the transition to a net-zero economy, but we will not make pledges that can't be met, including pledges that, for example, would require us to measure the GHG emissions of our insureds or the companies in which we invest. With millions of insureds across the globe, from individuals to small businesses to major corporations engaged in virtually every area of human activity, it's simply inconceivable. Instead, we believe that real actions – not hollow pledges – provide the best measure of our commitment to a net-zero future.

Leadership in a divided America

The world's ability to meet the challenges of climate change, catastrophic cyber threats, economic and social inequality, and the other great issues we face today, including the state of relations between democratic and authoritarian nations, is directly connected to the quality of our government and political leadership. Here in America, our inability to solve our most pressing domestic problems related particularly to our vitality and competitive profile, and to advance a foreign policy that provides leadership while representing our interests – frankly, to get things of consequence done – is a failure of leadership.

In his 1961 inaugural address, John F. Kennedy challenged his fellow citizens: "Ask not what your country can do for you – ask what you can do for your country." Where is the call today for citizens to actually rise above, unite and contribute to society, work hard, and preserve and enhance our common values and way of life? It is each generation's job to advance our inherited responsibilities.

Our nation is in the grip of ideological extremes that are obstacles to getting things done. The centrist majority of our country is capable of coming together to solve problems, but extremists on the right and the left are hijacking that effort. Rancorous arguments and paralyzing grievance have turned us into a more inward-looking country at a time when it has never been more important to understand the challenges to America arising from the world around us. A divided nation, we are failing to effectively lead and have left a dangerous leadership vacuum. Others, notably Russia and China, have noticed our preoccupations and perceive us to be in decline. They do not and will not hesitate to challenge us. Russian aggression and the war in Ukraine have served as a wake-up call for Western democracies, led by the U.S., to defend our democratic values and way of life. Let's hope we have the strength and fortitude to sustain the effort.

As a democracy, our country requires competing political visions that produce healthy debate and lead to intelligent, productive decisions. Unquestionably, honesty about our past history, including slavery and racism, and vigorous efforts to rectify errors, make for a more informed, mature society. It's intrinsic to democracy and the role of civil society. Democratization of opportunity, coupled with individual responsibility, matters deeply; our democratic way of life is unsustainable unless everyone has a chance. To that end, we as Chubb take with the utmost seriousness our commitment to an inclusive society and racial justice. Our Race Matters series, Intentional Inclusion Leadership training, and Chubb Rule of Law Fund support for justice system programs all testify to that.

The United States is not the only country suffering from extreme and growing wealth disparities, polarization, populism and a public sphere contaminated by cynicism and selfishness. Democracies around the world are under pressure because they are not solving problems and adequately protecting their own values of freedom, pluralism, the rule of law, and a better life for all their citizens. This causes discontent among citizens and feeds the illusion that authoritarian governments work better. However, that is a dangerous illusion, and it opens the door for populist, illiberal leadership. America's leading place in world affairs has gone hand in hand with a strong and growing economy and a healthy democracy that gets things done. To maintain that leadership requires will, discipline and sacrifice. In short, it requires that we run a better race, and that begins with the right priorities.

We have many advantages, and I am confident in our country. When it comes to competitors such as China, we also have potential disadvantages, one of them being size – China has a population four times that of the U.S. Our system of alliances built over generations is a potential force multiplier if we tend to them and support them. We cannot ignore the fact that a third to a half of global growth in the future will likely come from China, the world's largest country by population. If we are going to compete more effectively, it will take a larger working age population. Thoughtful economic- and humanitarian-oriented immigration programs for both skilled and non-skilled people will create an expanded labor force that will contribute to economic growth. By growing the economy faster and larger, we will create the financial means to not only pay for the commitments we have already made, i.e., our debt and entitlement programs, but also to invest in other important priorities for our long-term success: modernization of our infrastructure and technology base; greater R&D spending, including true 5G access for all; modernization and expansion of our military capability; training and skilling of our domestic workforce to make it more productive, complementing immigration-at-scale; and greater aid and assistance to and direct investment in other countries that share our vision.

"As a country, we cannot take our leadership position for granted. It is not an automatic right; it is earned."

A stronger economic base, with government using its resources for investments that are truly force multipliers, will make our collective democracy more resilient, our society more cohesive, and improve our power to lead in the world. We cannot take our leadership position for granted. It is not an automatic right; it is earned.

America's relationship with China

Rules-based international trade is part and parcel of the world order that flourished to the benefit of America, its allies and partners, and other countries after World War II. For seven decades the U.S. has had a special responsibility to lead the world in the protection of individual freedoms and the promotion of rules-based trade. America's vast foreign direct investments and the operations of U.S. businesses overseas – especially but not only in Asia – have been as powerful a factor in our world standing and ability to influence as our military presence abroad. More open rules-based global trade, powered by market-based principles, has helped to lift hundreds of millions of people out of poverty across the world and to support living standards in our country, but it has fallen out of favor across the U.S. political spectrum. We are in the throes of a damaging historical retreat from promoting our vision of the world, and it will hurt our quality of life at home.

The United States and China have a deep and growing rivalry and, at the same time, longstanding interdependencies. While our competition and tensions grow, our two nations' interests are deeply intertwined and the scale of trade and investment between us is significant. In 2021, two-way trade between the U.S. and China exceeded $657 billion, and China is our third largest trading partner after our North American neighbors, Mexico and Canada. From an industrial and commercial point of view, attempts to broadly decouple the U.S. and China are misguided and unrealistic. Importantly, two-way trade and investment creates dependencies, which in turn add ballast and act as a stabilizing force between our countries, though they also expose us and are a source of friction; both need to be managed. However, it means we are invested in each other's fate.

Our two countries' increased rivalry and competition extends beyond security and ideology to economics, and this is not going away. In that regard, the U.S. will and must naturally defend its interests, as will China. Both the public and private sectors have a role in defending our interests. This is especially true in areas of certain advanced technologies and intellectual property and, in particular, those that involve national security or represent certain leading-edge capabilities that provide future comparative advantage. We should be both thoughtful and careful in how we define what to protect. Our countries have important and fundamental differences, including the construct of our economies. One is more market oriented, while the other is becoming more state directed. The U.S. is far more open than China in most all ways. So, there is asymmetry in our economic models and the rules that govern them. Regardless of the differences, each country is pursuing what it believes is its own path to greater prosperity for its people. I, for one, am not insecure about my country and believe deeply in our American model as the right path that will prevail if, again, we have the discipline and will collectively to run a better race. Further, I believe our democratic values and market-based system have been the best in history at delivering prosperity, individual liberty, social stability and enlightened progress. Make no mistake: American companies carry our nation's values in how we conduct ourselves in China.

We are at a difficult time in the relationship between our two countries, and the war in Ukraine and China's support for Russia will escalate things. The level of distrust, lack of honest and productive communication, particularly between our two governments, and the growing nationalism being fed by constituents in both countries are at a high. It's important we seek ways to ease the current tensions. We need small confidence-building measures that begin to get us back into the habit of cooperation and problem-solving without ignoring our differences. China makes a mistake in viewing us a country in decline, and we make a mistake feeling insecure about ourselves while treating them, in the words of Henry Kissinger, as simply a guilty party. We are not natural enemies, and we shouldn't use that word. It should be the priority for both our governments and our private sectors to seek to advance productive economic relations benefiting both of our countries.

The notion of reciprocity in the broader sense is an important guiding principle, particularly in terms of access, equal treatment and compliance with commitments. Both must be held to account. However, at the same time, we must promote our vision of trade and investment globally as a part of our foreign policy. In that regard, we are in retreat and leave a vacuum for China to fill. Trade agreements matter. To begin, while unpopular to say, we should seek to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP); we should hold Mexico to account for United States-Mexico-Canada Agreement (USMCA) violations; and we should promote a digital trade agreement with Asia and Europe. These actions are essential to support growth in the U.S. economy, providing new and expanded job opportunities for workers across our industrial base. Of course, as we work to expand trade, we have a responsibility to ensure that the benefits are distributed throughout our economy, including providing the skills and knowledge necessary for all of our workers to compete in the global economy.

Back to China, people-to-people relations and dialogue have suffered during the pandemic, including from travel restrictions. We are learning more about each other secondhand than first – that is never a good thing. It is incumbent upon all of us, in both the public and the private sectors, to continue to reach for greater people-to-people interaction between us. We all have roles to play in communication and in creating reciprocal understanding of each other's actions, intentions and priorities. We especially need more relationships across senior levels of government. After all, relationships build trust and communication, which are so important, especially in conflict avoidance and friction reduction. And relationships lead to frank, earnest dialogue where we don't try to convince each other that what we observe really doesn't exist – a favorite Chinese pastime.

An unrivaled reputation for excellence

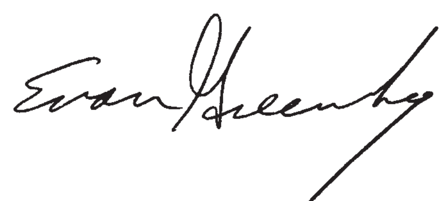
At Chubb we will make every effort to stay at the top of our game by continuing to grow, diversify, and modernize our company, its products and services, and its operations around the globe. This is the path for generating strong earnings and revenue growth for the benefit of the company and its shareholders.

We are in a phase of vigorous wealth creation. We are in a world that holds out great opportunities for us but is becoming a riskier and more complex place. We owe our success to the talent, dedication and knowledge of everyone at Chubb, from our underwriters and risk engineers to our claims organization, investment managers, technology and finance groups, and marketing teams. I would like to pay tribute to our board of directors and to my senior management team, who have made an indispensable contribution to Chubb's ability to seize strategic opportunities and keep up the pace of change in a competitive industry.

I have spoken of our technological advances and our determination to maximize the benefits of technology for our business. We never stay still but always look to the future. Even so, the task for the remaining years of this decade, and beyond, will consist of far more than embracing new technological opportunities. The more fundamental challenge will be to consolidate and renew all that is most special about Chubb – our culture, our skill sets, and the organizational structures that unite our global operations and make them so effective.

We have a culture that brings out the best in people who want to belong to something bigger than they are. We have an unrivaled reputation for excellence, and the innovative cutting edge to drive forward our strategy for balanced global growth. We are hugely ambitious, focused, disciplined and attentive to the needs and wishes of our customers, staff, investors and shareholders. For Chubb, 2021 was one of the greatest, if not the greatest, years on record. Together we will endeavor to make sure that this statement will be eclipsed by our company's performance in years to come.

Sincerely,



Evan G. Greenberg
Chairman and Chief Executive Officer

A Global Leader in Property and Casualty Insurance

Argentina	Chile	France	Japan	Pakistan	Saudi Arabia	Tunisia
Australia	China	Germany	Korea	Panama	Singapore	Turkey
Austria	Colombia	Gibraltar	Macau SAR	Peru	South Africa	United Arab Emirates
Belgium	Czech Republic	Hong Kong SAR	Malaysia	Philippines	Spain	United Kingdom
Bermuda	Denmark	Hungary	Mexico	Poland	Sweden	United States
Brazil	Ecuador	Indonesia	Myanmar	Portugal	Switzerland	Vietnam
Canada	Egypt	Ireland	Netherlands	Puerto Rico	Taiwan	
	Finland	Italy	New Zealand	Russia	Thailand	
			Norway			

A local presence in 54 countries and territories around the world

Chubb has operations in the countries and territories listed here and can help clients manage their risks anywhere in the world.

Chubb Senior Operating Leaders

Juan Luis Ortega
Executive Vice President, Chubb Group; President, Overseas General Insurance

John Lupica
Vice Chairman, Chubb Group; President, North America Insurance

John Keogh
President and Chief Operating Officer, Chubb Group

Paul J. Krump
Vice Chairman, Chubb Group; Global Underwriting and Claims

Chubb's senior operating leadership includes the company's President and Chief Operating Officer, the presidents of North America and Overseas General insurance operations, and the leader for global underwriting and claims.

Key Financial Results

Dollars in millions

Total North America P&C Insurance

2021	
Gross premiums written	$29,895
Net premiums written	$23,805
Combined ratio	85.6%

North America Commercial P&C Insurance

2021	
Gross premiums written	$20,819
Net premiums written	$16,415
Combined ratio	85.0%
Segment income	$4,359

North America Personal P&C Insurance

2021	
Gross premiums written	$5,720
Net premiums written	$5,002
Combined ratio	85.5%
Segment income	$955

North America Agricultural Insurance

2021	
Gross premiums written	$3,356
Net premiums written	$2,388
Combined ratio	89.1%
Segment income	$256

Chubb's insurance businesses in North America serve clients ranging from the largest multinationals, middle-market companies and small businesses to successful individuals and families, and the agriculture community.

In 2021, each of Chubb's North American businesses delivered excellent results. "Throughout the year we leaned in and seized the opportunities of a favorable trading environment," said John Lupica, Vice Chairman, Chubb Group and President, North America Insurance. "We demonstrated how we can scale this organization while delivering the quality and consistency that clients, agents and brokers value and expect from Chubb."

"In a world full of risk and uncertainty, and another year of elevated catastrophes, Chubb's results were world class," said John Keogh, President and Chief Operating Officer of Chubb Group, referring to both the company's North America and global operations. "In a changing market, where many industry players had to reevaluate their risk appetite, we stood out as a beacon of stability relative to others. Our results reflect the reach of our distribution, the strength of our customer relationships and our track record of being a reliable partner."

Paul Krump, Vice Chairman, Chubb Group, Global Underwriting and Claims, pointed to the strength of Chubb's claims-handling capabilities. "At the end of the day, customers buy our insurance products because of our world-class claims service," he said. "We wake up every day ready to provide exquisite service, with empathy, while looking for ways to continually improve to meet the evolving needs and expectations of our clients."

Total net premiums written for the company's North America P&C insurance businesses were $23.8 billion, up 12.1% from 2020. The combined ratio was 85.6%. Total commercial P&C net premiums written for North America were up 16.4% from the prior year.

North America Commercial P&C Insurance

Chubb is the largest commercial lines insurer in the U.S., offering a full range of traditional and specialty products for businesses of all sizes. Net premiums written for North America Commercial P&C Insurance increased 13.4% from 2020. The combined ratio for the segment was 85.0% – exceptional performance given the elevated level of catastrophes. Underwriting income was $2.3 billion, and segment income was $4.4 billion.

Major Accounts, Chubb's P&C business unit that serves large corporations, is recognized for the breadth and depth of its product and service offerings, technical underwriting expertise, superior client service, and global platform built to service complex, bespoke insurance programs in many countries around the world. It's a high-touch business where Chubb, with its strong client- and broker-centric culture, has developed long-term, enduring relationships.

In 2021, Chubb distinguished itself in the marketplace by being proactive and visible engaging with brokers and clients. When Covid-19 limited opportunities to meet in person, Chubb met virtually. When it was safe to meet in person, we did so. For example, for the second year in a row, the RIMS conference, a major industry event in the U.S., was cancelled. That did not stop Chubb from finding ways to engage with clients. Over three days,

Chubb's North America Insurance Business Units

Major Accounts	Commercial P&C insurance products for the large corporate market sold by retail brokers
Commercial Insurance	Commercial P&C insurance products for middle-market and small businesses sold by independent agents and retail brokers
Personal Risk Services	Personal lines coverage, including home, auto, valuables, umbrella and recreational marine insurance, for successful individuals and families sold by independent agents and brokers
Westchester	Commercial P&C excess and surplus lines sold through wholesale brokers
Chubb Bermuda	Excess liability, financial lines, property and political risk coverages sold by large international brokers
Agriculture	Crop insurance from Rain and Hail and farm and other P&C coverages sold by agents and brokers

Chubb's team held more than 700 virtual meetings. At another point during the year, when Covid was less of a threat, the company convened a gathering of its Client Advisory Boards, where about 165 clients met in-person in a safe environment.

In 2021, the division generated records for new accounts and expanding account relationships with existing clients. Chubb's investments in technology, and emphasis on making it easier for distribution partners to do business with the company, led to another record: 267,000 policies and endorsements were issued electronically during the year.

"Listening and staying connected is important, especially in a changing market," said Mr. Lupica. "These forums are essential in giving us feedback, which we use to calibrate our activities and ensure we're doing everything we can to make our company even better."

Chubb's ability to scale up and seize opportunities was on full display in the excess and surplus (E&S) lines market. The company's **Westchester** division, which specializes in hard-to-place casualty, property and specialty lines for middle-market and small businesses, serves wholesale brokers who distribute these products, including specialty classes such as financial lines, product recall and cyber. Traditional brokerage accounts for more than half of Westchester's premiums, with the balance from its small business and programs divisions.

During the softest part of the cycle, Chubb shrank the business. The market began to turn in 2019 and accelerated in 2020. Chubb, which held onto its capabilities, was ready to respond. In 2021, Westchester reported nearly $4 billion in gross premiums written, including its first-ever quarter with premiums that surpassed $1 billion. For

“Throughout the year we leaned in and seized the opportunities of a favorable trading environment. We demonstrated how we can scale this organization while delivering the quality and consistency that clients, agents and brokers value and expect from Chubb.”

– John Lupica

the year, the division posted records for both premium growth and new business.

Chubb Bermuda, which provides high excess casualty and property capacity as well as financial lines and political risk products, was similarly ready to respond to the changing market. Chubb Bermuda operates with a high severity/low frequency business model and offers broad coverage and sizable capacity to clients and brokers around the world.

“For years, Chubb Bermuda waited patiently for the kind of market we saw in 2021,” said Mr. Lupica. “When the market shifted, and rates reached a level of adequacy for the size of capacity we are able to offer, we responded across all of our business lines.”

For 2021, Chubb Bermuda posted its third-consecutive year of double-digit growth as well as record net written premiums. Together, commercial P&C net premiums written for Major Accounts and excess and surplus wholesale grew 14.3% in 2021.

Commercial Insurance is Chubb’s division that provides P&C coverage to small and medium-size companies with revenues up to $1 billion. In 2021, commercial P&C net premiums written in the division grew 15.1% to $6.5 billion, a record.

In the middle-market segment, Chubb is distinguished by its more than 25 industry practices, each handled by teams of experienced underwriting, claims and risk engineering professionals who understand the particular exposures of that industry. The business’s core package product is complemented by the industry’s largest offering of standard and specialty coverages, including auto, workers compensation, marine, cyber, environmental, multinational, directors and officers (D&O), errors and omissions (E&O), and A&H coverages.

The record premiums, including strong growth in new business, reflect in part a concerted focus on engaging with agents and getting more quotes into the market. Among the key areas of growth in 2021 were package, financial lines, which includes Chubb’s cyber insurance offering, and other specialty lines.

One notable innovation in 2021 was the introduction of Benchmarq, a new package product that extends Chubb’s renowned insurance products and services to a broader range of middle-market clients while offering agents and brokers a scalable solution, faster quoting and a streamlined product design.

Chubb continued its progress in expanding its agency footprint and enhancing service for distribution partners. New relationships with nearly 500 independent agencies, serving both commercial and consumer customers, were established during the year. The company also introduced a new digital portal that makes it easier and more efficient for agents to access the transactional and account management applications they use when interacting with Chubb. Another digital tool, a mobile app called Xplore, provides agents with a simple way to gauge Chubb’s risk appetite by industry and class. Chubb also streamlined workflows at its underwriting centers to be more nimble and responsive to agent needs.

Chubb is also bringing together unique combinations of personal accident and supplemental health products targeted to different industry practices. “In North America, we are highly focused on distributing through brokers and agents, further aligning with Chubb’s field organization, and selling our group A&H products to Commercial Insurance customers,” said Joe Vasquez, Senior Vice President, Chubb Group, Global Accident & Health.

Chubb's commercial P&C clients also benefit from the company's in-house network of more than 400 risk engineers, who help businesses identify, anticipate and reduce risks. "Our risk engineers continued to service clients throughout the pandemic, sometimes in unique and creative ways," said Mr. Krump. "We did this while following all of our safety protocols."

In 2021, the equipment breakdown and property casualty risk engineers completed 35,000 client engagements. About 6,000 of these engagements were conducted virtually.

The Chubb Risk Engineering Center, a 14,000-square-foot facility in New Jersey, is a showcase for the breadth of solutions for which the company's risk engineers can design customized programs and services. The center, which opened in 2019, is the only place in the world where property, casualty, worker safety, equipment breakdown and Internet of Things (IoT) training are all offered under the same roof. In 2021, more than 7,000 clients, agents, brokers and colleagues received technical training streamed globally from the state-of-the-art facility.

In the small business segment, Chubb continued to invest in digital technology and data and analytics capabilities that make it easier for customers and agents to do business with the company while driving superior risk selection across the portfolio. Adoption of Marketplace, Chubb's award-winning digital platform that enables agents to quote, issue and service their small business accounts, continued to grow. By the end of 2021, Marketplace was deployed to nearly 39,000 users at 4,185 agencies. Enhancements to the platform in 2021 included a new errors and omissions solution, called Pro ERM℠, which provides small businesses with a single policy that addresses professional, media and cyber exposures.

Overall, the small business segment grew strongly in 2021, including double-digit growth in new business owners policy customers.

North America Agricultural Insurance

Chubb's Rain and Hail subsidiary is the leading crop insurer in North America. The business serves approximately 120,000 farmers, insuring approximately 120 different crops on 80 million acres. Chubb's North America agriculture segment includes Chubb Agribusiness, which is focused on P&C offerings that provide commercial insurance coverages for manufacturers, processors and distributors in the agriculture sector. Chubb also offers property insurance for farms and ranches, including hobby farms, complex corporate farms and equine services.

For the year, the segment produced a combined ratio of 89.1%, versus 92.0% in 2020. Segment income was $256 million. Net premiums written were $2.4 billion, up 29.3% from prior year.

Crop insurance is a public-private partnership that operates with a proven model. The federal government sets the rates, terms and conditions. Market participants like Chubb compete based on service, technology, risk selection and claims handling. It's a playing field where Rain and Hail brings strengths, including experienced underwriters, unmatched data, a significant branch network and strong agency relationships. In 2021, Rain and Hail distinguished itself by writing 4,000 new crop policies and paying claims to farmers quickly in a year where agricultural communities faced drought, flood and freezing conditions that damaged crops. For the sixth consecutive year, Chubb was rated the #1 insurer in technology in a survey commissioned by the largest Farm Credit Associations.

> "We wake up every day ready to provide exquisite service, with empathy, while looking for ways to continually improve to meet the evolving needs and expectations of our clients."
>
> – Paul Krump

> “In sum, it was a tremendous year. Our performance is a credit to Chubb’s culture, the work ethic of our people, the flexibility and resiliency of our organization, and the work we’ve done over the years to build a technology infrastructure that allowed for all that to happen.”
>
> – John Keogh

“The multi-peril crop insurance program provides a critical safety net to ensure that the American farmer is able to continue to deliver a safe, stable food supply in an economical manner,” said Mr. Lupica. “We’re honored to be a leader that is recognized for the expertise and quality of service we bring to help protect farmers against crop failure and extreme change in crop value.”

North America Personal P&C Insurance

Chubb is the leading provider of personal lines insurance for successful individuals and families in the U.S. and Canada. Chubb Personal Risk Services is known for its broad product offering, superior claims and risk consulting services, and access to Chubb’s extensive branch network in the U.S. and Canada. Chubb clients also benefit from the company’s global presence, which offers protection for their assets around the world.

Net premiums written for the North America Personal P&C Insurance segment were $5.0 billion, up 1.7% from prior year. The combined ratio was 85.5%. Segment income was $955 million.

“Chubb has always been on the leading edge of innovating in this space,” said Mr. Lupica. “We want our clients to feel like they aren’t fully protected without us and our agents to feel like we’re their strongest partner. At the same time, we want to offer the value and service we bring at a fair price.”

Chubb clients benefit from services such as Chubb Property Manager℠, which provides policyholders with assistance for second homes that suffer damage from hurricane-force winds; Wildfire Defense Services, which monitors and protects homes threatened by wildfire; and an Internet of Things monitoring program that can alert wine collectors via a smartphone app to fluctuations in temperature, humidity and other conditions in their wine storage that can significantly alter the quality of the wine. During the year, the PRS team conducted about 18,000 virtual claims adjusting and risk consulting visits.

Chubb is investing in digital capabilities that offer benefits to clients and agents. Examples include an update to the popular mobile app that allows clients to track wildfires, hurricanes, earthquakes and other major events in relation to their insured properties. The business also introduced an app for agents and is rolling out a new “easy quote” process that pre-fills certain information, making it easier and faster for distribution partners to quote new business.

Chubb’s ability to serve customers and partners with excellence also requires investing in our people. In 2021, the company redoubled its efforts to attract and retain talent in what became a challenging hiring environment for companies in all industries. During the year, Chubb filled more than 3,600 positions in North America – double 2020 and 42% higher than 2019. Some 60% of open roles were filled with internal promotions. Nearly 6,500 employees in North America completed over 1,000 learning and development programs.

“In sum, it was a tremendous year,” said Mr. Keogh. “We conducted our business in a way that would never suggest we faced so many challenges around the world, from elevated catastrophes to the constantly changing environment that Covid presented to us. Our performance is a credit to Chubb’s culture, the work ethic of our people, the flexibility and resiliency of our organization, and the work we’ve done over the years to build a technology infrastructure that allowed for all that to happen.”

Chubb Corporate and Global Functional Leaders

From left

Peter Enns
Executive Vice President,
Chubb Group;
Chief Financial Officer

Rainer Kirchgaessner
Executive Vice President,
Chubb Group;
Global Corporate
Development Officer

Jo Ann Rabitz
Senior Vice President,
Chubb Group;
Global Human Resources
Officer

Timothy Boroughs
Executive Vice President,
Chubb Group;
Chief Investment Officer

From left

Joseph Wayland
Executive Vice President,
Chubb Group;
General Counsel

Sean Ringsted
Executive Vice President,
Chubb Group;
Chief Risk Officer and Chief
Digital Business Officer

Julie Dillman
Executive Vice President,
Chubb Group;
Senior Executive, Operations
and Technology, and Digital
Transformation Officer

Michael W. Smith
Senior Vice President,
Chubb Group;
Global Claims Officer

Key Financial Results

Dollars in millions

Overseas General Insurance

2021	
Gross premiums written	$13,262
Net premiums written	$10,713
Combined ratio	86.4%
Segment income	$1,970

Chubb's international general insurance operation comprises two main businesses: one with a retail presence in four regions of the world and the other an excess and surplus lines operation in the London wholesale market.

"Chubb's strengths propelled us to excellent results in 2021," said Juan Luis Ortega, Executive Vice President, Chubb Group and President, Overseas General Insurance. "In our commercial P&C businesses, we were ready to benefit from the hard market, notably in the U.K., Continental Europe, Australia and the London wholesale market. With our products, distribution and services, we were able to pursue opportunities from a position of strength. Most important, our people were engaged and out in the market."

During the year, Chubb also focused on advancing other strategies, including building its middle-market and small commercial capabilities and products. Investments in digital service and distribution gained momentum, as Chubb ended the year with more than 185 digital partners globally across multiple industry verticals. Mr. Ortega added, "While our consumer businesses continued to be affected by the pandemic, consumer activity picked up in the second half of the year, and we have a growing platform of possibilities."

Overall, Overseas General Insurance generated net premiums written of $10.7 billion in 2021, up 14.8%. Commercial P&C businesses grew 21.4% while net premiums written in consumer businesses increased 5.6%. The combined ratio for the year was 86.4%. Segment income was nearly $2.0 billion.

The **Europe** region, which also houses the company's operations in Middle East and Africa, produced $3.9 billion of net written premium in 2021, up 19.3% from prior year. Commercial P&C net premiums written in Europe were up 24.2%. In the **Asia-Pacific** region, net premiums written were $2.7 billion, up 12.4% from prior year, with commercial P&C premiums up 19.2%. The **Latin America** region generated net premiums written of $2.0 billion, up 6.1% from 2020. Commercial P&C net written premiums were up 8.5%. In the **Far East** region, which encompasses Japan, net premiums written grew 0.9%, with commercial P&C up 3.2%.

Chubb's ability to seize opportunity is even more evident when looking at growth since the market first began to firm. From 2018 to 2021, net premiums written in commercial P&C businesses grew 40.9%. That represents a three-year compound annual growth rate of 12.1%. Growth was led by the company's Europe and Asia-Pacific regions, which posted double-digit compound average growth rates over the three-year period.

"As others in the industry changed their risk appetite, businesses came to us," said Mr. Keogh. "We were present in markets around the world in a very significant way. When others became more risk averse, we were ready, able and willing to take on that risk. The opportunities for Chubb were vast and broad-based."

Major Accounts, Chubb's P&C business unit that serves large corporations, helped to drive the strong growth in commercial P&C. Chubb

Chubb's Overseas General Insurance Business Units

International	Commercial P&C, A&H and traditional and specialty personal lines sold by retail brokers, agents and other channels in four regions:
Europe	Operations in 27 countries, including seven in the Middle East and Africa, comprising P&C commercial lines and consumer lines, including A&H and specialty personal lines
Asia-Pacific	Operations in 14 countries and territories serving commercial customers and consumers with P&C, A&H and personal lines
Latin America	Operations in nine countries serving commercial customers with P&C products and consumers through A&H and personal lines
Far East	Operations in Japan serving commercial customers with P&C products and consumers through A&H and personal lines
Chubb Global Markets	Commercial P&C excess and surplus lines sold by wholesale brokers in the London market and through Lloyd's

has capabilities, including best-in-class service, underwriting expertise, an extensive product offering, and a broker- and client-centric culture, that few, if any, competitors can match. In 2021, Major Accounts added 1,500 new products to its client base. The business wrote new global insurance programs for multinational corporations in numerous industries, including aerospace, chemical manufacturing and hospitality. Major Accounts wrote new property programs for hundreds of clients, and added property capacity for hundreds of others.

"Chubb execution in 2021 was excellent," said Mr. Ortega. "In Major Accounts, we successfully leveraged our global network, consistent capacity and risk appetite, risk manager relationships, and Global Client Executive practice," which makes the management of complex risks easier for a select group of large domestic and multinational clients and their brokers.

Another major driver of growth in the company's international commercial P&C business was **Chubb Global Markets**, which provides global access to specialist underwriters in aviation, energy, financial lines, marine, political risk and credit, and property. Like Chubb Bermuda and Westchester in North America, Chubb Global Markets stands as an example of the company's underwriting discipline, patience and ability to shift from defense to offense. For several years leading up to 2017, Chubb intentionally shrunk the business in the face of a challenging underwriting environment. As the market turned, Chubb pursued growth aggressively. Since 2018, net premiums written have doubled. The business posted record net written premiums in 2021, up 38.1% from prior year, and the best performance since 2004.

“Chubb’s strengths propelled us to excellent results in 2021. With our products, distribution and services, we were able to pursue opportunities from a position of strength. Most important, our people were engaged and out in the market.”

– Juan Luis Ortega

In recent years, Chubb has also been building its middle-market and small commercial P&C capabilities in all regions. These local capabilities give the company access to better-priced business. Chubb is focused on further enhancing digital technology and platforms to make it even easier for clients and brokers to do business with the company. In Australia, for example, Chubb has put in place fully automated digital platforms that connect with more than 700 broker organizations across the nation, streamlining the process for agents and brokers to quote, issue and service their small business clients. Chubb is distributing a range of products through these platforms, including business package, professional indemnity, general liability, management liability and cyber. In 2021, premiums from new business grew nearly 50%. Across all platforms, about 80% of transactions were handled with straight-through processing, which doesn’t require manual intervention.

Chubb investments in digital technology are further expanding and diversifying the company’s distribution relationships. The company’s products and services are offered through approximately 20,000 independent agents and brokers and directly to the customers of affinity partners and sponsor organizations through telemarketing and digital and mobile channels.

Chubb’s award-winning tech integration platform, **Chubb Studio**, which was introduced in 2020, is gaining momentum. Studio provides partner companies with digital access to Chubb’s extensive range of consumer and small business insurance products, customer services and claims. By embedding in partner company ecosystems using API technology, Chubb is able to deliver contextual insurance offerings to their customers seamlessly.

To date, Chubb has entered into digital partnerships with a growing number of leading brands across financial services, e-commerce, super apps, and major airlines. These partnerships give us entry to an addressable market of more than 300 million customers, most of them in Asia and Latin America.

Increasingly, Chubb’s digital capabilities are attracting the attention of so-called digital natives, which are businesses that got their start selling their products or services online. In Asia, for example, Chubb is offering accident and illness protection to customers of Kredit Pintar, an Indonesian fintech that offers short-term consumer loans. In the Philippines, users of the GCash mobile wallet can enroll in a bill protection product powered by Chubb. In Latin America, Chubb expanded its partnership with Nubank, the largest independent digital bank in the world, to offer a broader range of life and general insurance products in Brazil. Betterfly, a Latin American digital benefits platform used by companies to encourage employees’ commitments to self-care, chose Chubb as its preferred insurance provider for Mexico, Colombia, Ecuador, Chile and Argentina. With Rappi, a super-app in Latin America, Chubb launched a 100% digital home and mobile phone insurance offering. Rappi and Chubb are also working together to co-create innovative and customized products for users of RappiBank and RappiTravel, two of the super-app's verticals.

Chubb is expanding its digital capabilities in order to best serve insureds in a rapidly shifting world. Throughout the pandemic, the company rolled out portals to help customers make claims quickly and easily. Claims adjudication has been automated for certain kinds of claims, including travel insurance. "We are only at the beginning of how we can digitally enhance our customer claims experience," said Mr. Ortega.

Maintaining and enhancing Chubb's market-leading standard of claims service is a continuing priority. "In another year of elevated CATs, and the second year of the pandemic, claims teams across our regions continued to provide top-class, rapid-response claims service," noted Mr. Krump.

Chubb's global capabilities include an industry-leading range of personal accident and supplemental health products. "An overarching tenet for Chubb's Global A&H organization is to continue to provide distinguished service and innovative products to our customers and distribution partners," said Mr. Vasquez. "For example, we introduced a variety of unique A&H travel insurance products that provided coverage for Covid-19. These products allowed our insureds to confidently travel overseas despite the uncertainty caused by the pandemic."

The company's sizable A&H business in Asia-Pacific is positioned to expand further with the completion of the pending acquisition of the life and non-life insurance companies of Cigna in seven markets in the region. The Cigna business, which is overwhelmingly A&H, is highly complementary with Chubb's operations. Notably, the digital opportunity across the region, which is large and untapped, is suitable for Chubb's direct-marketed A&H products as well as consumer P&C and simple life insurance products. Upon closing, which is expected in 2022, Asia's share of Chubb's global portfolio will increase from approximately $4 billion to $7 billion in premium and represent 18% of the company. Chubb's global supplemental A&H premiums are expected to grow from $3.8 billion to $6.3 billion. Another important development in Asia: In 2021, Chubb entered into agreements with several shareholders to purchase additional ownership interests in Huatai Group, a Chinese financial services holding company that, upon regulatory approval of all outstanding agreements, will bring Chubb's total aggregate ownership to 86.1%.

The arrival of the Covid-19 pandemic at the beginning of 2020 caused a significant slowdown in consumer activity globally. For Chubb, this had an impact on sales in some consumer lines, including travel insurance, cars and cell phones. Growth, however, started to return in the second half of 2021. While sales were down, Chubb continued to invest. For example, the company implemented digital enhancements to its customer contact center that serves millions of consumers in Asia and Latin America, allowing them to quickly resolve basic issues while having access to a representative who can assist with more complex inquiries.

"During this period, our consumer teams in Overseas General focused on building our capabilities in their respective regions," said Mr. Keogh. "We're going to have more presence, partners and distribution coming out of Covid than we did going in."

To ensure the business will continue to pursue opportunity and navigate challenges, Chubb continues to invest in its people. One of the principal ways the company develops talent is by promoting intra- and inter-regional mobility that exposes employees to different markets and cultures. Last year, 120 colleagues undertook new international assignments. Every year, more than 1,500 colleagues are promoted into a new job or granted expanded responsibilities. These career progression opportunities recognize the performance of colleagues and create an environment for continuous learning. New programs in 2021 include the launch of the Chubb Academy, an early career development program, in five European countries. The company also introduced a general management program for the next generation of leaders.

"Our international general insurance operation is strong and well diversified," Mr. Ortega concluded. "We have local presence, seasoned professionals across our commercial and consumer businesses, industry leading products and service capabilities, and a well-connected platform of digital services and distribution that make us the insurance partner of choice around the world."

Life Insurance

Key Financial Results

Dollars in millions

Life Insurance

2021	
Net premiums written	$2,477
Segment income	$418
Total international life insurance net premiums written and deposits	$3,751
International life insurance segment income	$140

Chubb's Life Insurance segment comprises two businesses. Chubb Life is an international life insurer, primarily focused on Asia, that provides protection and savings-oriented life insurance products to individuals and groups. Combined Insurance provides personal accident and supplemental health insurance coverages to consumers in North America.

For the year, the Life Insurance segment generated net premiums written of $2.5 billion, down 1.5% from prior year. Segment income was $418 million, up 4.1%.

Chubb Life

Chubb Life serves the needs of consumers through a variety of distribution channels including primarily captive agents, but also through banks, retailers, brokers, independent agents and direct marketing. Chubb Life has operations in seven Asian markets – Hong Kong, Indonesia, Korea, Myanmar, Taiwan, Thailand and Vietnam – as well as Latin America. In China, the company is also a joint venture partner in Huatai Life, a fast-growing life insurer that serves more than 1.2 million customers with a broad portfolio of savings and protection products. Collectively, Chubb Life and Huatai Life have approximately 540 offices, 4,300 employees and 83,000 agents.

The second year of the pandemic caused headwinds for the business, including surging infection rates in a number of key Asian markets that prompted extended lockdowns and dampened consumer activity. Chubb Life's continuing pivot to expand digital distribution, however, contributed to a 9.4% increase in international life insurance net premiums written. For the year, total international life insurance net premiums written and deposits were up 36.1%. International life insurance segment income was down 15.8%, driven by higher year-over-year Covid-related charges of $63 million.

Among its markets in Asia, Taiwan had an especially strong year through both bank and broker distribution channels.

"The agency channel has been and remains very important to us," said Brad Bennett, Senior Vice President, Chubb Group and Chief Operating Officer, Chubb Life. "The operating environment of the past two years, however, has led us to accelerate our digital strategies. This includes the digital distribution of our life products through a growing list of affinity partners but also the use of digital technologies to effectively recruit and train agents."

In 2021, Chubb Life launched more than two dozen partnerships in markets across Asia, with several more in Latin America. These distribution partnerships offer life insurance products, often alongside the company's A&H and other personal lines products in an embedded contextual way.

In Thailand, for example, Chubb Life and Krungsri Auto Broker offer car, motorcycle and "car for cash" loan payment protection insurance to customers of the auto broker. Customers will have access to a user-friendly online digital purchasing option, in addition to traditional in-store sales.

Chubb Studio, the company's global digital distribution platform, has opened the door for digital partnerships of life products across the region, including Thailand, Indonesia and Vietnam. “We’re actively pursuing the creation of digital products that will align with those partner opportunities, and investing in talent to help us accelerate that,” said Mr. Bennett.

For its agency distribution channel, Chubb Life also embraced digital approaches to recruiting and training new agents. The agency force grew 18% to nearly 58,000 in 2021. Onboarding of new agents was facilitated with virtual workshops, for example. The business also found new ways to recognize and reward high-performing agents when travel and in-person events were not an option. Recognition events for high-performing agents, which once would have been done in person, were adapted for virtual channels. Events drew hundreds of agents to watch their colleagues accept awards. “We began to emphasize digital recruiting when the pandemic first arrived, and our progress accelerated in 2021,” said Mr. Bennett.

Other highlights include the launch in Thailand of a new retirement savings product, called Retirement Extra 15, which is designed to support the working population and their retirement plans. After the 2021 launch of Chubb LifeBalance, a personal 360° health and well-being virtual coach app, the business in the Southeast Asian nation unveiled a new rewards program to motivate customers to maintain healthy, active lifestyles. In Hong Kong, where life expectancy is increasing, Chubb Life launched the Chubb Gold Fortune Deferred Annuity plan, which offers increasing guaranteed income over time. The company’s business in Vietnam received multiple awards, including being named by *HR Asia Magazine* as one of the best places to work in Asia.

The pending acquisition of Cigna’s A&H and life business in seven Asia Pacific markets will, upon completion, complement and expand Chubb’s Asia-based life insurance presence, more than tripling Chubb’s life company premiums to approximately $4 billion. While the Cigna business largely comprises A&H products, Chubb Life expects to pursue opportunities to access a larger customer base with its simple life insurance products. There will also be opportunities to market general insurance products to customers of Chubb Life. The transaction is expected to close in 2022.

While Chubb Life is focused on Asia, it has operations in other parts of the world, including Brazil, Chile, Ecuador and Mexico in Latin America. In the last year, Chubb expanded its relationship with Nubank, the largest independent digital bank in Brazil. Now, customers of Nubank and Nubank Vida, the fully digital life insurance offering in Brazil, can obtain cell phone insurance from Chubb.

“We have been pursuing a consistent and deliberate strategy to build Chubb Life,” said Mr. Bennett. “The addition of the Cigna A&H and life business in the region validates that we’re here to stay.”

Combined Insurance

In 2022, Combined Insurance is celebrating a major milestone: It’s been 100 years since the business was founded. Over the decades, Combined Insurance has evolved into a leading provider of supplemental health, accident, disability and life insurance products across the U.S. and Canada. While Combined remains committed to its deep roots as a leader in the individual market, the company is expanding and diversifying distribution to meet the changing needs of small, mid-size, and large businesses and the brokers who serve them.

> “The operating environment of the past two years has led us to accelerate our digital strategies, including the digital distribution of our life products through a growing list of affinity partners.”
>
> – Brad Bennett

“The company is going through a transformation now. We’re making investments to build our voluntary workplace benefits business that focuses on small employers.”

– Joe Vasquez

“The company is going through a transformation now,” said Joe Vasquez, Senior Vice President, Chubb Group, Global Accident & Health. “We’re making investments to build our voluntary workplace benefits business that focuses on small employers, a market segment with more than 6 million businesses in the U.S. For employers, our solutions can provide a competitive edge for staff recruitment and retention. For employees, protections from supplemental health insurance coverage can offer greater peace of mind.”

Combined Insurance’s agency business is targeting businesses with fewer than 200 employees – a large, underserved market. The company has bolstered its sales team with the addition of leaders with deep worksite experience, and is actively recruiting agents and sales managers with similar or complementary expertise. Agents are being equipped with technology that allows them to quickly and conveniently onboard new employers and enroll employees at the workplace, virtually or in person. The broad product offering, which may be offered individually or as a package, includes accident, critical illness, hospital indemnity, term or universal life, and Sick Pay Plus, a short-term disability product that provides day-one coverage for insureds who are sick or hurt and cannot work.

Combined Insurance also is leveraging its product breadth and capabilities to serve mid-size and large clients, as well as the customers of affinity partners. Chubb Workplace Benefits partners with benefit brokers, agents, and consultants to offer a line of supplemental insurance products specifically equipped to support the needs of these segments.

With regard to the individual market, Combined Insurance continues to offer supplemental health, accident, disability and life insurance policies to help people in all 50 U.S. states and all 10 Canadian provinces be better prepared for the unexpected. Combined Insurance currently serves nearly 4 million policyholders.

Among the ranks of agents and employees at Combined Insurance, military veterans are well represented. Since the company launched its veteran recruiting program in 2010, it has hired more than 5,500 veterans, military spouses, and/or their family members. Combined Insurance’s commitment to be a welcome place, where those who served their country can grow their careers, has been recognized by VIQTORY, the publisher of *G.I. Jobs®* magazine.

In 2021, for the fourth consecutive year, VIQTORY named Combined Insurance the top Military Friendly® Employer in the U.S. among businesses with $1 billion to $5 billion in revenue. The company has been ranked a Top 10 Military Friendly® Employer for 11 consecutive years.

“As we begin our second century in business, Combined Insurance is making investments and pursuing strategies that build on our traditional strengths, while tapping opportunities to deliver new solutions that offer value for employers and brokers,” said Mr. Vasquez.

Global Reinsurance

Key Financial Results

Dollars in millions

Global Reinsurance

2021	
Gross premiums written	$996
Net premiums written	$873
Combined ratio	108.7%
Segment income	$262

Chubb's reinsurance business, which operates under the Chubb Tempest Re brand, offers a broad range of products to a diverse group of primary property and casualty insurers worldwide. Doing business globally with offices in Bermuda, Stamford, London, Montreal and Zurich, the business has deep underwriting, actuarial and claims expertise.

For reinsurers, the marketplace improved in 2021 given changes in rate, terms and conditions in the primary market. "Throughout the year, we were finding more business that met our targets for achieving adequate risk-adjusted returns. We were more engaged, looked at more opportunities and wrote more business," said James Wixtead, Senior Vice President, Chubb Group and President, Chubb Tempest Re Group. "Yes, 2021 was a better market for reinsurers. But it wasn't a hard market as reinsurance capacity is still plentiful."

Reinsurers faced another year of elevated natural catastrophes, along with rising loss costs in long-tail lines, in part due to social inflation. Investors seeking higher yields continued the flow of capital into the reinsurance industry. The opportunities and challenges of 2021 are reflected in the results of Chubb's Global Reinsurance segment. Net premiums written were $873 million, up 19.5% from prior year. The combined ratio was 108.7% and segment income was $262 million, down 26.8% from 2020 and negatively impacted by $212 million of CAT losses.

Chubb Tempest Re's approach to navigating this market is also influenced by its status as a subsidiary of a leading global P&C insurer. It benefits from Chubb's global reach, financial strength and deep insights into insurance markets across geographies and lines of business. Chubb's geographic and product diversity also gives the company optionality in terms of where it can deploy capacity to achieve adequate risk-adjusted returns. In 2021, the robust commercial P&C insurance operating environment in the U.S. and around the world provided more such opportunities than did reinsurance.

Chubb will put its capital to work where it will achieve the best risk-adjusted returns. Consequently, Chubb Tempest Re's targets for an acceptable combined ratio and return on equity can be higher than the hurdles faced by other market participants for which reinsurance is their only business. Chubb Tempest Re actively manages its portfolio within its risk appetite and consistent underwriting guidelines. One example is reallocating capacity from property CAT to property pro rata, where there is less volatility and better expected margins.

"We continue to see challenges that create opportunities in the reinsurance market, including elevated loss activity driven by weather-related losses, supply chain issues and inflation, among other issues," said Mr. Wixtead. "We're focused on staying true to our understanding of the risk environment and how to address it. Tempest maintains a conservative outlook for risk and believe that has served us well throughout the cycle. As the market conditions improve, we are poised to be a beneficiary of the favorable trading environment."

Our Mission

Protecting the Present and Building a Better Future

Good corporate citizenship lies at our core – how we practice our craft of insurance, how we work together to serve our customers, how we treat each other, and how we work to help make a better world for our communities and our planet. Citizenship is about responsibility – and we express that responsibility in a way that reflects our core values and our mission to protect the present and build a better future.

We accomplish our mission by providing the security from risk that allows people and businesses to grow and prosper. Our mission is realized by sustaining a culture that values and rewards excellence, integrity, inclusion and opportunity; by working to protect our planet and assisting less fortunate individuals and communities in achieving and sustaining productive and healthy lives; and by promoting the rule of law.

From our roots in 18th century Philadelphia, we have built Chubb to be a dynamic, forward-looking global enterprise with a commitment to responsible citizenship. We act on this promise of responsibility through a wide range of activities that include our contributions of time and money.

Philanthropy

The Chubb Charitable Foundation believes that meaningful contributions that support our communities globally provide lasting benefits to society, to Chubb and to Chubb employees. Through philanthropy, global partnerships and company-sponsored volunteer activities focused on giving the gift of time and donations, the Foundation supports clearly defined projects that solve problems with measurable and sustainable outcomes, helping people in the countries where we live and work build productive and healthy lives.

Our philanthropy is funded principally through the Chubb Charitable Foundation and the Chubb Rule of Law Fund. Our commitment to assist those with fewer resources and to be stewards of the planet is focused on the areas of education, poverty and health, and the environment. In the last decade, Chubb has contributed more than $100 million to the Foundation.

For example, the Chubb Charitable Foundation has supported the International Rescue Committee. Through partnerships with The Nature Conservancy, Rainforest Trust and other conservation organizations, the Foundation supports programs to save endangered wildlife, protect threatened lands and waters, and promote resiliency. Additionally, the Foundation serves as a major partner with Teach for America and Teach for All programs in the U.S. and globally.

As part of our commitments to expand and enhance our broader diversity, equity and inclusion agenda, we are working through the Chubb Charitable Foundation to support a range of programs to address inequality and promote social, economic and racial justice. For example, in 2021, the Foundation established a scholarship with Georgia State University's risk management and insurance program to support students from diverse backgrounds and expand the pipeline of those individuals in the insurance industry.

Environment & Climate Change

Chubb recognizes the reality of climate change and the substantial impact of human activity on our planet. We realize our commitment to be a steward of the earth in a number of ways: recognizing and responding to the reality of climate change across our businesses; managing environmental risk for our customers with innovative products and risk engineering solutions; supporting environmental resiliency projects throughout the world; protecting biodiversity and saving land through our philanthropy; and reducing the environmental footprint of our own operations.

Chubb develops insurance products and risk management services that facilitate market-based solutions to current and pending environmental and climate-related issues.

The Chubb Charitable Foundation and the company's employees support a range of environmental philanthropies, as well as volunteer activities in local communities around the world.

In 2019, Chubb was the first insurer with major U.S. operations to adopt a policy concerning coal-related underwriting and investment. The company's short-term, science-based greenhouse gas (GHG) emissions reduction goal, which uses 2016 as the baseline, was achieved in 2019. Chubb is committed to its long-term goal of reducing absolute GHG emissions 40% by 2035.

In 2021, Chubb announced its support for a global transition to a net zero economy by 2050. During the year, Chubb also adopted the Task Force on Climate-related Financial Disclosures (TCFD) framework and released its first TCFD report.

Diversity, Equity & Inclusion

Chubb operates within a dynamic and changing global environment where marketplaces and customers are culturally diverse and broad. Meeting diverse customer needs requires the best minds collaborating in a rewarding and supportive environment. We recognize our responsibility to ensure opportunity within our own organization by creating an atmosphere where all colleagues, regardless of who they are, feel comfortable bringing their best to the table. Our strategy for diversity, equity and inclusion (DE&I) is designed to support Chubb's ability to attract, develop and retain the best talent – regardless of background.

Chubb's culture holds true to the principles of accountability and ownership and requires collective and individual responsibility. Making and sustaining progress requires holding leadership accountable; developing and advancing diverse talent; increasing gender and multicultural leadership diversity; and deploying inclusive recruitment, development and promotional practices.

Since 2020, Chubb has committed to taking specific actions related to racial equity in recruitment, career development and advancement opportunities; promoting a greater sense of belonging for Black colleagues; and increasing the knowledge and understanding of the Black employee experience through open two-way dialogue and education. These actions support our goal of becoming an anti-racist company.

Other DE&I initiatives include mentorships and affinity groups, such as Business Roundtables and Regional Inclusion Councils, which promote dynamic networking across the business and engage hundreds of employees in constructive dialogue.

To provide further transparency and accountability for its DE&I efforts, Chubb began publishing its EEO-1 workforce demographic data in 2022.

Chubb Rule of Law Fund

As a corporate citizen, Chubb recognizes the rule of law as the foundation of a liberal world order that the company embraces as essential to the proper functioning of markets and the protection of personal freedoms. Through the Chubb Rule of Law Fund, a unique corporate initiative, we support projects around the world that promote the preservation and advancement of the rule of law.

Since it was founded in 2008, the Fund has supported 66 projects in countries around the world focused on improving access to justice, strengthening courts, fighting corruption and creating the conditions of security and freedom in which our customers, employees and fellow citizens can thrive.

The events that unfolded across the U.S. in 2020 focused Chubb's attention more intensely on the persistent challenges arising from bigotry, racism and racial injustice in society, particularly for Black people. Chubb is taking specific actions to be an anti-racist company, including supporting programs through the Chubb Rule of Law Fund to address inequality and promote social, economic and racial justice. The Fund has made seven grants – including four announced in early 2021 that total $1.1 million – for initiatives to improve police and community relations, and to understand and reduce racial inequities throughout the criminal justice process.

The Chubb Rule of Law Fund is funded by the Chubb Charitable Foundation and contributions from Chubb's partner law firms.

Officers and Executives

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General Counsel

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Senior Vice President, Chubb Group;
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Division President, Chubb Global Markets

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Global Head of Operations and Technology

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Division President, North America Field Operations

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Chief Communications Officer

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Senior Vice President, Chubb Group;
Division President, North America Major Accounts

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Division President, Westchester

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Deputy Chief Risk Officer

Paul O'Connell
Senior Vice President, Chubb Group;
Chief Actuary

Jo Ann Rabitz
Senior Vice President, Chubb Group;
Global Human Resources Officer

Michael W. Smith
Senior Vice President, Chubb Group;
Global Claims Officer

Derek Talbott
Senior Vice President, Chubb Group;
Division President, North America Property
and Specialty Lines

Joe Vasquez
Senior Vice President, Chubb Group;
Global Accident & Health

James E. Wixtead
Senior Vice President, Chubb Group;
President, Chubb Tempest Re Group

Scott Arnold
Vice President, Chubb Group;
Division President, Chubb Agriculture;
President, Rain and Hail

Ross Bertossi
Vice President, Chubb Group;
Global Underwriting

*Chubb Limited Executive Management and Executive Officer for SEC reporting purposes
**Executive Officer for SEC reporting purposes

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Division President, North America Financial Lines

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Vice President, Chubb Group;
Division President, Chubb Bermuda

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Vice President, Chubb Group;
Chief Accounting Officer

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Division President, North America Surety;
Chief Underwriting Officer, Global Surety

Michael Kessler
Vice President, Chubb Group;
Division President, Global Cyber Risk

Yancy Molnar
Vice President, Chubb Group;
Head of International Government Affairs & Public Policy

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Vice President, Chubb Group;
Division President, Commercial Property and Casualty
Overseas General Insurance

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Division President, Personal Insurance
Overseas General Insurance

Shekar Pannala
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Vice President, Chubb Group;
Division President, North America Personal Risk Services

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Division President, North America Middle Market

Jeffrey Updyke
Vice President, Chubb Group;
Head of North America Lower Middle Market

Karen Valanzano
Vice President, Chubb Group;
Head of Federal Government & Political Affairs

Other Executives

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Chief Administration Officer, Bermuda Operations

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Ivy Kusinga
Chief Culture Officer, Chubb Group

Eric Larson
Chief Compliance Officer, Chubb Group

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Westchester

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George Ohsiek
Chief Auditor, Chubb Group

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Mark Roberts
Division President, United Kingdom, Ireland and South Africa

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Ketan Vaidya
Division President, North America
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Retired Chief Financial
and Business Officer
Ophthotech Corporation

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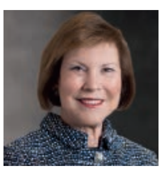
Harvard University



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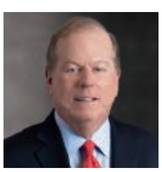
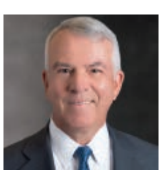
Vice President and
Managing Director
Deutsche Bank



Michael P. Connors
Lead Director
Chubb Limited

Chairman and
Chief Executive Officer
Information Services
Group, Inc.



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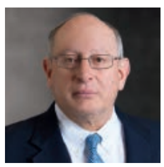
Robert W. Scully
Retired Co-President
Morgan Stanley

Eugene B. Shanks, Jr.
Retired President
Bankers Trust Company



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Wellington Management
Company

David H. Sidwell
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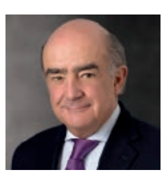
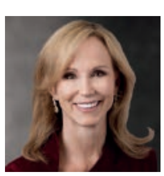
Financial Officer
Morgan Stanley

Olivier Steimer
Former Chairman
Banque Cantonale
Vaudoise



Luis Téllez
Former Chairman and
Chief Executive Officer
Mexican Stock Exchange



Frances F. Townsend
Executive Vice President
for Corporate Affairs,
Corporate Secretary and
Chief Compliance Officer
Activision Blizzard

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Theodore E. Shasta
David H. Sidwell
Luis Téllez

Compensation Committee
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Nominating & Governance Committee
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Risk & Finance Committee
Olivier Steimer, Chair
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Sheila P. Burke
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Eugene B. Shanks, Jr.

Executive Committee
Evan G. Greenberg, Chair
Mary Cirillo
Michael P. Connors
Robert W. Scully
Olivier Steimer
Frances F. Townsend

Shareholder Information

Visit investors.chubb.com, write to the Investor Relations Department at Chubb Limited or email investorrelations@chubb.com for copies of the company's reports to the Securities and Exchange Commission on Form 10-K, Form 10-Q or Form 8-K, all of which are available without charge.

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New York Stock Exchange Symbol

CB

Chubb Common Shares CUSIP Number

H1467J 104

Cautionary Statement Regarding Forward-Looking Statements

Forward-looking statements made in this document, such as those related to company performance, growth opportunities, economic and market conditions, and our expectations and intentions and other statements that are not historical facts, reflect our current views with respect to future events and financial performance and are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such statements involve risks and uncertainties that could cause actual results to differ materially, including without limitation, the following: competition, pricing and policy term trends, the levels of new and renewal business achieved, the frequency and severity of unpredictable catastrophic events, actual loss experience, uncertainties in the reserving or settlement process, integration activities and performance of acquired companies, loss of key employees or disruptions to our operations, new theories of liability, judicial, legislative, regulatory and other governmental developments, litigation tactics and developments, investigation developments and actual settlement terms, the amount and timing of reinsurance recoverable, credit developments among reinsurers, rating agency action, infection rates and severity of pandemics and their effects on our business operations and claims activity, possible terrorism or the outbreak and effects of war, economic, political, regulatory, insurance and reinsurance business conditions, potential strategic opportunities including acquisitions and our ability to achieve and integrate them, as well as management's response to these factors, and other factors identified in our filings with the Securities and Exchange Commission (SEC). Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the dates on which they are made. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

This report is printed on papers certified to the international standards of the Forest Stewardship Council (FSC), which promotes responsible management of the world's forests.

Non-GAAP Financial Measures
This document contains non-GAAP financial measures. The below non-GAAP financial measures, which may be defined differently by other companies, are important for an understanding of our overall results of operations and financial condition. However, these measures should not be viewed as a substitute for measures determined in accordance with generally accepted accounting principles (GAAP).

We provide certain financial measures on a constant-dollar basis (i.e., excluding the impact of foreign exchange). We believe it is useful to evaluate the trends in our results exclusive of the effect of fluctuations in exchange rates between the U.S. dollar and the currencies in which our international business is transacted, as these exchange rates could fluctuate significantly between periods and distort the analysis of trends. The impact is determined by assuming constant foreign exchange rates between periods by translating prior period results using the same local currency exchange rates as the comparable current period.

Core operating income, net of tax, excludes from net income the after-tax impact of adjusted net realized gains (losses) and the amortization of fair value adjustment of acquired invested assets and long-term debt related to The Chubb Corporation (Chubb Corp) acquisition. We believe this presentation enhances the understanding of our results of operations by highlighting the underlying profitability of our insurance business. We exclude adjusted net realized gains (losses) because the amount of these gains (losses) are heavily influenced by, and fluctuate in part, according to the availability of market opportunities. Adjusted net realized gains (losses), net of tax, includes net realized gains (losses) and net realized gains (losses) recorded in other income (expense) related to unconsolidated subsidiaries, and excludes realized gains and losses on crop derivatives. We exclude the amortization of the fair value adjustments related to purchased invested assets and long-term debt due to the size and complexity of this acquisition. References to core operating income measures mean net of tax, whether or not noted.

The following table presents the reconciliation of Net income to Core operating income:

(in millions of U.S. dollars except share and per share data)	**Full Year 2021**	**Full Year 2020**
Net income, as reported	$8,539	$3,533
Amortization of fair value adjustment of acquired invested assets and long-term debt, pre-tax	(64)	(95)
Tax benefit on amortization adjustment	11	17
Adjusted realized gains (losses), pre-tax		
Adjusted realized gains (losses)[1]	1,160	(499)
Net realized gains (losses) related to unconsolidated entities[2]	2,134	821
Tax expense on adjusted net realized gains (losses)	(271)	(24)
Core operating income	$5,569	$3,313
Denominator	443,197,278	453,441,512
Diluted earnings per share		
Net income	$19.27	$7.79
Amortization of fair value adjustment of acquired invested assets and long-term debt, net of tax	(0.12)	(0.17)
Adjusted net realized gains (losses), net of tax	6.83	0.65
Core operating income	$12.56	$7.31
% Change from prior year	71.8%	

[1] Excludes realized gains (losses) on crop derivatives of $(8) million and $1 million for 2021 and 2020, respectively.
[2] Realized gains (losses) on partially owned entities, which are investments where we hold more than an insignificant percentage of the investee's shares. The net income or loss is included in other income (expense).

Core operating return on equity (ROE) and **Core operating return on tangible equity (ROTE)** are annualized non-GAAP financial measures. The numerator includes core operating income, net of tax. The denominator includes the average shareholders' equity for the period adjusted to exclude unrealized gains (losses) on investments, net of tax. For the ROTE calculation, the denominator is also adjusted to exclude goodwill and other intangible assets, net of tax. These measures enhance the understanding of the return on shareholders' equity by highlighting the underlying profitability relative to shareholders' equity and tangible equity excluding the effect of unrealized gains and losses on our investments that are heavily influenced by available market opportunities. We believe ROTE is meaningful because it measures the performance of our operations without the impact of goodwill and other intangible assets.

(in millions of U.S. dollars except ratios)	Full Year 2021	Full Year 2020
Net income	$8,539	$3,533
Core operating income	$5,569	$3,313
Equity – beginning of period as reported	$59,441	$55,259
Less: unrealized gains (losses) on investments, net of deferred tax	4,673	2,543
Equity – beginning of period, as adjusted	$54,768	$52,716
Less: goodwill and other intangible assets, net of tax	$19,916	$20,012
Equity – beginning of period, as adjusted, excluding goodwill and other intangible assets	$34,852	$32,704
Equity – end of period, as reported	$59,714	$59,441
Less: unrealized gains (losses) on investments, net of deferred tax	2,256	4,673
Equity – end of period, as adjusted	$57,458	$54,768
Less: goodwill and other intangible assets, net of tax	$19,456	$19,916
Equity – end of period, as adjusted, excluding goodwill and other intangible assets	$38,002	$34,852
Weighted average equity, as reported	$59,578	$57,350
Weighted average equity, as adjusted	$56,113	$53,742
Weighted average equity, as adjusted, excluding goodwill and other intangible assets	$36,427	$33,778
ROE	14.3%	6.2%
Core operating ROTE	15.3%	9.8%
Core operating ROE	9.9%	6.2%
Private equities realized gains (losses), after-tax [1]	$2,053	$690
Impact of Private equities if included in Core operating ROE – Favorable [1]	3.7 pts	1.3 pts

[1] We record the change in the fair value mark and gains (losses) on sales of private equity funds as realized gains (losses) instead of investment income.

Combined ratio measures the underwriting profitability of our property and casualty business. **P&C combined ratio and CAY P&C combined ratio excluding Catastrophe losses (CATs)** are non-GAAP financial measures. Refer to the Non-GAAP Reconciliation section in the 2021 Form 10-K, on pages 63-66, for the definition of these non-GAAP financial measures and reconciliation to the Combined ratio.

	Full Year 2021	Full Year 2020
Combined ratio	89.1%	96.1%
Add: impact of gains and losses on crop derivatives	0.0%	0.0%
P&C combined ratio	89.1%	96.1%
Less: Catastrophe losses	7.1%	10.6%
Less: Prior period development	-2.8%	-1.2%
CAY P&C combined ratio excluding CATs	84.8%	86.7%

Tangible book value per common share is shareholders' equity less goodwill and other intangible assets, net of tax, divided by the shares outstanding. We believe that goodwill and other intangible assets are not indicative of our underlying insurance results or trends and make book value comparisons to less acquisitive peer companies less meaningful.

(in millions of U.S. dollars, except share and per share data)	December 31 2021	December 31 2020	% Change
Shareholders' equity	$59,714	$59,441	0.5%
Less: goodwill and other intangible assets, net of tax	19,456	19,916	
Numerator for tangible book value per share	$40,258	$39,525	1.9%
Shares outstanding	426,572,612	450,732,625	
Book value per common share	$139.99	$131.88	6.1%
Tangible book value per common share	$94.38	$87.69	7.6%

International life insurance net premiums written and deposits is a non-GAAP financial measure which includes International life insurance net premiums written and deposits collected on universal life and investment contracts. Deposits collected on universal life and investment contracts (life deposits) are not reflected as revenues in our consolidated statements of operations in accordance with GAAP. However, new life deposits are an important component of production and key to our efforts to grow our business.

(in millions of U.S. dollars)	**Full Year 2021**	**Full Year 2020**
International life insurance net premiums written	$1,310	$1,198
International life insurance deposits	2,441	1,559
Total international life insurance net premiums written and deposits[1]	$3,751	$2,757

[1] Excludes Combined North America and Life reinsurance businesses.

Adjusted net investment income is net investment income excluding the amortization of the fair value adjustment on acquired invested assets from the acquisition of Chubb Corp and including investment income from partially owned investment companies (private equity partnerships) where our ownership interest is in excess of three percent that are accounted for under the equity method. We believe this measure is meaningful as it highlights the underlying performance of our invested assets and portfolio management in support of our lines of business.

The following table presents a reconciliation of net investment income to adjusted net investment income:

(in millions of U.S. dollars)	**Full Year 2021**	**Full Year 2020**
Net investment income	$3,456	$3,375
Less: Amortization expense of fair value adjustment on acquired invested assets	(84)	(116)
Add: Other income from private equity partnerships	179	115
Adjusted net investment income	$3,719	$3,606
% Change from prior year	3.1%	

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

☑ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2021

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Transition Period from to

Commission File No. 1-11778

CHUBB LIMITED

(Exact name of registrant as specified in its charter)

Switzerland
(State or other jurisdiction of incorporation or organization)

98-0091805
(I.R.S. Employer Identification No.)

Baerengasse 32
Zurich, Switzerland CH-8001
(Address of principal executive offices) (Zip Code)
+41 (0)43 456 76 00
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Shares, par value CHF 24.15 per share	CB	New York Stock Exchange
Guarantee of Chubb INA Holdings Inc. 0.30% Senior Notes due 2024	CB/24A	New York Stock Exchange
Guarantee of Chubb INA Holdings Inc. 0.875% Senior Notes due 2027	CB/27	New York Stock Exchange
Guarantee of Chubb INA Holdings Inc. 1.55% Senior Notes due 2028	CB/28	New York Stock Exchange
Guarantee of Chubb INA Holdings Inc. 0.875% Senior Notes due 2029	CB/29A	New York Stock Exchange
Guarantee of Chubb INA Holdings Inc. 1.40% Senior Notes due 2031	CB/31	New York Stock Exchange
Guarantee of Chubb INA Holdings Inc. 2.50% Senior Notes due 2038	CB/38A	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☑	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☑

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☑

The aggregate market value of voting stock held by non-affiliates as of June 30, 2021 (the last business day of the registrant's most recently completed second fiscal quarter), was approximately $69 billion. For the purposes of this computation, shares held by directors and officers of the registrant have been excluded. Such exclusion is not intended, nor shall it be deemed, to be an admission that such persons are affiliates of the registrant.

As of February 10, 2022, there were 426,229,254 Common Shares par value CHF 24.15 of the registrant outstanding.

Documents Incorporated by Reference

Certain portions of the registrant's definitive proxy statement relating to its 2022 Annual General Meeting of Shareholders are incorporated by reference into Part III of this report.

CHUBB LIMITED INDEX TO 10-K

PART I

ITEM 1. Business

General

Chubb Limited is the Swiss-incorporated holding company of the Chubb Group of Companies. Chubb Limited, which is headquartered in Zurich, Switzerland, and its direct and indirect subsidiaries (collectively, the Chubb Group of Companies, Chubb, we, us, or our) are a global insurance and reinsurance organization, serving the needs of a diverse group of clients worldwide. At December 31, 2021, we had total assets of $200 billion and shareholders' equity of $60 billion. Chubb was incorporated in 1985 at which time it opened its first business office in Bermuda and continues to maintain operations in Bermuda. We have grown our business through increased premium volume, expansion of product offerings and geographic reach, and the acquisition of other companies to become a global property and casualty (P&C) leader.

With operations in 54 countries and territories, Chubb provides commercial and consumer P&C insurance, personal accident and supplemental health insurance (A&H), reinsurance, and life insurance to a diverse group of clients. We provide commercial insurance products and service offerings such as risk management programs, loss control, and engineering and complex claims management. We provide specialized insurance products ranging from Directors & Officers (D&O) and financial lines to various specialty-casualty and umbrella and excess casualty lines to niche areas such as aviation and energy. We also offer consumer lines insurance coverage including homeowners, automobile, valuables, umbrella liability, and recreational marine products. In addition, we supply A&H and life insurance to individuals in select countries.

We serve multinational corporations, mid-size and small businesses with property and casualty insurance and risk engineering services; affluent and high net worth individuals with substantial assets to protect; individuals purchasing life, personal accident, supplemental health, homeowners, automobile in certain international markets and for high net worth individuals in the U.S., and specialty personal insurance coverage; companies and affinity groups providing or offering accident and health insurance programs and life insurance to their employees or members; and insurers managing exposures with reinsurance coverage.

We make available free of charge through our website (investors.chubb.com, under Financials) our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, if any, filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after they have been electronically filed with or furnished to the U.S. Securities and Exchange Commission (SEC). Also available through our website (under Investor Relations / Corporate Governance) are our Corporate Governance Guidelines, Code of Conduct, and Charters for the Committees of the Board of Directors (the Board). Printed documents are available by contacting our Investor Relations Department (Telephone: +1 (212) 827-4445, E-mail: investorrelations@chubb.com).

We also use our website as a means of disclosing material, non-public information and for complying with our disclosure obligations under SEC Regulation FD (Fair Disclosure). Accordingly, investors should monitor the Investor Relations portion of our website, in addition to following our press releases, SEC filings, and public conference calls and webcasts. The information contained on, or that may be accessed through, our website is not incorporated by reference into, and is not a part of, this report. The SEC maintains an Internet site (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file with the SEC.

Customers

For most commercial and personal lines of business we offer, insureds typically use the services of an insurance broker or agent. An insurance broker acts as an agent for the insureds, offering advice on the types and amount of insurance to purchase, and assists in the negotiation of price and terms and conditions. We obtain business from the local and major international insurance brokers and typically pay a commission to brokers for any business accepted and bound. Loss of all or a substantial portion of the business provided by one or more of these brokers could have a material adverse effect on our business. In our opinion, no material part of our business is dependent upon a single insured or group of insureds. We do not believe that the loss of any one insured would have a material adverse effect on our financial condition or results of operations.

Competition

Competition in the insurance and reinsurance marketplace is substantial. We compete on an international and regional basis with major U.S., Bermuda, European, and other international insurers and reinsurers and with underwriting syndicates, some of which have greater financial, technological, marketing, distribution and management resources than we do. In addition, capital market participants have created alternative products that are intended to compete with reinsurance products. We also compete with new companies and existing companies that move into the insurance and reinsurance markets. Competitors include other stock companies, mutual companies, alternative risk sharing groups (such as group captives and catastrophe pools), and other underwriting organizations. Competitors sell through various distribution channels and business models, across a broad array of product lines, and with a high level of variation regarding geographic, marketing, and customer segmentation. We compete for business not only on the basis of price but also on the basis of availability of coverage desired by customers and quality of service.

The insurance industry is changing rapidly. Our ability to compete is dependent on a number of factors, particularly our ability to maintain the appropriate financial strength ratings as assigned by independent rating agencies and effectively using digital capabilities in an everchanging competitive landscape and incorporating, among other things, climate and environmental changes into our insurance processes, products, and services. Our broad market capabilities in personal, commercial, specialty, and A&H lines made available by our underwriting expertise, business infrastructure, and global presence, help define our competitive advantage. Our superior claims service is a significant asset to our business, our business partners and customers, and is unique in the industry. Our strong balance sheet is attractive to businesses, and our strong capital position and global platform affords us opportunities for growth not available to smaller, less diversified insurance companies. Refer to "Segment Information" for competitive environment by segment.

Trademarks and Trade Names

Various trademarks and trade names we use protect names of certain products and services we offer and are important to the extent they provide goodwill and name recognition in the insurance industry. We use commercially reasonable efforts to protect these proprietary rights, including various trade secret and trademark laws. We intend to retain material trademark rights in perpetuity, so long as it satisfies the use and registration requirements of applicable countries. One or more of the trademarks and trade names could be material to our ability to sell our products and services. We have taken appropriate steps to protect our ownership of key names, and we believe it is unlikely that anyone would be able to prevent us from using names in places or circumstances material to our operations.

Human Capital Management

Our employees are critical to our mission to protect the present and build a better future, by providing our customers with the security from risk that allows people and businesses to grow and prosper. To accomplish this mission, we seek to attract and retain the very best insurance professionals and to provide an inclusive and supportive culture that allows all of our employees to reach their full potential as we deliver insurance solutions and claims service for individuals, families and businesses of all sizes. Our highly collaborative, inclusive approach helps us drive better business outcomes. We track and report internally on key talent metrics including employee demographics, critical role succession planning, diversity data, and employee retention and engagement. This information is regularly reported to senior management as well as the Chubb Board of Directors. On December 31, 2021, we employed approximately 31,000 people in 54 countries and territories around the world, including 51.4 percent in North America, 12.3 percent in Europe, Eurasia and Africa, 20.0 percent in Asia, and 16.3 percent in Latin America. While we have not been immune from voluntary turnover generally reflecting the highly competitive environment for talent, we believe we have effectively managed it through talent acquisition and retention actions. We believe that employee relations are good. The average age of our workforce is 41.4 years and the average tenure is 8.2 years.

Diversity, Equity and Inclusion

Diversity, equity and inclusion are integral to Chubb's culture. We recognize our responsibility to provide opportunity within our own organization, where we aim to foster a diverse and inclusive meritocracy. Our extensive efforts in this area include mentorships, affinity groups, diversity awareness training, and education, open dialogue on race and racism, management development programs, and inclusive hiring practices.

We set goals and track progress on improving gender and racial diversity, particularly at the leadership levels and with early career program hires. We also look at the diversity rates in our hires and promotions and the diversity of our candidate interview slates for leadership roles. In 2021, there was year over year progress on gender and racial diversity at the leadership level, most notably on gender and racial diversity at our senior vice president and above levels, and we also improved the diversity of hiring into our development programs.

In 2021 we continued to support our Business Roundtables (our employee affinity groups) and Regional Inclusion Councils, which promote dynamic networking across the business and engage hundreds of employees in constructive dialogue. These circles of support focus on employee onboarding, development and retention and help us build stronger relationships with, and gain deeper insights into, our varied customer and distribution partner communities. Other programs include Chubb Start, which supports the continuous professional development of women who are early in their careers, and Chubb Signatures, a global and regional lecture series for successful senior women, diverse men and inclusion champions to share their unique backgrounds, experiences and hard-earned lessons in business. We also added programs in 2021 that support inclusive leadership, including a focus on inclusive hiring practices and intentional inclusion training to create greater awareness and proficiency in attracting and hiring diverse talent and building diverse teams. We played a key role in establishing an industry group – the Black Insurance Industry Collective (BIIC) – whose mission is to accelerate the advancement of Black professionals within the insurance industry and to increase representation of Black leaders at the executive level through leadership development, mentoring, sponsorships and networking within the industry. In addition, we remain attuned to demographic shifts within our workforce and society to evaluate and update employee policies, procedures and systems that reflect this commitment. We depend on our culture of leadership accountability to continue progress in diversity, equity and inclusion at Chubb.

Attraction, Development and Retention

The foundation to Chubb’s long-term success is our disciplined approach to attracting, developing and retaining the next generation of insurance professionals and leaders. We strive to be an inclusive meritocracy, where all employees regardless of race, gender or background can thrive. Learning and professional development are central to the Chubb culture, and we are committed to providing opportunities to evolve professionally. Our talent development efforts are for all employee levels and we expect our employees to own and drive their development by availing themselves of the structured and unstructured learning we offer, including on-the-job training, personal interaction and involvement, and online and classroom learning. Chubb has made substantial investments for a robust technical and leadership development environment and, where appropriate, fills open positions with internal sourcing of talent.

In addition, in response to the increasingly competitive labor market, we have taken steps to retain key talent, with competitive compensation actions including long-term incentives and more development opportunities, and to deepen our talent acquisition efforts by adding more recruiters and enhancing our employee referral program. Globally, we promoted more than 4,700 employees and successfully recruited more than 4,500 new employees (including more than 360 into early career programs) to fill openings and to support our growth plans.

Compensation and Benefits

Chubb is committed to delivering competitive compensation and benefits to its employees worldwide as a means to attract and retain a highly qualified, experienced, talented and motivated workforce. We vary and adjust our offerings to support the human resources requirements of our business in markets around the world in which we operate. Additionally, we structure our compensation programs for leaders to include a mix of short- and long-term awards, with a focus on linking pay to Chubb's performance and the enhancement of shareholder value over the medium- and long-term.

Segment Information

Chubb operates through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. In 2021, consolidated net premiums earned (NPE) was $36.4 billion. Additional financial information about our segments is included in Note 15 to the Consolidated Financial Statements.

North America Commercial P&C Insurance (42 percent of 2021 Consolidated NPE)

Overview

The North America Commercial P&C Insurance segment comprises operations that provide commercial and consumer P&C insurance and services to large, middle market, and small commercial businesses in the U.S., Canada, and Bermuda. This segment includes:

- Major Accounts (39 percent of this segment's 2021 NPE), the retail division focused on large institutional organizations and corporate companies
- Commercial Insurance (40 percent of this segment's 2021 NPE), which includes the retail division focused on middle market customers and small businesses
- Westchester and Chubb Bermuda (21 percent of this segment's 2021 NPE), our wholesale and specialty divisions

Products and Distribution

Major Accounts provides a broad array of commercial lines of products and services, including traditional and specialty P&C, and risk management, as well as consumer A&H products to large U.S. and Canadian-based institutional organizations and corporate companies. Major Accounts distributes its insurance products primarily through a limited number of retail brokers. In addition to using brokers, certain products are also distributed through general agents, independent agents, managing general agents (MGA), managing general underwriters, alliances, affinity groups, and direct marketing operations. Products and services offered include property, professional liability, cyber risk, excess casualty, workers' compensation, general liability, automobile liability, commercial marine, surety, environmental, construction, medical risk, inland marine, A&H coverages, as well as claims and risk management products and services.

The Major Accounts operations are organized into the following distinct business units, each offering specialized products and services targeted at specific markets:

- Chubb Global Casualty offers a range of customized risk management primary casualty products designed to help large insureds, including national accounts, and managing risk for workers' compensation, general liability and automobile liability coverages as well as offering casualty insurance solutions for commercial real estate. Chubb Global Casualty also provides products which insure specific global operating risks of U.S.-based multinational companies and include deductible programs, captive programs, and paid or incurred loss retrospective plans. Within Chubb Global Casualty, Chubb Alternative Risk Solutions Group underwrites contractual indemnification policies which provides prospective coverage for loss events within the insured's policy retention levels and underwrites assumed loss portfolio transfer (LPT) contracts in which insured loss events have occurred prior to the inception of the contract.
- Property provides products and services including primary, quota share and excess all-risk insurance, risk management programs and services, commercial, inland marine, and aerospace products.
- Casualty Risk provides coverages including umbrella and excess liability, environmental risk, casualty programs for commercial construction related projects for companies and institutions, and medical risk specialty liability products for the healthcare industry.
- Surety offers a wide variety of surety products and specializes in underwriting both commercial and contract bonds and has the capacity for bond issuance on an international basis.
- Accident & Health (A&H) products include employee benefit plans, occupational accident, student accident, and worldwide travel accident and global medical programs. With respect to products that include supplemental medical and hospital indemnity coverages, we typically pay fixed amounts for claims and are therefore insulated from rising healthcare costs. A&H also provides specialty personal lines products, including credit card enhancement programs (identity theft, rental car collision damage waiver, trip travel, and purchase protection benefits) distributed through affinity groups.
- Financial Lines provides management liability and professional liability (D&O and E&O), transactional risk and cyber risk products to public companies as well as to private and not for profit organizations.
- ESIS Inc. (ESIS) is an in-house third-party claims administrator that performs claims management and risk control services for domestic and international organizations as well as for the North America Commercial P&C Insurance segment. ESIS services include comprehensive medical managed care; integrated disability services; pre-loss control and risk management; health, safety and environmental consulting; salvage and subrogation; and healthcare recovery services. The net results for ESIS are included in North America Commercial P&C Insurance's administrative expenses.

The Commercial Insurance operations, which include Small Commercial, provides a broad range of P&C, financial lines, and A&H products targeted to U.S and Canadian-based middle market customers in a variety of industries, while the Small Commercial operations provide a broad range of property and casualty, workers' compensation, small commercial management and professional liability for small businesses based in the U.S.

- Commercial Insurance products and services offered include traditional property and casualty lines of business, including Package, which combines property and general liability, workers' compensation, automobile, umbrella; financial lines of business, including professional liability, management liability and cyber risk coverage; and other lines including environmental, A&H, and international coverages. Commercial Insurance distributes its insurance products through a North American network of independent retail agents, and regional, multinational and digital brokers. Generally, our customers purchase insurance through a single retail agent or broker, do not employ a risk management department, and do not retain significant risk through self-insured retentions. The majority of our customers purchase a Package product or a portfolio of products, which is a collection of insurance offerings designed to cover various needs.

- Small Commercial Insurance products and services offered include property and casualty lines of business, including a business owner policy which contains property and general liability; financial lines, including professional liability, management liability, cyber risk; and other lines including workers' compensation, automobile liability, and international coverages. Products are generally offered through a North American network of independent agents and brokers, as well as eTraditional, which are digital platforms where we electronically quote, bind, and issue for agents and brokers. An example of this is the Chubb Marketplace.

Wholesale and Specialty comprises Westchester and Chubb Bermuda.

- Westchester serves the market for business risks that tend to be hard to place or not easily covered by traditional policies due to unique or complex exposures and provides specialty products for property, casualty, environmental, professional liability, inland marine, product recall, small business, binding and program coverages in the U.S., Canada, and Bermuda. Products are offered through the wholesale distribution channel.
- Chubb Bermuda provides commercial insurance products on an excess basis including excess liability, D&O, professional liability, property, and political risk, the latter being written by Sovereign Risk Insurance Ltd., a wholly-owned managing agent. Chubb Bermuda focuses on Fortune 1000 companies and targets risks that are generally low in frequency and high in severity. Products are offered primarily through the Bermuda offices of major, internationally recognized insurance brokers.

Competitive Environment
Major Accounts competes against a number of large, global carriers as well as regional competitors and other entities offering risk alternatives such as self-insured retentions and captive programs. The markets in which we compete are subject to significant cycles of fluctuating capacity and wide disparities in price adequacy. We pursue a specialist strategy and focus on market opportunities where we can compete effectively based on service levels and product design, while still achieving an adequate level of profitability. We also achieve a competitive advantage through Major Accounts' innovative product offerings and our ability to provide multiple products to a single client due to our nationwide local presence. In addition, all our domestic commercial units are able to deliver global products and coverage to customers in concert with our Overseas General Insurance segment.

The Commercial Insurance operations compete against numerous insurance companies ranging from large national carriers to small and mid-size insurers who provide specialty coverages and standard P&C products. Recent competitive developments include the growth of new digital-based distribution models. Westchester competes against a number of large, national carriers as well as regional competitors and other entities offering risk alternatives such as self-insured retentions and captive programs. Chubb Bermuda competes against international commercial carriers writing business on an excess of loss basis.

North America Personal P&C Insurance (14 percent of 2021 Consolidated NPE)

Overview
The North America Personal P&C Insurance segment includes the business written by Chubb Personal Risk Services division, which includes high net worth personal lines business, with operations in the U.S. and Canada. This segment provides affluent and high net worth individuals and families with homeowners, high value automobile and collector cars, valuable articles (including fine arts), personal and excess liability, travel insurance, cyber, and recreational marine insurance and services. Our homeowners business, including valuable articles, represented 69 percent of North America Personal P&C Insurance's net premiums earned in 2021.

Products and Distribution
Chubb Personal Risk Services offers comprehensive personal insurance products and services to meet the evolving needs of high net worth families and individuals. Our seamless customer experience and superior coverage protect not only our clients' most valuable possessions, but also their standard of living. Our target customers consist of high net worth consumers with insurance needs that typically extend beyond what mass market carriers can offer. These coverages are offered solely through independent regional agents and brokers.

Competitive Environment
Chubb Personal Risk Services competes against insurance companies of varying sizes that sell personal lines products through various distribution channels, including retail agents as well as online distribution channels. We achieve a competitive advantage through our ability to address the specific needs of high net worth families and individuals, to provide superior service to our customers, and to develop and deploy digital production and processes.

North America Agricultural Insurance (6 percent of 2021 Consolidated NPE)

Overview
The North America Agricultural Insurance segment comprises our U.S. and Canadian-based businesses that provide a variety of coverages including crop insurance, primarily Multiple Peril Crop Insurance (MPCI) and crop-hail insurance through Rain and Hail Insurance Service, Inc. (Rain and Hail) as well as farm and ranch and specialty P&C commercial insurance products and services through our Chubb Agribusiness unit.

Products and Distribution
Rain and Hail provides comprehensive MPCI and crop-hail insurance coverages.

- MPCI is federally subsidized crop protection from numerous causes of loss, including drought, excessive moisture, freeze, disease and more. The MPCI program is offered in conjunction with the U.S. Department of Agriculture. MPCI products include revenue protection (defined as providing both commodity price and yield coverages), yield protection, margin protection, prevented planting coverage and replant coverage. For additional information on our MPCI program, refer to "Crop Insurance" under Item 7.
- Crop-Hail coverage provides crop protection from damage caused by hail and/or fire, with options in some markets for other perils such as wind or theft. Coverage is provided on an acre-by-acre basis and is available in the U.S. and in some parts of Canada. Crop-Hail can be used in conjunction with MPCI or other comprehensive coverages to offset the deductible and provide protection up to the actual cash value of the crop.

Chubb Agribusiness comprises Commercial Agribusiness and Farm and Ranch Agribusiness.

- Commercial Agribusiness offers specialty P&C coverages for commercial companies that manufacture, process and distribute agricultural products. Commercial products and services include property, general liability for premises/operations and product liability, commercial automobile, workers' compensation, employment practices liability coverage, built-in coverage for premises pollution, cyber and information security, and product withdrawal.

- Farm and Ranch Agribusiness offers an extensive line of coverages for farming operations from Hobby/Gentleman farms to complex corporate farms and equine services including personal use, boarding, and training. Coverages include farm and ranch structures, machinery and other equipment, automobile and other vehicle coverages, and livestock.

Competitive Environment
Rain and Hail primarily operates in a federally regulated program where all approved providers offer the same product forms and rates through independent and/or captive agents. We seek a competitive advantage through our ability to provide superior service to our customers, including the development of digital solutions. Chubb Agribusiness competes against both national and regional competitors offering specialty P&C insurance coverages to companies that manufacture, process, and distribute agricultural products.

Overseas General Insurance (29 percent of 2021 Consolidated NPE)

Overview
The Overseas General Insurance segment comprises Chubb International, our retail division, and Chubb Global Markets (CGM), our wholesale division. Chubb International comprises our international retail commercial P&C and corporate A&H traditional and specialty lines serving large corporations, middle market and small customers; consumer A&H and traditional and specialty personal lines business serving local territories outside the U.S., Bermuda, and Canada. CGM, our London-based international specialty and excess and surplus lines wholesale business, includes Lloyd's of London (Lloyd's) Syndicate 2488, a wholly-owned Chubb syndicate supported by funds at Lloyd's provided by Chubb Corporate Members. Syndicate 2488 has an underwriting capacity of £550 million for the Lloyd's 2022 account year. The syndicate is managed by Chubb's Lloyd's managing agency, Chubb Underwriting Agencies Limited.

Products and Distribution
Chubb International maintains a presence in every major insurance market in the world and is organized geographically along product lines as follows: Europe, Middle East and Africa; Asia Pacific and Japan; and Latin America. Products offered include commercial P&C and corporate A&H lines, including specialty coverages and services, and consumer lines, including A&H and personal lines insurance products. Chubb International's P&C business is generally written, on both a direct and assumed basis,

through major international, regional, and local brokers and agents. Certain branded products are also offered via digital-commerce platforms, allowing agents and brokers to quote, bind, and issue policies at their convenience. Property insurance products include traditional commercial fire coverage, as well as energy industry-related, marine, construction, and other technical coverages. Principal casualty products are commercial primary and excess casualty, environmental, and general liability. A&H and other consumer lines products are distributed through brokers, agents, direct marketing programs, including thousands of telemarketers, and sponsor relationships. The A&H operations primarily offer personal accident and supplemental medical coverages including accidental death, business/holiday travel, specified disease, disability, medical and hospital indemnity, and income protection. We are not in the primary healthcare business. With respect to our supplemental medical and hospital indemnity products, we typically pay fixed amounts for claims and are therefore largely insulated from the direct impact of rising healthcare costs. Chubb International specialty coverages include D&O, professional indemnity, cyber, surety, aviation, political risk, and specialty personal lines products. Chubb International personal lines operations provide a wide range of consumer lines products to meet the needs of specific target markets around the world. Products include high net worth homes, traditional homeowners, automobile, and specialty products that cover smart phones, spectacles, and personal cyber risk.

Chubb International's presence in China also includes its 47.3 percent ownership interest in Huatai Group. Huatai Group wholly owns Huatai Property & Casualty Insurance Co., Ltd. (Huatai P&C). Therefore, Chubb owns an approximately 47.3 percent indirect ownership interest in Huatai P&C, which provides a range of commercial and personal P&C products in China, including property, professional liability, product liability, employer liability, business interruption, marine cargo, personal accident, and specialty risk. These products are marketed through a variety of distribution channels including over 200 licensed sales locations in 28 Chinese provinces. Chubb is in the process of increasing its ownership interest in Huatai Group.

CGM offers products through its parallel distribution network via two legal entities, Chubb European Group SE (CEG) and Chubb Underwriting Agencies Limited, managing agent of Syndicate 2488. CGM uses the Syndicate to underwrite P&C business on a global basis through Lloyd's worldwide licenses. CGM uses CEG to underwrite similar classes of business through its network of U.K. and European licenses, and in the U.S. where it is eligible to write excess and surplus lines business. Factors influencing the decision to place business with the Syndicate or CEG include licensing eligibilities and client/broker preference. All business underwritten by CGM is accessed through registered brokers. The main lines of business include aviation, property, energy, professional lines, marine, financial lines, political risk, and credit.

Competitive Environment

Chubb International's primary competitors include U.S.-based companies with global operations, as well as non-U.S. global carriers and indigenous companies in regional and local markets. For the A&H lines of business, locally based competitors also include financial institutions and bank owned insurance subsidiaries. Our international operations have the distinct advantage of being part of one of the few international insurance groups with a global network of licensed companies able to write policies on a locally admitted basis. Our international operations also have the advantage of selling products through a variety of distribution channels including partnerships with major international, regional, and local brokers and agents. Additionally, as noted above, certain branded products are also offered via digital-commerce platforms. The principal competitive factors that affect the international operations are underwriting expertise and pricing, relative operating efficiency, product differentiation, producer relations, and the quality of policyholder services. A competitive strength of our international operations is our global network and breadth of insurance programs, which assist individuals and business organizations to meet their risk management objectives, while also having a significant presence in all of the countries in which we operate, giving us the advantage of accessing local technical expertise and regulatory environments, understanding local markets and culture, accomplishing a spread of risk, and offering a global network to service multinational accounts.

CGM is one of the preeminent international specialty insurers in London and is an established lead underwriter on a significant portion of the risks it underwrites for all lines of business. All lines of business face competition, depending on the business class, from Lloyd's syndicates, other carriers operating in the London market, and other major international insurers and reinsurers. Competition for international risks is also seen from domestic insurers in the country of origin of the insured. CGM differentiates itself from competitors through long standing experience in its product lines, its multiple insurance entities (Syndicate 2488 and CEG), and the quality of its underwriting and claims service.

Global Reinsurance (2 percent of 2021 Consolidated NPE)

Overview
The Global Reinsurance segment represents Chubb's reinsurance operations comprising Chubb Tempest Re Bermuda, Chubb Tempest Re USA, Chubb Tempest Re International, and Chubb Tempest Re Canada. Global Reinsurance markets its reinsurance products worldwide primarily through reinsurance brokers under the Chubb Tempest Re brand name and provides a broad range of traditional and non-traditional reinsurance coverage to a diverse array of primary P&C companies.

Products and Distribution
Global Reinsurance services clients globally through its major units. Major international brokers submit business to one or more of these units' underwriting teams who have built strong relationships with both key brokers and clients by providing a responsive, client-focused approach to risk assessment and pricing. Global Reinsurance’s diversified portfolio is produced through reinsurance intermediaries.

Chubb Tempest Re Bermuda principally provides property catastrophe reinsurance to insurers of commercial and personal property. Property catastrophe reinsurance is on an occurrence or aggregate basis and protects a ceding company against an accumulation of losses covered by its issued insurance policies, arising from a common event or occurrence. Chubb Tempest Re Bermuda underwrites reinsurance principally on an excess of loss basis, meaning that its exposure only arises after the ceding company's accumulated losses have exceeded the attachment point of the reinsurance policy. Chubb Tempest Re Bermuda also writes other types of reinsurance on a limited basis for some select clients.

Chubb Tempest Re USA offers an array of traditional and specialty P&C reinsurance for the North American market, principally on a treaty basis, with a focus on writing property and casualty reinsurance. Chubb Tempest Re USA underwrites reinsurance on both a proportional and excess of loss basis.

Chubb Tempest Re International offers an array of traditional and specialty P&C reinsurance to insurance companies worldwide, with emphasis on non-U.S. and non-Canadian risks, including but not limited to property, property catastrophe, casualty, marine, and specialty through its London- and Zurich-based offices. Chubb Tempest Re International underwrites reinsurance on both a proportional and excess of loss basis.

Chubb Tempest Re Canada offers an array of traditional and specialty P&C, and reinsurance for the Canadian market, including but not limited to casualty, property, property catastrophe, surety, and crop hail. Chubb Tempest Re Canada underwrites reinsurance on both a proportional and excess of loss basis.

Competitive Environment
The Global Reinsurance segment competes worldwide with major U.S. and non-U.S. reinsurers as well as reinsurance departments of numerous multi-line insurance organizations. In addition, capital markets participants have developed alternative capital sources intended to compete with traditional reinsurance. Additionally, government sponsored or backed catastrophe funds can affect demand for reinsurance. Global Reinsurance is typically involved in the negotiation and quotation of the terms and conditions of the majority of the contracts in which it participates. Global Reinsurance competes effectively in P&C markets worldwide because of Chubb's strong capital position, analytical capabilities, experienced underwriting team and quality customer service. The key competitors in our markets vary by geographic region and product line. An advantage of our international platform is that we can change our mix of business in response to changes in competitive conditions in the territories in which we operate. Our geographic reach is also sought by multinational ceding companies since our offices, except for Bermuda, provide local reinsurance license capabilities which benefit our clients in dealing with country regulators.

Life Insurance (7 percent of 2021 Consolidated NPE)

Overview
The Life Insurance segment comprises our international life operations (Chubb Life), Chubb Tempest Life Re (Chubb Life Re), and the North American supplemental A&H and life business of Combined Insurance.

Products and Distribution
Chubb Life provides individual life and group benefit insurance primarily in Asia, including Hong Kong, Indonesia, South Korea, Taiwan, Thailand, Vietnam, and Myanmar; throughout Latin America; selectively in Europe; Egypt; and in China through our direct and indirect investments in Huatai Group and Huatai Life Insurance Co., Ltd. (Huatai Life). Chubb Life offers a broad portfolio of protection and savings products including whole life, endowment plans, individual term life, group term life, medical

and health, personal accident, credit life, universal life, Group Employee benefits, unit linked contracts, and credit protection insurance for automobile, motorcycle, and home loans. The policies written by Chubb Life generally provide funds to beneficiaries of insureds after death and/or protection and/or savings benefits while the contract owner is living. We earn income from both insurance contracts subject to mortality and morbidity risks and investment contracts not subject to insurance risks. Funds received from policyholders for investment contracts are not recorded as premium revenue, but rather as a policyholder deposits with an offsetting policy holder account balance liability on the balance sheet. We earn income on investment contracts from both net investment spreads on policy holder account balances and fees for management and administrative services. The size of policyholder account balances will primarily determine the amount of income generated from investment contracts. These investment contracts are an important component of production and are key to our efforts to grow our business. Chubb Life sells to consumers through a variety of distribution channels including captive and independent agencies, bancassurance, worksite marketing, retailers, brokers, telemarketing, mobilassurance, and direct to consumer marketing. We continue to expand Chubb Life with a focus on opportunities in developing markets that we believe will result in strong and sustainable operating profits as well as a favorable return on capital commitments over time. Our dedicated captive agency distribution channel, whereby agents sell Chubb Life products exclusively, enables us to maintain direct contact with the individual consumer, promote quality sales practices, and exercise greater control over the future of the business. We have developed a substantial sales force of agents principally located in our Asia-Pacific countries. As of December 31, 2021, Chubb had a 57.7 percent direct and indirect ownership interest in Huatai Life, comprising a 20 percent direct ownership interest as well as a 37.7 percent indirect ownership interest through Huatai Group, the parent company of Huatai Life. Huatai Life commenced operations in 2005 and has since grown to become one of the larger life insurance foreign joint ventures in China. Huatai Life offers a broad portfolio of insurance products including whole life, universal life, medical and health, personal accident, and disability. These products are marketed through a variety of distribution channels including over 400 licensed sales locations in 20 Chinese provinces. Chubb is in the process of increasing its ownership interest in Huatai Group. We also have an indirect investment in Huatai Asset Management, a third-party investment management firm, through our direct ownership in Huatai Group.

Chubb Life Re's core business is a Bermuda-based operation which provides reinsurance to primary life insurers, focusing on guarantees included in certain variable annuity products and also on more traditional mortality reinsurance protection. Chubb Life Re's U.S.-based traditional life reinsurance operation was discontinued for new business in January 2010. Since 2007, Chubb Life Re has not quoted on new opportunities in the variable annuity reinsurance marketplace and our focus has been on managing the current portfolio of risk, both in the aggregate and on a contract basis. This business is managed with a long-term perspective and short-term net income volatility is expected.

Combined Insurance distributes specialty supplemental A&H and life insurance products targeted to middle income consumers and businesses in the U.S. and Canada through both direct marketing and worksite sales, through our Chubb Workplace Benefits platform. Combined Insurance's substantial North American sales force distributes a wide range of supplemental accident and sickness insurance products, including personal accident, short-term disability, critical illness, Medicare supplement products, and hospital confinement/recovery. Most of these products are primarily fixed-indemnity benefit obligations and are not directly subject to escalating medical cost inflation.

Competitive Environment

Chubb Life's competition differs by location but generally includes multinational insurers, and in some locations, local insurers, joint ventures, or state-owned insurers. Chubb's financial strength and reputation as an entrepreneurial organization with a global presence gives Chubb Life a strong base from which to compete. While Chubb Life Re is not currently quoting on new opportunities in the variable annuity reinsurance marketplace, we continue to monitor developments in this market. Combined Insurance competes for A&H business in the U.S. against numerous A&H and life insurance companies across various industry segments.

Corporate

Corporate results primarily include results of all run-off asbestos and environmental (A&E) exposures, the results of our run-off Brandywine business, the results of Westchester specialty operations for 1996 and prior years, certain other run-off exposures including molestation exposures, and income and expenses not attributable to reportable segments and the results of our non-insurance companies. The run-off operations do not actively sell insurance products, but are responsible for the management of existing policies and settlement of related claims.

Our exposure to A&E, abuse or molestation claims principally arises out of liabilities acquired when we purchased Westchester Specialty in 1998, CIGNA’s P&C business in 1999, and The Chubb Corporation in 2016. The A&E liabilities principally relate to claims arising from bodily-injury claims related to asbestos products and remediation costs associated with hazardous waste sites.

Underwriting

Chubb is an underwriting company and we strive to emphasize quality of underwriting rather than volume of business or market share. Our underwriting strategy is to manage risk by employing consistent, disciplined pricing and risk selection. This, coupled with writing a number of less cyclical product lines, has helped us develop flexibility and stability of our business, and has allowed us to maintain a profitable book of business throughout market cycles. Clearly defined underwriting authorities, standards, and guidelines coupled with a strong underwriting audit function are in place in each of our local operations and global profit centers. Global product boards ensure consistency of approach and the establishment of best practices throughout the world. Our priority is to help ensure adherence to criteria for risk selection by maintaining high levels of experience and expertise in our underwriting staff. In addition, we employ a business review structure that helps ensure control of risk quality and appropriate use of policy limits and terms and conditions. Underwriting discipline is at the heart of our operating philosophy.

Actuaries in each region work closely with the underwriting teams to provide additional expertise in the underwriting process. We use internal and external data together with sophisticated analytical, catastrophe loss and risk modeling techniques to ensure an appropriate understanding of risk, including diversification and correlation effects, across different product lines and territories. We recognize that climate changes and weather patterns are integral to our underwriting process and we continually adjust our process to address these changes. This is intended to help ensure that exposures are priced appropriately and resulting losses are contained within our risk tolerance and appetite for individual product lines, businesses, and Chubb as a whole. Our use of such tools and data also reflects an understanding of their inherent limitations and uncertainties. We also purchase protection from third parties, including, but not limited to, reinsurance as a tool to diversify risk and limit the net loss potential of catastrophes and large or unusually hazardous risks. For additional information refer to "Risk Factors" under Item 1A, “Reinsurance Protection”, below, “Catastrophe Management” and “Global Property Catastrophe Reinsurance Program”, under Item 7, and Note 5 to the Consolidated Financial Statements, under Item 8.

Reinsurance Protection

As part of our risk management strategy, we purchase reinsurance protection to mitigate our exposure to losses, including certain catastrophes, to a level consistent with our risk appetite. Although reinsurance agreements contractually obligate our reinsurers to reimburse us for an agreed-upon portion of our gross paid losses, reinsurance does not discharge our primary liability to our insureds and, thus, we ultimately remain liable for the gross direct losses. In certain countries, reinsurer selection is limited by local laws or regulations. In most countries there is more freedom of choice, and the counterparty is selected based upon its financial strength, claims settlement record, management, line of business expertise, and its price for assuming the risk transferred. In support of this process, we maintain a Chubb authorized reinsurer list that stratifies these authorized reinsurers by classes of business and acceptable limits. This list is maintained by our Reinsurance Security Committee (RSC), a committee comprising senior management personnel and a dedicated reinsurer security team. Changes to the list are authorized by the RSC and recommended to the Chair of the Risk and Underwriting Committee. The reinsurers on the authorized list and potential new markets are regularly reviewed and the list may be modified following these reviews. In addition to the authorized list, there is a formal exception process that allows authorized reinsurance buyers to use reinsurers already on the authorized list for higher limits or different lines of business, for example, or other reinsurers not on the authorized list if their use is supported by compelling business reasons for a particular reinsurance program.

A separate policy and process exists for captive reinsurance companies. Generally, these reinsurance companies are established by our clients or our clients have an interest in them. It is generally our policy to obtain collateral equal to the expected losses that may be ceded to the captive. Where appropriate, exceptions to the collateral requirement are granted but only after senior management review. Specific collateral guidelines and an exception process are in place for the North America Commercial P&C Insurance, North America Personal P&C Insurance, and Overseas General Insurance segments, all of which have credit management units evaluating the captive's credit quality and that of their parent company. The credit management units, working with actuaries, determine reasonable exposure estimates (collateral calculations), ensure receipt of collateral in an acceptable form, and coordinate collateral adjustments as and when needed. Financial reviews and expected loss evaluations are performed annually for active captive accounts and as needed for run-off exposures. In addition to collateral, parental guarantees are often used to enhance the credit quality of the captive.

In general, we seek to place our reinsurance with highly rated companies with which we have a strong trading relationship. For additional information refer to “Catastrophe Management” and “Global Property Catastrophe Reinsurance Program” under Item 7, and Note 5 to the Consolidated Financial Statements, under Item 8.

Unpaid Losses and Loss Expenses

We establish reserves for unpaid losses and loss expenses, which are estimates of future payments on reported and unreported claims for losses and related expenses, with respect to insured events that have occurred. These reserves are recorded in Unpaid losses and loss expenses in the Consolidated balance sheets. The process of establishing loss and loss expense reserves for P&C claims can be complex and is subject to considerable uncertainty as it requires the use of informed estimates and judgments based on circumstances known at the date the loss is recognized. These estimates and judgments are based on numerous factors, and may be revised as additional experience and other data become available and are reviewed, as new or improved methodologies are developed, or as laws change. Internal actuaries regularly analyze the levels of loss and loss expense reserves, taking into consideration factors that may impact the ultimate settlement value of the unpaid losses and loss expenses. These analyses could result in future changes in the estimates of loss and loss expense reserves or reinsurance recoverables and any such changes would be reflected in our results of operations in the period in which the estimates are changed. Losses and loss expenses are charged to income as incurred. The reserve for unpaid losses and loss expenses represents the estimated ultimate losses and loss expenses less paid losses and loss expenses, and comprises case reserves and incurred but not reported (IBNR) reserves. With the exception of certain structured settlements, for which the timing and amount of future claim payments are reliably determinable, and certain reserves for unsettled claims, our loss reserves are not discounted for the time value of money. The net undiscounted reserves related to structured settlements and certain reserves for unsettled claims are immaterial.

For each product line, management, after consultation with internal actuaries, develops a “best estimate” of the ultimate settlement value of the unpaid losses and loss expenses that it believes provides a reasonable estimate of the required reserve. We evaluate our estimates of reserves quarterly in light of developing information. While we are unable at this time to determine whether additional reserves may be necessary in the future, we believe that our reserves for unpaid losses and loss expenses are adequate at December 31, 2021. Future additions to reserves, if needed, could have a material adverse effect on our financial condition, results of operations, and cash flows. For additional information refer to “Critical Accounting Estimates – Unpaid losses and loss expenses”, under Item 7, and Note 7 to the Consolidated Financial Statements, under Item 8.

Investments

Our objective is to maximize investment income and total return while ensuring an appropriate level of liquidity, investment quality, and diversification. As such, Chubb's investment portfolio is invested primarily in investment-grade fixed-income securities as measured by the major rating agencies. We also invest in limited partnerships and investment funds. We do not allow leverage in our investment portfolio. The critical aspects of the investment process are controlled by Chubb Asset Management, an indirect wholly-owned subsidiary of Chubb. These aspects include asset allocation, portfolio and guideline design, risk management, and oversight of external asset managers. In this regard, Chubb Asset Management:

- conducts formal asset allocation modeling for each of the Chubb subsidiaries, providing formal recommendations for the portfolio's structure;
- establishes recommended investment guidelines that are appropriate to the prescribed asset allocation targets;
- provides the analysis, evaluation, and selection of our external investment advisors;
- establishes and develops investment-related analytics to enhance portfolio engineering and risk control;
- monitors and aggregates the correlated risk of the overall investment portfolio; and
- provides governance over the investment process for each of our operating companies to ensure consistency of approach and adherence to investment guidelines.

Under our guidance and direction, external asset managers conduct security and sector selection and transaction execution. Use of multiple managers benefits Chubb in several ways – it provides us with operational and cost efficiencies, diversity of styles and approaches, innovations in investment research and credit and risk management, all of which enhance the risk adjusted returns of our portfolios.

Chubb Asset Management determines the investment portfolio's allowable, targeted asset allocation and ranges for each of the segments. These asset allocation targets are derived from sophisticated asset and liability modeling that measures correlated histories of returns and volatility of returns. Allowable investment classes are further refined through analysis of our operating environment including expected volatility of cash flows, potential impact on our capital position, and regulatory and rating agency considerations.

The Board has established a Risk & Finance Committee which helps execute the Board's supervisory responsibilities pertaining to enterprise risk management including investment risk. Under the overall supervision of the Risk & Finance Committee, Chubb's governance over investment management is rigorous and ongoing. Among its responsibilities, the Risk & Finance Committee of the Board:

- reviews and approves asset allocation targets and investment policy to ensure that it is consistent with our overall goals, strategies, and objectives;
- reviews and approves investment guidelines to ensure that appropriate levels of portfolio liquidity, credit quality, diversification, and volatility are maintained; and
- systematically reviews the portfolio's exposures including any potential violations of investment guidelines.

We have long-standing global credit limits for our entire portfolio across the organization and for individual obligors. Exposures are aggregated, monitored, and actively managed by our Global Credit Committee, comprising senior executives, including our Chief Financial Officer, our Chief Risk Officer, our Chief Investment Officer, and our Treasurer.

Within the guidelines and asset allocation parameters established by the Risk & Finance Committee, individual investment committees of the segments determine tactical asset allocation. Additionally, these committees review all investment-related activity that affects their operating company, including the selection of outside investment advisors, proposed asset allocation changes, and the systematic review of investment guidelines.

For additional information regarding the investment portfolio, including breakdowns of the sector and maturity distributions, refer to Note 3 to the Consolidated Financial Statements under Item 8.

Regulation

Our insurance and reinsurance subsidiaries conduct business globally, including in all 50 states of the United States, the District of Columbia, and all U.S. Territories. Our business is subject to varying degrees of regulation and supervision in each of the jurisdictions in which our insurance and reinsurance subsidiaries are domiciled and on a group basis. The laws and regulations of the jurisdictions in which our insurance and reinsurance subsidiaries are domiciled require among other things that these subsidiaries maintain minimum levels of statutory capital, surplus, and liquidity, meet solvency standards, and submit to periodic examinations of their financial condition. The complex regulatory environments in which Chubb operates are subject to change and are regularly monitored.

Group Supervision

The Pennsylvania Insurance Department (Department) is the group-wide supervisor for the Chubb Group of Companies. In consultation with other insurance regulatory bodies that oversee Chubb's insurance activities, the Department has convened the Chubb Supervisory College (College) bi-annually since 2012, with regulator-only interim Colleges held in intervening years since 2017. The most recent regulators-only College was held in September 2021. During these meetings, the College reviewed extensive information about Chubb, without material adverse comment.

The following is an overview of regulations for our operations in Switzerland, the U.S., Bermuda, and other international locations.

Swiss Operations

The Swiss Financial Market Supervisory Authority (FINMA) has the discretion to supervise Chubb on a group-wide basis. However, FINMA acknowledges the Department's assumption of group supervision over us.

In 2008, we formed Chubb Insurance (Switzerland) Limited which offers property and casualty insurance to Swiss companies, A&H insurance for individuals of Swiss corporations, and reinsurance predominantly in continental Europe. We have also formed a reinsurance subsidiary named Chubb Reinsurance (Switzerland) Limited, which we operate as primarily a provider of reinsurance to Chubb entities. Both companies are licensed and governed by FINMA.

U.S. Operations
Our U.S. insurance subsidiaries are subject to extensive regulation by the states in which they do business. The laws of the various states establish departments of insurance with broad authority to regulate, among other things: the standards of solvency that must be met and maintained, the licensing of insurers and their producers, approval of policy forms and rates, the nature of and limitations on investments, restrictions on the size of the risks which may be insured under a single policy, deposits of securities for the benefit of policyholders, requirements for the acceptability of reinsurers, periodic examinations of the affairs of insurance companies, the form and content of reports of financial condition required to be filed, and the adequacy of reserves for unearned premiums, losses, and other exposures.

Our U.S. insurance subsidiaries are required to file detailed annual and quarterly reports with state insurance regulators. In addition, our U.S. insurance subsidiaries' operations and financial records are subject to examination at regular intervals by state regulators.

All states have enacted legislation that regulates insurance holding companies. This legislation provides that each U.S. insurance company in the insurance holding company system (system) is required to register with the insurance department of its state of domicile and furnish information concerning the operations of companies within the system that may materially affect the operations, management, or financial condition of our U.S. insurers. All transactions within a system must be fair and equitable. Notice to the insurance departments is required prior to the consummation of transactions affecting the ownership or control of an insurer and of certain material transactions between an insurer and an entity in its system. In addition, certain transactions may not be consummated without the department's prior approval.

We are also required to file annually with the Department an enterprise risk report that identifies material risks within our system that could pose enterprise risk to our U.S. insurers, a disclosure report that identifies our corporate governance practices, and a report reflecting our internal assessment of material risks associated with our current business plan and the sufficiency of our capital resources to support those risks. The National Association of Insurance Commissioners (NAIC) adopted a model law which requires companies to submit a group capital calculation (GCC) report that will assist regulators in identifying risks that may emanate from a holding company system. The GCC is intended to provide a baseline quantitative measure for group risks and meet the requirement under the current covered agreements between the U.S. and the European Union and between the U.S. and the U.K.

Statutory surplus is an important measure used by the regulators and rating agencies to assess our U.S. insurance subsidiaries' ability to support business operations and provide dividend capacity. Our U.S. insurance subsidiaries are subject to various state statutory and regulatory restrictions that limit the amount of dividends that may be paid without prior approval from regulatory authorities. These restrictions differ by state, but are generally based on calculations incorporating statutory surplus, statutory net income, and/or investment income.

The NAIC has a risk-based capital requirement for P&C insurance companies. This risk-based capital formula is used by many state regulatory authorities to identify insurance companies that may be undercapitalized and which merit further regulatory attention. These requirements are designed to monitor capital adequacy using a formula that prescribes a series of risk measurements to determine a minimum capital amount for an insurance company, based on the profile of the individual company. The ratio of a company's actual policyholder surplus to its minimum capital requirement will determine whether any state regulatory action is required. There are progressive risk-based capital failure levels that trigger more stringent regulatory action. If an insurer's policyholders' surplus falls below the Mandatory Control Level (70 percent of the Authorized Control Level, as defined by the NAIC), the relevant insurance commissioner is required to place the insurer under regulatory control.

However, an insurance regulator may allow a P&C company operating below the Mandatory Control Level that is writing no business and is running off its existing business to continue its run-off. Brandywine is running off its liabilities consistent with the terms of an order issued by the Insurance Commissioner of Pennsylvania. This includes periodic reporting obligations to the Department.

Government intervention continued in the insurance and reinsurance markets in relation to terrorism coverage in the U.S. (and through industry initiatives in other countries). The U.S. Terrorism Risk Insurance Act (TRIA), which was enacted in 2002 to ensure the availability of insurance coverage for certain types of terrorist acts in the U.S., was extended under the Terrorism Risk Insurance Program Reauthorization Act of 2019 (TRIPRA) through December 31, 2027, and applies to certain of our operations.

From time to time, Chubb and its subsidiaries and affiliates receive inquiries from state agencies and attorneys general, with which we generally comply, seeking information concerning business practices, such as underwriting and non-traditional or loss mitigation insurance products. Moreover, many recent factors, such as consequences of and reactions to industry and economic conditions and focus on domestic issues, have contributed to the potential for change in the legal and regulatory framework applicable to Chubb's U.S. operations and businesses. We cannot assure that changes in laws or investigative or enforcement activities in the various states in the U.S. will not have a material adverse impact on our financial condition, results of operations, or business practices.

We are subject to numerous U.S. federal and state laws governing the protection of personal and confidential information of our clients or employees. These laws and regulations are increasing in complexity, and the requirements are extensive and detailed. Numerous states require us to certify our compliance with their data protection laws.

We are subject to the New York Department of Financial Services' Cybersecurity Regulation (the NYDFS Cybersecurity Regulation) which mandates detailed cybersecurity standards for all institutions, including insurance entities, authorized by the NYDFS to operate in New York. Among the requirements are the maintenance of a cybersecurity program with governance controls, risk-based minimum data security standards for technology systems, cyber breach preparedness and response requirements, including reporting obligations, vendor oversight, training, program record keeping, and certification obligations. Because our North America systems are integrated, our companies domiciled in other states may also be impacted by this requirement.

Additionally, the NAIC adopted an Insurance Data Security Model Law, which requires licensed insurance entities to comply with detailed information security requirements. The NAIC model law is similar in many respects to the NYDFS Cybersecurity Regulation.

Bermuda Operations

The Insurance Act 1978 of Bermuda and related regulations, as amended (the Insurance Act), regulates the insurance business of our Bermuda domiciled (re)insurance subsidiaries (Bermuda domiciled subsidiaries) and provides that no person may carry on any insurance business in or from within Bermuda unless registered as an insurer by the Bermuda Monetary Authority (BMA). The Insurance Act imposes solvency and liquidity standards and auditing and reporting requirements on Bermuda insurance companies and grants the BMA powers to supervise, investigate, and intervene in the affairs of insurance companies.

Bermuda domiciled subsidiaries must prepare and file with the BMA, audited annual statutory financial statements and audited annual financial statements prepared in accordance with accounting principles generally accepted in the U.S. (GAAP), International Financial Reporting Standards (IFRS), or any such other generally accepted accounting principles as the BMA may recognize. The GAAP audited financial statements are made public by the BMA. The Insurance Act prescribes rules for the preparation and content of the statutory financial statements that require Bermuda domiciled subsidiaries to give detailed information and analyses regarding premiums, claims, reinsurance, and investments. In addition, each year, the Bermuda domiciled insurers are required to file with the BMA a capital and solvency return along with an annual statutory financial return. The prescribed form of capital and solvency return is comprised of the BMA's risk based capital model, termed the Bermuda Solvency Capital Requirement (BSCR) or an approved internal capital model in lieu thereof; a statutory economic balance sheet; the approved actuary's opinion; and several prescribed schedules. The BSCR is a tool to assist the BMA both in measuring risk and in determining appropriate levels of capitalization. The BSCR employs a standard mathematical model that correlates the risk underwritten by Bermuda insurers to their capital. The BSCR framework applies a standard measurement format to the risk associated with an insurer's assets, liabilities, and premiums, including a formula to take into account catastrophe risk exposure.

The BMA established risk-based regulatory capital adequacy and solvency margin requirements for Bermuda insurers that mandate that a Bermuda domiciled subsidiary's Enhanced Capital Requirement (ECR) be calculated by either (a) BSCR, or (b) an internal capital model which the BMA has approved for use for this purpose. The Bermuda domiciled subsidiaries use the BSCR in calculating their solvency requirements. Bermuda statutory reporting rules include an Economic Balance Sheet (EBS) framework. The EBS framework is embedded as part of the BSCR and forms the basis of our ECR.

In order to minimize the risk of a shortfall in capital arising from an unexpected adverse deviation the BMA has established a threshold capital level, (termed the Target Capital Level (TCL)), set at 120 percent of ECR, that serves as an early warning tool for the BMA. Failure to maintain statutory capital at least equal to the TCL would likely result in increased BMA regulatory oversight.

Under the BMA's powers to set standards on public disclosure under the Insurance Act, the Bermuda domiciled subsidiaries are required to prepare and publish a Financial Condition Report (FCR). The FCR provides details of measures governing the business operations, corporate governance framework, solvency and financial performance. The FCR must be filed with the BMA and requires Bermuda insurance companies to make the FCR publicly available.

Under the Insurance Act, Chubb's Bermuda domiciled subsidiaries are prohibited from declaring or paying any dividends of more than 25 percent of total statutory capital and surplus, as shown in its previous financial year statutory balance sheet, unless at least seven days before payment of the dividends, it files with the BMA an affidavit signed by at least two directors of the relevant Chubb Bermuda domiciled subsidiary (one of whom must be a director resident in Bermuda) and by the relevant Chubb Bermuda domiciled subsidiary's principal representative, that it will continue to meet its required solvency margins. Furthermore, Bermuda domiciled subsidiaries may only declare and pay a dividend from retained earnings and a dividend or distribution from contributed surplus if it has no reasonable grounds for believing that it is, or would after the payment be, unable to pay its liabilities as they become due, or if the realizable value of its assets would be less than the aggregate of its liabilities.

In addition, Chubb's Bermuda domiciled subsidiaries must obtain the BMA's prior approval before reducing total statutory capital, as shown in its previous financial year's financial statements, by 15 percent or more.

Other International Operations

The extent of insurance regulation varies significantly among the countries in which non-U.S. Chubb operations conduct business. While each country imposes licensing, solvency, auditing, and financial reporting requirements, the type and extent of the requirements differ substantially. For example:

- in some countries, insurers are required to prepare and file monthly and/or quarterly financial reports, and in others, only annual reports;
- some regulators require intermediaries to be involved in the sale of insurance products, whereas other regulators permit direct sales contact between the insurer and the customer;
- the extent of restrictions imposed upon an insurer's use of local and offshore reinsurance vary;
- policy form filing and rate regulation vary by country;
- the frequency of contact and periodic on-site examinations by insurance authorities differ by country; and
- regulatory requirements relating to insurer dividend policies vary by country.

Significant variations can also be found in the size, structure, and resources of the local regulatory departments that oversee insurance activities. Certain regulators prefer close relationships with all subject insurers and others operate a risk-based approach.

Chubb operates in some countries through subsidiaries and in some countries through branches of subsidiaries. Local capital requirements applicable to a subsidiary generally include its branches. Certain Chubb companies are jointly owned with local companies to comply with legal requirements for local ownership. Other legal requirements include discretionary licensing procedures, compulsory cessions of reinsurance, local retention of funds and records, data privacy and protection program requirements such as the General Data Protection Regulation (GDPR), and foreign exchange controls. Chubb's international companies are also subject to multinational application of certain U.S. laws.

There are various regulatory bodies and initiatives that impact Chubb in multiple international jurisdictions and the potential for significant impact on Chubb could be heightened as a result of recent industry and economic developments.

Enterprise Risk Management

As an insurer, Chubb is in the business of profitably managing risk for its customers. Since risk management must permeate an organization conducting a global insurance business, we have an established Enterprise Risk Management (ERM) framework, which encompasses climate risk, that is integrated into management of our businesses and is led by Chubb's senior management. As a result, ERM is a part of the day-to-day management of Chubb and its operations.

Our global ERM framework is broadly multi-disciplinary and its strategic objectives include:

- **External Risks**: identify, analyze, quantify, and where possible, mitigate significant external risks that could materially hamper the financial condition of Chubb and/or the achievement of corporate business objectives over the next 36 months;
- **Exposure Accumulations**: identify and quantify the accumulation of exposure to individual counterparties, products or industry sectors, particularly those that materially extend across or correlate between business units or divisions and/or the balance sheet;
- **Risk Modeling**: develop and use various data-sets, advanced analytics, metrics and processes (such as probabilistic exposure and economic capital models to assess aggregation risk from natural and other catastrophes) that help business and corporate leaders make informed underwriting, portfolio management and risk management decisions within a consistent risk/reward framework;
- **Governance**:
    - establish and coordinate risk guidelines that reflect the corporate appetite for risk;
    - monitor exposure accumulations relative to established guidelines; and
    - ensure effective internal risk management communication up to management and the Board, (including our Risk & Finance Committee and our Nominating & Governance Committee), down to the various business units and legal entities, and across the firm; and
- **Disclosure**: develop protocols and processes for risk-related disclosure internally as well as externally to rating agencies, regulators, shareholders and analysts.

Chubb Group's Risk and Underwriting Committee (RUC) reports to and assists the Chief Executive Officer (CEO) in the oversight and review of the ERM framework which covers the processes and guidelines used to manage the entire landscape of insurance, financial, strategic, and operational risks. The RUC is chaired by Chubb Group’s Chief Risk Officer (Chair). The RUC meets at least monthly, and is comprised of Chubb Group's most senior executives which, in addition to the Chair, includes the CEO, President and Chief Operating Officer, Chief Financial Officer, Chief Investment Officer, Chief Actuary, Chief Claims Officer, General Counsel, President – North America Insurance, President – Overseas General Insurance, Deputy Chief Risk Officer, and Chief Underwriting Officer.

The RUC is assisted in its activities by Chubb's Enterprise Risk Unit (ERU) and Product Boards. The ERU is responsible for the collation and analysis of risk insight in two key areas. The first relates to external information that provides insight to the RUC on existing or emerging risks that might significantly impact Chubb's key objectives while the second involves internal risk aggregations arising from Chubb's business writings and other activities such as investments and operations. The ERU is independent of the operating units and reports to our Chief Risk Officer. The Product Boards exist to provide oversight for products that we offer globally. A Product Board currently exists for each of Chubb's major product areas. Each Product Board is responsible for ensuring consistency in underwriting and pricing standards, identification of emerging issues, and guidelines for relevant accumulations.

Chubb's Chief Risk Officer also reports to the Board's Risk & Finance Committee, which helps execute the Board's supervisory responsibilities pertaining to ERM. The role of the Risk & Finance Committee includes evaluation of the integrity and effectiveness of our ERM procedures, systems, and information; governance on major policy decisions pertaining to risk aggregation and minimization; and assessment of our major decisions and preparedness levels pertaining to perceived material risks. The Audit Committee meets with the Risk & Finance Committee at least annually in order to exercise its duties under New York Stock Exchange Rules.

Others within the overall ERM structure contribute toward accomplishing Chubb's ERM objectives, including regional management, Corporate Underwriting, Internal Audit, Compliance, external consultants, and managers of our internal control processes and procedures.

Climate Change Risk Management

Chubb has a comprehensive, coordinated global environmental program that is embedded in all areas of the organization and its activities and performance are reported to the RUC and executive team. Chubb's Vice Chairman, Global Underwriting and Claims is the senior executive responsible for overseeing the global environmental program. The Vice Chairman reports to the CEO of Chubb who approves the goals and objectives of the environmental program. The Vice Chairman is a member of the Executive Committee, which comprises the most senior executive leaders, and has executive management responsibility for the execution of underwriting and portfolio management decisions and responses related to climate change.

Our Climate Sustainability Manager (CSM), who reports to the Vice Chairman, manages the global environmental program and is responsible for identifying and implementing opportunities for climate related products and services. The CSM chairs two committees as part of Chubb's climate management, the Climate Advisory Group (CAG) and the Operational Climate Committee (OCC). The CAG includes Chubb leaders across business units and functions (e.g. Underwriting, Claims, Risk Engineering, Enterprise Risk Management) and collaborates cross-divisionally to pursue opportunities to develop and expand climate–relevant products and services. The OCC oversees the operationally focused climate and environmental sustainability policies, strategies and programs of Chubb, which include Chubb's greenhouse gas measurement and reduction activities. The CAG meets six times per year to assess risks and to develop and expand climate-relevant products and services.

The potential impacts of climate change on the insurance industry, including Chubb, are complex, myriad and will develop over a multi-year time horizon. These risks primarily include physical risks, and to a lesser extent transition risks and liability risks. Physical risks arise from direct weather–related events, such as floods, storms and wildfire. The effects therein comprise direct impacts to insurers, such as damage to property.

Our insurance contracts are typically renewable annually. Consequently, we can respond to changes as needed by adjusting our pricing or by restricting our exposure.

As described in "Catastrophe Management" under Item 7, Chubb uses catastrophe models to quantify natural catastrophe risk for product pricing and portfolio management purposes. Based on science and our own experience to date, we have conducted extensive work to understand the potential impact of climate change on our risk profile. These findings actively inform our underwriting risk appetite for property-related exposures for wild-fire, where we have significantly reduced our business in certain western states, and other perils such as flood and hurricane.

Chubb regularly applies exclusions as part of its underwriting process, which depend on the specific conditions and circumstances of the risk being evaluated. Those exclusions may reflect environmental, social and governance (ESG) and climate-related considerations, such as restricted participation in certain industries, including mining and reclamation operations, oil refining, pipeline and related distribution operations, and chemical manufacturing and distribution. On July 1, 2019, Chubb adopted a policy limiting underwriting in companies involved in thermal coal. Additionally, we continue to assess our investment in carbon–intensive industries and plans for transitioning to a lower–carbon economy. As part of this assessment, Chubb has pledged to not make new debt or equity investments in companies that generate more than 30 percent of revenues from thermal coal mining or energy production from coal. Chubb also closely follows emerging trends in climate litigation to assess potential risks to additional insurance products.

Chubb mitigates exposure to climate change risk by hedging catastrophe risk in our insurance portfolio through both reinsurance and capital markets, and our investment portfolio through the diversification of risk, industry, location, type and duration of security. Asset concentrations are actively managed in hurricane-and flood-exposed areas, and our investment portfolio is relatively short-dated with an average duration of about four years.

Chubb supports industries involved in mitigating climate risk, by offering solutions to Cleantech companies, the renewable energy sector, and for green building restoration by providing coverage for additional costs associated with repair or replacement to a "green" standard not covered by traditional property insurance policies.

Tax Matters
Refer to "Risk Factors", under Item 1A and Note 1 **o**) and Note 8 to the Consolidated Financial Statements, under Item 8.

Information about our Executive Officers

Name	Age	Position
Evan G. Greenberg	67	Chairman, Chief Executive Officer, and Director
John W. Keogh	57	President and Chief Operating Officer
Peter C. Enns	56	Executive Vice President and Chief Financial Officer
John J. Lupica	56	Vice Chairman; President, North America Insurance
Joseph F. Wayland	64	Executive Vice President and General Counsel
Sean Ringsted	59	Executive Vice President, Chief Digital Business Officer, and Chief Risk Officer
Timothy A. Boroughs	72	Executive Vice President and Chief Investment Officer
Paul J. Krump	62	Vice Chairman, Global Underwriting and Claims
Juan Luis Ortega	47	Executive Vice President; President, Overseas General Insurance

Evan G. Greenberg has been a director of Chubb Limited since August 2002. Mr. Greenberg was elected Chairman of the Board of Directors in May 2007. Mr. Greenberg was appointed to the position of President and Chief Executive Officer of Chubb Limited in May 2004, and in June 2003, was appointed President and Chief Operating Officer of Chubb Limited. Mr. Greenberg was appointed to the position of Chief Executive Officer of Chubb Overseas General in April 2002. He joined Chubb as Vice Chairman, Chubb Limited, and Chief Executive Officer of Chubb Tempest Re in November 2001. Prior to joining Chubb, Mr. Greenberg was President and Chief Operating Officer of American International Group (AIG), a position he held from 1997 until 2000.

John W. Keogh was appointed President of Chubb in December 2020, and has served as Chief Operating Officer since July 2011. Mr. Keogh was appointed Vice Chairman of Chubb Limited in 2010 and Executive Vice Chairman in 2015. Mr. Keogh joined Chubb in 2006 as Chairman, Insurance – Overseas General. Before joining Chubb, Mr. Keogh held a range of positions with increasing responsibility during a 20-year career with AIG, including Senior Vice President, Domestic General Insurance, and President and Chief Executive Officer of National Union Fire Insurance Company of Pittsburgh, an AIG member company. He began his insurance career as an underwriter with AIG in 1986.

Peter C. Enns was appointed Executive Vice President and Chief Financial Officer of Chubb Limited in July 2021. Mr. Enns, who joined Chubb in April 2021 as Executive Vice President, Finance, has more than 30 years of finance and investment banking experience. Before joining Chubb, Mr. Enns held several management positions at HSBC from 2018 to 2020, including Global Head of Financial Institutions Group, Global Co-Head of Corporate Finance Coverage, and Global Co-Head of Investment Banking Coverage. Prior to HSBC, Mr. Enns held several senior positions through 2017 during a more than 20-year career at Goldman Sachs, including Chairman and CEO of Goldman Sachs Canada, Head of the Asia Financial Institutions Group, and Partner of the U.S. Financial Institutions Group.

John J. Lupica was appointed President, North America Insurance in September 2020 and has served as Vice Chairman of Chubb since November 2013. Prior to his current role, Mr. Lupica served in several senior management positions since joining Chubb in 2000, including President, North America Major Accounts and Specialty Insurance; Chairman, Insurance - North America; Chief Operating Officer, Insurance - North America; President of ACE USA; Division President of U.S. Professional Risk business and U.S. Regional Operations; and Executive Vice President of Professional Risk. Prior to joining Chubb, he served as Senior Vice President for Munich-American Risk Partners, Inc. He also held various management positions at AIG.

Joseph F. Wayland was appointed Executive Vice President of Chubb Limited in January 2016, and General Counsel and Secretary of Chubb Limited in July 2013. Mr. Wayland joined Chubb from the law firm of Simpson Thacher & Bartlett LLP, where he was a partner since 1994. From 2010 to 2012, he served in the United States Department of Justice, first as Deputy Assistant Attorney General of the Antitrust Division, and was later appointed as the Acting Assistant Attorney General in charge of that division.

Sean Ringsted was appointed Executive Vice President and Chief Digital Business Officer in February 2017 and Chief Risk Officer in November 2008. Mr. Ringsted previously served as Chief Actuary of Chubb Limited from November 2008 to January 2017, Chief Actuary of Chubb Group from 2004 to 2008, Executive Vice President and Chief Risk Officer for Chubb Tempest Re from 2002 to 2004, and Senior Vice President and Chief Actuary for Chubb Tempest Re from 1998 to 2002. Prior to joining Chubb, Mr. Ringsted was a consultant at Tillinghast-Towers Perrin.

Timothy A. Boroughs was appointed Chief Investment Officer of Chubb Group in 2000 and Executive Vice President in 2014. Prior to joining Chubb, Mr. Boroughs was Director of Fixed Income at Tudor Investment Corporation from 1997 to 2000, and Managing Partner and Director of Global Leveraged Investment Activity at Fischer Francis Trees & Watts from 1976 to 1997.

Paul J. Krump was appointed Vice Chairman, Global Underwriting and Claims in September 2020. Prior to his current role, from 2016 to 2020, Mr. Krump served as Executive Vice President, Chubb Group and President, North America Commercial and Personal Insurance. Before Chubb Limited's January 2016 acquisition of The Chubb Corporation, Mr. Krump served as Chief Operating Officer of The Chubb Corporation, responsible for the company's Commercial, Specialty, Personal and Accident & Health insurance lines; Claims; Global Field Operations; Information Technology; Human Resources; Communications; and External Affairs. Mr. Krump joined The Chubb Corporation in 1982 as a commercial underwriting trainee in the Minneapolis office. He held numerous headquarters and field positions in the United States and Europe, including President of Personal Lines and Claims and President of Commercial and Specialty Lines.

Juan Luis Ortega was appointed Executive Vice President, Chubb Group and President, Overseas General Insurance in August 2019. Mr. Ortega previously served as Senior Vice President, Chubb Group and Regional President of Latin America from 2016 to 2019, and Regional President of Asia Pacific from 2013 to 2016. Mr. Ortega had also held several senior roles since joining Chubb in 1999, including Senior Vice President, Accident & Health, for the Asia Pacific region from 2011 to 2013 and Senior Vice President and Regional Head of Accident & Health for the Latin America region from 2008 to 2010. Mr. Ortega joined Chubb in 1999 and advanced through a series of accident and health and credit insurance management positions in Miami, Puerto Rico and Mexico, before being named Country President of Chile in 2005.

ITEM 1A. Risk Factors
Factors that could have a material impact on our results of operations or financial condition are outlined below. Additional risks not presently known to us or that we currently deem insignificant may also impair our business or results of operations as they become known or as facts and circumstances change. Any of the risks described below could result in a material adverse effect on our results of operations or financial condition.

Insurance

Our results of operations or financial condition could be adversely affected by the occurrence of natural and man-made disasters.
We have substantial exposure to losses resulting from natural disasters, man-made catastrophes, such as terrorism or cyber-attack, and other catastrophic events, including pandemics. This could impact a variety of our businesses, including our commercial and personal lines, and life and accident and health (A&H) products. Catastrophes can be caused by various events, including hurricanes, typhoons, earthquakes, hailstorms, droughts, explosions, severe winter weather, fires, war, acts of terrorism, nuclear accidents, political instability, and other natural or man-made disasters, including a global or other wide-impact pandemic or a significant cyber-attack. The incidence and severity of catastrophes are inherently unpredictable and our losses from catastrophes could be substantial. In addition, climate change and resulting changes in global temperatures, weather patterns, and sea levels may both increase the frequency and severity of natural catastrophes and the resulting losses in the future and impact our risk modeling assumptions. We cannot predict the impact that changing climate conditions, if any, may have on our results of operations or our financial condition. Additionally, we cannot predict how legal, regulatory and/or social responses to concerns around global climate change and the resulting impact on various sectors of the economy may impact our business. Exposure to cyber risk is increasing systematically due to greater digital dependence and increases possible losses due to a catastrophic cyber event. Cyber catastrophic scenarios are not bound by time or geographic limitations and cyber catastrophic perils don't have well-established definitions and fundamental physical properties. Rather, cyber risks are engineered by human actors and thus are continuously evolving, often in ways that are engineered specifically to evade established loss mitigation controls. The occurrence of claims from catastrophic events could result in substantial volatility in our results of operations or financial condition for any fiscal quarter or year. Although we attempt to manage our exposure to such events through the use of underwriting controls, risk models, and the purchase of third-party reinsurance, catastrophic events are inherently unpredictable and the actual nature of such events, when they occur, could be more frequent or severe than contemplated in our pricing and risk management expectations. As a result, the occurrence of one or more catastrophic events could have an adverse effect on our results of operations and financial condition.

COVID-19, the effects of global actions taken to contain its spread, and its economic and societal impact could adversely impact our businesses, invested assets, financial condition, and results of operations.
COVID-19 and related variants (the "pandemic") is causing significant disruption to public health, the global economy, financial markets, and commercial, social and community activity generally. The pandemic has had a significant effect on our company's business operations and, depending on the course of the pandemic and government responses, may continue to affect our current and future financial results. We may experience higher levels of loss and, claims activity in certain lines of business in excess of losses we have already recognized, and our premiums could also be adversely affected by any repeated or further suppression of global commercial activity that results in a reduction in insurable assets and other exposure. Financial conditions resulting from the pandemic may also have a negative effect on the value and quality of our portfolio of invested assets, thereby adversely affecting our investment returns and increasing our credit and related risk. Certain lines of our business, such as our variable annuity life reinsurance business, may require additional forms of collateral in the event of a decline in the securities and benchmarks to which those repayment mechanisms are linked.

To protect our employees and in response to the global and regional restrictions on interpersonal contact and travel because of the pandemic, much of our work force may be working remotely, either for extended periods or intermittently, in response to changing health and regulatory conditions, placing increased demands on our IT systems. While we have continued to conduct our business effectively throughout the pandemic, there is no assurance that our ability to continue to function in this environment will not be adversely affected by an extended disruption in the telecommunications and internet infrastructures that support our remote work capability.

If actual claims exceed our loss reserves, our financial results could be adversely affected.
Our results of operations and financial condition depend upon our ability to accurately assess the potential losses associated with the risks that we insure and reinsure. We establish reserves for unpaid losses and loss expenses, which are estimates of future payments of reported and unreported claims for losses and related expenses, with respect to insured events that have occurred at or prior to the balance sheet date. The process of establishing reserves can be highly complex and is subject to considerable variability as it requires the use of informed estimates and judgments.

Actuarial staff in each of our segments regularly evaluates the levels of loss reserves. Any such evaluation could result in future changes in estimates of losses or reinsurance recoverables and would be reflected in our results of operations in the period in which the estimates are changed. Losses and loss expenses are charged to income as incurred. During the loss settlement period, which can be many years in duration for some of our lines of business, additional facts regarding individual claims and trends often will become known which may result in a change in overall reserves. In addition, application of statistical and actuarial methods may require the adjustment of overall reserves upward or downward from time to time.

Included in our loss reserves are liabilities for latent claims such as asbestos and environmental (A&E), which are principally related to claims arising from remediation costs associated with hazardous waste sites and bodily-injury claims related to exposure to asbestos products and environmental hazards. At December 31, 2021, gross A&E liabilities represented approximately 2.2 percent of our gross loss reserves. The estimation of these liabilities is subject to many complex variables including: the current legal environment; specific settlements that may be used as precedents to settle future claims; assumptions regarding trends with respect to claim severity and the frequency of higher severity claims; assumptions regarding the ability to allocate liability among defendants (including bankruptcy trusts) and other insurers; the ability of a claimant to bring a claim in a state in which it has no residency or exposure; the ability of a policyholder to claim the right to non-products coverage; whether high-level excess policies have the potential to be accessed given the policyholder's claim trends and liability situation; payments to unimpaired claimants; and the potential liability of peripheral defendants. Accordingly, the ultimate settlement of losses, arising from either latent or non-latent causes, may be significantly greater or less than the loss and loss expense reserves held at the balance sheet date. In addition, the amount and timing of the settlement of our P&C liabilities are uncertain and our actual payments could be higher than contemplated in our loss reserves owing to the impact of insurance, judicial decisions, and/or social inflation. If our loss reserves are determined to be inadequate, we may be required to increase loss reserves at the time of the determination and our net income and capital may be reduced.

The effects of emerging claim and coverage issues on our business are uncertain.
As industry practices and legislative, regulatory, judicial, social, financial, technological and other environmental conditions change, unexpected and unintended issues related to claims and coverage may emerge. These issues may adversely affect our business by either extending coverage beyond our underwriting intent or by increasing the frequency and severity of claims. In some instances, these changes may not become apparent until after we have issued insurance or reinsurance contracts that are affected by the changes. For example, recently enacted "reviver" legislation in certain states does allow civil claims relating to molestation to be asserted against policyholders that would otherwise be barred by statutes of limitations. As a result, the full extent of liability under our insurance or reinsurance contracts may not be known for many years after issuance.

The failure of any of the loss limitation methods we use could have an adverse effect on our results of operations and financial condition.
We seek to manage our loss exposure by maintaining a disciplined underwriting process throughout our insurance operations. We also look to limit our loss exposure by writing a number of our insurance and reinsurance contracts on an excess of loss basis. Excess of loss insurance and reinsurance indemnifies the insured against losses in excess of a specified amount. In addition, we limit program size for each client and purchase third-party reinsurance for our own account. In the case of our assumed proportional reinsurance treaties, we seek per occurrence limitations or loss and loss expense ratio caps to limit the impact of losses ceded by the client. In proportional reinsurance, the reinsurer shares a proportional part of the premiums and losses of the reinsured. We also seek to limit our loss exposure by geographic diversification. Geographic zone limitations involve significant underwriting judgments, including the determination of the area of the zones and the inclusion of a particular policy within a particular zone's limits.

However, there are inherent limitations in all of these tactics and no assurance can be given against the possibility of an event or series of events that could result in loss levels that could have an adverse effect on our financial condition or results of operations. It is also possible that losses could manifest themselves in ways that we do not anticipate and that our risk mitigation strategies are not designed to address. Additionally, various provisions of our policies, such as limitations or exclusions from coverage or choice of forum negotiated to limit our risks, may not be enforceable in the manner we intend. As a result, one or more natural or man-made catastrophes, terrorism, or other events could result in claims that substantially exceed our expectations, which could have an adverse effect on our results of operations and financial condition.

We may be unable to purchase reinsurance, and/or if we successfully purchase reinsurance, we are subject to the possibility of non-payment.

We purchase protection from third parties including, but not limited to, reinsurance to protect against catastrophes and other sources of volatility, to increase the amount of protection we can provide our clients, and as part of our overall risk management strategy. Our reinsurance business also purchases retrocessional protection which allows a reinsurer to cede to another company all or part of the reinsurance originally assumed by the reinsurer. A reinsurer's or retrocessionaire's insolvency or inability or unwillingness to make timely payments under the terms of its reinsurance agreement with us could have an adverse effect on us because we remain liable to the insured. From time to time, market conditions have limited, and in some cases have prevented, insurers and reinsurers from obtaining the types and amounts of reinsurance or retrocessional reinsurance that they consider adequate for their business needs.

There is no guarantee our desired amounts of reinsurance or retrocessional reinsurance will be available in the marketplace in the future. In addition to capacity risk, the remaining capacity may not be on terms we deem appropriate or acceptable or with companies with whom we want to do business. Finally, we face some degree of counterparty risk whenever we purchase reinsurance or retrocessional reinsurance. Consequently, the insolvency of these counterparties, or the inability, or unwillingness of any of our present or future reinsurers to make timely payments to us under the terms of our reinsurance or retrocessional agreements could have an adverse effect on us. At December 31, 2021, we had $17.6 billion of reinsurance recoverables, net of reserves for uncollectible recoverables.

Certain active Chubb companies are primarily liable for A&E and other exposures they have reinsured to our inactive run-off company Century Indemnity Company (Century). At December 31, 2021, the aggregate reinsurance balances ceded by our active subsidiaries to Century were approximately $1.8 billion. Should Century's loss reserves experience adverse development in the future and should Century be placed into rehabilitation or liquidation, the reinsurance recoverables due from Century to its affiliates would be payable only after the payment in full of third-party expenses and liabilities, including administrative expenses and direct policy liabilities. Thus, the intercompany reinsurance recoverables would be at risk to the extent of the shortage of assets remaining to pay these recoverables. While we believe the intercompany reinsurance recoverables from Century are not impaired at this time, we cannot assure that adverse development with respect to Century's loss reserves, if manifested, will not result in Century's insolvency, which could result in our recognizing a loss to the extent of any uncollectible reinsurance from Century. This could have an adverse effect on our results of operations and financial condition.

Our net income may be volatile because certain products sold by our Life Insurance business expose us to reserve and fair value liability changes that are directly affected by market and other factors and assumptions.

Our pricing, establishment of reserves for future policy benefits and valuation of life insurance and annuity products, including reinsurance programs, are based upon various assumptions, including but not limited to equity market changes, interest rates, mortality rates, morbidity rates, and policyholder behavior. The process of establishing reserves for future policy benefits relies on our ability to accurately estimate insured events that have not yet occurred but that are expected to occur in future periods. Significant deviations in actual experience from assumptions used for pricing and for reserves for future policy benefits could have an adverse effect on the profitability of our products and our business.

Under reinsurance programs covering variable annuity guarantees, we assumed the risk of guaranteed minimum death benefits (GMDB) and guaranteed living benefits (GLB), principally guaranteed minimum income benefits (GMIB), associated with variable annuity contracts. We ceased writing this business in 2007. Our net income is directly impacted by the change in the reserve calculated in connection with the reinsurance of GMDB liability and by the change in the fair value of the GLB liability. Additionally, the fair value of GLB liabilities is impacted by market conditions. We view our variable annuity reinsurance business as having a similar risk profile to that of catastrophe reinsurance, with the probability of long-term economic loss relatively small at the time of pricing. Adverse changes in market factors and policyholder behavior will have an impact on both Life Insurance underwriting income and consolidated net income.

Payment of obligations under surety bonds could have an adverse effect on our results of operations.

The surety business tends to be characterized by infrequent but potentially high severity losses. The majority of our surety obligations are intended to be performance-based guarantees. When losses occur, they may be mitigated, at times, by recovery rights to the customer’s assets, contract payments, and collateral and bankruptcy recoveries. We have substantial commercial and construction surety exposure for current and prior customers. In that regard, we have exposures related to surety bonds issued on behalf of companies that have experienced or may experience deterioration in creditworthiness. If the financial condition of these companies were adversely affected by the economy or otherwise, we may experience an increase in filed claims and may incur high severity losses, which could have an adverse effect on our results of operations.

Our exposure to various commercial and contractual counterparties, our reliance on brokers, and certain of our policies may subject us to credit risk.
We have exposure to counterparties through a variety of commercial transactions and arrangements, including reinsurance transactions; agreements with banks, hedge funds and other investment vehicles; and derivative transactions, that expose us to credit risk in the event our counterparty fails to perform its obligations. This includes exposure to financial institutions in the form of secured and unsecured debt instruments and equity securities. Moreover, deposits paid in connection with our agreements to acquire additional shares of Huatai Group expose us to risk if the transactions are not completed.

In accordance with industry practice, we generally pay amounts owed on claims to brokers who, in turn, remit these amounts to the insured or ceding insurer. Although the law is unsettled and depends upon the facts and circumstances of the particular case, in some jurisdictions, if a broker fails to make such a payment, we might remain liable to the insured or ceding insurer for the deficiency. Conversely, in certain jurisdictions, if a broker does not remit premiums paid for these policies over to us, these premiums might be considered to have been paid and the insured or ceding insurer will no longer be liable to us for those amounts, whether or not we have actually received the premiums from the broker. Consequently, we assume a degree of credit risk associated with a broker with whom we transact business. However, due to the unsettled and fact-specific nature of the law, we are unable to quantify our exposure to this risk. To date, we have not experienced any material losses related to this credit risk.

Under the terms of certain high-deductible policies which we offer, such as workers' compensation and general liability, our customers are responsible to reimburse us for an agreed-upon dollar amount per claim. In nearly all cases, we are required under such policies to pay covered claims first and then seek reimbursement for amounts within the applicable deductible from our customers. This obligation subjects us to credit risk from these customers. While we generally seek to mitigate this risk through collateral agreements and maintain a provision for uncollectible accounts associated with this credit exposure, an increased inability of customers to reimburse us in this context could have an adverse effect on our financial condition and results of operations. In addition, a lack of credit available to our customers could impact our ability to collateralize this risk to our satisfaction, which in turn, could reduce the amount of high-deductible policies we could offer.

Since we depend on a few brokers and agents for a large portion of our revenues, loss of business provided by any one of them could adversely affect us.
We market our insurance and reinsurance worldwide, primarily through independent insurance agents, insurance and reinsurance brokers, and bancassurance relationships. Accordingly, our business is dependent on the willingness of these agents and brokers to recommend our products to their customers, who may also promote and distribute the products of our competitors. Deterioration in relationships with our agent and broker distribution network or their increased promotion and distribution of our competitors' products could adversely affect our ability to sell our products. Loss of all or a substantial portion of the business provided by one or more of these agents and brokers could have an adverse effect on our business.

Financial

Our investment performance may affect our financial results and our ability to conduct business.
Our investment assets are invested by professional investment management firms under the direction of our management team in accordance with investment guidelines approved by the Risk & Finance Committee of the Board of Directors. Although our investment guidelines stress diversification of risks and conservation of principal and liquidity, our investments are subject to market risks and risks inherent in individual securities. Our investment performance is highly sensitive to many factors, including interest rates, inflation, monetary and fiscal policies, and domestic and international political conditions. The volatility of our losses may force us to liquidate securities, which may cause us to incur capital losses. Realized and unrealized losses in our investment portfolio would reduce our book value, and if significant, can affect our ability to conduct business.

Volatility in interest rates could impact the performance of our investment portfolio which could have an adverse effect on our investment income and operating results. Although we take measures to manage the risks of investing in a changing interest rate environment, we may not be able to effectively mitigate interest rate sensitivity. Our mitigation efforts include maintaining a high-quality portfolio of primarily fixed income investments with a relatively short duration to reduce the effect of interest rate changes on book value. A significant increase in interest rates would generally have an adverse effect on our book value. Our life insurance investments typically focus on longer duration bonds to better match the obligations of this business. For the life insurance business, policyholder behavior may be influenced by changing interest rate conditions and require a re-balancing of duration to effectively manage our asset/liability position.

As stated, our fixed income portfolio is primarily invested in high quality, investment-grade securities. However, a smaller portion of the portfolio, approximately 18 percent at December 31, 2021, is invested in below investment-grade securities. These securities, which pay a higher rate of interest, also have a higher degree of credit or default risk and may also be less liquid in times of economic weakness or market disruptions. While we have put in place procedures to monitor the credit risk and liquidity of our invested assets, it is possible that, in periods of economic weakness (such as recession), we may experience credit or default losses in our portfolio, which could adversely affect our results of operations and financial condition.

As a part of our ongoing analysis of our investment portfolio, we are required to assess current expected credit losses for all held-to-maturity securities and evaluate expected credit losses for available-for-sale securities when fair value is below amortized cost, which considers reasonable and supportable forecasts of future economic conditions in addition to information about past events and current conditions. This analysis requires a high degree of judgment. Financial assets with similar risk characteristics and relevant historical loss information are included in the development of an estimate of expected lifetime losses. Declines in relevant stock and other financial markets and other factors impacting the value of our investments could result in an adverse effect on our net income and other financial results.

We may require additional capital or financing sources in the future, which may not be available or may be available only on unfavorable terms.
Our future capital and financing requirements depend on many factors, including our ability to write new business successfully and to establish premium rates and reserves at levels sufficient to cover losses, as well as our investment performance and capital expenditure obligations, including with respect to acquisitions. We may need to raise additional funds through financings or access funds through existing or new credit facilities or through short-term repurchase agreements. We also from time to time seek to refinance debt or credit as amounts become due or commitments expire. Any equity or debt financing or refinancing, if available at all, may be on terms that are not favorable to us. In the case of equity financings, dilution to our shareholders could result, and in any case, such securities may have rights, preferences, and privileges that are senior to those of our Common Shares. Our access to funds under existing credit facilities is dependent on the ability of the banks that are parties to the facilities to meet their funding commitments. Under Swiss law, we would be prohibited from selling shares in an equity financing at a purchase price below our then-current par value. If we cannot obtain adequate capital or sources of credit on favorable terms, or at all, we could be forced to use assets otherwise available for our business operations, and our business, results of operations, and financial condition could be adversely affected.

We may be required to post additional collateral because of changes in our reinsurance liabilities to regulated insurance companies, or because of regulatory changes that affect our companies.
If our reinsurance liabilities increase, including in our property & casualty and variable annuity reinsurance businesses, we may be required to post additional collateral for insurance company clients. In addition, regulatory changes sometimes affect our obligations to post collateral. The need to post this additional collateral, if significant enough, may require us to sell investments at a loss in order to provide securities of suitable credit quality or otherwise secure adequate capital at an unattractive cost. This could adversely impact our net income and liquidity and capital resources.

U.S. and global economic and financial industry events and their consequences could harm our business, our liquidity and financial condition, and our stock price.
The consequences of adverse global or regional market and economic conditions may affect (among other aspects of our business) the demand for and claims made under our products, the ability of customers, counterparties, and others to establish or maintain their relationships with us, our ability to access and efficiently use internal and external capital resources, the availability of reinsurance protection, the risks we assume under reinsurance programs covering variable annuity guarantees, and our investment performance. The increasing impact of climate change could affect our cost of claims, loss ratios, and financial results. Volatility in the U.S. and other securities markets may adversely affect our stock price.

A decline in our financial strength ratings could affect our standing among distribution partners and customers and cause our premiums and earnings to decrease. A decline in our debt ratings could increase our borrowing costs and impact our ability to access capital markets.
Ratings are an important factor in establishing the competitive position of insurance and reinsurance companies. The objective of these rating systems is to provide an opinion of an insurer's financial strength and ability to meet ongoing obligations to its policyholders. A ratings downgrade could result in a substantial loss of business as insureds, ceding companies, and brokers move to other insurers and reinsurers with higher ratings. If one or more of our debt ratings were downgraded, we could also incur higher borrowing costs, and our ability to access the capital markets could be impacted. Additionally, we could be required to post collateral or be faced with the cancellation of policies and resulting premium in certain circumstances. We cannot give any assurance regarding whether or to what extent any of the rating agencies might downgrade our ratings in the future.

Our ability to pay dividends and/or to make payments on indebtedness may be constrained by our holding company structure.
Chubb Limited is a holding company that owns shares of its operating insurance and reinsurance subsidiaries along with several loans receivable from affiliates. Beyond this it does not itself have any significant operations or liquid assets. Repayment of loans receivable, guarantee fees and dividends and other permitted distributions from our insurance subsidiaries are its primary sources of funds to meet ongoing cash requirements, including any future debt service payments, other expenses, repurchases of its shares, and to pay dividends to our shareholders. Some of our insurance subsidiaries are subject to significant regulatory restrictions limiting their ability to declare and pay dividends. The inability of our insurance subsidiaries to pay dividends (or other intercompany amounts due, such as intercompany debt obligations) in an amount sufficient to enable us to meet our cash requirements at the holding company level could have an adverse effect on our operations and our ability to repurchase shares and pay dividends to our shareholders.

Swiss law imposes certain restrictions on our ability to repurchase our shares.
Swiss law imposes certain withholding tax and other restrictions on a Swiss company's ability to return earnings or capital to its shareholders, including through the repurchase of its own shares. We may only repurchase shares to the extent that sufficient freely distributable reserves are available. In addition, Swiss law requires that the total par value of Chubb's treasury shares must not be in excess of 10 percent of its total share capital, although an exemption from the 10 percent limit applies for repurchased treasury shares dedicated for cancellation and acquired pursuant to a shareholder-ratified repurchase program. As a result, in order to maintain our share repurchase program, our shareholders must periodically, in separate votes, ratify our share repurchase program and approve a reduction in our share capital through the cancellation of designated blocks of repurchased shares held in treasury. If our shareholders do not ratify our share repurchase program or approve the cancellation of repurchased shares, we may be restricted or unable to return capital to shareholders through share repurchases in the future. Furthermore, our current repurchase program relies on Swiss tax rulings. Any future revocation or loss of our Swiss tax rulings or the inability to conduct repurchases in accordance with these rulings could jeopardize our ability to continue repurchasing our shares.

Our operating results and shareholders' equity may be adversely affected by currency fluctuations.
Our reporting currency is the U.S. dollar. In general, we match assets and liabilities in local currencies. Where possible, capital levels in local currencies are limited to satisfy minimum regulatory requirements and to support local insurance operations. The principal currencies creating foreign exchange risk are the euro, British pound, Canadian dollar, Chinese yuan, Australian dollar, Mexican peso, Brazilian real, Korean won, Japanese yen, Thai baht, and Hong Kong dollar. At December 31, 2021, approximately 21.0 percent of our net assets were denominated in foreign currencies. We may experience losses resulting from fluctuations in the values of non-U.S. currencies, which could adversely impact our results of operations and financial condition.

Operational

The regulatory and political regimes under which we operate, and their volatility, could have an adverse effect on our business.
We may from time to time face challenges resulting from changes in applicable law and regulations in particular jurisdictions, or changes in approach to oversight of our business from insurance or other regulators.

Our insurance and reinsurance subsidiaries conduct business globally. Our businesses in each jurisdiction are subject to varying degrees of regulation and supervision. The laws and regulations of the jurisdictions in which our insurance and reinsurance subsidiaries are domiciled require, among other things, maintenance of minimum levels of statutory capital, surplus, and liquidity; various solvency standards; and periodic examinations of subsidiaries' financial condition. In some jurisdictions, laws and regulations also restrict payments of dividends and reductions of capital. Applicable statutes, regulations, and policies may also restrict the ability of these subsidiaries to write insurance and reinsurance policies, to make certain investments, and to distribute funds. The purpose of insurance laws and regulations generally is to protect policyholders and ceding insurance companies, not our shareholders. For example, some jurisdictions have enacted various consumer protection laws that make it more burdensome for insurance companies to sell policies and interact with customers in personal lines businesses. Failure to comply with such regulations can lead to significant penalties and reputational injury.

The foreign and U.S. federal and state laws and regulations that are applicable to our operations are complex and may increase the costs of regulatory compliance or subject our business to the possibility of regulatory actions or proceedings. Laws and regulations not specifically related to the insurance industry include trade sanctions that relate to certain countries, anti-money laundering laws, and anti-corruption laws. The insurance industry is also affected by political, judicial, and legal developments that may create new and expanded regulations and theories of liability. The current economic and financial climates present additional uncertainties and risks relating to increased regulation and the potential for increased involvement of the U.S. and other governments in the financial services industry.

Regulators in countries where we have operations continue to work with the International Association of Insurance Supervisors (IAIS) to consider changes to insurance company supervision, including with respect to group supervision and solvency requirements. The IAIS has developed a Common Framework for the Supervision of Internationally Active Insurance Groups (ComFrame), which is focused on the effective group-wide supervision of international active insurance groups (IAIGs), such as Chubb. As part of ComFrame, the IAIS is developing an international capital standard for such IAIGs. The details of this global capital standard and its applicability to Chubb are evolving and uncertain at this time. In addition, Chubb businesses across the European Union (EU) are subject to Solvency II, a capital and risk management regime, and our Bermuda businesses are subject to an equivalent of the EU's Solvency II regime. Also applicable to Chubb businesses are the requirements of the Swiss Financial Market Supervisory Authority (FINMA) whose regulations include Swiss Solvency Tests. There are also Risk Based Capital (RBC) requirements in the U.S. which are also subject to revision in response to global developments. The impact to Chubb of these developments remains uncertain, although currently we do not expect that our capital management strategies, results of operations and financial condition will be materially affected by these regulatory changes.

Evolving privacy and data security regulations could adversely affect our business.
We are subject to numerous U.S. federal and state laws and non-U.S. regulations governing the protection of personal and confidential information of our clients and employees, including in relation to medical records, credit card data and financial information. These laws and regulations are increasing in complexity and number, change frequently, sometimes conflict, and could expose Chubb to significant monetary damages, regulatory enforcement actions, fines and/or criminal prosecution in one or more jurisdictions.

We are subject to the New York Department of Financial Services' Cybersecurity Regulation (the NYDFS Cybersecurity Regulation) which mandates detailed cybersecurity standards for all institutions, including insurance entities, authorized by the NYDFS to operate in New York. The NYDFS Cybersecurity Regulation has increased our compliance costs and could increase the risk of noncompliance and subject us to regulatory enforcement actions and penalties, as well as reputation risk.

Additionally, the National Association of Insurance Commissioners (NAIC) adopted an Insurance Data Security Model Law, which requires licensed insurance entities to comply with detailed information security requirements. A number of states have enacted it into law, and it is not yet known whether or not, and to what extent, additional states will enact it. Such enactments, especially if inconsistent between states or with existing laws and regulations could raise compliance costs or increase the risk of noncompliance, with the attendant risk of being subject to regulatory enforcement actions and penalties, as well as reputational harm.

The EU General Data Protection Regulation (the GDPR) is a comprehensive regulation applying across all EU member states. All our business units (regardless of whether they are located in the EU) may be subject to the GDPR when personal data is processed in relation to the offer of goods and services to individuals within the EU. Our failure to comply with GDPR and other countries' privacy or data security-related laws, rules or regulations could result in significant penalties imposed by regulators, which could have an adverse effect on our business, financial condition and results of operations.

Significant other comprehensive privacy laws have been enacted by other jurisdictions, most notably the California Consumer Privacy Act (CCPA), the California Privacy Rights Act (CPRA), and Brazil's Lei Geral de Protecao de Dados (LGPD), which may affect our use of data and could affect our operations and subject us to fines and actions for noncompliance. In the U.S., several other states are considering similar legislation, and there are ongoing discussions regarding a National Privacy Law. New laws similar to the GDPR and the CCPA are expected to be enacted in coming years in various countries and jurisdictions in which we operate.

Our worldwide operations, particularly in developing nations, expose us to global geopolitical developments that could have an adverse effect on our business, liquidity, results of operations, and financial condition.
With operations in 54 countries and territories, we provide insurance and reinsurance products and services to a diverse group of clients worldwide, including operations in various developing nations. Both current and future foreign operations could be adversely affected by unfavorable geopolitical developments, including law changes; tax changes; changes in trade policies; changes to visa or immigration policies; regulatory restrictions; government leadership changes; political events and upheaval; sociopolitical instability; social, political or economic instability resulting from climate change; and nationalization of our operations without compensation. Adverse activity in any one country could negatively impact operations, increase our loss exposure under certain of our insurance products, and could, otherwise, have an adverse effect on our business, liquidity, results of operations, and financial condition depending on the magnitude of the events and our net financial exposure at that time in that country.

A failure in our operational systems or infrastructure or those of third parties, including due to security breaches or cyber-attacks, could disrupt business, damage our reputation, and cause losses.
Our operations rely on the secure processing, storage, and transmission of confidential and other information and assets, including in our computer systems and networks and those of third-party service providers. Our business depends on effective information security and systems and the integrity and timeliness of the data our information systems use to run our business. Our ability to adequately price products and services, to establish reserves, to provide effective, efficient and secure service to our customers, to value our investments and to timely and accurately report our financial results also depends significantly on the integrity and availability of the data we maintain, including that within our information systems, as well as data in and assets held through third-party service providers and systems. Like all global companies, our systems have been, and will likely continue to be, subject to threats from viruses or other malicious codes, unauthorized access, cyber-attacks, cyber frauds or other computer-related penetrations. Although we have implemented administrative and technical controls and have taken protective actions to reduce the risk of cyber incidents and to protect our information technology and assets, and we additionally endeavor to modify such procedures as circumstances warrant and negotiate agreements with third-party providers to protect our assets, such measures may be insufficient to prevent unauthorized access, computer viruses, malware or other malicious code or cyber-attack, business compromise attacks, catastrophic events, system failures and disruptions, employee errors or malfeasance, third party (including outsourced service providers) errors or malfeasance, loss of assets and other events that could have security consequences (each, a Security Event). As the breadth and complexity of our security infrastructure continues to grow, the potential risk of a Security Event increases. Such an event or events may jeopardize Chubb's or its clients' or counterparties' confidential and other information processed and stored within Chubb, and transmitted through its computer systems and networks, or otherwise cause interruptions, delays, or malfunctions in Chubb's, its clients', its counterparties', or third parties' operations, or result in data loss or loss of assets which could result in significant losses, reputational damage or an adverse effect on our operations and critical business functions. Chubb may be required to expend significant additional resources to modify our protective measures or to investigate and remediate vulnerabilities or other exposures and to pursue recovery of lost data or assets and we may be subject to litigation costs and losses, regulatory penalties (as described above) and financial losses that are either not insured against or not fully covered by insurance maintained. In certain instances, we rely on third parties to perform business functions and process data on our behalf which may expose us to additional data security risk.

Despite the contingency plans and facilities we have in place and our efforts to observe the regulatory requirements surrounding information security, our ability to conduct business may be adversely affected by a disruption of the infrastructure that supports our business in the communities in which we are located, or of outsourced services or functions. This may include a disruption involving electrical, communications, transportation, or other services used by Chubb. If a disruption occurs in one location and Chubb employees in that location are unable to occupy our offices and conduct business or communicate with or travel to other locations, our ability to service and interact with clients may suffer and we may not be able to successfully implement contingency plans that depend on communication or travel.

We use analytical models to assist our decision-making in key areas, such as underwriting, claims, reserving, and catastrophe risks, but actual results could differ materially from the model outputs and related analyses.
We use various modeling techniques (e.g., scenarios, predictive, stochastic and/or forecasting) and data analytics to analyze and estimate exposures, loss trends and other risks associated with our assets and liabilities. We use the modeled outputs and related analyses to assist us in decision-making (e.g., underwriting, pricing, claims, reserving, reinsurance, and catastrophe risk) and to maintain competitive advantage. The modeled outputs and related analyses are subject to various assumptions, uncertainties, model errors and the inherent limitations of any statistical analysis, including the use of historical internal and industry data. In addition, the modeled outputs and related analyses may from time to time contain inaccuracies, perhaps in material respects, including as a result of inaccurate inputs or applications thereof. Climate change may make modeled outcomes less certain or produce new, non-modeled risks. Consequently, actual results may differ materially from our modeled results. If, based upon these models or other factors, we misprice our products or underestimate the frequency and/or severity of loss events, or overestimate the risks we are exposed to, new business growth and retention of our existing business may be adversely affected which could have an adverse effect on our results of operations and financial condition.

We could be adversely affected by the loss of one or more key executives or by an inability to attract and retain qualified personnel.
Our success depends on our ability to retain the services of our existing key executives and to attract and retain additional qualified personnel in the future. The loss of the services of any of our key executives or the inability to hire and retain other highly qualified personnel in the future could adversely affect our ability to conduct or grow our business. This risk may be particularly acute for us relative to some of our competitors because some of our senior executives work in countries where they are not citizens and work permit and immigration issues could adversely affect the ability to retain or hire key persons. We do not maintain key person life insurance policies with respect to our employees.

Employee error and misconduct may be difficult to detect and prevent and could adversely affect our business, results of operations, and financial condition.
Losses may result from, among other things, fraud, errors, failure to document transactions properly, failure to obtain proper internal authorization, failure to comply with underwriting or other internal guidelines, or failure to comply with regulatory requirements. It is not always possible to deter or prevent employee misconduct, and the precautions that we take to prevent and detect this activity may not be effective in all cases. Resultant losses could adversely affect our business, results of operations, and financial condition.

Strategic

The continually changing landscape, including competition, technology and products, and existing and new market entrants could reduce our margins and adversely impact our business and results of operations.
Insurance and reinsurance markets are highly competitive. We compete on an international and regional basis with major U.S., Bermuda, European, and other international insurers and reinsurers and with underwriting syndicates, some of which have greater financial, technological, marketing, distribution and/or management resources than we do. In addition, capital market participants have created alternative products that are intended to compete with reinsurance products. We also compete with new companies and existing companies that move into the insurance and reinsurance markets. If competition, or technological or other changes to the insurance markets in which we operate, limits our ability to retain existing business or write new business at adequate rates or on appropriate terms, our business and results of operations could be materially and adversely affected. Increased competition could also result in fewer submissions, lower premium rates, and less favorable policy terms and conditions, which could reduce our profit margins and adversely impact our net income and shareholders' equity.

Recent technological advancements in the insurance industry and information technology industry present new and fast-evolving competitive risks as participants seek to increase transaction speeds, lower costs and create new opportunities. Advancements in technology are occurring in underwriting, claims, distribution and operations at a pace that may quicken, including as companies increase use of data analytics and technology as part of their business strategy. We will be at a competitive disadvantage if, over time, our competitors are more effective than us in their utilization of technology and evolving data analytics. If we do not anticipate or keep pace with these technological and other changes impacting the insurance industry, it could limit our ability to compete in desired markets.

Insurance and reinsurance markets are historically cyclical, and we expect to experience periods with excess underwriting capacity and unfavorable premium rates.
The insurance and reinsurance markets have historically been cyclical, characterized by periods of intense price competition due to excessive underwriting capacity as well as periods when shortages of capacity permitted favorable premium levels. An increase in premium levels is often offset by an increasing supply of insurance and reinsurance capacity, either by capital provided by new entrants or by the commitment of additional capital by existing insurers or reinsurers, which may cause prices to decrease. Any of these factors could lead to a significant reduction in premium rates, less favorable policy terms, and fewer submissions for our underwriting services. In addition to these considerations, changes in the frequency and severity of losses suffered by insureds and insurers may affect the cycles of the insurance and reinsurance markets significantly, as could periods of economic weakness (such as recession).

The integration of acquired companies may not be as successful as we anticipate.
Acquisitions involve numerous operational, strategic, financial, accounting, legal, tax, and other risks; potential liabilities associated with the acquired businesses; and uncertainties related to design, operation and integration of acquired businesses' internal controls over financial reporting. Difficulties in integrating an acquired company, along with its personnel, may result in the acquired company performing differently than we expected, in operational challenges or in our failure to realize anticipated expense-related efficiencies. This may also apply to companies in which we acquire majority ownership. Our existing businesses could also be negatively impacted by acquisitions. In addition, goodwill and intangible assets recorded in connection with insurance company acquisitions may be impaired if premium growth, underwriting profitability, agency retention and policy persistency, among other factors, differ from expectations.

There is also the potential that proposed acquisitions that have been publicly announced will not be consummated, even if a definitive agreement has been signed by the parties. If an agreement is terminated before closing, the result would be that our proposed acquisition would not occur, which could, among other things, expose us to damages or liability and adversely impact our stock price and future operations.

We may be subject to U.S. tax and Bermuda tax which may have an adverse effect on our results of operations and shareholder investment.
Chubb Limited and our non-U.S. subsidiaries operate in a manner so that none of these companies should be subject to U.S. tax (other than U.S. excise tax on insurance and reinsurance premium income attributable to insuring or reinsuring U.S. risks and U.S. withholding tax on some types of U.S. source investment income), because none of these companies should be treated as engaged in a trade or business within the U.S. However, because there is considerable uncertainty as to the activities that constitute being engaged in a trade or business within the U.S., we cannot be certain that the Internal Revenue Service (IRS) will not contend successfully that Chubb Limited or its non-U.S. subsidiaries are engaged in a trade or business in the U.S. If Chubb Limited or any of its non-U.S. subsidiaries were considered to be engaged in a trade or business in the U.S., such entity could be subject to U.S. corporate income and branch profits taxes on the portion of its earnings effectively connected to such U.S. business, in which case our results of operations and our shareholders' investments could be adversely affected.

The Bermuda Minister of Finance, under the Exempted Undertakings Tax Protection Act 1966 of Bermuda, as amended, has given Chubb Limited and its Bermuda insurance subsidiaries a written assurance that if any legislation is enacted in Bermuda that would impose tax computed on profits or income, or computed on any capital asset, gain, or appreciation, or any tax in the nature of estate duty or inheritance tax, then the imposition of any such tax would not be applicable to those companies or any of their respective operations, shares, debentures, or other obligations until March 31, 2035, except insofar as such tax would apply to persons ordinarily resident in Bermuda or is payable by us in respect of real property owned or leased by us in Bermuda. We cannot be certain that we will not be subject to any Bermuda tax after March 31, 2035.

We could be adversely affected by certain features of the 2017 U.S. tax reform legislation.
Tax legislation known as the Tax Cuts and Jobs Act (2017 Tax Act) was enacted in the U.S. on December 22, 2017. In addition to reducing the U.S. corporate income tax rate from 35 percent to 21 percent, it fundamentally changed many elements of the pre-2017 Tax Act U.S. tax law and introduced several new concepts to tax multinational corporations such as us. Among the most notable new rules are the Base Erosion and Anti-Abuse Tax (commonly called BEAT), which may apply as a result of payments by U.S. taxpayers to non-U.S. affiliates, and the Global Intangible Low Taxed Income (GILTI) addition to Subpart F income, which for insurance groups potentially expands U.S. taxation on the earnings of foreign subsidiaries. The 2017 Tax Act is a complex law with many significant new provisions. Since enactment, the IRS and U.S. Treasury Department have continued to issue rulings, notices, and proposed and final regulations to assist taxpayers in understanding and implementing the new provisions. Some of this guidance remains subject to comment or in proposed form; thus, there are many uncertainties relating to its ultimate application and effects on our company.

The Biden Administration and both houses of the U.S. Congress have proposed legislation, commonly referred to as the Build Back Better bills, that would modify aspects of the 2017 Tax Act and make other changes to U.S. tax law. This proposed legislation included, among other things, modifications to the BEAT and GILTI provisions. It is possible that such legislation or other legislation could be enacted in the future and could have an adverse impact on us or our shareholders.

The Organization for Economic Cooperation and Development (OECD), the European Union (EU), and the Swiss Federal Council are considering measures that might change long standing tax principles that could increase our taxes.
The OECD has published a framework for taxation that in many respects is different than long standing international tax principles. This framework is an alternative to digital services taxes that several countries have proposed, enacted, or are considering. These changes could redefine what income is taxed in which country and institute a global minimum tax. Late in 2021, the OECD published model legislation, and the EU issued a draft Directive related to the global minimum tax to be considered by member countries in 2022, to be effective in 2023 or later years. Early in 2022, the Swiss Federal Council announced that they plan to amend their constitution to adopt the global minimum tax effective January 1, 2024. The enactment of these proposals, as well as other countries' proposals in reaction to them, is very uncertain at this time, but if enacted could cause uncertainties to and increases in our income taxes.

The OECD also published an action plan several years ago to address base erosion and profit shifting (BEPS) impacting its member countries and other jurisdictions. It is possible that jurisdictions in which we do business could continue to react to the BEPS initiative or their own concerns by enacting tax legislation that could adversely affect us or our shareholders.

Several multilateral organizations, including the EU and the OECD have, in recent years, expressed concern about some countries not participating in adequate tax information exchange arrangements and have threatened those that do not agree to cooperate with punitive sanctions by member countries. It is still unclear what all these sanctions might be, which countries might adopt them, and when or if they might be imposed. We cannot assure, however, that the Tax Information Exchange Agreements (TIEAs) that have been entered into by Switzerland and Bermuda will be sufficient to preclude all of the sanctions described above, which, if ultimately adopted, could adversely affect us or our shareholders.

Shareholders

There are provisions in our charter documents that may reduce the voting rights and diminish the value of our Common Shares.
Our Articles of Association generally provide that shareholders have one vote for each Common Share held by them and are entitled to vote at all meetings of shareholders. However, the voting rights exercisable by a shareholder may be limited so that certain persons or groups are not deemed to hold 10 percent or more of the voting power conferred by our Common Shares. Moreover, these provisions could have the effect of reducing the voting power of some shareholders who would not otherwise be subject to the limitation by virtue of their direct share ownership. The Board of Directors may refuse to register holders of shares as shareholders with voting rights based on certain grounds, including if the holder would, directly or indirectly, formally, constructively or beneficially own (as described in Articles 8 and 14 of our Articles of Association) or otherwise control voting rights with respect to 10 percent or more of the registered share capital recorded in the commercial register. In addition, the Board of Directors shall reject entry of holders of registered shares as shareholders with voting rights in the share register or shall decide on their deregistration when the acquirer or shareholder upon request does not expressly state that she/he has acquired or holds the shares in her/his own name and for her/his account.

Applicable laws may make it difficult to effect a change of control of our company.
Before a person can acquire control of a U.S. insurance company, prior written approval must be obtained from the insurance commissioner of the state where the domestic insurer is domiciled. Prior to granting approval of an application to acquire control of a domestic insurer, the state insurance commissioner will consider such factors as the financial strength of the applicant, the integrity and management of the applicant's Board of Directors and executive officers, the acquirer's plans for the future operations of the domestic insurer, and any anti-competitive results that may arise from the consummation of the acquisition of control. Generally, state statutes provide that control over a domestic insurer is presumed to exist if any person, directly or indirectly, owns, controls, holds with the power to vote, or holds proxies representing 10 percent or more of the voting securities of the domestic insurer. Because a person acquiring 10 percent or more of our Common Shares would indirectly control the same percentage of the stock of our U.S. insurance subsidiaries, the insurance change of control laws of various U.S. jurisdictions would likely apply to such a transaction. Laws of other jurisdictions in which one or more of our existing subsidiaries are, or a future subsidiary may be, organized or domiciled may contain similar restrictions on the acquisition of control of Chubb.

While our Articles of Association limit the voting power of any shareholder to less than 10 percent, we cannot assure that the applicable regulatory body would agree that a shareholder who owned 10 percent or more of our Common Shares did not, because of the limitation on the voting power of such shares, control the applicable insurance subsidiary.

These laws may discourage potential acquisition proposals and may delay, deter, or prevent a change of control of Chubb, including transactions that some or all of our shareholders might consider to be desirable.

Shareholder voting requirements under Swiss law may limit our flexibility with respect to certain aspects of capital management.
Swiss law allows our shareholders to authorize share capital which can be issued by the Board of Directors without shareholder approval, but this authorization must be renewed by the shareholders every two years. Swiss law also does not provide as much flexibility in the various terms that can attach to different classes of stock as permitted in other jurisdictions. Swiss law also reserves for approval by shareholders many corporate actions over which the Board of Directors had authority prior to our re-domestication to Switzerland. For example, dividends must be approved by shareholders. While we do not believe that Swiss law requirements relating to our capital management will have an adverse effect on Chubb, we cannot assure that situations will not arise where such flexibility would have provided substantial benefits to our shareholders.

Chubb Limited is a Swiss company; it may be difficult to enforce judgments against it or its directors and executive officers.
Chubb Limited is incorporated pursuant to the laws of Switzerland. In addition, certain of our directors and officers reside outside the U.S. and all or a substantial portion of our assets and the assets of such persons are located in jurisdictions outside the U.S. As such, it may be difficult or impossible to effect service of process within the U.S. upon those persons or to recover against us or them on judgments of U.S. courts, including judgments predicated upon civil liability provisions of the U.S. federal securities laws.

Chubb has been advised by its Swiss counsel that there is doubt as to whether the courts in Switzerland would enforce:
- judgments of U.S. courts based upon the civil liability provisions of the U.S. federal securities laws obtained in actions against it or its directors and officers, who reside outside the U.S.; or
- original actions brought in Switzerland against these persons or Chubb predicated solely upon U.S. federal securities laws.

Chubb has also been advised by its Swiss counsel that there is no treaty in effect between the U.S. and Switzerland providing for this enforcement, and there are grounds upon which Swiss courts may not enforce judgments of U.S. courts. Some remedies available under the laws of U.S. jurisdictions, including some remedies available under the U.S. federal securities laws, would not be allowed in Swiss courts as contrary to that nation's public policy.

Shareholders may be subject to Swiss withholding taxes on the payment of dividends.
Our dividends are generally subject to a Swiss withholding tax at a rate of 35 percent; however, payment of a dividend in the form of a capital contribution reserve reduction or par value reduction is not subject to Swiss withholding tax. We have previously obtained shareholder approval for dividends to be paid in such form. It is our practice to recommend to shareholders that they annually approve the payment of dividends in such form, but we cannot assure that our shareholders will continue to approve a reduction in such form each year or that we will be able to meet the other legal requirements for a reduction, or that Swiss withholding tax rules will not be changed in the future. We estimate we would be able to pay dividends in such form, and thus exempt from Swiss withholding tax, until 2028–2033. This range may vary depending upon changes in annual dividends, special dividends, certain share repurchases, fluctuations in U.S. dollar/Swiss franc exchange rate, changes in par value or capital contribution reserves or changes or new interpretations to Swiss corporate or tax law or regulations.

Under certain circumstances, U.S. shareholders may be subject to adverse U.S. federal income tax consequences.
Under certain circumstances, a U.S. person who owns or is deemed to own 10 percent or more of the voting power or value of a foreign corporation that is a “controlled foreign corporation” (CFC) (a foreign corporation in which 10 percent U.S. shareholders own or are deemed to own more than 50 percent of the voting power or value of the stock of a foreign corporation or more than 25 percent of certain foreign insurance corporations) for any period during a taxable year must include in gross income for U.S. federal income tax purposes a pro rata share of the CFC's "subpart F income". We believe that because of the dispersion of our share ownership it is unlikely that any U.S. person who acquires shares of Chubb Limited directly or indirectly through one or more foreign entities should be required to include any subpart F income in income under the CFC rules of U.S. tax law.

Separately, any U.S. persons who hold shares may be subject to U.S. federal income taxation at ordinary income tax rates on their proportionate share of our Related Person Insurance Income (RPII). If the RPII of any of our non-U.S. insurance subsidiaries (each a "Non-U.S. Insurance Subsidiary") were to equal or exceed 20 percent of that company's gross insurance income in any taxable year and direct or indirect insureds (and persons related to those insureds) own directly or indirectly through foreign entities 20 percent or more of the voting power or value of Chubb Limited, then a U.S. person who owns any shares of Chubb Limited (directly or indirectly through foreign entities) on the last day of the taxable year would be required to include in his or her income for U.S. federal income tax purposes such person's pro rata share of such company's RPII for the taxable year. In addition, any RPII that is includible in the income of a U.S. tax-exempt organization may be treated as unrelated business taxable income. We believe that the gross RPII of each Non-U.S. Insurance Subsidiary did not in prior years of operation and is not expected in the foreseeable future to equal or exceed 20 percent of each such company's gross insurance income. Likewise, we do not expect the direct or indirect insureds of each Non-U.S. Insurance Subsidiary (and persons related to such insureds) to directly or indirectly own 20 percent or more of either the voting power or value of our shares. However, we cannot be certain that this will be the case because some of the factors which determine the extent of RPII may be beyond our control. If these thresholds are met or exceeded, any U.S. person’s investment in Chubb Limited could be adversely affected. In January 2022, the U.S. Treasury Department and the IRS released proposed regulations that may cause more income to be treated as RPII than under current law.

A U.S. tax-exempt organization may recognize unrelated business taxable income if a portion of our insurance income is allocated to the organization. This generally would be the case if either (i) Chubb Limited is considered a CFC and the tax-exempt shareholder is a 10 percent U.S. shareholder or (ii) there is RPII, certain exceptions do not apply, and the tax-exempt organization, directly (or indirectly through foreign entities) owns any shares of Chubb Limited. Although we do not believe that any U.S. tax-exempt organization should be allocated such insurance income, we cannot be certain that this will be the case. Potential U.S. tax-exempt investors are advised to consult their tax advisors.

U.S. persons who hold shares will be subject to adverse tax consequences if we are considered to be a Passive Foreign Investment Company (PFIC) for U.S. federal income tax purposes.
If Chubb Limited is considered a PFIC for U.S. federal income tax purposes, a U.S. person who holds Chubb Limited shares will be subject to adverse U.S. federal income tax consequences in which case their investment could be adversely affected. In addition, if Chubb Limited were considered a PFIC, upon the death of any U.S. individual owning shares, such individual's heirs or estate would not be entitled to a "step-up" in the basis of the shares which might otherwise be available under U.S. federal

income tax laws. We believe that we are not, have not been, and currently do not expect to become, a PFIC for U.S. federal income tax purposes. We cannot assure, however, that we will not be deemed a PFIC by the IRS. Recently enacted U.S. federal tax law and recent final and proposed regulations issued by the IRS and U.S. Treasury Department contain new rules that may affect the application of the PFIC provisions to an insurance company. The final regulations are effective for tax years beginning after January 15, 2021 and apply to us in 2022. Any shareholder electing to apply certain provisions of the newly finalized or proposed PFIC regulations prior to the effective date could be adversely affected by an investment in us. Shareholders are advised to consult their tax advisors.

ITEM 1B. Unresolved Staff Comments

There are currently no unresolved SEC staff comments regarding our periodic or current reports.

ITEM 2. Properties

We maintain office facilities around the world including in North America, Europe (including our principal executive offices in Switzerland), Bermuda, Latin America, Asia Pacific, and Japan. Most of our office facilities are leased, although we own major facilities in Hamilton, Bermuda, and in the U.S., including in Philadelphia, Pennsylvania; Wilmington, Delaware; Whitehouse Station, New Jersey; and Simsbury, Connecticut. Management considers its office facilities suitable and adequate for the current level of operations.

ITEM 3. Legal Proceedings

The information required with respect to Item 3 is included in Note 10 h) to the Consolidated Financial Statements, under Item 8, which is hereby incorporated herein by reference.

ITEM 4. Mine Safety Disclosures

Item not applicable.

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our Common Shares have been listed on the New York Stock Exchange since March 25, 1993, with a current par value of CHF 24.15 per share. The trading symbol for our Common Shares is "CB".

We have paid dividends each quarter since we became a public company in 1993. In 2021 and 2020, our annual dividends were paid by way of a distribution from capital contribution reserves (Additional paid-in capital) through the transfer of dividends from Additional paid-in capital to Retained earnings (free reserves) as approved by our shareholders.

Chubb Limited is a holding company whose principal sources of income are dividends and investment income from its operating subsidiaries. The ability of the operating subsidiaries to pay dividends to us and our ability to pay dividends to our shareholders are each subject to legal and regulatory restrictions. The recommendation and payment of future dividends will be based on the determination of the Board of Directors (Board) and will be dependent upon shareholder approval, profits and financial requirements of Chubb and other factors, including legal restrictions on the payment of dividends and other such factors as the Board deems relevant. Refer to Part I, Item 1A and Part II, Item 7 for additional information.

The number of record holders of Common Shares as of February 10, 2022 was 6,229. This is not the actual number of beneficial owners of Chubb's Common Shares since most of our shareholders hold their shares through a stockbroker, bank or other nominee rather than directly in their own names.

Refer to Part III, Item 12 for information relating to compensation plans under which equity securities are authorized for issuance.

Issuer's Repurchases of Equity Securities for the Three Months Ended December 31, 2021

Period	Total Number of Shares Purchased [1]	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan [2]	Approximate Dollar Value of Shares that May Yet be Purchased Under Publicly Announced Plan [3]
October 1 through October 31	369,919	$ 186.30	367,700	$ 3.48 billion
November 1 through November 30	2,669,873	$ 191.34	2,667,900	$ 2.97 billion
December 1 through December 31	1,733,371	$ 188.45	1,731,500	$ 2.65 billion
Total	4,773,163	$ 189.90	4,767,100	

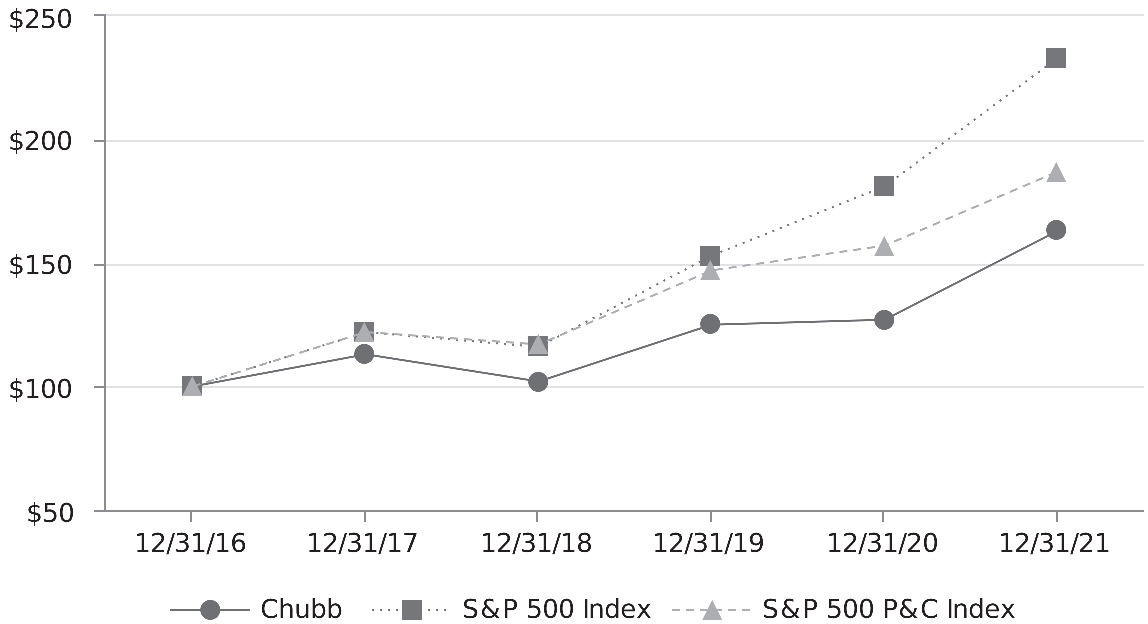
(1) This column represents open market share repurchases and the surrender to Chubb of Common Shares to satisfy tax withholding obligations in connection with the vesting of restricted stock issued to employees and to cover the cost of the exercise of options by employees through stock swaps.

(2) The aggregate value of shares purchased in the three months ended December 31, 2021 as part of the publicly announced plan was $905 million. The July 2021 $5.0 billion share repurchase program is the only board authorization currently in effect. Refer to Note 11 to the Consolidated Financial Statements for more information on the Chubb Limited securities repurchase authorizations.

(3) For the period January 1, 2022 through February 23, 2022, we repurchased 1,966,600 Common Shares for a total of $405 million in a series of open market transactions. As of February 23, 2022, $2.24 billion in share repurchase authorization remained through June 30, 2022.

Performance Graph

Set forth below is a line graph comparing the dollar change in the cumulative total shareholder return on Chubb's Common Shares from December 31, 2016, through December 31, 2021, as compared to the cumulative total return of the Standard & Poor's 500 Stock Index and the cumulative total return of the Standard & Poor's Property-Casualty Insurance Index. The cumulative total shareholder return is a concept used to compare the performance of a company's stock over time and is the ratio of the stock price change plus the cumulative amount of dividends over the specified time period (assuming dividend reinvestment), to the stock price at the beginning of the time period. The chart depicts the value on December 31, 2017, 2018, 2019, 2020, and 2021, of a $100 investment made on December 31, 2016, with all dividends reinvested.



	12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021
Chubb Limited	$100	$113	$102	$125	$127	$163
S&P 500 Index	$100	$122	$116	$153	$181	$233
S&P 500 P&C Index	$100	$122	$117	$147	$157	$187

ITEM 6. [Reserved]

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following is a discussion of our financial condition and results of operations for the years ended December 31, 2021 and 2020 and comparisons between 2021 and 2020. This discussion should be read in conjunction with the Consolidated Financial Statements and related Notes, under Item 8 of this Form 10-K. Comparisons between 2020 and 2019 have been omitted from this Form 10-K, but can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of our Form 10-K for the year ended December 31, 2020.

All comparisons in this discussion are to the corresponding prior year unless otherwise indicated. All dollar amounts are rounded. However, percent changes and ratios are calculated using whole dollars. Accordingly, calculations using rounded dollars may differ.

Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a "safe harbor" for forward-looking statements. Any written or oral statements made by us or on our behalf may include forward-looking statements that reflect our current views with respect to future events and financial performance. The words "believe," "anticipate," "estimate," "project," "should," "plan," "expect," "intend," "hope," "feel," "foresee," "will likely result," "will continue," and variations thereof and similar expressions, identify forward-looking statements. These forward-looking statements are subject to certain risks, uncertainties, and other factors that could, should potential events occur, cause actual results to differ materially from such statements. These risks, uncertainties, and other factors, which are described in more detail under Part I, Item 1A, under Risk Factors, and elsewhere herein and in other documents we file with the U.S. Securities and Exchange Commission (SEC), include but are not limited to:

- actual amount of new and renewal business, premium rates, underwriting margins, market acceptance of our products, and risks associated with the introduction of new products and services and entering new markets; the competitive environment in which we operate, including trends in pricing or in policy terms and conditions, which may differ from our projections and changes in market conditions that could render our business strategies ineffective or obsolete;
- losses arising out of natural or man-made catastrophes; actual loss experience from insured or reinsured events and the timing of claim payments; the uncertainties of the loss-reserving and claims-settlement processes, including the difficulties associated with assessing environmental damage and asbestos-related latent injuries, the impact of aggregate-policy-coverage limits, the impact of bankruptcy protection sought by various asbestos producers and other related businesses, and the timing of loss payments;
- infection rates and severity of COVID-19 and related risks, and their effects on our business operations and claims activity, and any adverse impact to our insureds, brokers, agents, and employees; actual claims may exceed our best estimate of ultimate insurance losses incurred which could change including as a result of, among other things, the impact of legislative or regulatory actions taken in response to COVID-19;
- changes in the distribution or placement of risks due to increased consolidation of insurance and reinsurance brokers; material differences between actual and expected assessments for guaranty funds and mandatory pooling arrangements; the ability to collect reinsurance recoverable, credit developments of reinsurers, and any delays with respect thereto and changes in the cost, quality, or availability of reinsurance;
- uncertainties relating to governmental, legislative and regulatory policies, developments, actions, investigations, and treaties; judicial decisions and rulings, new theories of liability, legal tactics, and settlement terms; the effects of data privacy or cyber laws or regulation; global political conditions and possible business disruption or economic contraction that may result from such events;
- developments in global financial markets, including changes in interest rates, stock markets, and other financial markets; increased government involvement or intervention in the financial services industry; the cost and availability of financing, and foreign currency exchange rate fluctuations; changing rates of inflation; and other general economic and business conditions, including the depth and duration of potential recession;
- the availability of borrowings and letters of credit under our credit facilities; the adequacy of collateral supporting funded high deductible programs; the amount of dividends received from subsidiaries;
- changes to our assessment as to whether it is more likely than not that we will be required to sell, or have the intent to sell, available for sale fixed maturity investments before their anticipated recovery;
- actions that rating agencies may take from time to time, such as financial strength or credit ratings downgrades or placing these ratings on credit watch negative or the equivalent;
- the effects of public company bankruptcies and accounting restatements, as well as disclosures by and investigations of public companies relating to possible accounting irregularities, and other corporate governance issues;
- acquisitions made performing differently than expected, our failure to realize anticipated expense-related efficiencies or growth from acquisitions, the impact of acquisitions on our pre-existing organization, including with respect to our announced acquisitions not closing; risks and uncertainties relating to our planned purchases of additional interests in Huatai Insurance Group Co., Ltd. (Huatai Group), including our ability to receive Chinese insurance regulatory approval and complete the purchases;
- risks associated with being a Swiss corporation, including reduced flexibility with respect to certain aspects of capital management and the potential for additional regulatory burdens; share repurchase plans and share cancellations;

- loss of the services of any of our executive officers without suitable replacements being recruited in a reasonable time frame;
- the ability of our technology resources, including information systems and security, to perform as anticipated such as with respect to preventing material information technology failures or third-party infiltrations or hacking resulting in consequences adverse to Chubb or its customers or partners; the ability of our company to increase use of data analytics and technology as part of our business strategy and adapt to new technologies; and
- management's response to these factors and actual events (including, but not limited to, those described above).

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates. We undertake no obligation to publicly update or review any forward-looking statements, whether as a result of new information, future events or otherwise.

Overview

We operate through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. For more information on our segments refer to "Segment Information" under Item 1.

We have grown our business through increased premium volume, expansion of product offerings and geographic reach, and acquisitions of other companies. Refer to Note 2 to the Consolidated Financial Statements for our most recent acquisitions.

Our product and geographic diversification differentiate us from the vast majority of our competitors and has been a source of stability during periods of industry volatility. Our long-term business strategy focuses on sustained growth in book value achieved through a combination of underwriting and investment income. By doing so, we provide value to our clients and shareholders through use of our substantial capital base in the insurance and reinsurance markets.

We are organized along a profit center structure by line of business and territory that does not necessarily correspond to corporate legal entities. Profit centers can access various legal entities subject to licensing and other regulatory rules. Profit centers are expected to generate underwriting income and appropriate risk-adjusted returns. Our corporate structure has facilitated the development of management talent by giving each profit center's senior management team the necessary autonomy within underwriting authorities to make operating decisions and create products and coverages needed by its target customer base. We are focused on delivering underwriting profit by only writing policies which we believe adequately compensate us for the risk we accept.

Our insurance and reinsurance operations generate gross revenues from two principal sources: premiums and investment income. Cash flow is generated from premiums collected and investment income received less paid losses and loss expenses, policy acquisition costs, and administrative expenses. Invested assets are substantially held in liquid, investment grade fixed income securities of relatively short duration. Claims payments in any short-term period are highly unpredictable due to the random nature of loss events and the timing of claims awards or settlements. The value of investments held to pay future claims is subject to market forces such as the level of interest rates, stock market volatility, and credit events such as corporate defaults. The actual cost of claims is also volatile based on loss trends, inflation rates, court awards, and catastrophes. We believe that our cash balance, our highly liquid investments, credit facilities, and reinsurance protection provide sufficient liquidity to meet unforeseen claim demands that might occur in the year ahead. Refer to "Liquidity" and "Capital Resources" for additional information.

Critical Accounting Estimates

Our Consolidated Financial Statements include amounts that, either by their nature or due to requirements of generally accepted accounting principles in the U.S. (GAAP), are determined using best estimates and assumptions. While we believe that the amounts included in our Consolidated Financial Statements reflect our best judgment, actual amounts could ultimately materially differ from those currently presented. We believe the items that require the most subjective and complex estimates are:

- unpaid loss and loss expense reserves, including long-tail asbestos and environmental (A&E) reserves and non-A&E casualty exposures;
- future policy benefits reserves;
- the valuation of value of business acquired (VOBA) and amortization of deferred policy acquisition costs and VOBA;
- the assessment of risk transfer for certain structured insurance and reinsurance contracts;
- reinsurance recoverable, including a valuation allowance for uncollectible reinsurance;
- the valuation of our investment portfolio and assessment of valuation allowance for expected credit losses;
- the valuation of deferred income taxes; and
- the assessment of goodwill for impairment.

We believe our accounting policies for these items are of critical importance to our Consolidated Financial Statements. The following discussion provides more information regarding the estimates and assumptions required to arrive at these amounts and should be read in conjunction with the sections entitled: Prior Period Development, Asbestos and Environmental (A&E), Reinsurance Recoverable on Ceded Reinsurance, Investments, and Net Realized and Unrealized Gains (Losses).

Unpaid losses and loss expenses

As an insurance and reinsurance company, we are required by applicable laws and regulations and GAAP to establish loss and loss expense reserves for the estimated unpaid portion of the ultimate liability for losses and loss expenses under the terms of our policies and agreements with our insured and reinsured customers. At December 31, 2021, our gross unpaid loss and loss expense reserves were $72.9 billion and our net unpaid loss and loss expense reserves were $56.8 billion. With the exception of certain structured settlements, for which the timing and amount of future claim payments are reliably determinable, and certain reserves for unsettled claims, our loss reserves are not discounted for the time value of money. The net undiscounted reserves related to structured settlements and certain reserves for unsettled claims are immaterial.

The following table presents a roll-forward of our unpaid losses and loss expenses:

	December 31, 2021			December 31, 2020		
(in millions of U.S. dollars)	**Gross Losses**	**Reinsurance Recoverable(1)**	**Net Losses**	Gross Losses	Reinsurance Recoverable(1)	Net Losses
Balance, beginning of year	**$ 67,811**	**$ 14,647**	**$ 53,164**	$ 62,690	$ 14,181	$ 48,509
Losses and loss expenses incurred	**28,033**	**6,053**	**21,980**	26,711	5,001	21,710
Losses and loss expenses paid	**(22,242)**	**(4,358)**	**(17,884)**	(22,053)	(4,619)	(17,434)
Other (including foreign exchange translation)	**(659)**	**(158)**	**(501)**	463	84	379
Balance, end of year	**$ 72,943**	**$ 16,184**	**$ 56,759**	$ 67,811	$ 14,647	$ 53,164

(1) Net of valuation allowance for uncollectible reinsurance.

The estimate of the liabilities includes provisions for claims that have been reported but are unpaid at the balance sheet date (case reserves) and for obligations on claims that have been incurred but not reported (IBNR) at the balance sheet date. IBNR may also include provisions to account for the possibility that reported claims may settle for amounts that differ from the established case reserves. Loss reserves also include an estimate of expenses associated with processing and settling unpaid claims (loss expenses). Our loss reserves comprise approximately 78 percent casualty-related business, which typically encompasses long-tail risks, and other risks where a high degree of judgment is required.

The process of establishing loss reserves for property and casualty claims can be complex and is subject to considerable uncertainty as it requires the use of informed estimates and judgments based on circumstances underlying the insured losses known at the date of accrual. For example, the reserves established for high excess casualty claims, asbestos and environmental claims, claims from major catastrophic events, or for our various product lines each require different assumptions and judgments to be made. The impact of COVID on both underlying exposures and the legal and claim adjudication processes adds an additional layer of complexity. The effects of climate change could, over time, add new uncertainties to the loss reserving process.

Necessary judgments are based on numerous factors and may be revised as additional experience and other data become available and are reviewed, as new or improved methods are developed, or as laws change. Hence, ultimate loss payments may differ from the estimate of the ultimate liabilities made at the balance sheet date. Changes to our previous estimates of prior period loss reserves impact the reported calendar year underwriting results adversely if our estimates increase or favorably if our estimates decrease. The potential for variation in loss reserve estimates is impacted by numerous factors. Reserve estimates for casualty lines are particularly uncertain given the lengthy reporting patterns and corresponding need for IBNR.

Case reserves for those claims reported by insureds or ceding companies to us prior to the balance sheet date and where we have sufficient information are determined by our claims personnel as appropriate based on the circumstances of the claim(s), standard claim handling practices, and professional judgment. Furthermore, for our Brandywine run-off operations and our assumed reinsurance operation, Global Reinsurance, we may adjust the case reserves as notified by the ceding company if the judgment of our respective claims department differs from that of the cedant.

With respect to IBNR reserves and those claims that have been incurred but not reported prior to the balance sheet date, there is, by definition, limited actual information to form the case reserve estimate and reliance is placed upon historical loss experience and actuarial methods to estimate the ultimate loss obligations and the corresponding amount of IBNR. IBNR reserve estimates are generally calculated by first projecting the ultimate amount of losses for a product line and subtracting paid losses and case reserves for reported claims. The judgments involved in projecting the ultimate losses may pertain to the use and interpretation of various standard actuarial reserving methods that place reliance on the extrapolation of actual historical data, loss development patterns, industry data, and other benchmarks as appropriate. The estimate of the required IBNR reserve also requires judgment by actuaries and management to reflect the impact of more contemporary and subjective factors, both qualitative and quantitative. Among some of these factors that might be considered are changes in business mix or volume, changes in ceded reinsurance structures, changes in claims handling practices, reported and projected loss trends, inflation, the legal environment, and the terms and conditions of the contracts sold to our insured parties.

Determining management's best estimate

Our recorded reserves represent management's best estimate of the provision for unpaid claims as of the balance sheet date, and establishing them involves a process that includes collaboration with various relevant parties in the company. For information on our reserving process, refer to Note 7 to the Consolidated Financial Statements.

Sensitivity to underlying assumptions

While we believe that our reserve for unpaid losses and loss expenses at December 31, 2021, is adequate, new information or emerging trends that differ from our assumptions may lead to future development of losses and loss expenses that is significantly greater or less than the recorded reserve, which could have a material effect on future operating results. As noted previously, our best estimate of required loss reserves for most portfolios is judgmentally selected for each origin year after considering the results from a number of reserving methods and is not a purely mechanical process. Therefore, it is difficult to convey, in a simple and quantitative manner, the impact that a change to a single assumption will have on our best estimate. In the examples below, we attempt to give an indication of the potential impact by isolating a single change for a specific reserving method that would be pertinent in establishing the best estimate for the product line described. We consider each of the following sensitivity analyses to represent a reasonably likely deviation in the underlying assumption.

North America Commercial P&C Insurance - Workers' Compensation

Given the long reporting and paid development patterns for workers' compensation business, the development factors used to project actual current losses to ultimate losses for our current exposure require considerable judgment that could be material to consolidated loss and loss expense reserves. Specifically, adjusting ground up ultimate losses by a one percentage point change in the tail factor (i.e., 1.04 changed to either 1.05 or 1.03) would cause a change of approximately $942 million, either positive or negative, for the projected net loss and loss expense reserves. This represents an impact of about 9.5 percent relative to recorded net loss and loss expense reserves of approximately $9.9 billion.

North America Commercial P&C Insurance – Liability
As is the case for Workers' Compensation above, given the long reporting and paid development patterns, the development factors used to project actual current losses to ultimate losses for our current exposure require considerable judgment that could be material to consolidated loss and loss expense reserves. Specifically, for our main U.S. Excess/Umbrella portfolios, a five percentage point change in the tail factor (e.g., 1.10 changed to either 1.15 or 1.05) would cause a change of approximately $584 million, either positive or negative, for the projected net loss and loss expense reserves. This represents an impact of about 18.6 percent relative to recorded net loss and loss expense reserves of approximately $3.1 billion for these portfolios.

The reserve portfolio for our Chubb Bermuda operations contains exposure to predominantly high excess liability coverage on an occurrence-first-reported basis (typically with attachment points in excess of $325 million and gross limits of up to $150 million) and D&O and other professional liability coverage on a claims-made basis (typically with attachment points in excess of $125 million and gross limits of up to $75 million). Due to the layer of exposure covered, the expected frequency for this book is very low. As a result of the low frequency/high severity nature of the book, a small difference in the actual vs. expected claim frequency, either positive or negative, could result in a material change to the projected ultimate loss if such change in claim frequency was related to a policy where close to maximum limits were deployed.

North America Personal P&C Insurance
Due to the relatively short-tailed nature of many of the coverages involved (e.g., homeowners property damage), most of the incurred losses in Personal Lines are resolved within a few years of occurrence. As shown in our loss triangle disclosure, the vast majority (almost 95 percent) of Personal Lines net ultimate losses and allocated loss adjustment expenses are typically paid within five years of the accident date and 80 percent within two years. Even though there are significant reserves associated with some liability exposures such as personal excess/umbrella liability, our incurred loss triangle also shows a roughly consistent pattern of only relatively minor movements in incurred estimates over time by accident year especially after twenty-four months of maturity. While the liability exposures are subject to additional uncertainties from more protracted resolution times, the main drivers of volatility in the Personal Lines business are relatively short-term in nature and relate to things like natural catastrophes, non-catastrophe weather events, man-made risks, and individual large loss volatility from other fortuitous claim events.

North America Agricultural Insurance
Approximately 67 percent of the reserves for this segment are from the crop related lines, which all have short payout patterns, with the majority of the liabilities expected to be resolved in the ensuing twelve months. Claim reserves for our Multiple Peril Crop Insurance (MPCI) product are set on a case-by-case basis and our aggregate exposure is subject to state level risk sharing formulae as well as third-party reinsurance. The majority of the development risk arises out of the accuracy of case reserve estimates and the time needed for final crop conditions to be assessed. We do not view our Agriculture reserves as substantially influenced by the general assumptions and risks underlying more typical P&C reserve estimates.

Overseas General Insurance
Certain long-tail lines, such as casualty and financial lines, are particularly susceptible to changes in loss trend and claim inflation. Heightened perceptions of tort and settlement awards around the world can increase the demand for these products as well as contributing to the uncertainty in the reserving estimates. Our reserving methods rely on loss development patterns estimated from historical data and while we attempt to adjust such factors for known changes in the current tort environment, it is possible that such factors may not entirely reflect all recent trends in tort environments. For example, when applying the reported loss development method, the lengthening of our selected loss development patterns by six months would increase reserve estimates on long-tail casualty and financial lines for accident years 2019 and prior by approximately $611 million. This represents an impact of 14.8 percent relative to recorded net loss and loss expense reserves of approximately $4.1 billion.

Global Reinsurance
At December 31, 2021, net unpaid losses and loss expenses for the Global Reinsurance segment aggregated to $1.6 billion, consisting of $781 million of case reserves and $783 million of IBNR. In comparison, at December 31, 2020, net unpaid losses and loss expenses for the Global Reinsurance segment aggregated to $1.5 billion, consisting of $772 million of case reserves and $740 million of IBNR.

For our catastrophe business, we principally estimate unpaid losses and loss expenses on an event basis by considering various sources of information, including specific loss estimates reported by our cedants, ceding company and overall industry loss estimates reported by our brokers, and our internal data regarding reinsured exposures related to the geographical location of the event. Our internal data analysis enables us to establish catastrophe reserves for known events with more certainty at an earlier date than would be the case if we solely relied on reports from third parties to determine carried reserves.

For our casualty reinsurance business, we generally rely on ceding companies to report claims and then use that data as a key input to estimate unpaid losses and loss expenses. Due to the reliance on claims information reported by ceding companies, as well as other factors, the estimation of unpaid losses and loss expenses for assumed reinsurance includes certain risks and uncertainties that are unique relative to our direct insurance business. These include, but are not necessarily limited to, the following:

- The reported claims information could be inaccurate;
- Typically, a lag exists between the reporting of a loss event to a ceding company and its reporting to us as a reinsurance claim. The use of a broker to transmit financial information from a ceding company to us increases the reporting lag. Because most of our reinsurance business is produced by brokers, ceding companies generally first submit claim and other financial information to brokers, who then report the proportionate share of such information to each reinsurer of a particular treaty. The reporting lag generally results in a longer period of time between the date a claim is incurred and the date a claim is reported compared with direct insurance operations. Therefore, the risk of delayed recognition of loss reserve development is higher for assumed reinsurance than for direct insurance lines; and
- The historical claims data for a particular reinsurance contract can be limited relative to our insurance business in that there may be less historical information available. Further, for certain coverages or products, such as excess of loss contracts, there may be relatively few expected claims in a particular year so the actual number of claims may be susceptible to significant variability. In such cases, the actuary often relies on industry data from several recognized sources.

We mitigate the above risks in several ways. In addition to routine analytical reviews of ceding company reports to ensure reported claims information appears reasonable, we perform regular underwriting and claims audits of certain ceding companies to ensure reported claims information is accurate, complete, and timely. As appropriate, audit findings are used to adjust claims in the reserving process. We also use our knowledge of the historical development of losses from individual ceding companies to adjust the level of adequacy we believe exists in the reported ceded losses.

On occasion, there will be differences between our carried loss reserves and unearned premium reserves and the amount of loss reserves and unearned premium reserves reported by the ceding companies. This is due to the fact that we receive consistent and timely information from ceding companies only with respect to case reserves. For IBNR, we use historical experience and other statistical information, depending on the type of business, to estimate the ultimate loss. We estimate our unearned premium reserve by applying estimated earning patterns to net premiums written for each treaty based upon that treaty's coverage basis (i.e., risks attaching or losses occurring). At December 31, 2021, the case reserves, net of retrocessions, reported to us by our ceding companies approximated our recorded case reserves. Our policy is to post additional case reserves in addition to the amounts reported by our cedants when our evaluation of the ultimate value of a reported claim is different than the evaluation of that claim by our cedant.

Typically, there is inherent uncertainty around the length of paid and reported development patterns, especially for certain casualty lines such as excess workers' compensation or general liability, which may take decades to fully develop. This uncertainty is accentuated by the need to supplement client development patterns with industry development patterns due to the sometimes low statistical credibility of the data. The underlying source and selection of the final development patterns can thus have a significant impact on the selected ultimate net losses and loss expenses. For example, a 20 percent shortening or lengthening of the development patterns used for U.S. long-tail lines would cause the loss reserve estimate derived by the reported Bornhuetter-Ferguson method for these lines to change by approximately $220 million. This represents an impact of 32 percent relative to recorded net loss and loss expense reserves of approximately $680 million.

Corporate
Within Corporate, we have exposure to certain liability insurance and reinsurance lines that have been in run-off, generally, since 1994. Unpaid losses and loss expenses relating to this run-off business resides within the Brandywine Division. Most of the remaining unpaid loss and loss expense reserves for the run-off business relate to A&E as well as molestation claims.

The A&E liabilities principally relate to claims arising from bodily-injury claims related to asbestos products and remediation costs associated with hazardous waste sites. The estimation of our A&E liabilities is particularly sensitive to future changes in the legal, social, and economic environment. We have not assumed any such future changes in setting the value of our A&E liabilities, which include provisions for both reported and IBNR claims.

There are many complex variables that we consider when estimating the reserves for our inventory of asbestos accounts and these variables may directly impact the predicted outcome. We believe the most significant variables relating to our asbestos liabilities include the current legal environment; specific settlements that may be used as precedents to settle future claims; assumptions regarding trends with respect to claim severity and the frequency of higher severity claims; assumptions regarding the ability to allocate liability among defendants (including bankruptcy trusts) and other insurers; the ability of a claimant to bring a claim in a state in which they have no residency or exposure; the ability of a policyholder to claim the right to unaggregated coverage; whether high-level excess policies have the potential to be accessed given the policyholder's claim trends and liability situation; payments to unimpaired claimants; and, the potential liability of peripheral defendants. Based on the policies, the facts, the law, and a careful analysis of the impact that these factors will likely have on any given account, we estimate the potential liability for indemnity, policyholder defense costs, and coverage litigation expense.

The results in asbestos cases announced by other carriers or defendants may well have little or no relevance to us because coverage exposures are highly dependent upon the specific facts of individual coverage and resolution status of disputes among carriers, policyholders, and claimants.

Chubb's exposure to molestation claims principally arises out of liabilities acquired when it purchased CIGNA's P&C business in 1999 and Chubb Corp in 2016. The vast majority of the current liability relates to exposure from recently enacted "reviver" legislation in certain states that allow civil claims relating to molestation to be asserted against policyholders that would otherwise be barred by statutes of limitations.

For additional information refer to the “Asbestos and Environmental (A&E)” section and to Note 7 to the Consolidated Financial Statements.

Future policy benefits reserves
We issue contracts in our Overseas General Insurance and Life Insurance segments that are classified as long-duration. These contracts generally include accident and supplemental health products, term and whole life products, endowment products, and annuities. In accordance with GAAP, we establish reserves for contracts determined to be long-duration based on approved actuarial methods that include assumptions related to expenses, mortality, morbidity, persistency and investment yields. For traditional long-duration contracts, these assumptions also include a provision for adverse deviation (PAD), and are “locked in” at the inception of the contract, meaning we use our original assumptions throughout the life of the policy and do not subsequently modify them unless we deem the reserves to be inadequate; while for non-traditional long-duration contracts, the assumptions do not include a PAD and are unlocked at each reporting date. The future policy benefits reserves balance is regularly evaluated for a premium deficiency. If experience is less favorable than assumptions, additional liabilities may be required, resulting in a charge to policyholder benefits and claims.

Valuation of value of business acquired (VOBA), and amortization of deferred policy acquisition costs and VOBA
As part of the acquisition of businesses that sell long-duration contracts, such as life products, we established an intangible asset related to VOBA, which represented the fair value of the future profits of the in-force contracts. The valuation of VOBA at the time of acquisition is derived from similar assumptions to those used to establish the associated future policy benefits reserves. The most significant input in this calculation is the discount rate used to arrive at the present value of the net cash flows. We amortize deferred policy acquisition costs associated with long-duration contracts and VOBA (collectively policy acquisition costs) over the estimated life of the contracts, generally in proportion to premium revenue recognized based upon the same assumptions used in estimating the liability for future policy benefits. For non-traditional long-duration contracts, we amortize policy acquisition costs over the expected life of the contracts in proportion to estimates of expected gross profits. The estimated life is established at the inception of the contracts or upon acquisition and is based on current persistency assumptions. Policy acquisition costs, which consist of commissions, premium taxes, and certain underwriting costs related directly to the successful acquisition of a new or renewal insurance contract, are reviewed to determine if they are recoverable from future income, including investment income. Unrecoverable costs are expensed in the period identified.

Risk transfer
In the ordinary course of business, we both purchase (or cede) and sell (or assume) reinsurance protection. We discontinued the purchase of all finite risk reinsurance contracts, as a matter of policy, in 2002. For both ceded and assumed reinsurance, risk transfer requirements must be met in order to use reinsurance accounting, principally resulting in the recognition of cash flows under the contract as premiums and losses. If risk transfer requirements are not met, a contract is to be accounted for as a deposit, typically resulting in the recognition of cash flows under the contract through a deposit asset or liability and not as revenue or expense. To meet risk transfer requirements, a reinsurance contract must include both insurance risk, consisting of underwriting and timing risk, and a reasonable possibility of a significant loss for the assuming entity. We also apply similar risk

transfer requirements to determine whether certain commercial insurance contracts should be accounted for as insurance or a deposit. Contracts that include fixed premium (i.e., premium not subject to adjustment based on loss experience under the contract) for fixed coverage generally transfer risk and do not require judgment.

Reinsurance and insurance contracts that include both significant risk sharing provisions, such as adjustments to premiums or loss coverage based on loss experience, and relatively low policy limits, as evidenced by a high proportion of maximum premium assessments to loss limits, can require considerable judgment to determine whether or not risk transfer requirements are met. For such contracts, often referred to as finite or structured products, we require that risk transfer be specifically assessed for each contract by developing expected cash flow analyses at contract inception. To support risk transfer, the cash flow analyses must demonstrate that a significant loss is reasonably possible, such as a scenario in which the ratio of the net present value of losses and commissions divided by the net present value of premiums equals or exceeds 110 percent with at least a 10 percent probability. For purposes of cash flow analyses, we generally use a risk-free rate of return consistent with the expected average duration of loss payments. In addition, to support insurance risk, we must prove the reinsurer's risk of loss varies with that of the reinsured and/or support various scenarios under which the assuming entity can recognize a significant loss.

To ensure risk transfer requirements are routinely assessed, qualitative and quantitative risk transfer analyses and memoranda supporting risk transfer are developed by underwriters for all structured products. We have established protocols for structured products that include criteria triggering an accounting review of the contract prior to quoting. If any criterion is triggered, a contract must be reviewed by a committee established by each of our segments with reporting oversight, including peer review, from our global Structured Transaction Review Committee.

With respect to ceded reinsurance, we entered into a few multi-year excess of loss retrospectively-rated contracts, principally in 2002. These contracts primarily provided severity protection for specific product divisions. Because traditional one-year reinsurance coverage had become relatively costly, these contracts were generally entered into in order to secure a more cost-effective reinsurance program. All of these contracts transferred risk and were accounted for as reinsurance. In addition, we maintain a few aggregate excess of loss reinsurance contracts that were principally entered into prior to 2003, such as the National Indemnity Company (NICO) contracts referred to in the section entitled, “Asbestos and Environmental (A&E)”. We have not purchased any other retroactive ceded reinsurance contracts since 1999.

With respect to assumed reinsurance and insurance contracts, products giving rise to judgments regarding risk transfer were primarily sold by our financial solutions business. Although we have significantly curtailed writing financial solutions business, several contracts remain in-force and principally include multi-year retrospectively-rated contracts and loss portfolio transfers. Because transfer of insurance risk is generally a primary client motivation for purchasing these products, relatively few insurance and reinsurance contracts have historically been written for which we concluded that risk transfer criteria had not been met. For certain insurance contracts that have been reported as deposits, the insured desired to self-insure a risk but was required, legally or otherwise, to purchase insurance so that claimants would be protected by a licensed insurance company in the event of non-payment from the insured.

Reinsurance recoverable

Reinsurance recoverable includes balances due to us from reinsurance companies for paid and unpaid losses and loss expenses and is presented net of a valuation allowance for uncollectible reinsurance. The valuation allowance for uncollectible reinsurance is determined based upon a review of the financial condition of the reinsurers and other factors. Ceded reinsurance contracts do not relieve our primary obligation to our policyholders. Consequently, an exposure exists with respect to reinsurance recoverable to the extent that any reinsurer is unable or unwilling to meet its obligations or disputes the liabilities assumed under the reinsurance contracts. We determine the reinsurance recoverable on unpaid losses and loss expenses using actuarial estimates as well as a determination of our ability to cede unpaid losses and loss expenses under existing reinsurance contracts.

The recognition of a reinsurance recoverable asset requires two key judgments. The first judgment involves our estimation based on the amount of gross reserves and the percentage of that amount which may be ceded to reinsurers. Ceded IBNR, which is a major component of the reinsurance recoverable on unpaid losses and loss expenses, is generally developed as part of our loss reserving process and, consequently, its estimation is subject to similar risks and uncertainties as the estimation of gross IBNR (refer to “Critical Accounting Estimates – Unpaid losses and loss expenses”). The second judgment involves our estimate of the amount of the reinsurance recoverable balance that we may ultimately be unable to recover from reinsurers due to insolvency, contractual dispute, or for other reasons. Estimated uncollectible amounts are reflected in a valuation allowance that reduces the reinsurance recoverable asset and, in turn, shareholders' equity. Changes in the valuation allowance for uncollectible reinsurance are reflected in net income.

Although the obligation of individual reinsurers to pay their reinsurance obligations is based on specific contract provisions, the collectability of such amounts requires estimation by management. The majority of the recoverable balance will not be due for collection until sometime in the future, and the duration of our recoverables may be longer than the duration of our direct exposures. Over this period of time, economic conditions and operational performance of a particular reinsurer may impact their ability to meet these obligations and while they may continue to acknowledge their contractual obligation to do so, they may not have the financial resources or willingness to fully meet their obligation to us.

To estimate the valuation allowance for uncollectible reinsurance, the reinsurance recoverable must first be determined for each reinsurer. This determination is based on a process rather than an estimate, although an element of judgment must be applied. As part of the process, ceded IBNR is allocated to reinsurance contracts because ceded IBNR is not generally calculated on a contract by contract basis. The allocations are generally based on premiums ceded under reinsurance contracts, adjusted for actual loss experience and historical relationships between gross and ceded losses. If actual premium and loss experience vary materially from historical experience, the allocation of reinsurance recoverable by reinsurer will be reviewed and may change. While such change is unlikely to result in a large percentage change in the valuation allowance for uncollectible reinsurance, it could, nevertheless, have a material effect on our net income in the period recorded.

Generally, we use a default analysis to estimate uncollectible reinsurance. The primary components of the default analysis are reinsurance recoverable balances by reinsurer, net of collateral, and forward looking default factors used to estimate the probability that the reinsurer may be unable to meet its future obligations in full. The definition of collateral for this purpose requires some judgment and is generally limited to assets held in a Chubb-only beneficiary trust, letters of credit, and liabilities held by us with the same legal entity for which we believe there is a right of offset. We do not currently include multi-beneficiary trusts. However, we have several reinsurers that have established multi-beneficiary trusts for which certain of our companies are beneficiaries. The determination of the default factor is principally based on the financial strength rating of the reinsurer and a corresponding default factor applicable to the financial strength rating. Default factors require considerable judgment and are determined using the current financial strength rating, or rating equivalent, of each reinsurer as well as other key considerations and assumptions. Significant considerations and assumptions include, but are not necessarily limited to, the following:

- For reinsurers that maintain a financial strength rating from a major rating agency, and for which recoverable balances are considered representative of the larger population (i.e., default probabilities are consistent with similarly rated reinsurers and payment durations conform to averages), the judgment exercised by management to determine the valuation allowance for uncollectible reinsurance of each reinsurer is typically limited because the financial rating is based on a published source and the default factor we apply is based on a historical default factor of a major rating agency applicable to the particular rating class. Default factors applied for financial ratings of AAA, AA, A, BBB, BB, B, and CCC, are 0.8 percent, 1.2 percent, 1.7 percent, 4.9 percent, 19.6 percent, 34.0 percent, and 62.2 percent, respectively. Because our model is predicated on the historical default factors of a major rating agency, we do not generally consider alternative factors. However, when a recoverable is expected to be paid in a brief period of time by a highly-rated reinsurer, such as certain property catastrophe claims, a default factor may not be applied;
- For balances recoverable from reinsurers that are both unrated by a major rating agency and for which management is unable to determine a credible rating equivalent based on a parent or affiliated company, we may determine a rating equivalent based on our analysis of the reinsurer that considers an assessment of the creditworthiness of the particular entity, industry benchmarks, or other factors as considered appropriate. We then apply the applicable default factor for that rating class. For balances recoverable from unrated reinsurers for which our ceded reserve is below a certain threshold, we generally apply a default factor of 34.0 percent;
- For balances recoverable from reinsurers that are either insolvent or under regulatory supervision, we establish a default factor and resulting valuation allowance for uncollectible reinsurance based on specific facts and circumstances surrounding each company. Upon initial notification of an insolvency, we generally recognize expense for a substantial portion of all balances outstanding, net of collateral, through a combination of write-offs of recoverable balances and increases to the valuation allowance for uncollectible reinsurance. When regulatory action is taken on a reinsurer, we generally recognize a default factor by estimating an expected recovery on all balances outstanding, net of collateral. When sufficient credible information becomes available, we adjust the valuation allowance for uncollectible reinsurance by establishing a default factor pursuant to information received; and
- For captives and other recoverables, management determines the valuation allowance for uncollectible reinsurance based on the specific facts and circumstances.

The following table summarizes reinsurance recoverables and the valuation allowance for uncollectible reinsurance for each type of recoverable balance at December 31, 2021:

(in millions of U.S. dollars)	Gross Reinsurance Recoverables on Losses and Loss Expenses	Recoverables (net of Usable Collateral)	Valuation Allowance for Uncollectible Reinsurance [(1)]
Type			
Reinsurers with credit ratings	$ 14,186	$ 12,210	$ 213
Reinsurers not rated	192	127	44
Reinsurers under supervision and insolvent reinsurers	45	36	21
Captives	2,325	559	28
Other - structured settlements and pools	947	946	23
Total	$ 17,695	$ 13,878	$ 329

(1) The valuation allowance for uncollectible reinsurance is based on a default analysis applied to gross reinsurance recoverables, net of approximately $3.8 billion of collateral at December 31, 2021.

At December 31, 2021, the use of different assumptions within our approach could have a material effect on the valuation allowance for uncollectible reinsurance. To the extent the creditworthiness of our reinsurers was to deteriorate due to an adverse event affecting the reinsurance industry, such as a large number of major catastrophes, actual uncollectible amounts could be significantly greater than our valuation allowance for uncollectible reinsurance. Such an event could have a material adverse effect on our financial condition, results of operations, and our liquidity. Given the various considerations used to estimate our uncollectible valuation allowance, we cannot precisely quantify the effect a specific industry event may have on the valuation allowance for uncollectible reinsurance. However, based on the composition (particularly the average credit quality) of the reinsurance recoverable balance at December 31, 2021, we estimate that a ratings downgrade of one notch for all rated reinsurers (e.g., from A to A- or A- to BBB+) could increase our valuation allowance for uncollectible reinsurance by approximately $87 million or approximately 0.5 percent of the gross reinsurance recoverable balance, assuming no other changes relevant to the calculation. While a ratings downgrade would result in an increase in our valuation allowance for uncollectible reinsurance and a charge to earnings in that period, a downgrade in and of itself does not imply that we will be unable to collect all of the ceded reinsurance recoverable from the reinsurers in question. Refer to Note 5 to the Consolidated Financial Statements, under item 8, for additional information.

Fair value measurements

Accounting guidance defines fair value as the price to sell an asset or transfer a liability (an exit price) in an orderly transaction between market participants and establishes a three-level valuation hierarchy based on the reliability of the inputs. The fair value hierarchy gives the highest priority to quoted prices in active markets (Level 1 inputs) and the lowest priority to unobservable data (Level 3 inputs). Level 2 includes inputs, other than quoted prices within Level 1, that are observable for assets or liabilities either directly or indirectly. Refer to Note 4 and Note 13 to the Consolidated Financial Statements, under item 8, for information on our fair value measurements.

Assessment of investment portfolio credit losses

Each quarter, we evaluate current expected credit losses (CECL) for fixed maturity securities classified as held to maturity and expected credit losses (ECL) for fixed maturity securities classified as available for sale. Because our investment portfolio is the largest component of consolidated assets, CECL and ECL could be material to our financial condition and results of operations. Refer to Notes 1 e) and 3 to the Consolidated Financial Statements, under item 8, for more information.

Deferred income taxes

At December 31, 2021, our net deferred tax liability was $389 million. Our deferred tax assets and liabilities primarily result from temporary differences between the amounts recorded in our Consolidated Financial Statements and the tax basis of our assets and liabilities. We determine deferred tax assets and liabilities separately for each tax-paying component (an individual entity or group of entities that is consolidated for tax purposes) in each tax jurisdiction. The realization of deferred tax assets depends upon the existence of sufficient taxable income within the carryback or carryforward periods under the tax law in the applicable tax jurisdiction. There may be changes in tax laws in a number of countries where we transact business that impact our deferred tax assets and liabilities. At each balance sheet date, management assesses the need to establish a valuation allowance that reduces deferred tax assets when it is more likely than not that all, or some portion, of the deferred tax assets will not be realized. The determination of the need for a valuation allowance is based on all available information including projections of future taxable income, principally derived from business plans and where appropriate available tax planning strategies. Projections of future taxable income incorporate assumptions of future business and operations that are apt to differ from actual experience. If our assumptions and estimates that resulted in our forecast of future taxable income prove to be incorrect, an additional valuation allowance could become necessary, which could have a material adverse effect on our financial condition, results of operations, and liquidity. At December 31, 2021, the valuation allowance of $92 million reflects management's assessment that it is more likely than not that a portion of the deferred tax assets will not be realized due to the inability of certain subsidiaries to generate sufficient taxable income.

Goodwill impairment assessment

Goodwill, which represents the excess of acquisition cost over the estimated fair value of net assets acquired, was $15.2 billion and $15.4 billion at December 31, 2021 and 2020, respectively. Goodwill is assigned to applicable reporting units of acquired entities at the time of acquisition. Our reporting units are the same as our reportable segments. For goodwill balances by reporting units, refer to Note 6 to the Consolidated Financial Statements, under item 8. Goodwill is not amortized but is subject to a periodic evaluation for impairment at least annually, or earlier if there are any indications of possible impairment. Impairment is tested at the reporting unit level. The impairment evaluation first uses a qualitative assessment to determine whether it is more likely than not (i.e., more than a 50 percent probability) that the fair value of a reporting unit is greater than its carrying amount. If a reporting unit fails this qualitative assessment, a single quantitative analysis is used to measure and record the amount of the impairment. In assessing the fair value of a reporting unit, we make assumptions and estimates about the profitability attributable to our reporting units, including:

- short-term and long-term growth rates; and
- estimated cost of equity and changes in long-term risk-free interest rates.

If our assumptions and estimates made in assessing the fair value of acquired entities change, we could be required to write-down the carrying value of goodwill which could be material to our results of operations in the period the charge is taken. Based on our impairment testing for 2021, we determined no impairment was required and none of our reporting units was at risk for impairment.

Consolidated Operating Results – Years Ended December 31, 2021, 2020, and 2019

				% Change	
(in millions of U.S. dollars, except for percentages)	**2021**	2020	2019	2021 vs. 2020	2020 vs. 2019
Net premiums written	**$ 37,868**	$ 33,820	$ 32,275	12.0 %	4.8 %
Net premiums written - constant dollars [1]				10.5 %	5.5 %
Net premiums earned	**36,355**	33,117	31,290	9.8 %	5.8 %
Net investment income	**3,456**	3,375	3,426	2.4 %	(1.5)%
Net realized gains (losses)	**1,152**	(498)	(530)	NM	(6.1)%
Total revenues	**40,963**	35,994	34,186	13.8 %	5.3 %
Losses and loss expenses	**21,980**	21,710	18,730	1.2 %	15.9 %
Policy benefits	**699**	784	740	(10.9)%	5.9 %
Policy acquisition costs	**6,918**	6,547	6,153	5.7 %	6.4 %
Administrative expenses	**3,136**	2,979	3,030	5.3 %	(1.7)%
Interest expense	**492**	516	552	(4.7)%	(6.4)%
Other (income) expense	**(2,365)**	(994)	(596)	137.9 %	66.8 %
Amortization of purchased intangibles	**287**	290	305	(0.9)%	(4.9)%
Chubb integration expenses	**—**	—	23	—	NM
Total expenses	**31,147**	31,832	28,937	(2.2)%	10.0 %
Income before income tax	**9,816**	4,162	5,249	135.9 %	(20.7)%
Income tax expense	**1,277**	629	795	102.9 %	(20.8)%
Net income	**$ 8,539**	$ 3,533	$ 4,454	141.7 %	(20.7)%

NM – not meaningful

(1) On a constant-dollar basis. Amounts are calculated by translating prior period results using the same local currency exchange rates as the comparable current period.

Financial Highlights for the Year Ended December 31, 2021

- Net income was a record $8.5 billion compared with $3.5 billion in 2020. Net income in 2021 was driven by record P&C underwriting results, including growth in net premiums earned and improvements in our loss and loss expense ratios. Record net investment income and returns from our private equity investments also contributed to the higher net income.

- Consolidated net premiums written were $37.9 billion, up 12.0 percent, or 10.5 percent in constant dollars, primarily from growth in commercial lines, driven by positive rate increases, higher new business, increased exposure and higher renewal retention, and more moderate but positive growth in consumer lines.

- Consolidated net premiums earned were $36.4 billion, up 9.8 percent, or 8.3 percent in constant dollars, primarily from growth in commercial lines, and more moderate but positive growth in consumer lines.

- Total pre-tax and after-tax catastrophe losses were $2.4 billion (7.1 percentage points of the P&C combined ratio) and $2.0 billion, respectively, compared with $3.3 billion (10.6 percentage points of the P&C combined ratio) and $2.8 billion in 2020.

- Total pre-tax and after-tax favorable prior period development were $926 million (2.8 percentage points of the combined ratio) and $756 million, respectively, compared with favorable prior period development of $395 million (1.2 percentage points of the combined ratio) and $357 million, respectively, in 2020. The prior period development in 2021 of $926 million includes favorable development of $430 million for COVID-related liabilities, of which $20 million is in short-tail lines in our Overseas General Insurance segment, and an incremental $315 million favorable development in short-tail lines in our Overseas General Insurance segment, partially offset by adverse development of $443 million for molestation claims, of which $375 million was related to the pending Boy Scouts of America settlement in the fourth quarter. Refer to Note 7 to the Consolidated Financial Statements, under Item 8, for further information on prior period development.

- The P&C combined ratio was 89.1 percent compared with 96.1 percent in 2020. P&C current accident year (CAY) combined ratio excluding catastrophe losses was 84.8 percent compared with 86.7 percent in the prior year. The current year ratios decreased due to underlying loss ratio improvement, including earned rate exceeding loss cost trends, and the favorable impact of higher net premiums earned on the expense ratio.

- Net investment income was a record $3.5 billion compared with $3.4 billion in 2020, primarily due to higher income received from our private equity partnerships and increased dividends on public equities.
- Operating cash flow was a record $11.1 billion for 2021.

- Shareholders' equity increased by $273 million in 2021, primarily reflecting net income of $8.5 billion and total capital returned to shareholders in the year of $6.3 billion, including share repurchases of $4.9 billion, at an average purchase price of $175.85 per share, and dividends of $1.4 billion, and net unrealized losses on investments of $2.4 billion.

Outlook

2021 was a record year in terms of net income and underwriting results, double-digit commercial premium growth globally, strong levels of rate increase, and slow but improving growth in our consumer business globally. Looking ahead, we are off to a very good start in the first quarter overall. We expect 2022 to be a good year in terms of continued growth and margin improvement as we capitalize on favorable underwriting conditions for our commercial P&C businesses globally. We expect rates to continue to exceed loss costs for some time to come. Consumer lines growth is expected to return as the pandemic eases, though there is no certainty. In the future, as interest rates rise and spreads widen, our investment income will rise. And our strategic investments, such as our pending acquisition of Cigna's Life and Accident and Health Insurance Business in seven Asia-Pacific Markets and our agreements to increase our aggregate ownership in Huatai Group in China, will provide us with greater revenue, earnings and growth opportunity.

Net Premiums Written

(in millions of U.S. dollars, except for percentages)	2021	2020	2019	% Change 2021 vs. 2020	% Change 2020 vs. 2019	% Change C$ 2021 vs. 2020
Commercial casualty	**$ 6,994**	$ 6,177	$ 5,654	13.2 %	9.2 %	12.5 %
Workers' compensation	**2,130**	2,015	2,098	5.7 %	(4.0)%	5.7 %
Financial lines	**5,067**	4,201	3,697	20.6 %	13.6 %	18.5 %
Surety	**572**	531	639	7.9 %	(16.9)%	7.0 %
Commercial multiple peril (1)	**1,193**	1,047	983	13.9 %	6.6 %	13.9 %
Property and other short-tail lines	**6,425**	5,231	4,468	22.8 %	17.1 %	19.9 %
Total Commercial P&C	**22,381**	19,202	17,539	16.6 %	9.5 %	15.1 %
Agriculture	**2,388**	1,846	1,810	29.3 %	2.0 %	29.3 %
Personal automobile	**1,525**	1,550	1,786	(1.6)%	(13.2)%	(3.6)%
Personal homeowners	**3,719**	3,627	3,513	2.5 %	3.2 %	2.2 %
Personal other	**1,825**	1,656	1,514	10.2 %	9.4 %	6.6 %
Total Personal lines	**7,069**	6,833	6,813	3.4 %	0.3 %	2.0 %
Total Property and Casualty lines	**31,838**	27,881	26,162	14.2 %	6.6 %	12.8 %
Global A&H lines (2)	**3,763**	3,859	4,315	(2.5)%	(10.6)%	(4.7)%
Reinsurance lines	**873**	731	649	19.5 %	12.6 %	18.0 %
Life	**1,394**	1,349	1,149	3.4 %	17.4 %	1.9 %
Total consolidated	**$ 37,868**	$ 33,820	$ 32,275	12.0 %	4.8 %	10.5 %

(1) Commercial multiple peril represents retail package business (property and general liability).
(2) For purposes of this schedule only, A&H results from our Combined North America and International businesses, normally included in the Life Insurance and Overseas General Insurance segments, respectively, as well as the A&H results of our North America Commercial P&C segment, are included in Global A&H lines above.

The strong growth in consolidated net premiums written in 2021 principally reflects growth in commercial lines of 17.7 percent, and more moderate but positive growth in consumer lines of 1.5 percent. Commercial lines, which includes reinsurance and agriculture, grew across most lines of business, driven by higher new business, positive rate increases, increased exposure, and strong renewal retention.

- Commercial casualty grew globally, driven by higher new business and positive rate increases, primarily across North America, Europe and Asia. Additionally, there was increased exposure primarily on in-force policies following the adverse impact of prior year COVID-related exposure reductions.
- Workers' compensation growth was due to increased exposure primarily on in-force policies following the adverse impact of prior year COVID-related exposure adjustments.
- Financial lines grew globally, reflecting higher new business, improved retention and positive rate increases in North America, Asia, and Europe.
- Commercial multiple peril increased due to higher new and renewal business, including rate and exposure increases, in North America.
- Property and other short-tail lines grew due to higher new business, improved retention and positive rate increases in Asia, North America, and Europe.
- Personal lines increased globally primarily reflecting rate and exposure increases in homeowners' lines in North America and growth in specialty lines in Europe and Asia. Growth was partially offset by declines in automobile, reflecting reduced exposures from COVID-related impacts in North America and Latin America. While down for the year, Latin America began to experience growth in the latter half of the year.
- Global A&H lines began to experience modest growth in the latter half of the year in Latin America, but overall global growth was unfavorably impacted by less travel volume and reduced consumer activity due to COVID-related impacts. Our North American Combined Insurance supplemental A&H business decreased due to COVID-related impacts on face-to-face and worksite sales.
- Growth in our international life operations, principally from new business in Asia and Latin America, was partially offset by declines in our life reinsurance business that has not written new business since 2007.

For additional information on net premiums written, refer to the segment results discussions.

Net Premiums Earned

Net premiums earned for short-duration contracts, typically P&C contracts, generally reflect the portion of net premiums written that was recorded as revenues for the period as the exposure periods expire. Net premiums earned for long-duration contracts, typically traditional life contracts, generally are recognized as earned when due from policyholders. Net premiums earned increased $3.2 billion, or $2.8 billion on a constant-dollar basis in 2021, reflecting growth in commercial lines, while consumer lines were relatively flat.

Catastrophe Losses and Prior Period Development

Catastrophe losses exclude reinstatement premiums which are additional premiums paid on certain reinsurance agreements in order to reinstate coverage that had been exhausted by loss occurrences. The reinstatement premium amount is typically a pro rata portion of the original ceded premium paid based on how much of the reinsurance limit had been exhausted. Prior period development is net of expense adjustments which typically relate to either profit commission reserves or policyholder dividend reserves based on actual claim experience that develops after the policy period ends. Refer to the Non-GAAP Reconciliation section for further information on reinstatement premiums on catastrophe losses and adjustments to prior period development.

We generally define catastrophe loss events consistent with the definition of the Property Claims Service (PCS) for events in the U.S. and Canada. PCS defines a catastrophe as an event that causes damage of $25 million or more in insured losses and affects a significant number of insureds. For events outside of the U.S. and Canada, we generally use a similar definition. We also define losses from certain pandemics, such as COVID-19, as a catastrophe loss. The tables below represent catastrophe loss estimates for events that occurred in the related calendar year only. Changes in catastrophe loss estimates in the current calendar year that relate to loss events that occurred in previous calendar years are considered prior period development and are excluded from the tables below.

	Catastrophe Loss Charge by Event For Full Year 2021							
(in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Total excluding RIPs	RIPs collected (expensed)	Total including RIPs
Net losses								
Hurricane Ida	$ 400	$ 231	$ 1	$ 68	$ 156	$ 856	$ 22	$ 834
Winter-related storms	426	201	8	63	56	754	(12)	766
U.S. flooding, hail, tornadoes, and wind events	257	165	29	18	8	477	(1)	478
International weather-related events	2	6	—	99	9	116	1	115
European flooding	1	—	—	94	11	106	—	106
Other U.S. hurricanes/tropical storms	24	55	—	—	—	79	—	79
Other	2	5	—	16	—	23	—	23
Total	$ 1,112	$ 663	$ 38	$ 358	$ 240	$ 2,411		
RIPs collected (expensed)	—	(16)	(2)	—	28		10	
Total before income tax	$ 1,112	$ 679	$ 40	$ 358	$ 212			$2,401
Income tax benefit								417
Total after income tax								$1,984

Catastrophe Loss Charge by Event For Full Year 2020

(in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Total excluding RIPs	RIPs collected (expensed)	Total including RIPs
Net losses									
COVID-19	$ 925	$ —	$ —	$ 421	$ 10	$ 24	$ 1,380	$ (16)	$1,396
U.S. hurricanes/tropical storms	429	132	1	79	86	—	727	7	720
U.S. flooding, hail, tornadoes, and wind events	295	191	25	9	11	—	531	(3)	534
U.S. wildfires	61	162	1	5	1	—	230	—	230
Civil unrest	111	2	—	17	—	—	130	—	130
International weather-related events	3	6	—	67	15	—	91	2	89
Midwest derecho	37	38	8	—	1	—	84	—	84
Australia storms	—	—	—	66	—	—	66	—	66
Other	7	2	—	26	(1)	—	34	—	34
Total	$ 1,868	$ 533	$ 35	$ 690	$ 123	$ 24	$ 3,273		
RIPs collected (expensed)	(3)	(1)	(1)	(15)	10	—		(10)	
Total before income tax	$ 1,871	$ 534	$ 36	$ 705	$ 113	$ 24			$3,283
Income tax benefit									506
Total after income tax									$2,777

Catastrophe Loss Charge by Event For Full Year 2019

(in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Total excluding RIPs	RIPs collected (expensed)	Total including RIPs
Net losses								
U.S. flooding, hail, tornadoes, and wind events	$ 220	$ 202	$ 7	$ —	$ 9	$ 438	$ —	$ 438
Tornado in Dallas, Texas	55	145	—	—	2	202	(11)	213
Winter-related storms	74	110	1	6	2	193	—	193
Hurricane Dorian	26	30	—	10	8	74	1	73
California wildfires	11	45	—	—	—	56	—	56
Typhoon Hagibis	—	—	—	20	17	37	1	36
Civil unrest in Hong Kong and Chile	—	—	—	33	—	33	(4)	37
International weather-related events	1	2	—	30	—	33	—	33
Other	34	9	—	53	13	109	1	108
Total	$ 421	$ 543	$ 8	$ 152	$ 51	$ 1,175		
RIPs collected (expensed)	—	(11)	—	(4)	3		(12)	
Total before income tax	$ 421	$ 554	$ 8	$ 156	$ 48			$ 1,187
Income tax benefit								221
Total after income tax								$ 966

Prior Period Development

(in millions of U.S. dollars)		2021		2020		2019
Favorable prior period development	$	926	$	395	$	792

Prior period development (PPD) arises from changes to loss estimates recognized in the current year that relate to loss events that occurred in previous calendar years and excludes the effect of losses from the development of earned premium from previous accident years.

Pre-tax net favorable prior period development for 2021 was $926 million, including adverse development of $443 million for molestation claims, of which $375 million was related to the pending Boy Scouts of America settlement in the fourth quarter, and $83 million related to legacy A&E exposures. The remaining favorable development of $1,452 million, including favorable development of $430 million for COVID-related claims, is primarily comprised of 39 percent in long-tail lines, principally from accident years 2020 and 2017 and prior, and 61 percent in short-tail lines, mainly in homeowners, accident and health, property, and surety lines.

Pre-tax net favorable prior period development for 2020 was $395 million, which included adverse development of $259 million for U.S. child molestation claims, predominately reviver statute-related, and $106 million adverse development related to legacy asbestos and environmental liabilities. The remaining favorable development of $760 million principally comprises 89 percent long-tail lines, principally from accident years 2016 and prior, and 11 percent short-tail lines.

Refer to the Prior Period Development section in Note 7 to the Consolidated Financial Statements for additional information.

P&C Combined Ratio

In evaluating our segments excluding Life Insurance financial performance, we use the P&C combined ratio, the loss and loss expense ratio, the policy acquisition cost ratio, and the administrative expense ratio. We calculate these ratios by dividing the respective expense amounts by net premiums earned. We do not calculate these ratios for the Life Insurance segment as we do not use these measures to monitor or manage that segment. The P&C combined ratio is determined by adding the loss and loss expense ratio, the policy acquisition cost ratio, and the administrative expense ratio. A P&C combined ratio under 100 percent indicates underwriting income, and a combined ratio exceeding 100 percent indicates underwriting loss.

	2021	2020	2019
Loss and loss expense ratio			
CAY loss ratio excluding catastrophe losses	58.3 %	59.2 %	60.8 %
Catastrophe losses	7.1 %	10.6 %	4.1 %
Favorable prior period development	(2.8)%	(1.3)%	(2.8)%
Loss and loss expense ratio	62.6 %	68.5 %	62.1 %
Policy acquisition cost ratio	18.3 %	18.9 %	19.1 %
Administrative expense ratio	8.2 %	8.7 %	9.4 %
P&C Combined ratio	89.1 %	96.1 %	90.6 %

The loss and loss expense ratio and the CAY loss ratio excluding catastrophe losses decreased in 2021, primarily due to underlying loss ratio improvement including earned rate exceeding loss cost trends. The loss and loss expense ratio in 2021 also benefited from lower catastrophe losses and higher favorable prior period development.

The policy acquisition cost ratio decreased in 2021 primarily due to a change in the mix of business, including less premiums earned from consumer A&H lines that have a higher acquisition cost ratio and higher premiums earned from commercial P&C lines that have a lower acquisition cost ratio.

The administrative expense ratio decreased in 2021 primarily due to the favorable impact of higher net premiums earned, partially offset by increased investment to support growth.

Policy benefits
Policy benefits represent losses on contracts classified as long-duration and generally include accident and supplemental health products, term and whole life products, endowment products, and annuities. Refer to the Life Insurance segment operating results section for further discussion.

Policy benefits were $699 million, $784 million and $740 million in 2021, 2020 and 2019, respectively, which included separate account liabilities (gains) losses of $(8) million, $58 million and $44 million, respectively. The offsetting movements of these liabilities are recorded in Other (income) expense on the Consolidated statements of operations. Excluding the separate account gains and losses, Policy benefits were $707 million in 2021 compared with $726 million in 2020, reflecting growth in our International Life operations, offset by a decline in our Combined Insurance North America supplemental accident and health business and our life reinsurance business.

Refer to the respective sections that follow for a discussion of Net investment income, Other (income) expense, Net realized gains (losses), Interest expense, Amortization of purchased intangibles, and Income tax expense.

Segment Operating Results – Years Ended December 31, 2021, 2020, and 2019

We operate through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. In addition, the results of our run-off Brandywine business, including all run-off asbestos and environmental (A&E) exposures, and the results of Westchester specialty operations for 1996 and prior years are presented within Corporate.

North America Commercial P&C Insurance

The North America Commercial P&C Insurance segment comprises operations that provide property and casualty (P&C) and accident & health (A&H) insurance and services to large, middle market, and small commercial businesses in the U.S., Canada, and Bermuda. This segment includes our North America Major Accounts and Specialty Insurance division (large corporate accounts and wholesale business), and the North America Commercial Insurance division (principally middle market and small commercial accounts).

				% Change	
(in millions of U.S. dollars, except for percentages)	**2021**	2020	2019	2021 vs. 2020	2020 vs. 2019
Net premiums written	**$16,415**	$14,474	$13,375	13.4 %	8.2 %
Net premiums earned	**15,461**	13,964	12,922	10.7 %	8.1 %
Losses and loss expenses	**10,015**	10,129	8,206	(1.1)%	23.4 %
Policy acquisition costs	**2,082**	1,942	1,831	7.1 %	6.1 %
Administrative expenses	**1,052**	1,006	1,028	4.6 %	(2.2)%
Underwriting income	**2,312**	887	1,857	160.8 %	(52.2)%
Net investment income	**2,078**	2,061	2,109	0.8 %	(2.3)%
Other (income) expense	**31**	23	24	39.2 %	(4.2)%
Segment income	**$ 4,359**	$ 2,925	$ 3,942	49.0 %	(25.8)%
Loss and loss expense ratio:					
CAY loss ratio excluding catastrophe losses	**62.7 %**	64.2 %	65.3 %	(1.5) pts	(1.1) pts
Catastrophe losses	**7.2 %**	13.4 %	3.3 %	(6.2) pts	10.1 pts
Prior period development	**(5.1)%**	(5.1)%	(5.1)%	— pts	— pts
Loss and loss expense ratio	**64.8 %**	72.5 %	63.5 %	(7.7) pts	9.0 pts
Policy acquisition cost ratio	**13.4 %**	14.0 %	14.2 %	(0.6) pts	(0.2) pts
Administrative expense ratio	**6.8 %**	7.2 %	7.9 %	(0.4) pts	(0.7) pts
Combined ratio	**85.0 %**	93.7 %	85.6 %	(8.7) pts	8.1 pts

Catastrophe Losses and Prior Period Development

(in millions of U.S. dollars)		2021		2020		2019
Catastrophe losses	$	1,112	$	1,871	$	421
Favorable prior period development	$	762	$	702	$	649

Refer to the tables on pages 50 - 51 for detail of catastrophe losses and Note 7 to the Consolidated Financial Statements for detail on prior period development.

Premiums

Net premiums written increased $1,941 million, or 13.4 percent in 2021, comprising:

- Commercial P&C lines: Positive growth of 14.6 percent reflecting strong new business written, positive rate increases, and strong premium retention across a number of retail and wholesale lines, including primary and excess casualty, financial lines, and property.
- Consumer lines: Negative growth of 11.3 percent principally from exposure declines in A&H.

Net premiums earned increased $1,497 million, or 10.7 percent in 2021, reflecting the growth in commercial lines described above.

Combined Ratio

The loss and loss expense ratio and the CAY loss ratio excluding catastrophe losses decreased in 2021 primarily reflecting underlying loss ratio improvement including earned rate exceeding loss cost trends. The loss and loss expense ratio in 2021 also benefited from higher favorable prior period development and lower catastrophe losses compared to the prior year, which included significant losses related to the COVID-19 pandemic.

The policy acquisition cost ratio decreased in 2021 primarily due to a change in mix of business towards lines that have a lower acquisition cost ratio, primarily excess casualty.

The administrative expense ratio decreased in 2021 primarily due to the favorable impact of higher net premiums earned, partially offset by increased investment to support growth.

North America Personal P&C Insurance

The North America Personal P&C Insurance segment comprises operations that provide high net worth personal lines products, including homeowners and complementary products such as valuable articles, excess liability, automobile, and recreational marine insurance and services in the U.S. and Canada.

(in millions of U.S. dollars, except for percentages)	2021	2020	2019	% Change 2021 vs. 2020	% Change 2020 vs. 2019
Net premiums written	**$5,002**	$4,920	$4,787	1.7 %	2.8 %
Net premiums earned	**4,915**	4,866	4,694	1.0 %	3.7 %
Losses and loss expenses	**2,924**	3,187	3,043	(8.3)%	4.7 %
Policy acquisition costs	**1,001**	974	948	2.9 %	2.7 %
Administrative expenses	**276**	270	286	2.0 %	(5.4)%
Underwriting income	**714**	435	417	64.0 %	4.6 %
Net investment income	**249**	260	258	(4.1)%	0.5 %
Other (income) expense	**(2)**	5	3	NM	75.8 %
Amortization of purchased intangibles	**10**	11	12	(5.1)%	(5.0)%
Segment income	**$ 955**	$ 679	$ 660	40.6 %	2.8 %
Loss and loss expense ratio:					
CAY loss ratio excluding catastrophe losses	**52.0 %**	53.1 %	55.1 %	(1.1) pts	(2.0) pts
Catastrophe losses	**13.6 %**	11.0 %	11.6 %	2.6 pts	(0.6) pts
Prior period development	**(6.1)%**	1.4 %	(1.9)%	(7.5) pts	3.3 pts
Loss and loss expense ratio	**59.5 %**	65.5 %	64.8 %	(6.0) pts	0.7 pts
Policy acquisition cost ratio	**20.4 %**	20.0 %	20.2 %	0.4 pts	(0.2) pts
Administrative expense ratio	**5.6 %**	5.6 %	6.1 %	— pts	(0.5) pts
Combined ratio	**85.5 %**	91.1 %	91.1 %	(5.6) pts	— pts

NM – not meaningful

Catastrophe Losses and Prior Period Development

(in millions of U.S. dollars)	2021	2020	2019
Catastrophe losses	**$ 679**	$ 534	$ 554
Favorable (unfavorable) prior period development	**$ 305**	$ (63)	$ 95

Refer to the tables on pages 50 - 51 for detail of catastrophe losses and Note 7 to the Consolidated Financial Statements for detail on prior period development.

Premiums

Net premiums written increased $82 million, or 1.7 percent for 2021, primarily driven by new business and strong renewal retention, from both rate and exposure increases, mainly in homeowners. Partially offsetting the increase were cancellations in parts of California exposed to wildfires and the unfavorable year-over-year impact of reinstatement premiums. These items negatively impacted net premiums written growth by 1.3 percentage points.

Net premiums earned increased $49 million, or 1.0 percent for 2021, reflecting the growth in net premiums written.

Combined Ratio

The loss and loss expense ratio and CAY loss ratio excluding catastrophe losses decreased in 2021 due to better underlying loss ratio improvement in homeowners including earned rate exceeding loss cost trends, partially offset by an increase in automobile frequency. The loss and loss expense ratio in 2021 also benefited from favorable prior period development in the current year compared to unfavorable prior period development in the prior year, partially offset by higher catastrophe losses. Unfavorable prior period development in 2020 was due to higher than expected non-catastrophe loss development, primarily in homeowners. The policy acquisition cost ratio increased in 2021 primarily due to lower ceded commissions and the unfavorable year-over-year impact of reinstatement premiums.

North America Agricultural Insurance

The North America Agricultural Insurance segment comprises our North American based businesses that provide a variety of coverages in the U.S. and Canada including crop insurance, primarily Multiple Peril Crop Insurance (MPCI) and crop-hail through Rain and Hail Insurance Service, Inc. (Rain and Hail) as well as farm and ranch and specialty P&C commercial insurance products and services through our Chubb Agribusiness unit.

				% Change	
(in millions of U.S. dollars, except for percentages)	**2021**	2020	2019	2021 vs. 2020	2020 vs. 2019
Net premiums written	**$2,388**	$1,846	$1,810	29.3 %	2.0 %
Net premiums earned	**2,338**	1,822	1,795	28.3 %	1.5 %
Losses and loss expenses	**1,962**	1,544	1,616	27.1 %	(4.5)%
Policy acquisition costs	**124**	123	84	1.2 %	45.7 %
Administrative expenses	**(3)**	9	6	NM	67.2 %
Underwriting income	**255**	146	89	74.1 %	65.3 %
Net investment income	**28**	30	30	(4.1)%	—
Other (income) expense	**1**	1	1	—	—
Amortization of purchased intangibles	**26**	27	28	(0.8)%	(2.1)%
Segment income	**$ 256**	$ 148	$ 90	73.0 %	65.1 %
Loss and loss expense ratio:					
CAY loss ratio excluding catastrophe losses	**81.5 %**	83.7 %	93.5 %	(2.2) pts	(9.8) pts
Catastrophe losses	**1.7 %**	2.0 %	0.5 %	(0.3) pts	1.5 pts
Prior period development	**0.7 %**	(1.0)%	(3.9)%	1.7 pts	2.9 pts
Loss and loss expense ratio	**83.9 %**	84.7 %	90.1 %	(0.8) pts	(5.4) pts
Policy acquisition cost ratio	**5.3 %**	6.8 %	4.7 %	(1.5) pts	2.1 pts
Administrative expense ratio	**(0.1)%**	0.5 %	0.3 %	(0.6) pts	0.2 pts
Combined ratio	**89.1 %**	92.0 %	95.1 %	(2.9) pts	(3.1) pts

NM – not meaningful

Catastrophe Losses and Prior Period Development

(in millions of U.S. dollars)	**2021**	2020	2019
Catastrophe losses	**$ 40**	$ 36	$ 8
(Unfavorable) favorable prior period development	**$ (10)**	$ 10	$ 80

Refer to the tables on pages 50 - 51 for detail of catastrophe losses and Note 7 to the Consolidated Financial Statements for detail on prior period development.

Premiums

Net premiums written increased $542 million, or 29.3 percent in 2021, due mainly to an increase in MPCI, primarily reflecting higher commodity prices and volatility factors, both of which impact pricing, as well as higher reported acreage from policyholders and policy count growth. In addition, our Chubb Agribusiness unit contributed to the net premiums written increase with strong new business growth.

Net premiums earned increased $516 million, or 28.3 percent in 2021 reflecting the growth in net premiums written.

Combined Ratio

The loss and loss expense ratio and CAY loss ratio excluding catastrophe losses decreased in 2021 reflecting better crop year results, partially offset by the unfavorable impact of a commodity hedge loss. The loss and loss expense ratio in 2021 was unfavorably impacted by higher catastrophe losses and adverse prior period development. The policy acquisition cost ratio decreased in 2021 primarily due to the favorable impact of higher net premiums earned. The administrative expense ratio decreased in 2021 primarily due to an increase in administrative and operating reimbursements received under the government program for MPCI business and the favorable impact of higher net premiums earned.

Overseas General Insurance

Overseas General Insurance segment comprises Chubb International and Chubb Global Markets (CGM). Chubb International comprises our international commercial P&C traditional and specialty lines serving large corporations, middle market and small customers; A&H and traditional and specialty personal lines business serving local territories outside the U.S., Bermuda, and Canada. CGM, our London-based international commercial P&C excess and surplus lines business, includes Lloyd's of London (Lloyd's) Syndicate 2488. Chubb provides funds at Lloyd's to support underwriting by Syndicate 2488 which is managed by Chubb Underwriting Agencies Limited.

				% Change	
(in millions of U.S. dollars, except for percentages)	**2021**	2020	2019	2021 vs. 2020	2020 vs. 2019
Net premiums written	**$10,713**	$9,335	$9,262	14.8 %	0.8 %
Net premiums written - constant dollars				10.6 %	2.9 %
Net premiums earned	**10,441**	9,285	8,882	12.5 %	4.5 %
Losses and loss expenses	**5,143**	5,255	4,606	(2.1)%	14.1 %
Policy acquisition costs	**2,799**	2,568	2,501	9.0 %	2.7 %
Administrative expenses	**1,078**	1,034	1,033	4.3 %	0.1 %
Underwriting income	**1,421**	428	742	232.2 %	(42.4)%
Net investment income	**597**	534	588	11.9 %	(9.2)%
Other (income) expense	**—**	13	12	NM	4.5 %
Amortization of purchased intangibles	**48**	45	45	8.2 %	—
Segment income	**$1,970**	$ 904	$1,273	118.1 %	(29.0)%
Loss and loss expense ratio:					
CAY loss ratio excluding catastrophe losses	**50.1 %**	50.7 %	51.2 %	(0.6) pts	(0.5) pts
Catastrophe losses	**3.5 %**	7.5 %	1.8 %	(4.0) pts	5.7 pts
Prior period development	**(4.3)%**	(1.6)%	(1.1)%	(2.7) pts	(0.5) pts
Loss and loss expense ratio	**49.3 %**	56.6 %	51.9 %	(7.3) pts	4.7 pts
Policy acquisition cost ratio	**26.8 %**	27.7 %	28.1 %	(0.9) pts	(0.4) pts
Administrative expense ratio	**10.3 %**	11.1 %	11.6 %	(0.8) pts	(0.5) pts
Combined ratio	**86.4 %**	95.4 %	91.6 %	(9.0) pts	3.8 pts

NM – not meaningful

Catastrophe Losses and Prior Period Development

(in millions of U.S. dollars)	**2021**	2020	2019
Catastrophe losses	**$ 358**	$ 705	$ 156
Favorable prior period development	**$ 441**	$ 150	$ 92

Refer to the tables on pages 50 - 51 for detail of catastrophe losses and Note 7 to the Consolidated Financial Statements for detail on prior period development.

Net Premiums Written by Region

(in millions of U.S. dollars, except for percentages)	2021	2020	2019	C$ 2020	% Change 2021 vs. 2020	% Change C$ 2021 vs. 2020	% Change 2020 vs. 2019
Region							
Europe, Middle East, and Africa	**$ 5,242**	$ 4,247	$ 3,753	$ 4,454	23.4 %	17.7 %	13.2 %
Latin America	**2,044**	1,928	2,277	1,956	6.1 %	4.5 %	(15.3)%
Asia Pacific ex Japan	**2,733**	2,450	2,515	2,568	11.6 %	6.4 %	(2.6)%
Japan	**520**	515	506	507	0.9 %	2.5 %	1.8 %
Other [(1)]	**174**	195	211	202	(10.8)%	(13.9)%	(7.6)%
Net premiums written	**$10,713**	$ 9,335	$ 9,262	$ 9,687	14.8 %	10.6 %	0.8 %

	2021 % of Total	2020 % of Total	2019 % of Total
Region			
Europe, Middle East, and Africa	**49 %**	45 %	40 %
Latin America	**19 %**	21 %	25 %
Asia Pacific ex Japan	**25 %**	26 %	27 %
Japan	**5 %**	6 %	6 %
Other [(1)]	**2 %**	2 %	2 %
Net premiums written	**100 %**	100 %	100 %

(1) Includes the international supplemental A&H business of Combined Insurance and other international operations.

Premiums

Net premiums written increased $1,378 million in 2021, or $1,026 million on a constant-dollar basis, reflecting growth in commercial lines of 21.4 percent, or 16.9 percent on a constant-dollar basis, and growth in consumer lines of 5.6 percent, or 1.8 percent on a constant-dollar basis.

Growth in Europe, Middle East and Africa in 2021 was primarily driven by higher new business and positive rate increases in commercial lines, including commercial casualty, financial lines and property. Personal lines grew reflecting new business in specialty lines.

Growth in Latin America in 2021 was primarily driven by higher new business and retention in commercial P&C lines. Additionally, consumer lines in the prior year was adversely impacted by restrictions resulting from the COVID-19 pandemic in automobile and A&H.

Growth in Asia Pacific ex Japan in 2021 was primarily driven by higher new business, higher retention and positive rate increases in commercial P&C lines, including financial lines, property and casualty, and higher new business in consumer lines, primarily in specialty and homeowners. Additionally, consumer lines in the prior year was adversely impacted by restrictions resulting from the COVID-19 pandemic.

Growth in Japan in 2021 was primarily driven by new business in commercial P&C lines, including financial lines and casualty. Consumer lines also increased, driven by homeowners and specialty in personal lines. Additionally, consumer lines in the prior year was adversely impacted by restrictions resulting from the COVID-19 pandemic.

Net premiums earned increased $1,156 million in 2021, or $811 million on a constant-dollar basis, reflecting the increase in commercial and consumer lines described above.

Combined Ratio

The loss and loss expense ratio and CAY loss ratio excluding catastrophe losses decreased in 2021 reflecting underlying loss ratio improvement including earned rate exceeding loss cost trends, partially offset by a COVID-related reduced claim frequency benefit in the prior year, primarily in the automobile portfolio in Latin America, and lower premiums earned from A&H lines which have a lower loss ratio. The loss and loss expense ratio in 2021 also benefited from higher favorable prior period development and lower catastrophe losses compared to the prior year.

The policy acquisition cost ratio decreased in 2021 primarily due to a change in the mix of business, including less premiums earned from A&H lines that have a higher acquisition cost ratio and higher premiums earned from commercial P&C lines that have a lower acquisition cost ratio.

The administrative expense ratio decreased in 2021 primarily due to the favorable impact of higher net premiums earned and expense management, partially offset by increased investment to support growth.

Global Reinsurance

The Global Reinsurance segment represents our reinsurance operations comprising Chubb Tempest Re Bermuda, Chubb Tempest Re USA, Chubb Tempest Re International, and Chubb Tempest Re Canada. Global Reinsurance markets its reinsurance products worldwide primarily through reinsurance brokers under the Chubb Tempest Re brand name and provides a broad range of traditional and non-traditional reinsurance coverage to a diverse array of primary P&C companies.

				% Change	
(in millions of U.S. dollars, except for percentages)	**2021**	2020	2019	2021 vs. 2020	2020 vs. 2019
Net premiums written	**$ 873**	$ 731	$ 649	19.5 %	12.6 %
Net premiums written - constant dollars				18.0 %	12.1 %
Net premiums earned	**798**	698	654	14.3 %	6.7 %
Losses and loss expenses	**632**	435	352	45.2 %	23.5 %
Policy acquisition costs	**200**	174	169	15.3 %	3.0 %
Administrative expenses	**35**	37	35	(4.5)%	5.2 %
Underwriting income (loss)	**(69)**	52	98	NM	(46.8)%
Net investment income	**331**	307	279	7.7 %	10.1 %
Other (income) expense	**—**	2	1	NM	NM
Segment income	**$ 262**	$ 357	$ 376	(26.8)%	(5.0)%
Loss and loss expense ratio:					
CAY loss ratio excluding catastrophe losses	**50.7 %**	49.1 %	50.6 %	1.6 pts	(1.5) pts
Catastrophe losses	**28.3 %**	17.0 %	7.6 %	11.3 pts	9.4 pts
Prior period development	**0.2 %**	(3.8)%	(4.3)%	4.0 pts	0.5 pts
Loss and loss expense ratio	**79.2 %**	62.3 %	53.9 %	16.9 pts	8.4 pts
Policy acquisition cost ratio	**25.1 %**	24.9 %	25.7 %	0.2 pts	(0.8) pts
Administrative expense ratio	**4.4 %**	5.3 %	5.4 %	(0.9) pts	(0.1) pts
Combined ratio	**108.7 %**	92.5 %	85.0 %	16.2 pts	7.5 pts

NM – not meaningful

Catastrophe Losses and Prior Period Development

(in millions of U.S dollars)	**2021**	2020	2019
Catastrophe losses	**$ 212**	$ 113	$ 48
(Unfavorable) favorable prior period development	**$ (3)**	$ 29	$ 29

Refer to the tables on pages 50 - 51 for detail of catastrophe losses and Note 7 to the Consolidated Financial Statements for detail on prior period development.

Premiums
Net premiums written increased $142 million in 2021 primarily from growth in property pro-rata business and financial lines, driven by new business written. In addition, net premiums written increased due to higher reinstatement premiums.

Net premiums earned increased $100 million in 2021 primarily reflecting the increase in net premiums written described above.

Combined Ratio
The loss and loss expense ratio increased in 2021 primarily due to higher catastrophe losses and unfavorable prior period development compared with favorable prior period development in the prior year. The CAY loss ratio excluding catastrophe losses increased in 2021 primarily due to a shift in the mix of business.

The administrative expense ratio decreased in 2021 primarily from the favorable impact of higher net premiums earned.

Life Insurance

The Life Insurance segment comprises our international life operations, Chubb Tempest Life Re (Chubb Life Re), and the North American supplemental A&H and life business of Combined Insurance. We assess the performance of our life business based on Life Insurance underwriting income, which includes Net investment income and (Gains) losses from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP.

(in millions of U.S. dollars, except for percentages)	2021	2020	2019	% Change 2021 vs. 2020	% Change 2020 vs. 2019
Net premiums written	**$ 2,477**	$ 2,514	$ 2,392	(1.5)%	5.1 %
Net premiums written - constant dollars				(2.8)%	5.6 %
Net premiums earned	**2,402**	2,482	2,343	(3.2)%	5.9 %
Losses and loss expenses	**740**	724	757	2.3 %	(4.4)%
Policy benefits	**707**	726	696	(2.7)%	4.3 %
Policy acquisition costs	**712**	766	620	(7.1)%	23.6 %
Administrative expenses	**333**	320	323	3.8 %	(1.0)%
Net investment income	**407**	385	373	5.6 %	3.3 %
Life Insurance underwriting income	**317**	331	320	(4.2)%	3.6 %
Other (income) expense	**(106)**	(74)	(48)	42.4 %	53.1 %
Amortization of purchased intangibles	**5**	4	2	23.3 %	100.0 %
Segment income	**$ 418**	$ 401	$ 366	4.1 %	9.8 %

Premiums
Net premiums written decreased $37 million in 2021, or $72 million on a constant-dollar basis. For our International Life operations, net premiums written increased 9.4 percent, principally in Asia, from new business in Taiwan, Thailand and Vietnam, and in Latin America from new business in Brazil and Ecuador. This growth was offset by a decline in our North America Combined Insurance business of 7.1 percent, from the adverse impact of the COVID-19 pandemic on face-to-face and worksite sales, and a decline in our life reinsurance business which continues to decline as no new business is currently being written.

Deposits

The following table presents deposits collected on universal life and investment contracts:

(in millions of U.S. dollars, except for percentages)	2021	2020	2019	% Change 2021 vs. 2020	% Change C$ 2021 vs. 2020	% Change 2020 vs. 2019
Deposits collected on universal life and investment contracts	$ 2,441	$ 1,559	$ 1,463	56.6 %	49.9 %	6.5 %

Deposits collected on universal life and investment contracts (life deposits) are not reflected as revenues in our Consolidated statements of operations in accordance with GAAP. New life deposits are an important component of production, and although they do not significantly affect current period income from operations, they are key to our efforts to grow our business. Life deposits collected increased $882 million, or $812 million on a constant-dollar basis, in 2021, primarily from successful sales in broker and bank channels in Taiwan.

Life Insurance underwriting income and Segment income

Life Insurance underwriting income decreased $14 million in 2021, primarily due to the decrease in net premiums written described above, partially offset by higher net investment income. Segment income increased $17 million primarily due to higher other income from our share of net income from our investment in Huatai, our partially-owned insurance entity in China.

Corporate

Corporate results primarily include the results of our non-insurance companies, income and expenses not attributable to reportable segments and loss and loss expenses of asbestos and environmental (A&E) liabilities and certain other non-A&E run-off exposures, including molestation.

(in millions of U.S. dollars, except for percentages)	2021	2020	2019	% Change 2021 vs. 2020	% Change 2020 vs. 2019
Losses and loss expenses	$ 572	$ 435	$ 158	31.4 %	176.4 %
Administrative expenses	365	303	319	20.6 %	(5.0)%
Underwriting loss	937	738	477	26.9 %	54.8 %
Net investment income (loss)	(55)	(87)	(125)	(35.6)%	(30.8)%
Interest expense	492	516	552	(4.7)%	(6.4)%
Net realized gains (losses)	1,160	(499)	(522)	NM	(4.6)%
Other (income) expense	(2,118)	(791)	(459)	168.0 %	72.7 %
Amortization of purchased intangibles	198	203	218	(3.2)%	(6.9)%
Chubb integration expenses	—	—	23	—	NM
Income tax expense	1,277	629	795	102.9 %	(20.8)%
Net income (loss)	$ 319	$ (1,881)	$ (2,253)	NM	(16.5)%

NM – not meaningful

The increase in losses and loss expenses was primarily from adverse development relating to our Brandywine asbestos and environmental exposures, and non A&E run-off casualty exposure, including molestation. Adverse development on molestation exposures in 2021 is primarily related to Boy Scouts of America related abuse claims. Refer to Note 7 of the Consolidated Financial Statements for further information. Administrative expenses increased $62 million in 2021 primarily due to higher employee-related expenses and increased spending to support digital growth initiatives.

Other (income) and expense increased $1.3 billion in 2021 primarily due to higher returns from our private equities where we own more than three percent, principally from mark-to-market movement. Refer to Note 14 to the Consolidated Financial Statements for additional information on Other (income) expense.

Refer to the respective sections that follow for a discussion of Net realized gains (losses), Net investment income (loss), Amortization of purchased intangibles, and Income tax expense (benefit).

Net Realized and Unrealized Gains (Losses)

We take a long-term view with our investment strategy, and our investment managers manage our investment portfolio to maximize total return within specific guidelines designed to minimize risk. The majority of our investment portfolio is available for sale and reported at fair value. Our held to maturity investment portfolio is reported at amortized cost, net of valuation allowance.

The effect of market movements on our fixed maturities portfolio impacts Net income (through Net realized gains (losses)) when securities are sold, when we write down an asset, or when we record a change to the valuation allowance for expected credit losses. For a further discussion related to how we assess the valuation allowance for expected credit losses and the related impact on Net income, refer to Note 1 e) to the Consolidated Financial Statements. Additionally, Net income is impacted through the reporting of changes in the fair value of equity securities, private equity funds where we own less than three percent, and derivatives, including financial futures, options, swaps, and GLB reinsurance. Changes in unrealized appreciation and depreciation on available for sale securities, resulting from the revaluation of securities held, changes in cumulative foreign currency translation adjustment, and unrealized postretirement benefit obligations liability adjustment, are reported as separate components of Accumulated other comprehensive income in Shareholders' equity in the Consolidated balance sheets.

The following table presents our net realized and unrealized gains (losses):

	Year Ended December 31						
	2021			2020			2019
(in millions of U.S. dollars)	**Net Realized Gains (Losses)**	**Net Unrealized Gains (Losses)**	**Net Impact**	Net Realized Gains (Losses)	Net Unrealized Gains (Losses)	Net Impact	Net Realized Gains (Losses)
Fixed maturities	**$ 3**	**$ (2,919)**	**$(2,916)**	$ (281)	$ 2,604	$ 2,323	$ (31)
Fixed income and equity derivatives	**(72)**	**—**	**(72)**	81	—	81	(435)
Public equity							
Sales	**157**	**—**	**157**	455	—	455	58
Mark-to-market	**505**	**—**	**505**	131	—	131	46
Private equity (less than 3 percent ownership)							
Sales	**—**	**—**	**—**	—	—	—	(5)
Mark-to-market	**111**	**—**	**111**	(32)	—	(32)	(15)
Total investment portfolio	**704**	**(2,919)**	**(2,215)**	354	2,604	2,958	(382)
Variable annuity reinsurance derivative transactions, net of applicable hedges	**114**	**—**	**114**	(310)	—	(310)	(142)
Other derivatives	**(8)**	**—**	**(8)**	1	—	1	(8)
Foreign exchange	**348**	**(530)**	**(182)**	(483)	306	(177)	7
Other [(1)]	**(6)**	**503**	**497**	(60)	(244)	(304)	(5)
Net gains (losses), pre-tax	**$ 1,152**	**$ (2,946)**	**$(1,794)**	$ (498)	$ 2,666	$ 2,168	$ (530)

(1) Net unrealized gains (losses) includes our postretirement programs of $522 million and $(232) million for the years ended December 31, 2021 and 2020, respectively.

Pre-tax net losses of $2,215 million in our investment portfolio were principally the result of an increase in interest rates, partially offset by positive equity returns.

The realized gains relating to the variable annuity reinsurance derivative transactions in 2021 reflected a decrease in the fair value of GLB liabilities due to higher global equity markets and higher interest rates. The realized losses relating to the variable annuity reinsurance derivative transactions in 2020 reflected an increase in the fair value of GLB liabilities due to lower interest rates and changes made to our valuation model relating to policyholder behavior, partially offset by higher global equity markets. Included in the realized gains (losses) are derivative instruments that decrease in fair value when the S&P 500 index increases. During the years ended December 31, 2021 and 2020, we experienced realized losses of $202 million and $108 million, respectively, related to these derivative instruments.

Effective Income Tax Rate
Our effective tax rate (ETR) was 13.0 percent, 15.1 percent, and 14.9 percent in 2021, 2020, and 2019, respectively. Our ETR reflects a mix of income or losses in jurisdictions with a wide range of tax rates, permanent differences between U.S. GAAP and local tax laws, and the impact of discrete items. A change in the geographic mix of earnings could impact our ETR. The ETR in 2021 was impacted by a higher percentage of income generated in lower tax jurisdictions and discrete tax benefits.

Non-GAAP Reconciliation
In presenting our results, we included and discussed certain non-GAAP measures. These non-GAAP measures, which may be defined differently by other companies, are important for an understanding of our overall results of operations and financial condition. However, they should not be viewed as a substitute for measures determined in accordance with generally accepted accounting principles (GAAP).

Book value per common share is shareholders' equity divided by the shares outstanding. Tangible book value per common share is shareholders' equity less goodwill and other intangible assets, net of tax, divided by the shares outstanding. We believe that book value comparisons to less acquisitive peer companies are more meaningful when adjusted for goodwill and other intangible assets. The calculation of tangible book value per share does not consider the embedded goodwill attributable to our investments in partially-owned insurance companies until we consolidate.

We provide financial measures, including net premiums written, net premiums earned, and underwriting income on a constant-dollar basis. We believe it is useful to evaluate the trends in our results exclusive of the effect of fluctuations in exchange rates between the U.S. dollar and the currencies in which our international business is transacted, as these exchange rates could fluctuate significantly between periods and distort the analysis of trends. The impact is determined by assuming constant foreign exchange rates between periods by translating prior period results using the same local currency exchange rates as the comparable current period.

P&C performance metrics comprise consolidated operating results (including Corporate) and exclude the operating results of the Life Insurance segment. We believe that these measures are useful and meaningful to investors as they are used by management to assess the company's P&C operations which are the most economically similar. We exclude the Life Insurance segment because the results of this business do not always correlate with the results of our P&C operations.

P&C combined ratio is the sum of the loss and loss expense ratio, policy acquisition cost ratio, and the administrative expense ratio excluding the life business and including the realized gains and losses on the crop derivatives. These derivatives were purchased to provide economic benefit, in a manner similar to reinsurance protection, in the event that a significant decline in commodity pricing impacts underwriting results. We view gains and losses on these derivatives as part of the results of our underwriting operations.

CAY P&C combined ratio excluding catastrophe losses (CATs) excludes CATs and prior period development (PPD) from the P&C combined ratio. We exclude CATs as they are not predictable as to timing and amount and PPD as these unexpected loss developments on historical reserves are not indicative of our current underwriting performance. The combined ratio numerator is adjusted to exclude CATs, net premiums earned adjustments on PPD, prior period expense adjustments, and reinstatement premiums on PPD, and the denominator is adjusted to exclude net premiums earned adjustments on PPD and reinstatement premiums on CATs and PPD. In periods where there are adjustments on loss sensitive policies, these adjustments are excluded from PPD and net premiums earned when calculating the ratios. We believe this measure provides a better evaluation of our underwriting performance and enhances the understanding of the trends in our P&C business that may be obscured by these items. This measure is commonly reported among our peer companies and allows for a better comparison.

Reinstatement premiums are additional premiums paid on certain reinsurance agreements in order to reinstate coverage that had been exhausted by loss occurrences. The reinstatement premium amount is typically a pro rata portion of the original ceded premium paid based on how much of the reinsurance limit had been exhausted.

Net premiums earned adjustments within PPD are adjustments to the initial premium earned on retrospectively rated policies based on actual claim experience that develops after the policy period ends. The premium adjustments correlate to the prior period loss development on these same policies and are fully earned in the period the adjustments are recorded.
Prior period expense adjustments typically relate to adjustable commission reserves or policyholder dividend reserves based on actual claim experience that develops after the policy period ends. The expense adjustments correlate to the prior period loss development on these same policies.

The following tables present the calculation of combined ratio, as reported for each segment to P&C combined ratio, adjusted for catastrophe losses (CATs) and PPD:

For the Year Ended December 31, 2021 (in millions of U.S. dollars except for ratios)		North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Corporate	Total P&C
Numerator								
Losses and loss expenses	A	$ 10,015	$ 2,924	$ 1,962	$ 5,143	$ 632	$ 572	$ 21,248
Catastrophe losses and related adjustments								
Catastrophe losses, net of related adjustments		(1,112)	(679)	(40)	(358)	(212)	—	(2,401)
Reinstatement premiums collected (expensed) on catastrophe losses		—	(16)	(2)	—	28	—	10
Catastrophe losses, gross of related adjustments		(1,112)	(663)	(38)	(358)	(240)	—	(2,411)
PPD and related adjustments								
PPD, net of related adjustments - favorable (unfavorable)		762	305	(10)	441	(3)	(569)	926
Net premiums earned adjustments on PPD - unfavorable (favorable)		67	—	(25)	—	—	—	42
Expense adjustments - unfavorable (favorable)		6	—	(3)	—	—	—	3
PPD reinstatement premiums - unfavorable (favorable)		6	(1)	—	7	3	—	15
PPD, gross of related adjustments - favorable (unfavorable)		841	304	(38)	448	—	(569)	986
CAY loss and loss expense ex CATs	B	$ 9,744	$ 2,565	$ 1,886	$ 5,233	$ 392	$ 3	$ 19,823
Policy acquisition costs and administrative expenses								
Policy acquisition costs and administrative expenses	C	$ 3,134	$ 1,277	$ 121	$ 3,877	$ 235	$ 365	$ 9,009
Expense adjustments - favorable (unfavorable)		(6)	—	3	—	—	—	(3)
Policy acquisition costs and administrative expenses, adjusted	D	$ 3,128	$ 1,277	$ 124	$ 3,877	$ 235	$ 365	$ 9,006
Denominator								
Net premiums earned	E	$ 15,461	$ 4,915	$ 2,338	$10,441	$ 798		$ 33,953
Reinstatement premiums (collected) expensed on catastrophe losses		—	16	2	—	(28)		(10)
Net premiums earned adjustments on PPD - unfavorable (favorable)		67	—	(25)	—	—		42
PPD reinstatement premiums - unfavorable (favorable)		6	(1)	—	7	3		15
Net premiums earned excluding adjustments	F	$ 15,534	$ 4,930	$ 2,315	$10,448	$ 773		$ 34,000
P&C Combined ratio								
Loss and loss expense ratio	A/E	64.8 %	59.5 %	83.9 %	49.3 %	79.2 %		62.6 %
Policy acquisition cost and administrative expense ratio	C/E	20.2 %	26.0 %	5.2 %	37.1 %	29.5 %		26.5 %
P&C Combined ratio		85.0 %	85.5 %	89.1 %	86.4 %	108.7 %		89.1 %
CAY P&C Combined ratio ex CATs								
Loss and loss expense ratio, adjusted	B/F	62.7 %	52.0 %	81.5 %	50.1 %	50.7 %		58.3 %
Policy acquisition cost and administrative expense ratio, adjusted	D/F	20.2 %	25.9 %	5.3 %	37.1 %	30.5 %		26.5 %
CAY P&C Combined ratio ex CATs		82.9 %	77.9 %	86.8 %	87.2 %	81.2 %		84.8 %
Combined ratio								
Combined ratio								89.1 %
Add: impact of gains and losses on crop derivatives								—
P&C Combined ratio								89.1 %

Note: The ratios above are calculated using whole U.S. dollars. Accordingly, calculations using rounded amounts may differ. Letters A, B, C, D, E and F included in the table are references for calculating the ratios above.

For the Year Ended December 31, 2020 (in millions of U.S. dollars except for ratios)		North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Corporate	Total P&C
Numerator								
Losses and loss expenses	**A**	$ 10,129	$ 3,187	$ 1,544	$ 5,255	$ 435	$ 435	$ 20,985
Catastrophe losses and related adjustments								
Catastrophe losses, net of related adjustments		(1,871)	(534)	(36)	(705)	(113)	—	(3,259)
Reinstatement premiums collected (expensed) on catastrophe losses		(3)	(1)	(1)	(15)	10	—	(10)
Catastrophe losses, gross of related adjustments		(1,868)	(533)	(35)	(690)	(123)	—	(3,249)
PPD and related adjustments								
PPD, net of related adjustments - favorable (unfavorable)		702	(63)	10	150	29	(433)	395
Net premiums earned adjustments on PPD - unfavorable (favorable)		32	—	3	—	—	—	35
Expense adjustments - unfavorable (favorable)		(1)	—	6	—	(2)	—	3
PPD reinstatement premiums - unfavorable (favorable)		—	(18)	—	—	(1)	—	(19)
PPD, gross of related adjustments - favorable (unfavorable)		733	(81)	19	150	26	(433)	414
CAY loss and loss expense ex CATs	**B**	$ 8,994	$ 2,573	$ 1,528	$ 4,715	$ 338	$ 2	$ 18,150
Policy acquisition costs and administrative expenses								
Policy acquisition costs and administrative expenses	**C**	$ 2,948	$ 1,244	$ 132	$ 3,602	$ 211	$ 303	$ 8,440
Expense adjustments - favorable (unfavorable)		1	—	(6)	—	2	—	(3)
Policy acquisition costs and administrative expenses, adjusted	**D**	$ 2,949	$ 1,244	$ 126	$ 3,602	$ 213	$ 303	$ 8,437
Denominator								
Net premiums earned	**E**	$ 13,964	$ 4,866	$ 1,822	$ 9,285	$ 698		$ 30,635
Reinstatement premiums (collected) expensed on catastrophe losses		3	1	1	15	(10)		10
Net premiums earned adjustments on PPD - unfavorable (favorable)		32	—	3	—	—		35
PPD reinstatement premiums - unfavorable (favorable)		—	(18)	—	—	(1)		(19)
Net premiums earned excluding adjustments	**F**	$ 13,999	$ 4,849	$ 1,826	$ 9,300	$ 687		$ 30,661
P&C Combined ratio								
Loss and loss expense ratio	**A/E**	72.5 %	65.5 %	84.7 %	56.6 %	62.3 %		68.5 %
Policy acquisition cost and administrative expense ratio	**C/E**	21.2 %	25.6 %	7.3 %	38.8 %	30.2 %		27.6 %
P&C Combined ratio		93.7 %	91.1 %	92.0 %	95.4 %	92.5 %		96.1 %
CAY P&C Combined ratio ex CATs								
Loss and loss expense ratio, adjusted	**B/F**	64.2 %	53.1 %	83.7 %	50.7 %	49.1 %		59.2 %
Policy acquisition cost and administrative expense ratio, adjusted	**D/F**	21.1 %	25.6 %	6.8 %	38.7 %	31.0 %		27.5 %
CAY P&C Combined ratio ex CATs		85.3 %	78.7 %	90.5 %	89.4 %	80.1 %		86.7 %
Combined ratio								
Combined ratio								96.1 %
Add: impact of gains and losses on crop derivatives								—
P&C Combined ratio								96.1 %

Note: The ratios above are calculated using whole U.S. dollars. Accordingly, calculations using rounded amounts may differ. Letters A, B, C, D, E and F included in the table are references for calculating the ratios above.

For the Year Ended December 31, 2019 (in millions of U.S. dollars except for ratios)		North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Corporate	Total P&C
Numerator								
Losses and loss expenses	**A**	$ 8,206	$ 3,043	$ 1,616	$ 4,606	$ 352	$ 158	$ 17,981
Catastrophe losses and related adjustments								
Catastrophe losses, net of related adjustments		(421)	(554)	(8)	(156)	(48)	—	(1,187)
Reinstatement premiums collected (expensed) on catastrophe losses		—	(11)	—	(4)	3	—	(12)
Catastrophe losses, gross of related adjustments		(421)	(543)	(8)	(152)	(51)	—	(1,175)
PPD and related adjustments								
PPD, net of related adjustments - favorable (unfavorable)		649	95	80	92	29	(153)	792
Net premiums earned adjustments on PPD - unfavorable (favorable)		38	—	36	—	1	—	75
Expense adjustments - unfavorable (favorable)		(3)	—	(13)	—	(1)	—	(17)
PPD reinstatement premiums - unfavorable (favorable)		(1)	(4)	—	1	(1)	—	(5)
PPD, gross of related adjustments - favorable (unfavorable)		683	91	103	93	28	(153)	845
CAY loss and loss expense ex CATs	**B**	$ 8,468	$ 2,591	$ 1,711	$ 4,547	$ 329	$ 5	$ 17,651
Policy acquisition costs and administrative expenses								
Policy acquisition costs and administrative expenses	**C**	$ 2,859	$ 1,234	$ 90	$ 3,534	$ 204	$ 319	$ 8,240
Expense adjustments - favorable (unfavorable)		3	—	13	—	1	—	17
Policy acquisition costs and administrative expenses, adjusted	**D**	$ 2,862	$ 1,234	$ 103	$ 3,534	$ 205	$ 319	$ 8,257
Denominator								
Net premiums earned	**E**	$ 12,922	$ 4,694	$ 1,795	$ 8,882	$ 654		$ 28,947
Reinstatement premiums (collected) expensed on catastrophe losses		—	11	—	4	(3)		12
Net premiums earned adjustments on PPD - unfavorable (favorable)		38	—	36	—	1		75
PPD reinstatement premiums - unfavorable (favorable)		(1)	(4)	—	1	(1)		(5)
Net premiums earned excluding adjustments	**F**	$ 12,959	$ 4,701	$ 1,831	$ 8,887	$ 651		$ 29,029
P&C Combined ratio								
Loss and loss expense ratio	**A/E**	63.5 %	64.8 %	90.1 %	51.9 %	53.9 %		62.1 %
Policy acquisition cost and administrative expense ratio	**C/E**	22.1 %	26.3 %	5.0 %	39.7 %	31.1 %		28.5 %
P&C Combined ratio		85.6 %	91.1 %	95.1 %	91.6 %	85.0 %		90.6 %
CAY P&C Combined ratio ex CATs								
Loss and loss expense ratio, adjusted	**B/F**	65.3 %	55.1 %	93.5 %	51.2 %	50.6 %		60.8 %
Policy acquisition cost and administrative expense ratio, adjusted	**D/F**	22.1 %	26.3 %	5.6 %	39.7 %	31.5 %		28.4 %
CAY P&C Combined ratio ex CATs		87.4 %	81.4 %	99.1 %	90.9 %	82.1 %		89.2 %
Combined ratio								
Combined ratio								90.6 %
Add: impact of gains and losses on crop derivatives								—
P&C Combined ratio								90.6 %

Note: The ratios above are calculated using whole U.S. dollars. Accordingly, calculations using rounded amounts may differ. Letters A, B, C, D, E and F included in the table are references for calculating the ratios above.

Net Investment Income

(in millions of U.S. dollars, except for percentages)	**2021**	2020	2019
Average invested assets	**$ 116,475**	$ 109,766	$ 104,074
Net investment income [(1)]	**$ 3,456**	$ 3,375	$ 3,426
Yield on average invested assets	**3.0 %**	3.1 %	3.3 %
Market yield on fixed maturities	**2.3 %**	1.7 %	2.7 %

(1) Includes $84 million, $116 million, and $161 million of amortization expense related to the fair value adjustment of acquired invested assets related to the Chubb Corp acquisition in 2021, 2020, and 2019, respectively.

Net investment income is influenced by a number of factors including the amounts and timing of inward and outward cash flows, the level of interest rates, and changes in overall asset allocation. Net investment income increased 2.4 percent in 2021 compared with 2020, primarily due to increased dividends on public equities which resulted from a higher allocation to public equities and higher income received from our private equity partnerships. Investment income for the year was tempered by lower reinvestment rates on new and reinvested assets. Refer to Note 1 e) to the Consolidated Financial Statements for additional information.

For private equities where we own less than three percent, investment income is included within Net investment income in the table above. For private equities where we own more than three percent, investment income is included within Other income (expense) in the Consolidated statements of operations. Excluded from Net investment income is the mark-to-market movement for private equities, which is recorded within either Other income (expense) or Net realized gains (losses) based on our percentage of ownership. The total mark-to-market movement for private equities excluded from Net investment income was as follows:

(in millions of U.S. dollars)	**2021**	2020	2019
Total mark-to-market gain on private equity, pre-tax	**$ 2,115**	$ 714	$ 449

Interest Expense

Interest expense was $492 million, $516 million, and $552 million for the years ended December 31, 2021, 2020, and 2019, respectively, including a benefit of $21 million each year related to the amortization of the fair value of debt assumed in the Chubb Corp acquisition. Pre-tax interest expense for our existing debt obligations and fees based on expected usage of certain facilities, including letters of credit, collateral fees, and repurchase agreements, is expected to total $543 million for 2022 based on current foreign exchange rates. In addition, we expect a benefit of $21 million related to the fair value of debt amortization for 2022. The expected increase in pre-tax interest expense is primarily driven by the 2021 issuance of $600 million of 2.85 percent senior notes due December 2051 and $1,000 million of 3.05 percent senior notes due December 2061. Refer to Note 9 to the Consolidated Financial Statements, under Item 8, for more information.

Amortization of Purchased Intangibles and Other Amortization

Amortization expense related to purchased intangibles was $287 million, $290 million, and $305 million for the years ended December 31, 2021, 2020, and 2019, respectively, and principally relates to the Chubb Corp acquisition. The amortization of purchased intangibles expense in 2022 is expected to be $281 million, or approximately $70 million each quarter. Refer to Note 6 to the Consolidated Financial Statements, under Item 8, for more information.

Reduction of deferred tax liability associated with Other intangible assets

At December 31, 2021, the deferred tax liability associated with the Other intangible assets (excluding the fair value adjustment on Unpaid losses and loss expenses) was $1,212 million.

The following table presents at December 31, 2021, the expected reduction to the deferred tax liability associated with the amortization of Other intangible assets, at current foreign currency exchange rates for the next five years:

For the Years Ending December 31 (in millions of U.S. dollars)	Reduction to deferred tax liability associated with intangible assets
2022	$ 66
2023	60
2024	55
2025	51
2026	48
Total	$ 280

Amortization of the fair value adjustment on acquired invested assets and assumed long-term debt

The following table presents at December 31, 2021, the expected amortization expense of the fair value adjustment on acquired invested assets related to the Chubb Corp acquisition, at current foreign currency exchange rates, and the expected amortization benefit from the fair value adjustment on assumed long-term debt for the next five years:

	Amortization (expense) benefit of the fair value adjustment on	
For the Years Ending December 31 (in millions of U.S. dollars)	Acquired invested assets (1)	Assumed long-term debt (2)
2022	$ (68)	$ 21
2023	(50)	21
2024	(9)	21
2025	—	21
2026	—	21
Total	$ (127)	$ 105

(1) Recorded as a reduction to Net investment income in the Consolidated statements of operations.

(2) Recorded as a reduction to Interest expense in the Consolidated statements of operations.

The estimate of amortization expense of the fair value adjustment on acquired invested assets could vary based on current market conditions, bond calls, overall duration of the acquired investment portfolio, and foreign exchange.

Investments

Our investment portfolio is invested primarily in publicly traded, investment grade, fixed income securities with an average credit quality of A/A as rated by the independent investment rating services Standard and Poor's (S&P)/ Moody's Investors Service (Moody's). The portfolio is externally managed by independent, professional investment managers and is broadly diversified across geographies, sectors, and issuers. Other investments principally comprise direct investments, investment funds, and limited partnerships. We hold no collateralized debt obligations in our investment portfolio, and we provide no credit default protection. We have long-standing global credit limits for our entire portfolio across the organization. Exposures are aggregated, monitored, and actively managed by our Global Credit Committee, comprising senior executives, including our Chief Financial Officer, our Chief Risk Officer, our Chief Investment Officer, and our Treasurer. We also have well-established, strict contractual investment rules requiring managers to maintain highly diversified exposures to individual issuers and closely monitor investment manager compliance with portfolio guidelines.

The average duration of our fixed income securities, including the effect of options and swaps, was 4.1 years and 4.0 years at December 31, 2021 and 2020, respectively. We estimate that a 100 basis point (bps) increase in interest rates would reduce the valuation of our fixed income portfolio by approximately $4.4 billion at December 31, 2021. The following table shows the fair value and cost/amortized cost, net of valuation allowance, of our invested assets:

	December 31, 2021		December 31, 2020	
(in millions of U.S. dollars)	**Fair Value**	**Cost/ Amortized Cost, Net**	Fair Value	Cost/ Amortized Cost
Fixed maturities available for sale	**$ 93,108**	**$ 90,479**	$ 90,699	$ 85,168
Fixed maturities held to maturity	**10,647**	**10,118**	12,510	11,653
Short-term investments	**3,146**	**3,147**	4,345	4,349
Fixed income securities	**106,901**	**103,744**	107,554	101,170
Equity securities	**4,782**	**4,782**	4,027	4,027
Other investments	**11,169**	**11,169**	7,945	7,945
Total investments	**$ 122,852**	**$ 119,695**	$ 119,526	$ 113,142

The fair value of our total investments increased $3.3 billion during the year ended December 31, 2021, due to strong operating cash flows, positive equity returns and net proceeds from debt issuance. The increase was partially offset by share repurchases, unrealized losses on fixed maturities and payment of dividends on our Common Shares.

The following tables present the fair value of our fixed income securities at December 31, 2021 and 2020. The first table lists investments according to type and second according to S&P credit rating:

	December 31, 2021		December 31, 2020	
(in millions of U.S. dollars, except for percentages)	**Fair Value**	**% of Total**	Fair Value	% of Total
U.S. Treasury / Agency	**$ 3,458**	**3 %**	$ 4,122	4 %
Corporate and asset-backed securities	**41,264**	**39 %**	38,769	36 %
Mortgage-backed securities	**22,292**	**21 %**	20,616	19 %
Municipal	**9,650**	**9 %**	11,943	11 %
Non-U.S.	**27,091**	**25 %**	27,759	26 %
Short-term investments	**3,146**	**3 %**	4,345	4 %
Total	**$ 106,901**	**100 %**	$ 107,554	100 %
AAA	**$ 15,364**	**14 %**	$ 15,622	15 %
AA	**35,179**	**33 %**	36,125	33 %
A	**20,171**	**19 %**	19,712	18 %
BBB	**17,362**	**16 %**	17,542	16 %
BB	**9,084**	**8 %**	9,699	9 %
B	**9,202**	**9 %**	8,267	8 %
Other	**539**	**1 %**	587	1 %
Total	**$ 106,901**	**100 %**	$ 107,554	100 %

Corporate and asset-backed securities

The following table presents our 10 largest global exposures to corporate bonds by fair value at December 31, 2021:

(in millions of U.S. dollars)	Fair Value
Wells Fargo & Co	$ 713
Bank of America Corp	680
JP Morgan Chase & Co	608
Comcast Corp	489
Verizon Communications Inc	487
AT&T Inc	472
Morgan Stanley	471
Citigroup Inc	418
HSBC Holdings Plc	378
Goldman Sachs Group Inc	360

Mortgage-backed securities

The following table shows the fair value and amortized cost, net of valuation allowance, of our mortgage-backed securities:

	S&P Credit Rating					Fair Value	Amortized Cost, Net
December 31, 2021 (in millions of U.S. dollars)	AAA	AA	A	BBB	BB and below	Total	Total
Agency residential mortgage-backed (RMBS)	$ 92	$ 18,234	$ —	$ —	$ —	$ 18,326	$ 17,920
Non-agency RMBS	309	42	74	43	6	474	478
Commercial mortgage-backed securities	3,030	276	170	12	4	3,492	3,412
Total mortgage-backed securities	$ 3,431	$ 18,552	$ 244	$ 55	$ 10	$ 22,292	$ 21,810

Municipal
As part of our overall investment strategy, we may invest in states, municipalities, and other political subdivisions fixed maturity securities (Municipal). We apply the same investment selection process described previously to our Municipal investments. The portfolio is highly diversified primarily in state general obligation bonds and essential service revenue bonds including education and utilities (water, power, and sewers).

Non-U.S.
Our exposure to the Euro results primarily from Chubb European Group SE which is headquartered in France and offers a broad range of coverages throughout the European Union, Central, and Eastern Europe. Chubb primarily invests in Euro denominated investments to support its local currency insurance obligations and required capital levels. Chubb's local currency investment portfolios have strict contractual investment guidelines requiring managers to maintain a high quality and diversified portfolio to both sector and individual issuers. Investment portfolios are monitored daily to ensure investment manager compliance with portfolio guidelines.

Our non-U.S. investment grade fixed income portfolios are currency-matched with the insurance liabilities of our non-U.S. operations. The average credit quality of our non-U.S. fixed income securities is A and 46 percent of our holdings are rated AAA or guaranteed by governments or quasi-government agencies. Within the context of these investment portfolios, our government and corporate bond holdings are highly diversified across industries and geographies. Issuer limits are based on credit rating (AA—two percent, A—one percent, BBB—0.5 percent of the total portfolio) and are monitored daily via an internal compliance system. We manage our indirect exposure using the same credit rating based investment approach. Accordingly, we do not believe our indirect exposure is material.

The following table summarizes the fair value and amortized cost, net of valuation allowance, of our non-U.S. fixed income portfolio by country/sovereign for non-U.S. government securities at December 31, 2021:

(in millions of U.S. dollars)	Fair Value	Amortized Cost, Net
Canada	$ 1,021	$ 1,013
Republic of Korea	945	891
United Kingdom	664	655
Province of Ontario	661	648
United Mexican States	551	561
Kingdom of Thailand	548	510
Federative Republic of Brazil	527	539
Commonwealth of Australia	446	429
Socialist Republic of Vietnam	441	305
Province of Quebec	424	412
Other Non-U.S. Government Securities	5,484	5,361
Total	$ 11,712	$ 11,324

The following table summarizes the fair value and amortized cost, net of valuation allowance, of our non-U.S. fixed income portfolio by country/sovereign for non-U.S. corporate securities at December 31, 2021:

(in millions of U.S. dollars)	Fair Value	Amortized Cost, Net
United Kingdom	$ 2,501	$ 2,434
Canada	1,824	1,775
France	1,281	1,245
United States (1)	1,230	1,207
Australia	939	917
Japan	769	761
Germany	597	582
Switzerland	563	543
Netherlands	535	513
China	452	446
Other Non-U.S. Corporate Securities	4,688	4,597
Total	$ 15,379	$ 15,020

(1) The countries that are listed in the non-U.S. corporate fixed income portfolio above represent the ultimate parent company's country of risk. Non-U.S. corporate securities could be issued by foreign subsidiaries of U.S. corporations.

Below-investment grade corporate fixed income portfolio

Below-investment grade securities have different characteristics than investment grade corporate debt securities. Risk of loss from default by the borrower is greater with below-investment grade securities. Below-investment grade securities are generally unsecured and are often subordinated to other creditors of the issuer. Also, issuers of below-investment grade securities usually have higher levels of debt and are more sensitive to adverse economic conditions, such as recession or increasing interest rates, than investment grade issuers. At December 31, 2021, our corporate fixed income investment portfolio included below-investment grade and non-rated securities which, in total, comprised approximately 15 percent of our fixed income portfolio. Our below-investment grade and non-rated portfolio includes over 1,600 issuers, with the greatest single exposure being $140 million.

We manage high-yield bonds as a distinct and separate asset class from investment grade bonds. The allocation to high-yield bonds is explicitly set by internal management and is targeted to securities in the upper tier of credit quality (BB/B). Our minimum rating for initial purchase is BB/B. Fourteen external investment managers are responsible for high-yield security selection and portfolio construction. Our high-yield managers have a conservative approach to credit selection and very low historical default experience. Holdings are highly diversified across industries and generally subject to a 1.5 percent issuer limit as a percentage of high-yield allocation. We monitor position limits daily through an internal compliance system. Derivative and structured securities (e.g., credit default swaps and collateralized debt obligations) are not permitted in the high-yield portfolio.

Asbestos and Environmental (A&E)

Asbestos and environmental (A&E) reserving considerations

For asbestos, Chubb faces claims relating to policies issued to manufacturers, distributors, installers, and other parties in the chain of commerce for asbestos and products containing asbestos. Claimants will generally allege damages across an extended time period which may coincide with multiple policies covering a wide range of time periods for a single insured.

Environmental claims present exposure for remediation and defense costs associated with the contamination of property or bodily injury as a result of pollution.

The following table presents count information for asbestos claims by causative agent and environmental claims by account, for direct policies only:

	Asbestos (by causative agent)		Environmental (by account)	
	2021	2020	**2021**	2020
Open at beginning of year	**1,723**	1,724	**1,234**	1,217
Newly reported/reopened	**191**	192	**131**	130
Closed or otherwise disposed	**175**	193	**135**	113
Open at end of year	**1,739**	1,723	**1,230**	1,234

Survival ratios are calculated by dividing the asbestos or environmental loss and allocated loss adjustment expense (ALAE) reserves by the average asbestos or environmental loss and ALAE payments for the three most recent calendar years (3-year survival ratio).

The following table presents the gross and net 3-year survival ratios for Asbestos and Environmental loss and ALAE reserves:

(in years)	Gross loss and ALAE reserves	Net loss and ALAE reserves
Asbestos	**5.7**	**6.2**
Environmental	**3.0**	**3.3**

The survival ratios provide only a very rough depiction of reserves and are significantly impacted by a number of factors such as aggressive settlement practices, variations in gross to ceded relationships within the asbestos or environmental claims, and levels of coverage provided. Therefore, we urge caution in using these very simplistic ratios to gauge reserve adequacy.

Catastrophe Management

We actively monitor and manage our catastrophe risk accumulation around the world from natural perils, including setting risk limits based on probable maximum loss (PML), and purchasing catastrophe reinsurance, to ensure sufficient liquidity and capital to meet the expectations of regulators, rating agencies and policyholders, and to provide shareholders with an appropriate risk-adjusted return. Chubb uses internal and external data together with sophisticated analytical, catastrophe loss and risk modeling techniques to ensure an appropriate understanding of risk, including diversification and correlation effects, across different product lines and territories. The table below presents our modeled pre-tax estimates of natural catastrophe PML, net of reinsurance, at December 31, 2021, and is not our expected catastrophe losses for any one year.

	Modeled Net Probable Maximum Loss (PML) Pre-tax					
	Worldwide [1] Annual Aggregate		U.S. Hurricane [2] Annual Aggregate		California Earthquake [3] Single Occurrence	
(in millions of U.S. dollars, except for percentages)	**Chubb**	**% of Total Shareholders' Equity**	**Chubb**	**% of Total Shareholders' Equity**	**Chubb**	**% of Total Shareholders' Equity**
1-in-10	$ 2,163	3.6 %	$ 1,090	1.8 %	$ 146	0.2 %
1-in-100	$ 4,360	7.3 %	$ 2,734	4.6 %	$ 1,311	2.2 %
1-in-250	$ 7,103	11.9 %	$ 4,971	8.3 %	$ 1,508	2.5 %

(1) Worldwide aggregate is comprised of losses arising from tropical cyclones, convective storms, earthquakes, U.S. wildfires and inland floods, and do not include "non-modeled" perils such as man-made and other catastrophe risk including pandemic.

(2) U.S. hurricane losses include losses from wind and storm-surge and exclude rainfall.

(3) California earthquakes include the fire-following sub-peril.

The PML for worldwide and key U.S. peril regions are based on our in-force portfolio at October 1, 2021, and reflect the April 1, 2021 reinsurance program (see Global Property Catastrophe Reinsurance Program section) as well as inuring reinsurance protection coverages. These estimates assume that reinsurance recoverable is fully collectible.

According to the model, for the 1-in-100 return period scenario, there is a one percent chance that our pre-tax annual aggregate losses incurred in any year from U.S. hurricane events could be in excess of $2,734 million (or 4.6 percent of our total shareholders' equity at December 31, 2021). Effective December 31, 2021, our worldwide PMLs include losses from U.S. wildfire and U.S. inland flood.

The above estimates of Chubb's loss profile are inherently uncertain for many reasons, including the following:

- While the use of third-party modeling packages to simulate potential catastrophe losses is prevalent within the insurance industry, the models are reliant upon significant meteorology, seismology, and engineering assumptions to estimate catastrophe losses. In particular, modeled catastrophe events are not always a representation of actual events and ensuing additional loss potential;
- There is no universal standard in the preparation of insured data for use in the models, the running of the modeling software and interpretation of loss output. These loss estimates do not represent our potential maximum exposures and it is highly likely that our actual incurred losses would vary materially from the modeled estimates;
- The potential effects of climate change add to modeling complexity; and
- Changing climate conditions could impact our exposure to natural catastrophe risks. Published studies by leading government, academic and professional organizations combined with extensive research by Chubb climate scientists reveal the potential for increases in the frequency and severity of key natural perils such as tropical cyclones, inland flood, and wildfire. To understand the potential impacts on the Chubb portfolio, we have conducted stress tests on our peak exposure zone, namely in the U.S., using parameters outlined by the Intergovernmental Panel on Climate Change (IPCC) Climate Change 2021 report. These parameters consider the impacts of climate change and the resulting climate peril impacts over a timescale relevant to our business. The tests are conducted by adjusting our baseline view of risk for the perils of hurricane, inland flood, and wildfire in the U.S. to reflect increases in frequency and severity across the modeled domains for each of these perils. Based on these tests against the Chubb portfolio we do not expect material impacts to our baseline PMLs from climate change over the next 12 months. These tests reflect current exposures only and exclude potentially mitigating factors such as changes to building codes, public or private risk mitigation, regulation and public policy.

Man-made and other catastrophes
We have substantial exposure to losses resulting from man-made catastrophes including terrorism, cyber-attack, financial events, and other catastrophe events, including pandemics. These events are inherently unpredictable and could impact a variety of our businesses, including commercial and personal lines, life insurance, A&H, and reinsurance products. Our losses from these events could be substantial.

Terrorism
We offer terrorism coverage in the U.S. and in many other countries through various insurance products. We actively monitor terrorism risk and manage exposures through set risk limits based on modeled losses from certain terrorism attack scenarios, the purchase of reinsurance, and the reliance on government-sponsored terrorism reinsurance programs. In the U.S., certain protections of our terrorism exposure are provided through the Terrorism Risk Insurance Program Reauthorization Act of 2019 (TRIPRA). In 2021, TRIPRA covers 80 percent of insured losses above a deductible, estimated to be approximately $2.6 billion. Refer to "Global Property Catastrophe Reinsurance Program" for information on our reinsurance protection purchased. At our largest exposure location in the U.S., our maximum modeled losses from a 10-ton truck-bomb explosion are estimated to be $1.7 billion pre-tax based on the exposures, net of reinsurance and TRIPRA as of December 31, 2021.

Cyber Insurance
While frequency and severity trends are being managed through long-standing underwriting strategies, the potential catastrophe risk that aggregation of cyber exposures presents to insurers is unique and unprecedented. In contrast with natural catastrophe risks, catastrophic cyber event scenarios are not bound by time or geography. Further, catastrophic cyber perils do not have well-established definitions or fundamental physical properties. For these reasons, catastrophic cyber events have the inherent potential for significant economic loss. Although cyber risk does not represent a material component of our net premiums written and we engage in significant risk mitigation through our underwriting and use of reinsurance, we are exposed to material losses in the event of a systemic cyber-attack.

Financial Risk
The consequences of adverse global or regional market and economic conditions may affect our investment portfolio. Our investment portfolio is subject to credit or default risk and may also be less liquid in times of economic weakness or market disruptions. Our investments are subject to market risks and risks inherent in individual securities. Our investment performance is highly sensitive to many factors, including interest rates, inflation, monetary and fiscal policies, and domestic and international political conditions. The volatility of our losses may force us to liquidate securities, which may cause us to incur capital losses. Realized and unrealized losses in our investment portfolio would reduce our book value, and if significant, can affect our ability to conduct business.

Moreover, we have substantial exposure to insurance products which are sensitive to certain system-wide financial conditions, such as our financial lines, surety, political risk, involuntary loss of employment (outside U.S.), and trade credit products. These products tend to be characterized by infrequent but potentially high severity losses. The majority of our exposure in these products may be impacted by an adverse economic climate such as an economic recession or depression. If the financial condition of these insureds were adversely affected by the economy or otherwise, we may experience an increase in filed claims and may incur high severity losses, which could have an adverse effect on our results of operations. We monitor credit exposures to single counterparties and to sectors of interest from sources across our operations (e.g. investments, insurance products, reinsurance recoverable, bank deposits, letters of credit) and establish guidelines for credit risk exposure at the counterparty level. Our net income may be volatile because certain variable annuity reinsurance products sold expose us to reserve and fair value liability changes that are directly affected by market and other factors and assumptions.

Pandemic
An outbreak of pandemic disease, such as the COVID-19 pandemic could have a materially adverse effect on our results of operations. The vast majority of our property and liability coverages do not provide coverage for pandemic claims. However, we are subject to the potential of aggregation of loss from coverages provided in our life, A&H, and workers compensation portfolios. We assess our direct pandemic exposure using stress scenarios that consider mortality, morbidity and other causes of insured loss such as trip cancellation. Our assessment also incorporates the impact of a severe economic downturn which, as stated above under Financial Risk, includes an adverse impact to our investment portfolio and to our insurance products sensitive to certain system-wide financial conditions.

Global Property Catastrophe Reinsurance Program

Chubb's core property catastrophe reinsurance program provides protection against natural catastrophes impacting its primary property operations (i.e., excluding our Global Reinsurance and Life Insurance segments).

We regularly review our reinsurance protection and corresponding property catastrophe exposures. This may or may not lead to the purchase of additional reinsurance prior to a program's renewal date. In addition, prior to each renewal date, we consider how much, if any, coverage we intend to buy and we may make material changes to the current structure in light of various factors, including modeled PML assessment at various return periods, reinsurance pricing, our risk tolerance and exposures, and various other structuring considerations.

Chubb renewed its Global Property Catastrophe Reinsurance Program for our North American and International operations effective April 1, 2021 through March 31, 2022, with an additional $100 million of limit for international loss occurrences compared to the expiring program. The program consists of three layers in excess of losses retained by Chubb on a per occurrence basis. In addition, Chubb also renewed its terrorism coverage (excluding nuclear, biological, chemical and radiation coverage, with an inclusion of coverage for biological and chemical coverage for personal lines) for the United States from April 1, 2021 through March 31, 2022 with the same limits and retention and percentage placed except that the majority of terrorism coverage is on an aggregate basis above our retentions without a reinstatement.

Loss Location	Layer of Loss	Comments	Notes
United States (excluding Alaska and Hawaii)	$0 million – $1.0 billion	Losses retained by Chubb	(a)
United States (excluding Alaska and Hawaii)	$1.0 billion – $1.15 billion	All natural perils and terrorism	(b)
United States (excluding Alaska and Hawaii)	$1.15 billion – $2.25 billion	All natural perils and terrorism	(c)
United States (excluding Alaska and Hawaii)	$2.25 billion – $3.5 billion	All natural perils and terrorism	(d)
International (including Alaska and Hawaii)	$0 million – $175 million	Losses retained by Chubb	(a)
International (including Alaska and Hawaii)	$175 million – $1.275 billion	All natural perils and terrorism	(c)
Alaska, Hawaii, and Canada	$1.275 billion – $2.525 billion	All natural perils and terrorism	(d)

(a) Ultimate retention will depend upon the nature of the loss and the interplay between the underlying per risk programs and certain other catastrophe programs purchased by individual business units. These other catastrophe programs have the potential to reduce our effective retention below the stated levels.

(b) These coverages are partially placed with Reinsurers.

(c) These coverages are both part of the same Second layer within the Global Property Catastrophe Reinsurance Program and are fully placed with Reinsurers.

(d) These coverages are both part of the same Third layer within the Global Property Catastrophe Reinsurance Program and are fully placed with Reinsurers.

Political Risk and Credit Insurance

Political risk insurance is a specialized coverage that provides clients with protection against unexpected, catastrophic political or macroeconomic events, primarily in emerging markets. We participate in this market through our Bermuda based wholly-owned subsidiary Sovereign Risk Insurance Ltd. (Sovereign), and through a unit of our London-based CGM operation. Chubb is one of the world's leading underwriters of political risk and credit insurance, has a global portfolio spread across more than 150 countries and is also a member of The Berne Union. Our clients include financial institutions, national export credit agencies, leading multilateral agencies, private equity firms and multinational corporations. CGM writes political risk and credit insurance business out of underwriting offices in London, United Kingdom; Hamburg, Germany; Sao Paulo, Brazil; Singapore; Tokyo, Japan; and in the U.S. in the following locations: Chicago, New York, Los Angeles and Washington, D.C.

Our political risk insurance products provide protection to commercial lenders against defaults on cross border loans, cover investors against equity losses, and protect exporters against defaults on contracts. Commercial lenders, our largest client segment, are covered for missed scheduled loan repayments due to acts of confiscation, expropriation or nationalization by the host government, currency inconvertibility or exchange transfer restrictions, or war or other acts of political violence. In addition, in the case of loans to government-owned entities or loans that have a government guarantee, political risk policies cover scheduled payments against risks of non-payment or non-honoring of government guarantees. Private equity investors and corporations cover their equity investments against financial losses, such as expropriatory events, inability to repatriate dividends, and physical damage to their operations caused by covered political risk events. Our export contracts product provides coverage for both exporters and their financing banks against the risk of contract frustration due to government actions, including non-payment by governmental entities.

CGM's credit insurance businesses cover losses due to insolvency, protracted default, and political risk perils including export and license cancellation. Our credit insurance product provides coverage to larger companies that have sophisticated credit risk management systems, with exposure to multiple customers and that have the ability to self-insure losses up to a certain level through excess of loss coverage. It also provides coverage to trade finance banks, exporters, and trading companies, with exposure to trade-related financing instruments. CGM also has limited capacity for Specialist Credit insurance products which provide coverage for project finance and working capital loans for large corporations and banks.

We have implemented structural features in our policies in order to control potential losses within the political risk and credit insurance businesses. These include basic loss sharing features such as co-insurance and deductibles and, in the case of trade credit, the use of non-qualifying losses that drop smaller exposures deemed too difficult to assess. Ultimate loss severity is also limited by using waiting periods to enable the insurer and insured to mitigate losses and to agree on recovery strategies if a claim does materialize. We have the option to pay claims over the original loan repayment schedule, rather than in a lump sum, in order to provide insureds and the insurer additional time to remedy problems and work towards full recoveries. It is important to note that political risk and credit policies are named peril conditional insurance contracts, not financial guarantees, and claims are only paid after conditions and warranties are fulfilled. Political risk and credit insurance policies do not cover currency devaluations, bond defaults, movements in overseas equity markets, transactions deemed illegal, situations where corruption or misrepresentation has occurred, or debt that is not legally enforceable. In addition to assessing and mitigating potential exposure on a policy-by-policy basis, we also have specific risk management measures in place to manage overall exposure and risk. These measures include placing country, credit, and individual transaction limits based on country risk and credit ratings, combined single loss limits on multi-country policies, the use of quota share and excess of loss reinsurance protection as well as quarterly modeling and stress-testing of the portfolio. We have a dedicated Country and Credit Risk management team that is responsible for the portfolio.

Crop Insurance

We are, and have been since the 1980s, one of the leading writers of crop insurance in the U.S. and have conducted that business through a managing general agent subsidiary of Rain and Hail. We provide protection throughout the U.S. on a variety of crops and are therefore geographically diversified, which reduces the risk of exposure to a single event or a heavy accumulation of losses in any one region. Given its concentration of risk exposed to temperature, moisture, drought, hail and the more frequent and severe storms associated with climate change, crop insurance is a business with catastrophe-like features. Our crop insurance business comprises two components - Multiple Peril Crop Insurance (MPCI) and crop-hail insurance.

The MPCI program, offered in conjunction with the U.S. Department of Agriculture’s Risk Management Agency (RMA), is a federal subsidized insurance program that covers revenue shortfalls or production losses due to natural causes such as drought, excessive moisture, hail, wind, freeze, insects, and disease. These revenue products are defined as providing both commodity price and yield coverages. Policies are available for various crops in different areas of the U.S. and generally have deductibles generally ranging from 10 percent to 50 percent of the insured's risk. The USDA's Risk Management Agency (RMA) sets the policy terms and conditions, rates and forms, and is also responsible for setting compliance standards. As a participant in the MPCI program, we report all details of policies to the RMA and are party to a Standard Reinsurance Agreement (SRA). The SRA sets out the relationship between private insurance companies and the Federal Crop Insurance Corporation (FCIC) concerning the terms and conditions regarding the risks each will bear including the pro-rata and state stop-loss provisions, which allows companies to limit the exposure of any one state or group of states on their underwriting results. In addition to the pro-rata and excess of loss reinsurance protections inherent in the SRA, we also purchase third-party proportional and stop-loss reinsurance for our MPCI business to reduce our exposure. We may also enter into crop derivative contracts to further manage our risk exposure.

Each year the RMA issues a final SRA for the subsequent reinsurance year (i.e., the 2022 SRA covers the 2022 reinsurance year from July 1, 2021 through June 30, 2022). There were no significant changes in the terms and conditions from the 2021 SRA and therefore, the new SRA does not impact Chubb's outlook on the crop program relative to 2022.

We recognize net premiums written as soon as estimable on our MPCI business, which is generally when we receive acreage reports from the policyholders on the various crops throughout the U.S. This allows us to best determine the premium associated with the liability that is being planted. The MPCI program has specific timeframes as to when producers must report acreage to us and in certain cases, the reporting occurs after the close of the respective reinsurance year. Once the net premium written has been recorded, the premium is then earned over the growing season for the crops. A majority of the crops that are covered in the program are typically subject to the SRA in effect at the beginning of the year. Given the major crops covered in the program, we typically see a substantial written and earned premium impact in the second and third quarters.

The pricing of MPCI premium is determined using a number of factors including commodity prices and related volatility (i.e., both impact the amount of premium we can charge to the policyholder). For example, in most states, the pricing for the MPCI revenue product for corn (i.e., insurance coverage for lower than expected crop revenue in a given season) includes a factor based on the average commodity price in February. If corn commodity prices are higher in February, compared to the February price in the prior year, and all other factors are the same, the increase in price will increase the corn premium year-over-year. Pricing is also impacted by volatility factors, which measure the likelihood commodity prices will fluctuate over the crop year. For example, if volatility is set at a higher rate compared to the prior year, and all other factors are the same, the premium charged to the policyholder will be higher year-over-year for the same level of coverage.

Losses incurred on the MPCI business are determined using both commodity price and crop yield. With respect to commodity price, there are two important periods on a large portion of the business: The month of February when the initial premium base is set, and the month of October when the final harvest price is set. If the price declines from February to October, with yield remaining at normal levels, the policyholder may be eligible to recover on the policy. However, in most cases there are deductibles on these policies, therefore, the impact of a decline in price would have to exceed the deductible before a policyholder would be eligible to recover.

We evaluate our MPCI business at an aggregate level and the combination of all of our insured crops (both winter and summer) go into our underwriting gain or loss estimate in any given year. Typically, we do not have enough information on the harvest prices or crop yield outputs to quantify the preliminary estimated impact to our underwriting results until the fourth quarter.

Our crop-hail program is a private offering. Premium is earned on the crop-hail program over the coverage period of the policy. Given the very short nature of the growing season, most crop-hail business is typically written in the second and third quarters and the recognition of earned premium is also more heavily concentrated during this timeframe. We use industry data to develop our own rates and forms for the coverage offered. The policy primarily protects farmers against yield reduction caused by hail and/or fire, and related costs such as transit to storage. We offer various deductibles to allow the grower to partially self-insure for a reduced premium cost. We limit our crop-hail exposures through the use of township liability limits and third-party reinsurance on our net retained hail business.

Liquidity

Liquidity is a measure of a company's ability to generate cash flows sufficient to meet short-term and long-term cash requirements. As a holding company, Chubb Limited possesses assets that consist primarily of the stock of its subsidiaries and other investments. In addition to net investment income, Chubb Limited's cash flows depend primarily on dividends and other statutorily permissible payments. Historically, dividends and other statutorily permitted payments have come primarily from Chubb's Bermuda-based operating subsidiaries, which we refer to as our Bermuda subsidiaries. Our consolidated sources of funds consist primarily of net premiums written, fees, net investment income, and proceeds from sales and maturities of investments. Funds are used at our various companies primarily to pay claims, operating expenses, and dividends; to service debt; to purchase investments; and to fund acquisitions.

We anticipate that positive cash flows from operations (underwriting activities and investment income) should be sufficient to cover cash outflows under most loss scenarios for the near term. Should the need arise, we generally have access to capital markets and available credit facilities. Refer to "Credit Facilities" below for additional information. Our access to funds under the existing credit facility is dependent on the ability of the bank that is a party to the facility to meet its funding commitments. Should our existing credit provider experience financial difficulty, we may be required to replace credit sources, possibly in a difficult market. If we cannot obtain adequate capital or sources of credit on favorable terms, on a timely basis, or at all, our business, operating results, and financial condition could be adversely affected. To date, we have not experienced difficulty accessing our credit facility or establishing additional facilities when needed.

To further ensure the sufficiency of funds to settle unforeseen claims, we hold certain invested assets in cash and short-term investments. In addition, for certain insurance, reinsurance, or deposit contracts that tend to have relatively large and reasonably predictable cash outflows, we attempt to establish dedicated portfolios of assets that are duration-matched with the related liabilities. With respect to the duration of our overall investment portfolio, we manage asset durations to both maximize return given current market conditions and provide sufficient liquidity to cover future loss payments. At December 31, 2021, the average duration of our fixed maturities (4.1 years) is less than the average expected duration of our insurance liabilities (4.6 years).

Despite our safeguards, if paid losses accelerate beyond our ability to fund such paid losses from current operating cash flows, we might need to either liquidate a portion of our investment portfolio or arrange for financing. Potential events causing such a liquidity strain could include several significant catastrophes occurring in a relatively short period of time, large uncollectible reinsurance recoverables on paid losses (as a result of coverage disputes, reinsurers' credit problems, or decreases in the value of collateral supporting reinsurance recoverables) or increases in collateral postings under our variable annuity reinsurance business. Because each subsidiary focuses on a more limited number of specific product lines than is collectively available from the Chubb Group of Companies, the mix of business tends to be less diverse at the subsidiary level. As a result, the probability of a liquidity strain, as described above, may be greater for individual subsidiaries than when liquidity is assessed on a consolidated basis. If such a liquidity strain were to occur in a subsidiary, we could be required to liquidate a portion of our investments, potentially at distressed prices, as well as be required to contribute capital to the particular subsidiary and/or curtail dividends from the subsidiary to support holding company operations.

The payment of dividends or other statutorily permissible distributions from our operating companies are subject to the laws and regulations applicable to each jurisdiction, as well as the need to maintain capital levels adequate to support the insurance and reinsurance operations, including financial strength ratings issued by independent rating agencies. During 2021, we were able to meet all our obligations, including the payments of dividends on our Common Shares, with our net cash flows.

We assess which subsidiaries to draw dividends from based on a number of factors. Considerations such as regulatory and legal restrictions as well as the subsidiary's financial condition are paramount to the dividend decision. Chubb Limited received dividends of $3.7 billion and $1.9 billion from its Bermuda subsidiaries in 2021 and 2020, respectively. Chubb Limited also received cash dividends of $21 million and $110 million and non-cash dividends of $916 million and $734 million from a Swiss subsidiary in 2021 and 2020, respectively.

The U.S. insurance subsidiaries of Chubb INA Holdings Inc. (Chubb INA) may pay dividends, without prior regulatory approval, subject to restrictions set out in state law of the subsidiary's domicile (or, if applicable, commercial domicile). Chubb INA's international subsidiaries are also subject to insurance laws and regulations particular to the countries in which the subsidiaries operate. These laws and regulations sometimes include restrictions that limit the amount of dividends payable without prior approval of regulatory insurance authorities. Chubb Limited received no dividends from Chubb INA in 2021 and 2020. Debt issued by Chubb INA is serviced by statutorily permissible distributions by Chubb INA's insurance subsidiaries to Chubb INA as well as other group resources. Chubb INA received dividends of $2.3 billion and $1.2 billion from its subsidiaries in 2021 and 2020, respectively. At December 31, 2021, the amount of dividends available to be paid to Chubb INA in 2022 from its subsidiaries without prior approval of insurance regulatory authorities totals $2.9 billion.

Cash Flows

Our insurance and reinsurance operations provide liquidity in that premiums are received in advance, sometimes substantially in advance, of the time claims are paid. Generally, cash flows are affected by claim payments that, due to the nature of our operations, may comprise large loss payments on a limited number of claims and which can fluctuate significantly from period to period. The irregular timing of these loss payments can create significant variations in cash flows from operations between periods. For additional information regarding estimates of future claim payments over the next twelve months, refer to our discussion of Cash Requirements within "Capital Resources". Sources of liquidity include cash from operations, routine sales of investments, and financing arrangements. The following is a discussion of our cash flows for 2021, 2020, and 2019.

Operating cash flows reflect Net income for each period, adjusted for non-cash items and changes in working capital.

Operating cash flows were a record $11.1 billion in 2021, compared to $9.8 billion and $6.3 billion in 2020 and 2019, respectively. Operating cash flow increased $1.3 billion in 2021 compared to 2020, due to higher premiums collected reflecting premium growth, principally in our commercial lines, partially offset by higher catastrophe loss payments and higher taxes paid.

Cash used for investing was $6.7 billion in 2021, compared to $7.5 billion and $5.9 billion in 2020 and 2019, respectively. Cash used for investing in the current year included lower net purchases of equity securities of $2.4 billion, partially offset by higher net purchases of fixed maturities of $2.0 billion. In addition, cash used related to acquisitions of Huatai Group ownership interest was $1.2 billion in 2021 compared to $1.6 billion in 2020. Refer to Note 2 to the Consolidated Financial Statements for additional information.

Cash used for financing was $4.4 billion in 2021, compared to $2.1 billion and $151 million in 2020 and 2019, respectively. Cash used for financing was higher by $2.3 billion in 2021 compared to 2020 principally from more shares repurchased in the current year of $4.3 billion, partially offset by higher net proceeds from the issuance of long-term debt (net of repayments) of $1.9 billion. Refer to Note 11 to the Consolidated Financial Statements for additional information on share repurchases.

Both internal and external forces influence our financial condition, results of operations, and cash flows. Claim settlements, premium levels, and investment returns may be impacted by changing rates of inflation and other economic conditions. In many cases, significant periods of time, ranging up to several years or more, may lapse between the occurrence of an insured loss, the reporting of the loss to us, and the settlement of the liability for that loss.

We use repurchase agreements as a low-cost funding alternative. At December 31, 2021, there were $1.4 billion in repurchase agreements outstanding with various maturities over the next eight months.

In addition to cash from operations, routine sales of investments, and financing arrangements, we have agreements with a third-party bank provider which implemented two international multi-currency notional cash pooling programs to enhance cash management efficiency during periods of short-term timing mismatches between expected inflows and outflows of cash by currency. The programs allow us to optimize investment income by avoiding portfolio disruption. In each program, participating Chubb entities establish deposit accounts in different currencies with the bank provider. Each day the credit or debit balances in every account are notionally translated into a single currency (U.S. dollars) and then notionally pooled. The bank extends overdraft credit to all participating Chubb entities as needed, provided that the overall notionally pooled balance of all accounts in each pool at the end of each day is at least zero. Actual cash balances are not physically converted and are not commingled between legal entities. Chubb entities may incur overdraft balances as a means to address short-term liquidity needs. Any overdraft balances incurred under this program by a Chubb entity would be guaranteed by Chubb Limited (up to $300 million in the aggregate). Our syndicated letter of credit facility allows for same day drawings to fund a net pool overdraft should participating Chubb entities withdraw contributed funds from the pool.

Capital Resources

Capital resources consist of funds deployed or available to be deployed to support our business operations.

(in millions of U.S. dollars, except for percentages)	**December 31 2021**	December 31 2020
Short-term debt	**$ 999**	$ —
Long-term debt	**15,169**	14,948
Trust preferred securities	**308**	308
Total shareholders' equity	**59,714**	59,441
Total capitalization	**$ 76,190**	$ 74,697
Ratio of financial debt to total capitalization	**21.2 %**	20.0 %
Ratio of financial debt plus trust preferred securities to total capitalization	**21.6 %**	20.4 %

Repurchase agreements are excluded from the table above and are disclosed separately from short-term debt in the Consolidated balance sheets. The repurchase agreements are collateralized borrowings where we maintain the right and ability to redeem the collateral on short notice, unlike short-term debt which comprises the current maturities of our long-term debt instruments.

On November 15, 2021, Chubb INA issued $600 million of 2.85 percent senior notes due December 2051 and $1.0 billion of 3.05 percent senior notes due December 2061. Refer to Note 9 to the Consolidated Financial Statements for details about debt issued and debt redeemed.

We believe our financial strength provides us with the flexibility and capacity to obtain available funds externally through debt or equity financing on both a short-term and long-term basis. Our ability to access the capital markets is dependent on, among other things, market conditions and our perceived financial strength. We have accessed both the debt and equity markets from time to time. We generally maintain the ability to issue certain classes of debt and equity securities via an unlimited Securities and Exchange Commission (SEC) shelf registration which is renewed every three years. This allows us capital market access for refinancing as well as for unforeseen or opportunistic capital needs. In October 2021, we filed a new shelf registration statement which allows us to issue an unlimited amount of certain classes of debt and equity from time to time, replacing the shelf registration statement that was filed in October 2018. This new shelf registration statement expires in October 2024.

Securities Repurchases

From time to time, we repurchase shares as part of our capital management program. In November 2020, the Board of Directors (Board) authorized a share repurchase program of $1.5 billion of Chubb Common Shares from November 19, 2020 through December 31, 2021.

In February 2021, the Board approved an increase to this share repurchase program of $1.0 billion to a total of $2.5 billion, effective through December 31, 2021. On July 19, 2021, the Board authorized a one-time incremental share repurchase program of up to $5.0 billion through June 30, 2022, which is the only board authorization currently in effect.

Share repurchases may be made in the open market, in privately negotiated transactions, block trades, accelerated repurchases and/or through option or other forward transactions. In 2021, 2020, and 2019 we repurchased $4.9 billion, $516 million, and $1.5 billion, respectively, of Common Shares in a series of open market transactions under the Board share repurchase authorizations at an average per share price of $175.85, $143.91, and $146.61, respectively. For the period January 1, 2022 through February 23, 2022, we repurchased 1,966,600 Common Shares for a total of $405 million in a series of open market transactions under the share repurchase program authorization. At February 23, 2022, $2.2 billion in share repurchase authorization remained through June 30, 2022.

Common Shares

Our Common Shares had a par value of CHF 24.15 each at December 31, 2021.

As of December 31, 2021, there were 47,448,502 Common Shares in treasury with a weighted average cost of $157.31 per share.

Under Swiss law, dividends must be stated in Swiss francs though dividend payments are made by Chubb in U.S. dollars.

At our May 2021 annual general meeting, our shareholders approved an annual dividend for the following year of up to $3.20 per share, expected to be paid in four quarterly installments of $0.80 per share after the annual general meeting by way of distribution from capital contribution reserves, transferred to free reserves for payment. The Board will determine the record and payment dates at which the annual dividend may be paid until the date of the 2022 annual general meeting, and is authorized to abstain from distributing a dividend at its discretion. The first three quarterly installments each of $0.80 per share, have been distributed by the Board as expected.

At our May 2020 annual general meeting, our shareholders approved an annual dividend for the following year of up to $3.12 per share, which was paid in four quarterly installments of $0.78 per share at dates determined by the Board after the annual general meeting by way of distribution from capital contribution reserves, transferred to free reserves for payment.

Dividend distributions on Common Shares amounted to CHF 2.88 ($3.18) per share for the year ended December 31, 2021. Refer to Note 11 to the Consolidated Financial Statements for additional information on our dividends.

Cash Requirements

Our cash requirements within the next twelve months include claims payable to claimants and other routine obligations typical to our business. We also have commitments related to our limited partnerships as well as our purchase agreements for Cigna's Life and A&H business in Asia and for the incremental ownership interests in Huatai Group. We expect the cash required to meet these obligations to be primarily generated through a combination of cash on hand, cash from operations, routine sales of investments, and financing arrangements. We believe these sources will be sufficient to meet our anticipated cash requirements for at least the next twelve months, while maintaining sufficient liquidity for normal operating purposes. We believe our financial strength provides us with the flexibility and capacity to obtain available funds externally through debt or equity financing on both a short-term and long-term basis, if necessary. At December 31, 2021, our long-term cash requirements under our various contractual obligations and commitments include:

- *Gross loss payments under insurance and reinsurance contracts* - We are obligated to pay claims under insurance and reinsurance contracts for specified loss events covered under those contracts. Total cash requirements are not determinable from underlying contracts and must be estimated. Gross loss payments under insurance and reinsurance contracts are estimated at $73.0 billion with $20.3 billion estimated due over the next twelve months. These estimated gross loss payments are inherently uncertain and the amount and timing of actual loss payments are likely to differ from these estimates and the differences could be material. Given the numerous factors and assumptions involved in both estimates of loss reserves and related estimates as to the timing of future loss payments, differences between actual and estimated loss payments will not necessarily indicate a commensurate change in ultimate loss estimates. Refer to Note 7 to the Consolidated Financial Statements for additional information.

- *Estimated payments for future policy benefits and GLB* - Total estimated payments for future policy benefits and GLB are estimated at $21.0 billion and $1.4 billion, respectively, with a total $993 million estimated due over the next twelve months. These estimated payments, which are not determinable from the contracts, are gross of fees or premiums from the underlying contracts. These estimated payments are higher than the future policy benefits reserves and GLB liability presented on our Consolidated balance sheets which are discounted and are reflected net of fees and premiums due from the underlying contracts. The timing and amount of actual payments may vary from the estimates. Refer to Note 1 i) to the Consolidated Financial Statements for additional information.

- *Short-term and Long-term debt, trust preferred securities, and related interest payments* - Total obligations for short-term and long-term debt and trust preferred securities maturities are $16.3 billion with $1.0 billion due in November 2022. Interest payments related to these obligations total $7.1 billion with $515 million due over the next twelve months. These estimates are based on current exchange rates. Refer to Note 9 to the Consolidated Financial Statements for additional information.

- *Commitments on invested assets* - Total obligations for commitments related to our invested assets are $7.9 billion with $2.2 billion due over the next twelve months. Refer to Note 10 to the Consolidated Financial Statements for additional information.

- *Pending acquisitions* - Cash requirements for pending acquisitions include approximately $5.75 billion for Cigna's life and A&H business in Asia-Pacific markets which is expected to be paid over the next twelve months, subject to certain post-closing purchase adjustments. Additionally, we entered into agreements totaling $2.2 billion for additional equity interests in Huatai Group, of which we paid approximately $1.1 billion in 2021 and $113 million in January 2022. The remainder is expected to be paid over the next twelve months. The timing of completion is contingent upon important conditions. Refer to Note 2 to the Consolidated Financial Statements for additional information.

- *Deposit liabilities* - Total obligations for deposit liabilities, including contract holder deposit funds, are $2.3 billion with $68 million due over the next twelve months. Refer to Note 1 k) to the Consolidated Financial Statements for additional information.

- *Repurchase agreements* - We use repurchase agreements as a low-cost funding alternative. At December 31, 2021, there were $1.4 billion in repurchase agreements outstanding with various maturities over the next eight months. Refer to Note 9 to the Consolidated Financial Statements for additional information.

- *Operating leases* - Total obligations for operating leases are $513 million with $142 million estimated due over the next twelve months. Refer to Note 10 i) to the Consolidated Financial Statements for additional information. As of December 31, 2021, we entered into a lease for office space that is not yet recorded on our Consolidated balance sheets and is not included in the total obligations referenced above. The lease is expected to commence in 2023 with an initial term of approximately 21 years and the option to renew for an additional five to ten years. Total cash requirements are estimated at approximately $650 million.

Information provided in connection with outstanding debt of subsidiaries

Chubb INA Holdings Inc. (Subsidiary Issuer) is an indirect 100 percent-owned and consolidated subsidiary of Chubb Limited (Parent Guarantor). The Parent Guarantor fully and unconditionally guarantees certain of the debt of the Subsidiary Issuer.

The following table presents the condensed balance sheets of Chubb Limited and Chubb INA Holdings Inc., after elimination of investment in any non-guarantor subsidiary:

	Chubb Limited (Parent Guarantor)		Chubb INA Holdings Inc. (Subsidiary Issuer)	
	December 31		December 31	
(in millions of U.S. dollars)	**2021**	2020	**2021**	2020
Assets				
Investments	**$ —**	$ —	**$ 149**	$ 197
Cash	**1**	84	**580**	1
Due from parent guarantor/subsidiary issuer, net	**—**	479	**346**	—
Due from subsidiaries that are not issuers or guarantors, net	**1,564**	3,099	**—**	—
Other assets	**16**	10	**1,667**	463
Total assets	**$ 1,581**	$ 3,672	**$ 2,742**	$ 661
Liabilities				
Due to parent guarantor/subsidiary issuer, net	**$ 346**	$ —	**$ —**	$ 479
Due to subsidiaries that are not issuers or guarantors, net	**—**	—	**1,121**	2,583
Affiliated notional cash pooling programs	**8**	—	**—**	272
Short-term debt	**—**	—	**999**	—
Long-term debt	**—**	—	**15,169**	14,948
Trust preferred securities	**—**	—	**308**	308
Other liabilities	**363**	379	**1,803**	1,364
Total liabilities	**717**	379	**19,400**	19,954
Total shareholders' equity	**864**	3,293	**(16,658)**	(19,293)
Total liabilities and shareholders' equity	**$ 1,581**	$ 3,672	**$ 2,742**	$ 661

The following table presents the condensed statements of operations and comprehensive income of Chubb Limited and Chubb INA Holdings Inc., excluding equity in earnings from non-guarantor subsidiaries:

Year Ended December 31, 2021 (in millions of U.S. dollars)	Chubb Limited (Parent Guarantor)	Chubb INA Holdings Inc. (Subsidiary Issuer)
Net investment income	**$ 4**	**$ 1**
Net realized gains (loss)	**(18)**	**318**
Administrative expenses	**103**	**(84)**
Interest (income) expense	**(110)**	**564**
Other (income) expense	**(47)**	**(27)**
Income tax expense (benefit)	**15**	**(136)**
Net income	**$ 25**	**$ 2**
Comprehensive income	**$ 25**	**$ 357**

Credit Facilities

As our Bermuda subsidiaries are non-admitted insurers and reinsurers in the U.S., the terms of certain U.S. insurance and reinsurance contracts require them to provide collateral, which can be in the form of letters of credit (LOCs). LOCs may also be used for general corporate purposes.

Should the need arise, we generally have access to capital markets and to credit facilities with letter of credit capacity of $3.7 billion with a sub-limit of $1.9 billion for revolving credit. At December 31, 2021, our usage under these facilities was $1.4 billion in LOCs. Our access to credit under these facilities is dependent on the ability of the banks that are a party to the facilities to meet their funding commitments. Should the existing credit providers on these facilities experience financial difficulty, we may be required to replace credit sources, possibly in a difficult market. If we cannot obtain adequate capital or sources of credit on favorable terms, on a timely basis, or at all, our business, operating results, and financial condition could be adversely affected. To date, we have not experienced difficulty accessing our credit facilities or establishing additional facilities when needed.

In the event we are required to provide alternative security to clients, the security could take the form of additional insurance trusts supported by our investment portfolio or funds withheld using our cash resources. The value of LOCs required is driven by, among other things, statutory liabilities reported by variable annuity guarantee reinsurance clients, loss development of existing reserves, the payment pattern of such reserves, the expansion of business, and loss experience of such business.

The facilities noted above require that we maintain certain financial covenants, all of which have been met at December 31, 2021. These covenants include:

(i) a minimum consolidated net worth of not less than $34.985 billion; and
(ii) a ratio of consolidated debt to total capitalization of not greater than 0.35 to 1.

At December 31, 2021, (a) the minimum consolidated net worth requirement under the covenant described in (i) above was $34.985 billion and our actual consolidated net worth as calculated under that covenant was $59.4 billion and (b) our ratio of debt to total capitalization, as calculated under the covenant which excludes the fair value adjustment of debt acquired through the Chubb Corp acquisition, was 0.21 to 1, which is below the maximum debt to total capitalization ratio of 0.35 to 1 as described in (ii) above.

Our failure to comply with the covenants under any credit facility would, subject to grace periods in the case of certain covenants, result in an event of default. This could require us to repay any outstanding borrowings or to cash collateralize LOCs under such facility. Our failure to repay material financial obligations, as well as our failure with respect to certain other events expressly identified, would result in an event of default under the facility.

Ratings

Chubb Limited and its subsidiaries are assigned credit and financial strength (insurance) ratings from internationally recognized rating agencies, including S&P, A.M. Best, Moody's, and Fitch. The ratings issued on our companies by these agencies are announced publicly and are available directly from the agencies. Our Internet site (investors.chubb.com, under Shareholder Resources/Rating Agency Ratings) also contains some information about our ratings, but such information on our website is not incorporated by reference into this report.

Financial strength ratings reflect the rating agencies' opinions of a company's claims paying ability. Independent ratings are one of the important factors that establish our competitive position in the insurance markets. The rating agencies consider many factors in determining the financial strength rating of an insurance company, including the relative level of statutory surplus necessary to support the business operations of the company. These ratings are based upon factors relevant to policyholders, agents, and intermediaries and are not directed toward the protection of investors. Such ratings are not recommendations to buy, sell, or hold securities.

Credit ratings assess a company's ability to make timely payments of principal and interest on its debt. It is possible that, in the future, one or more of the rating agencies may reduce our existing ratings. If one or more of our ratings were downgraded, we could incur higher borrowing costs, and our ability to access the capital markets could be impacted. In addition, our insurance and reinsurance operations could be adversely impacted by a downgrade in our financial strength ratings, including a possible reduction in demand for our products in certain markets. Also, we have insurance and reinsurance contracts which contain rating triggers. In the event the S&P or A.M. Best financial strength ratings of Chubb fall, we may be faced with the cancellation of premium or be required to post collateral on our underlying obligation associated with this premium. We estimate that at December 31, 2021, a one-notch downgrade of our S&P or A.M. Best financial strength ratings would result in an immaterial loss of premium or requirement for collateral to be posted.

ITEM 7A. Quantitative and Qualitative Disclosures about Market Risk

Market Sensitive Instruments and Risk Management

Market risk represents the potential for loss due to adverse changes in the fair value of financial instruments. We are exposed to potential losses from various market risks including changes in interest rates, equity prices, and foreign currency exchange rates. Further, through writing the GLB and GMDB products, we are exposed to volatility in the equity and credit markets, as well as interest rates. Our investment portfolio consists primarily of fixed income securities, denominated in both U.S. dollars and foreign currencies, which are sensitive to changes in interest rates and foreign currency exchange rates. The majority of our fixed income portfolio is classified as available for sale. The effect of market movements on our fixed maturities portfolio impacts Net income (through Net realized gains (losses)) when securities are sold, when we write down an asset, or when we record a change to the allowance for expected credit losses. Changes in interest rates and foreign currency exchange rates will have an immediate effect on Shareholders' equity and Comprehensive income and in certain instances, Net income. From time to time, we also use derivative instruments such as futures, options, swaps, and foreign currency forward contracts to manage the duration of our investment portfolio and foreign currency exposures and also to obtain exposure to a particular financial market. At December 31, 2021 and 2020, our notional exposure to derivative instruments was $20.0 billion and $5.3 billion, respectively. These instruments are recognized as assets or liabilities in our Consolidated Financial Statements and are sensitive to changes in interest rates, foreign currency exchange rates, and equity security prices. As part of our investing activities, from time to time we purchase to be announced mortgage backed securities (TBAs). Changes in the fair value of TBAs are included in Net realized gains (losses) and therefore, have an immediate effect on both our Net income and Shareholders' equity.

We seek to mitigate market risk using a number of techniques, including maintaining and managing the assets and liabilities of our international operations consistent with the foreign currencies of the underlying insurance and reinsurance businesses, thereby limiting exchange rate risk to net assets denominated in foreign currencies.

The following is a discussion of our primary market risk exposures at December 31, 2021. Our policies to address these risks in 2021 were not materially different from 2020. We do not currently anticipate significant changes in our primary market risk exposures or in how those exposures are managed in future reporting periods based upon what is known or expected to be in effect in future reporting periods.

Interest rate risk – fixed income portfolio and debt obligations

Our fixed income portfolio and debt obligations have exposure to interest rate risk. Changes in investment values attributable to interest rate changes are mitigated by corresponding and partially offsetting changes in the economic value of our insurance reserves and debt obligations. We monitor this exposure through periodic reviews of our asset and liability positions.

The following table presents the impact at December 31, 2021 and 2020, on the fair value of our fixed income portfolio of a hypothetical increase in interest rates of 100 bps applied instantly across the U.S. yield curve (an immediate time horizon was used as this presents the worst case scenario):

(in billions of U.S. dollars, except for percentages)	**2021**	2020
Fair value of fixed income portfolio	**$ 106.9**	$ 107.6
Pre-tax impact of 100 bps increase in interest rates:		
Decrease in dollars	**$ 4.4**	$ 4.3
As a percentage of total fixed income portfolio at fair value	**4.1 %**	4.0 %

Changes in interest rates will have an immediate effect on Comprehensive income and Shareholders' equity but will not ordinarily have an immediate effect on Net income. Variations in market interest rates could produce significant changes in the timing of prepayments due to available prepayment options. For these reasons, actual results could differ from those reflected in the tables.

Although our debt and trust preferred securities (collectively referred to as debt obligations) are reported at amortized cost and not adjusted for fair value changes, changes in interest rates could have a material impact on their fair value, albeit there would be no impact on our Consolidated Financial Statements.

The following table presents the impact at December 31, 2021 and 2020, on the fair value of our debt obligations of a hypothetical decrease in interest rates of 100 bps applied instantly across the U.S. yield curve (an immediate time horizon was used as this presents the worst case scenario):

(in millions of U.S. dollars, except for percentages)	**2021**	2020
Fair value of debt obligations, including repurchase agreements	**$ 19,733**	$ 19,365
Pre-tax impact of 100 bps decrease in interest rates:		
Increase in dollars	**$ 1,799**	$ 1,673
As a percentage of total debt obligations at fair value	**9.1 %**	8.6 %

Foreign currency management

As a global company, Chubb entities transact business in multiple currencies. Our policy is to generally match assets, liabilities and required capital for each individual jurisdiction in local currency, which would include the use of derivatives. We do not hedge our net asset non-U.S. dollar capital positions; however, we do consider hedging for planned cross border transactions.

The following table summarizes the net assets (liabilities) in non-U.S. currencies at December 31, 2021 and 2020:

	2021		2020		
(in millions of U.S. dollars, except for percentages)	**Value of net assets (liabilities)**	**Exchange rate per USD**	Value of net assets (liabilities)	Exchange rate per USD	2021 vs. 2020 % change in exchange rate per USD
Chinese yuan renminbi (CNY)	**$ 3,519**	**0.1573**	$ 2,853	0.1532	2.7 %
Canadian dollar (CAD)	**2,624**	**0.7914**	2,613	0.7858	0.7 %
British pound sterling (GBP)	**2,333**	**1.3532**	2,492	1.3670	(1.0)%
Australian dollar (AUD)	**1,347**	**0.7263**	1,347	0.7694	(5.6)%
Korean won (KRW) (x100)	**805**	**0.0840**	781	0.0920	(8.7)%
Mexican peso (MXN)	**728**	**0.0487**	877	0.0502	(3.0)%
Japanese yen (JPY)	**631**	**0.0087**	617	0.0097	(10.3)%
Brazilian real (BRL)	**577**	**0.1795**	747	0.1926	(6.8)%
Hong Kong Dollar (HKD)	**537**	**0.1283**	486	0.1290	(0.6)%
Euro (EUR) [(1)]	**(3,013)**	**1.1370**	(3,162)	1.2216	(6.9)%
Other foreign currencies	**2,444**	**various**	3,095	various	NM
Value of net assets denominated in foreign currencies [(2)]	**$ 12,532**		$ 12,746		
As a percentage of total net assets	**21.0 %**		21.4 %		
Pre-tax decrease to Shareholders' equity of a hypothetical 10 percent strengthening of the USD	**$ 1,139**		$ 1,159		

NM – not meaningful

(1) Comprised Euro denominated debt of $4.9 billion, partially offset by net assets of $1.9 billion at December 31, 2021 and Euro denominated debt of $5.2 billion, partially offset by net assets of $2.1 billion at December 31, 2020.

(2) Net assets denominated in foreign currencies comprised goodwill and other intangible assets of approximately 45 percent and 46 percent at December 31, 2021 and 2020, respectively.

Reinsurance of GMDB and GLB guarantees
Chubb views its variable annuity reinsurance business as having a similar risk profile to that of catastrophe reinsurance with the probability of long-term economic loss relatively small, at the time of pricing. Adverse changes in market factors and policyholder behavior will have an impact on both realized gains (losses) and net income for GLB and both Life Insurance underwriting income and net income for GMDB. When evaluating these risks, we expect to be compensated for taking both the risk of a cumulative long-term economic net loss, as well as the short-term accounting variations caused by these market movements. Therefore, we evaluate this business in terms of its long-term economic risk and reward.

For the GMDB reinsurance business, net income is directly impacted by changes in future policy benefit reserves. For the GLB reinsurance business, net income is directly impacted by changes in the fair value of the GLB liability (FVL), which is classified as a derivative for accounting purposes. The FVL calculation is directly affected by market factors, including equity levels, interest rate levels, credit risk, and implied volatilities, as well as policyholder behaviors, such as annuitization and lapse rates, and policyholder mortality.

The tables below are estimates of the sensitivities to instantaneous changes in economic inputs (e.g., equity shock, interest rate shock, etc.) or actuarial assumptions at December 31, 2021 of the FVL and of the fair value of specific derivative instruments held (hedge value) to partially offset the risk in the variable annuity guarantee reinsurance portfolio. The following assumptions should be considered when using the below tables:

- Equity shocks impact all global equity markets equally
    - Our liabilities are sensitive to global equity markets in the following proportions: 80 percent—90 percent U.S. equity, and 10 percent—20 percent international equity.
    - Our current hedge portfolio is sensitive only to U.S. equity markets.
    - We would suggest using the S&P 500 index as a proxy for U.S. equity, and the MSCI EAFE index as a proxy for international equity.
- Interest rate shocks assume a parallel shift in the U.S. yield curve
    - Our liabilities are also sensitive to global interest rates at various points on the yield curve, mainly the U.S. Treasury curve in the following proportions: 5 percent—15 percent short-term rates (maturing in less than 5 years), 15 percent —25 percent medium-term rates (maturing between 5 years and 10 years, inclusive), and 65 percent—75 percent long-term rates (maturing beyond 10 years).
    - A change in AA-rated credit spreads impacts the rate used to discount cash flows in the fair value model. AA-rated credit spreads are a proxy for both our own credit spreads and the credit spreads of the ceding insurers.
- The hedge sensitivity is from December 31, 2021 market levels and only applicable to the equity and interest rate sensitivities table below.
- The sensitivities are not directly additive because changes in one factor will affect the sensitivity to changes in other factors. The sensitivities do not scale linearly and may be proportionally greater for larger movements in the market factors. The sensitivities may also vary due to foreign exchange rate fluctuations. The calculation of the FVL is based on internal models that include assumptions regarding future policyholder behavior, including lapse, annuitization, and asset allocation. These assumptions impact both the absolute level of the FVL as well as the sensitivities to changes in market factors shown below. Actual sensitivity of our net income may differ from those disclosed in the tables below due to fluctuations in short-term market movements.
- In addition, the tables below do not reflect the expected quarterly run rate of net income generated by the variable annuity guarantee reinsurance portfolio if markets remain unchanged during the period. All else equal, if markets remain unchanged during the period, the FVL will increase, resulting in a realized loss. This realized loss occurs primarily because the guarantees provided in the underlying contracts continue to become more valuable even when markets remain unchanged. We refer to this increase in FVL as the “timing effect”. The unfavorable impact of the timing effect on our FVL in a quarter is not reflected in the sensitivity tables below. For this reason, when using the tables below to estimate the sensitivity of FVL in the first quarter 2022 to various changes, it is necessary to assume an additional $5 million to $45 million increase in FVL and realized losses. Note that both the timing effect and the quarterly run rate impact to net income change over time as the book ages.

Sensitivities to equity and interest rate movements

(in millions of U.S. dollars)		Worldwide Equity Shock					
Interest Rate Shock		+10 %	Flat	-10 %	-20 %	-30 %	-40%
+100 bps	(Increase)/decrease in FVL	$ 325	$ 219	$ 91	$ (77)	$ (288)	$ (552)
	Increase/(decrease) in hedge value	(92)	—	92	184	276	368
	Increase/(decrease) in net income	$ 233	$ 219	$ 183	$ 107	$ (12)	$ (184)
Flat	(Increase)/decrease in FVL	$ 130	$ —	$ (167)	$ (369)	$ (616)	$ (918)
	Increase/(decrease) in hedge value	(92)	—	92	184	276	368
	Increase/(decrease) in net income	$ 38	$ —	$ (75)	$ (185)	$ (340)	$ (550)
-100 bps	(Increase)/decrease in FVL	$ (123)	$ (288)	$ (484)	$ (719)	$(1,000)	$ (1,333)
	Increase/(decrease) in hedge value	(92)	—	92	184	276	368
	Increase/(decrease) in net income	$ (215)	$ (288)	$ (392)	$ (535)	$ (724)	$ (965)

Sensitivities to Other Economic Variables	AA-rated Credit Spreads		Interest Rate Volatility		Equity Volatility	
(in millions of U.S. dollars)	+100 bps	-100 bps	+2 %	-2 %	+2 %	-2%
(Increase)/decrease in FVL	$ 66	$ (77)	$ (1)	$ 1	$ (22)	$ 19
Increase/(decrease) in net income	$ 66	$ (77)	$ (1)	$ 1	$ (22)	$ 19

Variable Annuity Net Amount at Risk

All our VA reinsurance treaties include annual or aggregate claim limits and many include an aggregate deductible which limit the net amount at risk under these programs. The tables below present the net amount at risk at December 31, 2021 following an immediate change in equity market levels, assuming all global equity markets are impacted equally.

a) Reinsurance covering the GMDB risk only

	Equity Shock					
(in millions of U.S. dollars)	+20 %	Flat	-20%	-40%	-60%	-80%
GMDB net amount at risk	$ 297	$ 283	$ 471	$ 848	$ 897	$ 744
Claims at 100% immediate mortality	151	156	174	164	148	128

The treaty claim limits function as a ceiling as equity markets fall. As the shocks in the table above become incrementally more negative, the impact on the NAR and claims at 100 percent mortality begin to drop due to the specific nature of these claim limits, many of which are annual claim limits calculated as a percentage of the reinsured account value. There is also some impact due to a small portion of the GMDB reinsurance under which claims are positively correlated to equity markets (claims decrease as equity markets fall).

b) Reinsurance covering the GLB risk only

	Equity Shock					
(in millions of U.S. dollars)	+20 %	Flat	-20%	-40%	-60%	-80%
GLB net amount at risk	$ 757	$ 1,054	$ 1,586	$ 2,384	$ 2,941	$ 3,333

The treaty claim limits cause the net amount at risk to increase at a declining rate as equity markets fall.

c) Reinsurance covering both the GMDB and GLB risks on the same underlying policyholders

	Equity Shock					
(in millions of U.S. dollars)	+20 %	Flat	-20%	-40%	-60%	-80%
GMDB net amount at risk	$ 37	$ 45	$ 58	$ 74	$ 88	$ 100
GLB net amount at risk	289	378	505	679	860	989
Claims at 100% immediate mortality	36	35	35	35	35	35

The treaty limits control the increase in the GMDB net amount at risk as equity markets fall. The GMDB net amount at risk continues to increase as equity markets fall because most of these reinsurance treaties do not have annual claim limits calculated as a percentage of the underlying account value. The treaty limits cause the GLB net amount at risk to increase at a declining rate as equity markets fall.

ITEM 8. Financial Statements and Supplementary Data

The financial statements and supplementary data are included in this Form 10-K commencing on page F-1.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Chubb’s management, with the participation of Chubb’s Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of Chubb’s disclosure controls and procedures as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934 as of December 31, 2021. Based upon that evaluation, Chubb’s Chief Executive Officer and Chief Financial Officer concluded that Chubb’s disclosure controls and procedures are effective in allowing information required to be disclosed in reports filed under the Securities Exchange Act of 1934 to be recorded, processed, summarized, and reported within time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to Chubb’s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

There have been no changes in Chubb's internal controls over financial reporting during the three months ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, Chubb's internal controls over financial reporting. Chubb's management report on internal control over financial reporting is included on page F-3 and PricewaterhouseCoopers LLP's audit report is included on pages F-4, F-5, and F-6.

ITEM 9B. Other Information

Item not applicable.

ITEM 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Item not applicable.

ITEM 10. Directors, Executive Officers and Corporate Governance

Information pertaining to this item is incorporated by reference to the sections entitled “Agenda Item 5 - Election of the Board of Directors”, "Corporate Governance - Delinquent Section 16(a) Reports", “Corporate Governance - The Board of Directors - Director Nomination Process”, and “Corporate Governance - The Committees of the Board - Audit Committee” of the definitive proxy statement for the 2022 Annual General Meeting of Shareholders which will be filed with the SEC not later than 120 days after the close of the fiscal year pursuant to Regulation 14A. Also incorporated herein by reference is the text under the caption “Information about our Executive Officers” appearing at the end of Part I Item 1 of the Annual Report on Form 10-K.

Code of Ethics

Chubb has adopted a Code of Conduct, which sets forth standards by which all Chubb employees, officers, and directors must abide as they work for Chubb. Chubb has posted this Code of Conduct on its Internet site (about.chubb.com/governance.html). Chubb intends to disclose on its Internet site any amendments to, or waivers from, its Code of Conduct that are required to be publicly disclosed pursuant to the rules of the SEC or the New York Stock Exchange.

ITEM 11. Executive Compensation

This item is incorporated by reference to the sections entitled “Executive Compensation”, “Compensation Committee Report” and “Director Compensation” of the definitive proxy statement for the 2022 Annual General Meeting of Shareholders which will be filed with the SEC not later than 120 days after the close of the fiscal year pursuant to Regulation 14A.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights	Weighted-average exercise price of outstanding options, warrants, and rights [3]	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders [1]	10,762,100	$ 133.95	19,127,542
Equity compensation plans not approved by security holders [2]	22,945		

[1] These totals include securities available for future issuance under the following plans:

(i) Chubb Limited 2016 Long-Term Incentive Plan, as amended and restated (Amended 2016 LTIP). A total of 32,900,000 shares are authorized to be issued pursuant to awards made as options, stock appreciation rights, stock units, performance shares, performance units, restricted stock, and restricted stock units. The maximum number of shares that may be delivered to participants and their beneficiaries under the Amended 2016 LTIP shall be equal to the sum of: (x) 32,900,000 shares of stock; and (y) any shares of stock that have not been delivered pursuant to the ACE LTIP (as defined in clause (ii) of this footnote (1) below) and remain available for grant pursuant to the ACE LTIP, including shares of stock represented by awards granted under the ACE LTIP that are forfeited, expire or are canceled after the effective date of the Amended 2016 LTIP without delivery of shares of stock or which result in the forfeiture of the shares of stock back to the Company to the extent that such shares would have been added back to the reserve under the terms of the ACE LTIP. As of December 31, 2021, a total of 7,197,001 option awards and 804,119 restricted stock unit awards are outstanding, and 18,040,720 shares remain available for future issuance under this plan.

(ii) ACE Limited 2004 Long-Term Incentive Plan (ACE LTIP). As of December 31, 2021, a total of 3,518,809 option awards are outstanding. No additional grants will be made pursuant to the ACE LTIP.

(iii) The Chubb Corporation Long-Term Incentive Plan (2014) (Chubb Corp. LTIP). As of December 31, 2021, a total of 46,290 option awards and 30,196 deferred stock unit awards are outstanding. No additional grants will be made pursuant to the Chubb Corp. LTIP.

(iv) ESPP. A total of 6,500,000 shares have been authorized for purchase at a discount. As of December 31, 2021, 1,086,822 shares remain available for future issuance under this plan.

[2] These plans are the Chubb Corp. CCAP Excess Benefit Plan (CCAP Excess Benefit Plan) and the Chubb Corp. Deferred Compensation Plan for Directors, under which no Common Shares are available for future issuance other than with respect to outstanding rewards. The CCAP Excess Benefit Plan is a nonqualified, defined contribution plan and covers those participants in the Capital Accumulation Plan of The Chubb Corporation (CCAP) (Chubb Corp.’s legacy 401(k) plan) and Chubb Corp.’s

legacy employee stock ownership plan (ESOP) whose total benefits under those plans are limited by certain provisions of the Internal Revenue Code. A participant in the CCAP Excess Benefit Plan is entitled to a benefit equaling the difference between the participant's benefits under the CCAP and the ESOP, without considering the applicable limitations of the Code, and the participant's actual benefits under such plans. A participant's excess ESOP benefit is expressed as Common Shares. Payments under the CCAP Excess Benefit Plan are generally made: (i) for excess benefits related to the CCAP, in cash annually as soon as practical after the amount of excess benefit can be determined; and (ii) for excess benefits related to the ESOP, in Common Shares as soon as practicable after the participant's termination of employment. Allocations under the ESOP ceased in 2004. Accordingly, other than dividends, no new contributions are made to the ESOP or the CCAP Excess Benefit Plan with respect to excess ESOP benefits.

(3) Weighted average exercise price excludes shares issuable under performance unit awards and restricted stock unit awards.

Additional information is incorporated by reference to the section entitled "Information About Our Share Ownership" of the definitive proxy statement for the 2022 Annual General Meeting of Shareholders which will be filed with the SEC not later than 120 days after the close of the fiscal year pursuant to Regulation 14A.

ITEM 13. Certain Relationships and Related Transactions and Director Independence

This item is incorporated by reference to the sections entitled "Corporate Governance - What Is Our Related Party Transactions Approval Policy And What Procedures Do We Use To Implement It?", "Corporate Governance - What Related Party Transactions Do We Have?", and "Corporate Governance - The Board of Directors - Director Independence" of the definitive proxy statement for the 2022 Annual General Meeting of Shareholders which will be filed with the SEC not later than 120 days after the close of the fiscal year pursuant to Regulation 14A.

ITEM 14. Principal Accounting Fees and Services

This item is incorporated by reference to the section entitled "Agenda Item 4 – Election of Auditors – 4.2 – Ratification of appointment of PricewaterhouseCoopers LLP (United States) as independent registered public accounting firm for purposes of U.S. securities law reporting" of the definitive proxy statement for the 2022 Annual General Meeting of Shareholders which will be filed with the SEC not later than 120 days after the close of the fiscal year pursuant to Regulation 14A.

ITEM 15. Exhibits, Financial Statement Schedules

(a) Financial Statements, Schedules, and Exhibits

Other schedules have been omitted as they are not applicable to Chubb, or the required information has been included in the Consolidated Financial Statements and related notes.

3. Exhibits

		Incorporated by Reference			
Exhibit Number	Exhibit Description	Form	Original Number	Date Filed	Filed Herewith
3.1	Articles of Association of the Company, as amended and restated	8-K	3.1	January 20, 2022	
3.2	Organizational Regulations of the Company as amended	8-K	3.1	November 21, 2016	
4.1	Articles of Association of the Company, as amended and restated	8-K	4.1	January 20, 2022	
4.2	Organizational Regulations of the Company as amended	8-K	3.1	November 21, 2016	
4.3	Specimen share certificate representing Common Shares	8-K	4.3	July 18, 2008	
4.4	Indenture, dated March 15, 2002, between ACE Limited and Bank One Trust Company, N.A.	8-K	4.1	March 22, 2002	
4.5	Senior Indenture, dated August 1, 1999, among ACE INA Holdings, Inc., ACE Limited and Bank of New York Mellon Trust Company, N.A. (as successor), as trustee	S-3 ASR	4.4	December 10, 2014	
4.6	Indenture, dated November 30, 1999, among ACE INA Holdings, Inc. and Bank One Trust Company, N.A., as trustee	10-K	10.38	March 29, 2000	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
4.7	Indenture, dated December 1, 1999, among ACE INA Holdings, Inc., ACE Limited and Bank One Trust Company, National Association, as trustee	10-K	10.41	March 29, 2000	
4.8	Amended and Restated Trust Agreement, dated March 31, 2000, among ACE INA Holdings, Inc., Bank One Trust Company, National Association, as property trustee, Bank One Delaware Inc., as Delaware trustee and the administrative trustees named therein	10-K	4.17	March 16, 2006	
4.9	Common Securities Guarantee Agreement, dated March 31, 2000	10-K	4.18	March 16, 2006	
4.10	Capital Securities Guarantee Agreement, dated March 31, 2000	10-K	4.19	March 16, 2006	
4.11	Form of 2.70 percent Senior Notes due 2023	8-K	4.1	March 13, 2013	
4.12	Form of 4.15 percent Senior Notes due 2043	8-K	4.2	March 13, 2013	
4.13	First Supplemental Indenture dated as of March 13, 2013 to the Indenture dated as of August 1, 1999 among ACE INA Holdings, Inc., as Issuer, ACE Limited, as Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Successor Trustee	8-K	4.3	March 13, 2013	
4.14	Form of 3.35 percent Senior Notes due 2024	8-K	4.1	May 27, 2014	
4.15	Form of 3.150 percent Senior Notes due 2025	8-K	4.1	March 16, 2015	
4.16	Form of 2.875 percent Senior Notes due 2022	8-K	4.2	November 3, 2015	
4.17	Form of 3.35 percent Senior Notes due 2026	8-K	4.3	November 3, 2015	
4.18	Form of 4.35 percent Senior Notes due 2045	8-K	4.4	November 3, 2015	
4.19	First Supplemental Indenture to the Chubb Corp Senior Indenture dated as of January 15, 2016 to the Indenture dated as of October 25, 1989 among ACE INA Holdings, Inc., as Successor Issuer, ACE Limited, as Guarantor, and The Bank of New York Mellon Trust Company, N.A., as Trustee	8-K	4.1	January 15, 2016	
4.20	Chubb Corp Senior Indenture (incorporated by reference to Exhibit 4(a) to Chubb Corp's Registration Statement on Form S-3 filed on October 27, 1989) (File No. 33-31796)	S-3	4(a)	October 27, 1989	
4.21	Chubb Corp Junior Subordinated Indenture (incorporated by reference to Exhibit 4.1 to Chubb Corp's Current Report on Form 8-K filed on March 30, 2007) (File No. 001-08661)	8-K	4.1	March 30, 2007	
4.22	Form of 6.80 percent Chubb Corp Debentures due 2031 (incorporated by reference to Exhibit 4(a) to Chubb Corp's Registration Statement on Form S-3 filed on October 27, 1989) (File No. 33-31796)	S-3	4(a)	October 27, 1989	
4.23	Form of 6.00 percent Chubb Corp Senior Notes due 2037 (incorporated by reference to Exhibit 4.1 to Chubb Corp's Current Report on Form 8-K filed on May 11, 2007) (File No. 001-08661)	8-K	4.1	May 11, 2007	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
4.24	Form of 6.50 percent Chubb Corp Senior Notes due 2038 (incorporated by reference to Exhibit 4.2 to Chubb Corp's Current Report on Form 8-K filed on May 6, 2008) (File No. 001-08661)	8-K	4.2	May 6, 2008	
4.25	Procedures regarding the registration of shareholders in the share register of Chubb Limited	10-K	4.32	February 28, 2017	
4.26	Form of Officer's Certificate related to the 1.550% Senior Notes due 2028 and 2.500% Senior Notes due 2038	8-K	4.1	March 6, 2018	
4.27	Form of Global Note for the 1.550% Senior Notes due 2028	8-K	4.2	March 6, 2018	
4.28	Form of Global Note for the 2.500% Senior Notes due 2038	8-K	4.3	March 6, 2018	
4.29	Form of Officer's Certificate related to the 0.875% Senior Notes due 2027 and 1.400% Senior Notes due 2031	8-K	4.1	June 17, 2019	
4.30	Form of Global Note for the 0.875% Senior Notes due 2027	8-K	4.2	June 17, 2019	
4.31	Form of Global Note for the 1.400% Senior Notes due 2031	8-K	4.3	June 17, 2019	
4.32	Form of Officer's Certificate related to the 0.300% Senior Notes due 2024 and 0.875% Senior Notes due 2029	8-K	4.1	December 5, 2019	
4.33	Form of Global Note for the 0.300% Senior Notes due 2024	8-K	4.2	December 5, 2019	
4.34	Form of Global Note for the 0.875% Senior Notes due 2029	8-K	4.3	December 5, 2019	
4.35	Form of Officer's Certificate related to the 1.375% Senior Notes due 2030	8-K	4.1	September 17, 2020	
4.36	Form of Global Note for the 1.375% Senior Notes due 2030	8-K	4.2	September 17, 2020	
4.37	Form of Officer's Certificate related to the 2.850% Senior Notes due 2051 and the 3.050% Senior Notes due 2061	8-K	4.1	November 18, 2021	
4.38	Form of Global Note for the 2.850% Senior Notes due 2051	8-K	4.2	November 18, 2021	
4.39	Form of Global Note for the 3.050% Senior Notes due 2061	8-K	4.3	November 18, 2021	
4.40	Description of the Registrant's Securities				X
10.1*	Form of Indemnification Agreement between the Company and the directors of the Company, dated August 13, 2015	10-K	10.1	February 26, 2016	
10.2	Credit Agreement for $1,000,000,000 Senior Unsecured Letter of Credit Facility, dated as of November 6, 2012, among ACE Limited, and certain subsidiaries and Wells Fargo Bank, National Association as Administrative Agent, the Swingline Bank and an Issuing Bank	10-K	10.13	February 28, 2013	
10.3*	Employment Terms dated October 29, 2001, between ACE Limited and Evan Greenberg	10-K	10.64	March 27, 2003	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
10.4*	Employment Terms dated April 10, 2006, between ACE and John Keogh	10-K	10.29	February 29, 2008	
10.5*	Executive Severance Agreement between ACE and John Keogh	10-K	10.30	February 29, 2008	
10.6*	ACE Limited Executive Severance Plan as amended effective May 18, 2011	10-K	10.21	February 24, 2012	
10.7*	Form of employment agreement between the Company (or subsidiaries of the Company) and executive officers of the Company to allocate a percentage of aggregate salary to the Company (or subsidiaries of the Company)	8-K	10.1	July 16, 2008	
10.8*	Outside Directors Compensation Parameters				X
10.9*	ACE Limited Elective Deferred Compensation Plan (as amended and restated effective January 1, 2005)	10-K	10.24	March 16, 2006	
10.10*	ACE USA Officer Deferred Compensation Plan (as amended through January 1, 2001)	10-K	10.25	March 16, 2006	
10.11*	ACE USA Officer Deferred Compensation Plan (as amended and restated effective January 1, 2011)	10-Q	10.7	October 30, 2013	
10.12*	ACE USA Officer Deferred Compensation Plan (as amended and restated effective January 1, 2009)	10-K	10.36	February 27, 2009	
10.13*	First Amendment to the Amended and Restated ACE USA Officers Deferred Compensation Plan	10-K	10.28	February 25, 2010	
10.14*	Form of Swiss Mandatory Retirement Benefit Agreement (for Swiss-employed named executive officers)	10-Q	10.2	May 7, 2010	
10.15*	ACE Limited Elective Deferred Compensation Plan (as amended and restated effective January 1, 2009)	10-K	10.39	February 27, 2009	
10.16*	ACE Limited Elective Deferred Compensation Plan (as amended and restated effective January 1, 2011)	10-Q	10.5	October 30, 2013	
10.17*	Deferred Compensation Plan amendments, effective January 1, 2009	10-K	10.40	February 27, 2009	
10.18*	ACE USA Supplemental Employee Retirement Savings Plan (see exhibit 10.6 to Form 10-Q filed with the SEC on May 15, 2000)	10-Q	10.6	May 15, 2000	
10.19*	ACE USA Supplemental Employee Retirement Savings Plan (as amended through the Second Amendment)	10-K	10.30	March 1, 2007	
10.20*	ACE USA Supplemental Employee Retirement Savings Plan (as amended through the Third Amendment)	10-K	10.31	March 1, 2007	
10.21*	ACE USA Supplemental Employee Retirement Savings Plan (as amended and restated)	10-K	10.46	February 27, 2009	
10.22*	First Amendment to the Amended and Restated ACE USA Supplemental Employee Retirement Savings Plan	10-K	10.39	February 25, 2010	
10.23*	The ACE Limited 1995 Outside Directors Plan (as amended through the Seventh Amendment)	10-Q	10.1	August 14, 2003	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
10.24*	ACE Limited 2004 Long-Term Incentive Plan (as amended through the Fifth Amendment)	8-K	10	May 21, 2010	
10.25*	ACE Limited 2004 Long-Term Incentive Plan (as amended through the Sixth Amendment)	8-K	10.1	May 20, 2013	
10.26*	ACE Limited Rules of the Approved U.K. Stock Option Program (see exhibit 10.2 to Form 10-Q filed with the SEC on February 13, 1998)	10-Q	10.2	February 13, 1998	
10.27*	Director Restricted Stock Award Terms under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.1	November 9, 2009	
10.28*	Form of Incentive Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	8-K	10.4	September 13, 2004	
10.29*	Form of Incentive Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.4	May 8, 2008	
10.30*	Form of Incentive Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	10-K	10.63	February 27, 2009	
10.31*	Form of Incentive Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.3	October 30, 2013	
10.32*	Form of Non-Qualified Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	8-K	10.5	September 13, 2004	
10.33*	Form of Non-Qualified Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.3	May 8, 2008	
10.34*	Form of Non-Qualified Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.4	October 30, 2013	
10.35*	Form of Restricted Stock Unit Award Terms (for outside directors) under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.2	November 7, 2007	
10.36*	Form of Restricted Stock Unit Award Terms (for outside directors) under the ACE Limited 2004 Long-Term Incentive Plan	10-Q	10.2	August 7, 2009	
10.37*	Form of Incentive Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan for Messrs. Greenberg and Cusumano	10-Q	10.1	August 4, 2011	
10.38*	Form of Non-Qualified Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan for Messrs. Greenberg and Cusumano	10-Q	10.2	August 4, 2011	
10.39*	Form of Incentive Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.71	February 27, 2015	
10.40*	Form of Non-Qualified Stock Option Terms under the ACE Limited 2004 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.72	February 27, 2015	
10.41*	Form of Executive Management Non-Competition Agreement	8-K	10.1	May 22, 2015	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
10.42	Commitment Increase Agreement to increase the credit capacity under the Credit Agreement originally entered into on November 6, 2012 to $1,500,000,000 under the Senior Unsecured Letter of Credit Facility, dated as of December 11, 2015, among ACE Limited, and certain subsidiaries, and Wells Fargo Bank, National Association as Administrative Agent, the Swingline Bank and an Issuing Bank	10-K	10.72	February 26, 2016	
10.43	Chubb Limited 2016 Long-Term Incentive Plan	S-8	4.4	May 26, 2016	
10.44*	Form of Incentive Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan	10-Q	10.2	August 5, 2016	
10.45*	Form of Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan	10-Q	10.3	August 5, 2016	
10.46*	Form of Restricted Stock Unit Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan	10-Q	10.4	August 5, 2016	
10.47*	Form of Non-Qualified Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan	10-Q	10.5	August 5, 2016	
10.48*	Form of Incentive Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-Q	10.6	August 5, 2016	
10.49*	Form of Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-Q	10.7	August 5, 2016	
10.50*	Form of Restricted Stock Unit Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-Q	10.8	August 5, 2016	
10.51*	Form of Non-Qualified Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-Q	10.9	August 5, 2016	
10.52*	Chubb Limited Employee Stock Purchase Plan, as amended and restated	S-8	4.4	May 25, 2017	
10.53*	Director Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan	10-Q	10.1	August 3, 2017	
10.54	Amended and Restated Credit Agreement for $1,000,000 Senior Unsecured Letter of Credit Facility, dated as of October 25, 2017, among Chubb Limited, and certain subsidiaries and Wells Fargo Bank, National Association as Administrative Agent, the Swingline Bank and an Issuing Bank	10-K	10.88	February 23, 2018	
10.55*	Form of Incentive Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Executive Officers	10-K	10.89	February 23, 2018	
10.56*	Form of Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Executive Officers	10-K	10.90	February 23, 2018	
10.57*	Form of Non-Qualified Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Executive Officers	10-K	10.92	February 23, 2018	
10.58*	Form of Restricted Stock Unit Award Terms under the Chubb Limited 2016 Long-Term Plan for Executive Officers	10-K	10.93	February 23, 2018	
10.59*	Form of Incentive Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.94	February 23, 2018	

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
10.60*	Form of Non-Qualified Stock Option Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.95	February 23, 2018	
10.61*	Form of Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.96	February 23, 2018	
10.62*	Form of Restricted Stock Unit Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.97	February 23, 2018	
10.63*	Chubb Limited Clawback Policy	10-K	10.99	February 23, 2018	
10.64*	The Chubb Corporation Key Employee Deferred Compensation Plan (2005)	8-K	10.9	March 9, 2005	
10.65*	Amendment One to The Chubb Corporation Key Employee Deferred Compensation Plan (2005)	8-K	10.1	September 12, 2005	
10.66*	Amendment No. 2 to The Chubb Corporation Key Employee Deferred Compensation Plan (2005)	10-K	10.20	March 2, 2009	
10.67*	Amendment No. 3 to The Chubb Corporation Key Employee Deferred Compensation Plan (2005)	10-K	10.32	February 28, 2013	
10.68*	Pension Excess Benefit Plan of The Chubb Corporation	10-K	10.77	February 25, 2021	
10.69*	Amendment No. 2 to the Pension Excess Benefit Plan of The Chubb Corporation	10-K	10.78	February 25, 2021	
10.70*	Amendment No. 3 to the Pension Excess Benefit Plan of The Chubb Corporation	10-K	10.79	February 25, 2021	
10.71*	Amendment No. 4 to the Pension Excess Benefit Plan of The Chubb Corporation	10-K	10.8	February 25, 2021	
10.72*	Amendments to the Chubb U.S. Supplemental Employee Retirement Plan, the Chubb U.S. Deferred Compensation Plan, and Pension Excess Benefit Plan of The Chubb Corporation	10-K	10.81	February 25, 2021	
10.73*	Form of Performance Based Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Swiss Executive Management	10-K	10.82	February 25, 2021	
10.74*	Form of Performance Based Restricted Stock Award Terms under the Chubb Limited 2016 Long-Term Incentive Plan for Executive Officers	10-K	10.83	February 25, 2021	
10.75*	Chubb Limited 2016 Long-Term Incentive Plan, as amended and restated	8-K	10.1	May 24, 2021	
10.76*	Employment Terms dated December 8, 2020, between Chubb Limited and Peter Enns [personal email removed]				X
21.1	Subsidiaries of the Company				X
22.1	Guaranteed Securities				X
23.1	Consent of Independent Registered Public Accounting Firm				X
31.1	Certification Pursuant to Section 302 of The Sarbanes-Oxley Act of 2002				X
31.2	Certification Pursuant to Section 302 of The Sarbanes-Oxley Act of 2002				X

Exhibit Number	Exhibit Description	Incorporated by Reference Form	Original Number	Date Filed	Filed Herewith
32.1	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of The Sarbanes-Oxley Act of 2002				X
32.2	Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of The Sarbanes-Oxley Act of 2002				X
101	The following financial information from Chubb Limited's Annual Report on Form 10-K for the year ended December 31, 2021, formatted in Inline XBRL: (i) Consolidated Balance Sheets at December 31, 2021 and 2020; (ii) Consolidated Statements of Operations and Comprehensive Income for the years ended December 31, 2021, 2020, and 2019; (iii) Consolidated Statements of Shareholders' Equity for the years ended December 31, 2021, 2020, and 2019; (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020, and 2019; and (v) Notes to the Consolidated Financial Statements				X
104	The Cover Page Interactive Data File formatted in Inline XBRL (The cover page XBRL tags are embedded in the Inline XBRL document and included in Exhibit 101)				

* Management contract, compensatory plan or arrangement

ITEM 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CHUBB LIMITED

By: /s/ Peter C. Enns

Peter C. Enns
Executive Vice President and Chief Financial Officer

February 24, 2022

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Evan G. Greenberg **Evan G. Greenberg**	Chairman, Chief Executive Officer, and Director	February 24, 2022
/s/ Peter C. Enns **Peter C. Enns**	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 24, 2022
/s/ Annmarie T. Hagan **Annmarie T. Hagan**	Chief Accounting Officer (Principal Accounting Officer)	February 24, 2022
/s/ Michael G. Atieh **Michael G. Atieh**	Director	February 24, 2022
/s/ Sheila P. Burke **Sheila P. Burke**	Director	February 24, 2022
/s/ Mary A. Cirillo **Mary A. Cirillo**	Director	February 24, 2022
/s/ Michael P. Connors **Michael P. Connors**	Director	February 24, 2022
/s/ Robert J. Hugin **Robert J. Hugin**	Director	February 24, 2022

/s/ Robert W. Scully **Robert W. Scully**	Director	February 24, 2022
/s/ Eugene B. Shanks, Jr. **Eugene B. Shanks, Jr.**	Director	February 24, 2022
/s/ Theodore E. Shasta **Theodore E. Shasta**	Director	February 24, 2022
/s/ David H. Sidwell **David H. Sidwell**	Director	February 24, 2022
/s/ Olivier Steimer **Olivier Steimer**	Director	February 24, 2022
/s/ Luis Téllez **Luis Téllez**	Director	February 24, 2022
/s/ Frances F. Townsend **Frances F. Townsend**	Director	February 24, 2022

CHUBB LIMITED AND SUBSIDIARIES

CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2021

Chubb Limited

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS AND INTERNAL CONTROL OVER FINANCIAL REPORTING

Financial Statements

The consolidated financial statements of Chubb Limited (Chubb) were prepared by management, which is responsible for their reliability and objectivity. The statements have been prepared in conformity with accounting principles generally accepted in the United States of America and, as such, include amounts based on informed estimates and judgments of management. Financial information elsewhere in this annual report is consistent with that in the consolidated financial statements.

The Board of Directors (Board), operating through its Audit Committee, which is composed entirely of directors who are not officers or employees of Chubb, provides oversight of the financial reporting process and safeguarding of assets against unauthorized acquisition, use or disposition. The Audit Committee annually recommends the appointment of an independent registered public accounting firm and submits its recommendation to the Board for approval.

The Audit Committee meets with management, the independent registered public accountants and the internal auditor; approves the overall scope of audit work and related fee arrangements; and reviews audit reports and findings. In addition, the independent registered public accountants and the internal auditor meet separately with the Audit Committee, without management representatives present, to discuss the results of their audits; the adequacy of Chubb's internal control; the quality of its financial reporting; and the safeguarding of assets against unauthorized acquisition, use or disposition.

The consolidated financial statements have been audited by an independent registered public accounting firm, PricewaterhouseCoopers LLP, which has been given access to all financial records and related data, including minutes of all meetings of the Board and committees of the Board. Chubb believes that all representations made to our independent registered public accountants during their audits were valid and appropriate.

Management's Report on Internal Control over Financial Reporting

The management of Chubb is responsible for establishing and maintaining adequate internal control over financial reporting. Pursuant to the rules and regulations of the Securities and Exchange Commission, internal control over financial reporting is a process designed by, or under the supervision of our Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

As of December 31, 2021, management has evaluated the effectiveness of Chubb's internal control over financial reporting based on the criteria for effective-internal control over financial reporting established in “Internal Control - Integrated Framework,” issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. Based on this evaluation, management has concluded that Chubb's internal control over financial reporting was effective as of December 31, 2021.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the consolidated financial statements of Chubb included in this Annual Report, has issued a report on the effectiveness of Chubb's internal controls over financial reporting as of December 31, 2021. The report, which expresses an unqualified opinion on the effectiveness of Chubb's internal control over financial reporting as of December 31, 2021, is included in this Item under “Report of Independent Registered Public Accounting Firm” and follows this statement.

/s/ Evan G. Greenberg	/s/ Peter C. Enns
Evan G. Greenberg	Peter C. Enns
Chairman and Chief Executive Officer	Executive Vice President and Chief Financial Officer

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of Chubb Limited

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Chubb Limited and its subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations and comprehensive income, of shareholders' equity and of cash flows for each of the three years in the period ended December 31, 2021, including the related notes and financial statement schedules listed in the index appearing under Item 15(a)2 (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Valuation of Unpaid Losses and Loss Expenses, Net of Reinsurance

As described in Note 7 to the consolidated financial statements, as of December 31, 2021, the Company's liability for unpaid losses and loss expenses, net of reinsurance, was $56.8 billion. The majority of the Company's net unpaid losses and loss expenses arise from the Company's long-tail casualty business (such as general liability and professional liability), U.S. sourced workers' compensation, asbestos-related, environmental pollution and other exposures with high estimation uncertainty. The process of establishing loss and loss expense reserves requires the use of estimates and judgments based on circumstances underlying the insured loss at the date of accrual. The judgments involved in projecting the ultimate losses include the use and interpretation of various standard actuarial reserving methods that place reliance on the extrapolation of actual historical data, loss development patterns, industry data, and other benchmarks as appropriate. The reserves for the various product lines each require different qualitative and quantitative assumptions and judgments, including changes in business mix or volume, changes in ceded reinsurance structures, changes in claims handling practices, reported and projected loss trends, inflation, the legal environment, and the terms and conditions of the contracts sold to the Company's insured parties.

The principal considerations for our determination that performing procedures relating to the valuation of unpaid losses and loss expenses, net of reinsurance, from the long-tail and other exposures as described above, is a critical audit matter are (i) the significant judgment by management in determining the reserve liability, which in turn led to a high degree of auditor subjectivity and judgment in performing procedures relating to the valuation; (ii) the significant audit effort and judgment in evaluating the audit evidence relating to the actuarial reserving methods and assumptions related to extrapolation of actual historical data, loss development patterns, industry data, other benchmarks, and the impact of qualitative and quantitative subjective assumptions and judgments; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Company's valuation of unpaid losses and loss expenses, net of reinsurance, including controls over the selection of actuarial reserving methods and development of significant assumptions. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in performing one or a combination of procedures, including (i) independently estimating reserves on a sample basis using actual historical data and loss development patterns, as well as industry data and other benchmarks, to develop an independent estimate and comparing the independent estimate to management's actuarially determined reserves and (ii) evaluating the appropriateness of management's actuarial reserving methods and the reasonableness of the aforementioned assumptions, as well as assessing qualitative adjustments to carried reserves and the consistency of management's approach period-over-period. Performing these procedures involved testing the completeness and accuracy of data provided by management.

Valuation of Level 3 Investments in the Valuation Hierarchy

As described in Note 4 to the consolidated financial statements, as of December 31, 2021, the Company had total assets measured at fair value of $109.3 billion, of which $2.8 billion were categorized as level 3 in the valuation hierarchy. The level 3 investments are measured at fair value using inputs that are unobservable and reflect management's judgments about assumptions that market participants would use in pricing or, for certain of the investments, management obtains and evaluates a single broker quote, which is typically from a market maker. The valuation of certain of the investments is more subjective when markets are less liquid due to the lack of market based inputs (i.e., stale pricing), which may increase the potential that an investment's estimated fair value is not reflective of the price at which an actual transaction would occur.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The principal considerations for our determination that performing procedures relating to the valuation of level 3 investments in the valuation hierarchy is a critical audit matter are (i) the significant judgment by management in determining the fair value of these investments as they are measured using inputs that are unobservable and are priced using inputs other than quoted prices, which in turn led to a high degree of auditor subjectivity and judgment in performing procedures relating to the estimates; (ii) the significant audit effort and judgment in evaluating the audit evidence related to the valuation; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of the controls relating to the valuation of level 3 investments. These procedures also included, among others (i) obtaining pricing from sources other than those used by management for a sample of investments and comparing management's estimate to the prices independently obtained and (ii) the involvement of professionals with specialized skill and knowledge to assist in developing an independent range of prices for a sample of investments and comparing management's estimate to the independently developed range of prices.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Philadelphia, PA

February 24, 2022

We have served as the Company's auditor since 1985, which includes periods before the Company became subject to SEC reporting requirements.

CONSOLIDATED BALANCE SHEETS

Chubb Limited and Subsidiaries

(in millions of U.S. dollars, except share and per share data)	December 31 2021	December 31 2020
Assets		
Investments		
Fixed maturities available for sale, at fair value, net of valuation allowance - $14 and $20 (amortized cost – $90,493 and $85,188)	$ 93,108	$ 90,699
Fixed maturities held to maturity, at amortized cost, net of valuation allowance - $35 and $44 (fair value – $10,647 and $12,510)	10,118	11,653
Equity securities, at fair value	4,782	4,027
Short-term investments, at fair value (amortized cost – $3,147 and $4,349)	3,146	4,345
Other investments, at fair value	11,169	7,945
Total investments	122,323	118,669
Cash	1,659	1,747
Restricted cash	152	89
Securities lending collateral	1,831	1,844
Accrued investment income	821	867
Insurance and reinsurance balances receivable, net of valuation allowance - $46 and $44	11,322	10,480
Reinsurance recoverable on losses and loss expenses, net of valuation allowance - $329 and $314	17,366	15,592
Reinsurance recoverable on policy benefits	213	206
Deferred policy acquisition costs	5,513	5,402
Value of business acquired	236	263
Goodwill	15,213	15,400
Other intangible assets	5,455	5,811
Prepaid reinsurance premiums	3,028	2,769
Investments in partially-owned insurance companies	3,130	2,813
Other assets	11,792	8,822
Total assets	$ 200,054	$ 190,774
Liabilities		
Unpaid losses and loss expenses	$ 72,943	$ 67,811
Unearned premiums	19,101	17,652
Future policy benefits	5,947	5,713
Insurance and reinsurance balances payable	7,243	6,708
Securities lending payable	1,831	1,844
Accounts payable, accrued expenses, and other liabilities	15,004	14,052
Deferred tax liabilities	389	892
Repurchase agreements	1,406	1,405
Short-term debt	999	—
Long-term debt	15,169	14,948
Trust preferred securities	308	308
Total liabilities	140,340	131,333
Commitments and contingencies (refer to Note 10)		
Shareholders' equity		
Common Shares (CHF 24.15 par value; 474,021,114 and 477,605,264 shares issued; 426,572,612 and 450,732,625 shares outstanding)	10,985	11,064
Common Shares in treasury (47,448,502 and 26,872,639 shares)	(7,464)	(3,644)
Additional paid-in capital	8,478	9,815
Retained earnings	47,365	39,337
Accumulated other comprehensive income (AOCI)	350	2,869
Total shareholders' equity	59,714	59,441
Total liabilities and shareholders' equity	$ 200,054	$ 190,774

See accompanying notes to the Consolidated Financial Statements

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME

Chubb Limited and Subsidiaries

For the years ended December 31, 2021, 2020, and 2019 (in millions of U.S. dollars, except per share data)	2021	2020	2019
Revenues			
Net premiums written	$ 37,868	$ 33,820	$ 32,275
Increase in unearned premiums	(1,513)	(703)	(985)
Net premiums earned	36,355	33,117	31,290
Net investment income	3,456	3,375	3,426
Net realized gains (losses):			
Other-than-temporary impairment (OTTI) losses gross	—	—	(90)
Portion of OTTI losses recognized in other comprehensive income (OCI)	—	—	32
Net OTTI losses recognized in income	—	—	(58)
Net realized gains (losses) excluding OTTI losses	1,152	(498)	(472)
Net realized gains (losses) (includes $3, $(281), and $(31) reclassified from AOCI)	1,152	(498)	(530)
Total revenues	40,963	35,994	34,186
Expenses			
Losses and loss expenses	21,980	21,710	18,730
Policy benefits	699	784	740
Policy acquisition costs	6,918	6,547	6,153
Administrative expenses	3,136	2,979	3,030
Interest expense	492	516	552
Other (income) expense	(2,365)	(994)	(596)
Amortization of purchased intangibles	287	290	305
Chubb integration expenses	—	—	23
Total expenses	31,147	31,832	28,937
Income before income tax	9,816	4,162	5,249
Income tax expense (includes benefit of $(6), $(36), and nil on unrealized gains and losses reclassified from AOCI)	1,277	629	795
Net income	$ 8,539	$ 3,533	$ 4,454
Other comprehensive income (loss)			
Unrealized appreciation (depreciation)	$ (2,935)	$ 2,311	$ 3,704
Reclassification adjustment for net realized (gains) losses included in net income	(3)	281	31
	(2,938)	2,592	3,735
Change in:			
Cumulative foreign currency translation adjustment	(530)	306	13
Postretirement benefit liability adjustment	522	(232)	(76)
Other comprehensive income (loss), before income tax	(2,946)	2,666	3,672
Income tax (expense) benefit related to OCI items	427	(416)	(605)
Other comprehensive income (loss)	(2,519)	2,250	3,067
Comprehensive income	$ 6,020	$ 5,783	$ 7,521
Earnings per share			
Basic earnings per share	$ 19.41	$ 7.82	$ 9.77
Diluted earnings per share	$ 19.27	$ 7.79	$ 9.71

See accompanying notes to the Consolidated Financial Statements

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

Chubb Limited and Subsidiaries

For the years ended December 31, 2021, 2020, and 2019 (in millions of U.S. dollars)	2021	2020	2019
Common Shares			
Balance – beginning of year	$ 11,064	$ 11,121	$ 11,121
Cancellation of treasury shares	(79)	(57)	—
Balance – end of year	10,985	11,064	11,121
Common Shares in treasury			
Balance – beginning of year	(3,644)	(3,754)	(2,618)
Common Shares repurchased	(4,861)	(516)	(1,531)
Cancellation of treasury shares	590	323	—
Net shares issued under employee share-based compensation plans	451	303	395
Balance – end of year	(7,464)	(3,644)	(3,754)
Additional paid-in capital			
Balance – beginning of year	9,815	11,203	12,557
Net shares issued under employee share-based compensation plans	(179)	(195)	(178)
Exercise of stock options	(52)	(50)	(82)
Share-based compensation expense	286	255	266
Funding of dividends declared to Retained earnings	(1,392)	(1,398)	(1,360)
Balance – end of year	8,478	9,815	11,203
Retained earnings			
Balance – beginning of year	39,337	36,142	31,700
Cumulative effect of adoption of accounting standards	—	(72)	(12)
Balance – beginning of year, as adjusted	39,337	36,070	31,688
Net income	8,539	3,533	4,454
Cancellation of treasury shares	(511)	(266)	—
Funding of dividends declared from Additional paid-in capital	1,392	1,398	1,360
Dividends declared on Common Shares	(1,392)	(1,398)	(1,360)
Balance – end of year	47,365	39,337	36,142
Accumulated other comprehensive income (AOCI)			
Net unrealized appreciation (depreciation) on investments			
Balance – beginning of year	4,673	2,543	(545)
Change in year, before reclassification from AOCI, net of income tax (expense) benefit of $527, $(426), and $(647)	(2,408)	1,885	3,057
Amounts reclassified from AOCI, net of income tax (expense) of $(6), $(36), and nil	(9)	245	31
Change in year, net of income tax (expense) benefit of $521, $(462), and $(647)	(2,417)	2,130	3,088
Balance – end of year	2,256	4,673	2,543
Cumulative foreign currency translation adjustment			
Balance – beginning of year	(1,637)	(1,939)	(1,976)
Change in year, net of income tax (expense) benefit of $21, $(4), and $24	(509)	302	37
Balance – end of year	(2,146)	(1,637)	(1,939)
Postretirement benefit liability adjustment			
Balance – beginning of year	(167)	15	73
Change in year, net of income tax (expense) benefit of $(115), $50, and $18	407	(182)	(58)
Balance – end of year	240	(167)	15
Accumulated other comprehensive income (AOCI)	350	2,869	619
Total shareholders' equity	$ 59,714	$ 59,441	$ 55,331

See accompanying notes to the Consolidated Financial Statements

CONSOLIDATED STATEMENTS OF CASH FLOWS

Chubb Limited and Subsidiaries

For the years ended December 31, 2021, 2020, and 2019 (in millions of U.S. dollars)	**2021**	2020	2019
Cash flows from operating activities			
Net income	**$ 8,539**	$ 3,533	$ 4,454
Adjustments to reconcile net income to net cash flows from operating activities			
Net realized (gains) losses	**(1,152)**	498	530
Amortization of premiums/discounts on fixed maturities	**332**	367	395
Amortization of purchased intangibles	**287**	290	305
Deferred income taxes	**(74)**	(333)	(97)
Unpaid losses and loss expenses	**5,791**	4,664	(257)
Unearned premiums	**1,857**	846	1,051
Future policy benefits	**239**	236	215
Insurance and reinsurance balances payable	**582**	535	(302)
Accounts payable, accrued expenses, and other liabilities	**536**	(98)	(207)
Income taxes payable	**48**	46	(7)
Insurance and reinsurance balances receivable	**(984)**	(114)	(270)
Reinsurance recoverable	**(1,953)**	(336)	838
Deferred policy acquisition costs	**(247)**	(89)	(344)
Equity in net income of partially-owned entities	**(2,433)**	(1,019)	(617)
Other	**(219)**	759	655
Net cash flows from operating activities	**11,149**	9,785	6,342
Cash flows from investing activities			
Purchases of fixed maturities available for sale	**(30,222)**	(26,298)	(25,846)
Purchases of fixed maturities held to maturity	**(594)**	(202)	(229)
Purchases of equity securities	**(1,167)**	(6,419)	(531)
Sales of fixed maturities available for sale	**6,596**	11,377	13,110
Sales of to be announced mortgage-backed securities	**—**	—	6
Sales of equity securities	**1,018**	3,880	611
Maturities and redemptions of fixed maturities available for sale	**17,361**	12,450	9,039
Maturities and redemptions of fixed maturities held to maturity	**1,964**	995	946
Net change in short-term investments	**1,175**	(81)	(1,117)
Net derivative instruments settlements	**(219)**	(113)	(703)
Private equity contributions	**(2,471)**	(1,924)	(1,315)
Private equity distributions	**1,421**	907	1,390
Acquisition of subsidiaries (net of cash acquired of nil, nil, $45)	**—**	—	(29)
Payment, including deposit, for Huatai Group interest	**(1,184)**	(1,623)	(580)
Other	**(337)**	(470)	(657)
Net cash flows used for investing activities	**(6,659)**	(7,521)	(5,905)
Cash flows from financing activities			
Dividends paid on Common Shares	**(1,401)**	(1,388)	(1,354)
Common Shares repurchased	**(4,861)**	(523)	(1,530)
Proceeds from issuance of long-term debt	**1,576**	988	2,828
Proceeds from issuance of repurchase agreements	**1,858**	2,354	2,817
Repayment of long-term debt	**—**	(1,301)	(510)
Repayment of repurchase agreements	**(1,858)**	(2,354)	(2,817)
Proceeds from share-based compensation plans	**300**	145	204
Policyholder contract deposits and other	**512**	470	514
Policyholder contract withdrawals and other	**(454)**	(386)	(303)
Other	**(81)**	(87)	—
Net cash flows used for financing activities	**(4,409)**	(2,082)	(151)
Effect of foreign currency rate changes on cash and restricted cash	**(106)**	8	20
Net increase (decrease) in cash and restricted cash	**(25)**	190	306
Cash and restricted cash – beginning of year	**1,836**	1,646	1,340
Cash and restricted cash – end of year	**$ 1,811**	$ 1,836	$ 1,646
Supplemental cash flow information			
Taxes paid	**$ 1,298**	$ 902	$ 912
Interest paid	**$ 492**	$ 524	$ 512

See accompanying notes to the Consolidated Financial Statements

1. Summary of significant accounting policies

a) Basis of presentation

Chubb Limited is a holding company incorporated in Zurich, Switzerland. Chubb Limited, through its subsidiaries, provides a broad range of insurance and reinsurance products to insureds worldwide. Our results are reported through the following business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. Refer to Note 15 for additional information.

The accompanying Consolidated Financial Statements, which include the accounts of Chubb Limited and its subsidiaries (collectively, Chubb, we, us, or our), have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) and, in the opinion of management, reflect all adjustments necessary for a fair statement of the results and financial position for such periods. All significant intercompany accounts and transactions, including internal reinsurance transactions, have been eliminated.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Amounts included in the Consolidated Financial Statements reflect our best estimates and assumptions; actual amounts could differ materially from these estimates. Chubb's principal estimates include:

- unpaid loss and loss expense reserves, including long-tail asbestos and environmental (A&E) reserves and non-A&E casualty exposures;
- future policy benefits reserves;
- amortization of deferred policy acquisition costs and value of business acquired (VOBA);
- reinsurance recoverable, including a valuation allowance for uncollectible reinsurance;
- the assessment of risk transfer for certain structured insurance and reinsurance contracts;
- the valuation of the investment portfolio and assessment of valuation allowance for expected credit losses;
- the valuation of deferred income taxes;
- the valuation and amortization of purchased intangibles; and
- the assessment of goodwill for impairment.

b) Premiums

Premiums are generally recorded as written upon inception of the policy. For multi-year policies for which premiums written are payable in annual installments, only the current annual premium is included as written at policy inception due to the ability of the insured/reinsured to commute or cancel coverage within the policy term. The remaining annual premiums are recorded as written at each successive anniversary date within the multi-year term.

For property and casualty (P&C) insurance and reinsurance products, premiums written are primarily earned on a pro-rata basis over the policy terms to which they relate. Unearned premiums represent the portion of premiums written applicable to the unexpired portion of the policies in force. For retrospectively-rated policies, written premiums are adjusted to reflect expected ultimate premiums consistent with changes to incurred losses, or other measures of exposure as stated in the policy, and earned over the policy coverage period.

Mandatory reinstatement premiums assessed on reinsurance policies are earned in the period of the loss event that gave rise to the reinstatement premiums. All remaining unearned premiums are recognized over the remaining coverage period.

Premiums from long-duration contracts such as certain traditional term life, whole life, endowment, and long-duration personal accident and health (A&H) policies are generally recognized as revenue when due from policyholders. Traditional life policies include those contracts with fixed and guaranteed premiums and benefits. Benefits and expenses are matched with income to result in the recognition of profit over the life of the contracts.

Retroactive loss portfolio transfer (LPT) contracts in which the insured loss events occurred prior to contract inception are evaluated to determine whether they meet criteria for reinsurance accounting. If reinsurance accounting is appropriate, written premiums are fully earned and corresponding losses and loss expenses recognized at contract inception. These contracts can cause significant variances in gross premiums written, net premiums written, net premiums earned, and net incurred losses in the years in which they are written. Reinsurance contracts sold not meeting the criteria for reinsurance accounting are recorded using the deposit method as described below in Note 1 k).

Reinsurance premiums assumed are based on information provided by ceding companies supplemented by our own estimates of premium when we have not received ceding company reports. Estimates are reviewed and adjustments are recorded in the period in which they are determined. Premiums are earned over the coverage terms of the related reinsurance contracts and range from one to three years.

c) Deferred policy acquisition costs and value of business acquired
Policy acquisition costs consist of commissions (direct and ceded), premium taxes, and certain underwriting costs related directly to the successful acquisition of new or renewal insurance contracts. A VOBA intangible asset is established upon the acquisition of blocks of long-duration contracts in a business combination and represents the present value of estimated net cash flows for the contracts in force at the acquisition date. Acquisition costs and VOBA, collectively policy acquisition costs, are deferred and amortized. Amortization is recorded in Policy acquisition costs in the Consolidated statements of operations. Policy acquisition costs on P&C contracts are generally amortized ratably over the period in which premiums are earned. Policy acquisition costs on traditional long-duration contracts are amortized over the estimated life of the contracts, generally in proportion to premium revenue recognized based upon the same assumptions used in estimating the liability for future policy benefits. For non-traditional long-duration contracts, we amortize policy acquisition costs over the expected life of the contracts in proportion to expected gross profits. The effect of changes in estimates of expected gross profits is reflected in the period the estimates are revised. Policy acquisition costs are reviewed to determine if they are recoverable from future income, including investment income. Unrecoverable policy acquisition costs are expensed in the period identified.

Advertising costs are expensed as incurred except for direct-response campaigns that qualify for cost deferral, principally related to long-duration A&H business produced by the Overseas General Insurance segment, which are deferred and recognized as a component of Policy acquisition costs. For individual direct-response marketing campaigns that we can demonstrate have specifically resulted in incremental sales to customers and such sales have probable future economic benefits, incremental costs directly related to the marketing campaigns are capitalized as Deferred policy acquisition costs. Deferred policy acquisition costs, including deferred marketing costs, are reviewed regularly for recoverability from future income, including investment income, and amortized in proportion to premium revenue recognized, primarily over a ten-year period, the expected economic future benefit period based upon the same assumptions used in estimating the liability for future policy benefits. The expected future benefit period is evaluated periodically based on historical results and adjusted prospectively. The amount of deferred marketing costs reported in Deferred policy acquisition costs in the Consolidated balance sheets was $189 million and $226 million at December 31, 2021 and 2020, respectively. Amortization expense for deferred marketing costs was $85 million, $99 million, and $109 million for the years ended December 31, 2021, 2020, and 2019, respectively.

d) Reinsurance
Chubb assumes and cedes reinsurance with other insurance companies to provide greater diversification of business and minimize the net loss potential arising from large risks. Ceded reinsurance contracts do not relieve Chubb of its primary obligation to policyholders.

For both ceded and assumed reinsurance, risk transfer requirements must be met in order to account for a contract as reinsurance, principally resulting in the recognition of cash flows under the contract as premiums and losses. To meet risk transfer requirements, a reinsurance contract must include insurance risk, consisting of both underwriting and timing risk, and a reasonable possibility of a significant loss for the assuming entity. To assess risk transfer for certain contracts, Chubb generally develops expected discounted cash flow analyses at contract inception. Deposit accounting is used for contracts that do not meet risk transfer requirements. Deposit accounting requires that consideration received or paid be recorded in the balance sheet as opposed to recording premiums written or losses incurred in the statement of operations. Non-refundable fees on deposit contracts are earned based on the terms of the contract described below in Note 1 k).

Reinsurance recoverable includes balances due from reinsurance companies for paid and unpaid losses and loss expenses and future policy benefits that will be recovered from reinsurers, based on contracts in force. The method for determining the reinsurance recoverable on unpaid losses and loss expenses incurred but not reported (IBNR) involves actuarial estimates consistent with those used to establish the associated liability for unpaid losses and loss expenses as well as a determination of Chubb's ability to cede unpaid losses and loss expenses under the terms of the reinsurance agreement.

Reinsurance recoverable is presented net of a valuation allowance for uncollectible reinsurance determined based upon a review of the financial condition of reinsurers and other factors. The valuation allowance for uncollectible reinsurance is based on an estimate of the reinsurance recoverable balance that will ultimately be unrecoverable due to reinsurer insolvency, a contractual dispute, or any other reason. The valuation of this allowance includes several judgments including certain aspects of the allocation of reinsurance recoverable on IBNR claims by reinsurer and a default analysis to estimate uncollectible reinsurance. The primary components of the default analysis are reinsurance recoverable balances by reinsurer, net of collateral, and default factors used to determine the portion of a reinsurer's balance deemed uncollectible. The definition of collateral for this purpose requires some judgment and is generally limited to assets held in a Chubb-only beneficiary trust, letters of credit, and liabilities held with the same legal entity for which Chubb believes there is a contractual right of offset. The determination of the default factor is principally based on the financial strength rating of the reinsurer. Default factors require considerable judgment and are determined using the current financial strength rating, or rating equivalent, of each reinsurer as well as other key considerations and assumptions. Changes in the valuation allowance for uncollectible reinsurance recoverables are recorded in Losses and loss expenses in the Consolidated statements of operations. The more significant considerations to calculate the valuation allowance include, but are not necessarily limited to, the following:

- For reinsurers that maintain a financial strength rating from a major rating agency, and for which recoverable balances are considered representative of the larger population (i.e., default probabilities are consistent with similarly rated reinsurers and payment durations conform to averages), the financial rating is based on a published source and the default factor is based on published default statistics of a major rating agency applicable to the reinsurer's particular rating class. When a recoverable is expected to be paid in a brief period of time by a highly rated reinsurer, such as certain property catastrophe claims, a default factor may not be applied;
- For balances recoverable from reinsurers that are both unrated by a major rating agency and for which management is unable to determine a credible rating equivalent based on a parent, affiliate, or peer company, we determine a rating equivalent based on an analysis of the reinsurer that considers an assessment of the creditworthiness of the particular entity, industry benchmarks, or other factors as considered appropriate. We then apply the applicable default factor for that rating class. For balances recoverable from unrated reinsurers for which the ceded reserve is below a certain threshold, we generally apply a default factor of 34 percent, consistent with published statistics of a major rating agency;
- For balances recoverable from reinsurers that are either insolvent or under regulatory supervision, we establish a default factor and resulting valuation allowance for uncollectible reinsurance based on reinsurer-specific facts and circumstances. Upon initial notification of an insolvency, we generally recognize an expense for a substantial portion of all balances outstanding, net of collateral, through a combination of write-offs of recoverable balances and increases to the valuation allowance for uncollectible reinsurance. When regulatory action is taken on a reinsurer, we generally recognize a default factor by estimating an expected recovery on all balances outstanding, net of collateral. When sufficient credible information becomes available, we adjust the valuation allowance for uncollectible reinsurance by establishing a default factor pursuant to information received; and
- For other recoverables, management determines the valuation allowance for uncollectible reinsurance based on the specific facts and circumstances.

The methods used to determine the reinsurance recoverable balance and related valuation allowance for uncollectible reinsurance are regularly reviewed and updated, and any resulting adjustments are reflected in earnings in the period identified.

The methods used to determine the valuation allowance for uncollectible high deductible recoverable amounts and valuation allowance for insurance and reinsurance balances receivable are similar to the processes used to determine the valuation allowance for uncollectible reinsurance recoverable. For information on high deductible policies, refer to section h) Unpaid losses and loss expenses, below.

Prepaid reinsurance premiums represent the portion of premiums ceded to reinsurers applicable to the unexpired coverage terms of the reinsurance contracts in-force.

The value of reinsurance business assumed is the deferred gain or loss related to loss portfolio transfers assumed and is calculated as the difference between the estimated ultimate value of the liabilities assumed under retroactive reinsurance contracts over consideration received. The gain or loss is amortized and recorded to Losses and loss expenses based on the payment pattern of the losses assumed. The unamortized value is reviewed regularly to determine if it is recoverable based upon the terms of the contract, estimated losses and loss expenses, and anticipated investment income. Unrecoverable amounts are expensed in the period identified. The value of reinsurance business assumed at December 31, 2021 and 2020 were immaterial.

e) Investments
Fixed maturities, equity securities, and short-term investments
Fixed maturities are classified as either available for sale or held to maturity.

- Available for sale (AFS) portfolio is reported at fair value, net of a valuation allowance for credit losses, with changes in fair value recorded as a separate component of AOCI in Shareholders' equity.
- Held to maturity (HTM) portfolio includes securities for which we have the ability and intent to hold to maturity or redemption and is reported at amortized cost, net of a valuation allowance for credit losses.

Equity securities are reported at fair value with changes in fair value recorded in Net realized gains (losses) on the Consolidated statements of operations.

Realized gains or losses on sales of investments are determined on a first-in, first-out basis.

Short-term investments comprise securities due to mature within one year of the date of purchase and are recorded at fair value which typically approximates cost.

Interest, dividend income, and amortization of fixed maturity market premiums and discounts, related to these securities are recorded in Net investment income, net of investment management and custody fees, in the Consolidated statements of operations.

In addition, net investment income includes the amortization of the fair value adjustment related to the acquired invested assets of The Chubb Corporation (Chubb Corp). At December 31, 2021, the remaining balance of this fair value adjustment was $127 million which is expected to amortize over the next two years; however, the estimate could vary based on current market conditions, bond calls, and the duration of the acquired investment portfolio. In addition, sales of these acquired fixed maturities would also reduce the fair value adjustment balance. For mortgage-backed securities and any other holdings for which there is a prepayment risk, prepayment assumptions are evaluated and revised as necessary. Any adjustments required due to the resultant change in effective yields and maturities are recognized prospectively. Prepayment fees or call premiums that are only payable when a security is called prior to its maturity are earned when received and reflected in Net investment income.

Valuation allowance for fixed income securities
Management evaluates current expected credit losses (CECL) for all HTM securities each quarter. U.S. treasury and agency securities and U.S. government agency mortgage-backed securities are assumed to have no risk of non-payment and therefore are excluded from the CECL evaluation. The remaining HTM securities are evaluated for potential credit loss on a collective pool basis. We elected to pool HTM securities by 1) external credit rating and 2) time to maturity (duration). These characteristics are the most representative of similar risk characteristics within our portfolio. Chubb pools HTM securities and calculates an expected credit loss for each pool using Moody’s corporate bond default average, corporate bond recovery rate, and an economic cycle multiplier. The multiplier is based on the leading economic index and will adjust the average default frequency for a forward-looking economic outlook. Management monitors the credit quality of HTM securities through the review of external credit ratings on a quarterly basis.

Management evaluates expected credit losses (ECL) for AFS securities when fair value is below amortized cost. AFS securities are evaluated for potential credit loss on an individual security level but the evaluation may use assumptions consistent with expectations of credit losses for a group of similar securities. If management has the intent to sell or will be required to sell the security before recovery, the entire impairment loss will be recorded through income to Net realized gains and losses. If management does not have the intent to sell or will not be required to sell the security before recovery, an allowance for credit losses is established and is recorded through income to Net realized gains and losses, and the non-credit loss portion is recorded through other comprehensive income.

Examples of criteria that are collectively evaluated to determine if a credit loss has occurred include the following:

- The extent to which the fair value is less than amortized cost;
- Adverse conditions related to the security, industry, or geographic area;
- Downgrades in the security's credit rating by a rating agency; and
- Failure of the issuer to make scheduled principal or interest payments

AFS securities that meet any one of the criteria included above will be subject to a discounted cash flow analysis by comparing the present value of expected future cash flows with the amortized cost basis. Projected cash flows are driven primarily by assumptions regarding probability of default and the timing and amount of recoveries associated with defaults. Chubb developed the projected cash flows using market data, issuer-specific information, and credit ratings. In combination with contractual cash flows and the use of historical default and recovery data by Moody's Investors Service (Moody's) rating category we generate expected cash flows using the average cumulative issuer-weighted global default rates by letter rating.

If the present value of expected future cash flows is less than the amortized cost, a credit loss exists and an allowance for credit losses will be recognized. If the present value of expected future cash flows is equal to or greater than the amortized cost basis, management will conclude an expected credit loss does not exist.

Management reviews credit losses and the valuation allowance for expected credit losses each quarter. When all or a portion of a fixed maturity security is identified to be uncollectible and written off, the valuation allowance for expected credit losses is reduced. In general, a security is considered uncollectible no later than when all efforts to collect contractual cash flows have been exhausted. Below are considerations for when a security may be deemed uncollectible:

- We have sufficient information to determine that the issuer of the security is insolvent;
- We receive notice that the issuer of the security has filed for bankruptcy, and the collectability is expected to be adversely impacted by the bankruptcy;
- The issuer of a security has violated multiple debt covenants;
- Amounts have been past due for a specified period of time with no response from the issuer;
- A significant deterioration in the value of the collateral has occurred;
- We have received correspondence from the issuer of the security indicating that it doesn’t intend to pay the contractual principal and interest.

We elected to not measure an allowance for accrued investment income as uncollectible balances are written off in a timely manner, typically 30 to 45 days after uncollected balances are due.

Prior to January 1, 2020, fixed income securities were evaluated individually for other-than-temporary impairment (OTTI) and a realized loss was recognized once certain criteria were met.

Other investments
Other investments principally comprise investment funds, limited partnerships, partially-owned investment companies, life insurance policies, policy loans, and non-qualified separate account assets.

<u>Investment funds and limited partnerships</u>
Investment funds, limited partnerships, and all other investments over which Chubb cannot exercise significant influence are accounted for as follows. Generally, we own less than three percent of the investee’s shares.

- Income and expenses from these funds are reported within Net investment income.
- These funds are carried at net asset value, which approximates fair value with changes in fair value recorded in Net realized gains (losses) on the Consolidated statements of operations. Refer to Note 4 for a further discussion on net asset value.
- As a result of the timing of the receipt of valuation data from the investment managers, these investments are generally reported on a three-month lag.
- Sales of these investments are reported within Net realized gains (losses).

Partially-owned investment companies
Partially-owned investment companies are limited partnerships where our ownership interest is in excess of three percent are accounted for under the equity method because Chubb exerts significant influence. These investments apply investment company accounting to determine operating results, and Chubb retains the investment company accounting in applying the equity method.

- This means that investment income, realized gains or losses, and unrealized gains or losses are included in the portion of equity earnings reflected in Other (income) expense.
- As a result of the timing of the receipt of valuation data from the investment managers, these investments are generally reported on a three-month lag.

Other

- Policy loans are carried at outstanding balance and interest income is reflected in Net investment income.
- Life insurance policies are carried at policy cash surrender value and income is reflected in Other (income) expense.
- Non-qualified separate account assets are supported by assets that do not qualify for separate accounting reporting under GAAP. The underlying securities are recorded on a trade date basis and carried at fair value. Unrealized gains and losses on non-qualified separate account assets are reflected in Other (income) expense.

Investments in partially-owned insurance companies
Investments in partially-owned insurance companies primarily represent direct investments in which Chubb has significant influence and as such, meet the requirements for equity accounting. Generally, we own twenty percent or more of the investee's shares. We report our share of the net income or loss of the partially-owned insurance companies in Other (income) expense.

Derivative instruments
Chubb recognizes all derivatives at fair value in the Consolidated balance sheets in either Accounts payable, accrued expenses, and other liabilities or Other assets. Changes in fair value are included in Net realized gains (losses) in the Consolidated statements of operations. We did not designate any derivatives as accounting hedges. We participate in derivative instruments in two principal ways:

(i) To sell protection to customers as an insurance or reinsurance contract that meets the definition of a derivative for accounting purposes. This category principally comprised our GLB contracts; and

(ii) To mitigate financial risks and manage certain investment portfolio risks and exposures, including assets and liabilities held in foreign currencies. We use derivative instruments including futures, options, swaps, and foreign currency forward contracts. Refer to Note 10 for additional information.

Securities lending program
Chubb participates in a securities lending program operated by a third-party banking institution whereby certain assets are loaned to qualified borrowers and from which we earn an incremental return which is recorded within Net investment income in the Consolidated statements of operations.

Borrowers provide collateral, in the form of either cash or approved securities, at a minimum of 102 percent of the fair value of the loaned securities. Each security loan is deemed to be an overnight transaction. Cash collateral is invested in a collateral pool which is managed by the banking institution. The collateral pool is subject to written investment guidelines with key objectives which include the safeguard of principal and adequate liquidity to meet anticipated redemptions. The fair value of the loaned securities is monitored on a daily basis, with additional collateral obtained or refunded as the fair value of the loaned securities changes. The collateral is held by the third-party banking institution, and the collateral can only be accessed in the event that the institution borrowing the securities is in default under the lending agreement. As a result of these restrictions, we consider our securities lending activities to be non-cash investing and financing activities. An indemnification agreement with the lending agent protects us in the event a borrower becomes insolvent or fails to return any of the securities on loan.

The fair value of the securities on loan is included in fixed maturities and equity securities in the Consolidated balance sheets. The securities lending collateral is reported as a separate line in the Consolidated balance sheets with a related liability reflecting our obligation to return the collateral plus interest.

Repurchase agreements
Similar to securities lending arrangements, securities sold under repurchase agreements, whereby Chubb sells securities and repurchases them at a future date for a predetermined price, are accounted for as collateralized investments and borrowings and are recorded at the contractual repurchase amounts plus accrued interest. Assets to be repurchased are the same or substantially the same as the assets transferred, and the transferor, through right of substitution, maintains the right and ability to redeem the collateral on short notice. The fair value of the underlying securities is included in fixed maturities and equity securities. In contrast to securities lending programs, the use of cash received is not restricted. We report the obligation to return the cash as Repurchase agreements in the Consolidated balance sheets and record the fees under these repurchase agreements within Interest expense on the Consolidated statements of operations.

Refer to Note 4 for a discussion on the determination of fair value for Chubb's various investment securities.

f) Cash
We have agreements with a third-party bank provider which implemented two international multi-currency notional cash pooling programs. In each program, participating Chubb entities establish deposit accounts in different currencies with the bank provider and each day the credit or debit balances in every account are notionally translated into a single currency (U.S. dollars) and then notionally pooled. The bank extends overdraft credit to any participating Chubb entity as needed, provided that the overall notionally-pooled balance of all accounts in each pool at the end of each day is at least zero. Actual cash balances are not physically converted and are not commingled between legal entities. Any overdraft balances incurred under this program by a Chubb entity would be guaranteed by Chubb Limited (up to $300 million in the aggregate). Our syndicated letter of credit facility allows for same day drawings to fund a net pool overdraft should participating Chubb entities overdraw contributed funds from the pool.

Restricted cash
Restricted cash in the Consolidated balance sheets represents amounts held for the benefit of third parties and is legally or contractually restricted as to withdrawal or usage. Amounts include deposits with U.S. and non-U.S. regulatory authorities, trust funds set up for the benefit of ceding companies, and amounts pledged as collateral to meet financing arrangements.

The following table provides a reconciliation of cash and restricted cash reported within the Consolidated balance sheets that total to the amounts shown in the Consolidated statements of cash flows:

	December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Cash	**$ 1,659**	$ 1,747	$ 1,537
Restricted cash	**152**	89	109
Total cash and restricted cash shown in the Consolidated statements of cash flows	**$ 1,811**	$ 1,836	$ 1,646

g) Goodwill and Other intangible assets
Goodwill represents the excess of the cost of acquisitions over the fair value of net assets acquired and is not amortized. Goodwill is assigned at acquisition to the applicable reporting unit of the acquired entities giving rise to the goodwill. Goodwill impairment tests are performed annually or more frequently if circumstances indicate a possible impairment. For goodwill impairment testing, we use a qualitative assessment to determine whether it is more likely than not (i.e., more than a 50 percent probability) that the fair value of a reporting unit is greater than its carrying amount. If our assessment indicates less than a 50 percent probability that fair value exceeds carrying value, we quantitatively estimate a reporting unit's fair value. Goodwill recorded in connection with investments in partially-owned insurance companies is recorded in Investments in partially-owned insurance companies and is also measured for impairment annually.

Indefinite lived intangible assets are not subject to amortization. Finite lived intangible assets are amortized over their useful lives, generally with an average original useful life of 25 years. Intangible assets are regularly reviewed for indicators of impairment. Impairment is recognized if the carrying amount is not recoverable from its undiscounted cash flows and is measured as the difference between the carrying amount and fair value.

h) Unpaid losses and loss expenses
A liability is established for the estimated unpaid losses and loss expenses under the terms of, and with respect to, Chubb's policies and agreements. Similar to premiums that are recognized as revenues over the coverage period of the policy, a liability for unpaid losses and loss expenses is recognized as expense when insured events occur over the coverage period of the policy.

This liability includes a provision for both reported claims (case reserves) and incurred but not reported claims (IBNR reserves). IBNR reserve estimates are generally calculated by first projecting the ultimate cost of all losses that have occurred (expected losses), and then subtracting paid losses, case reserves, and loss expenses. The methods of determining such estimates and establishing the resulting liability are reviewed regularly and any adjustments are reflected in income in the period in which they become known. Future developments may result in losses and loss expenses materially greater or less than recorded amounts.

Except for net unpaid loss and loss expense reserves for certain structured settlements for which the timing and amount of future claim payments are reliably determinable and certain reserves for unsettled claims, Chubb does not discount its P&C loss reserves. The net undiscounted reserves related to structured settlements and certain reserves for unsettled claims are immaterial.

Included in Unpaid losses and loss expenses are liabilities for A&E claims and expenses. These unpaid losses and loss expenses are principally related to claims arising from remediation costs associated with hazardous waste sites and bodily-injury claims related to asbestos products and environmental hazards. The estimation of these liabilities is particularly sensitive to changes in the legal environment including specific settlements that may be used as precedents to settle future claims. However, Chubb does not anticipate future changes in laws and regulations in setting its A&E reserve levels.

Also included in Unpaid losses and loss expenses is the fair value adjustment of $90 million and $110 million at December 31, 2021 and 2020, respectively, related to Chubb Corp's historical unpaid losses and loss expenses. The estimated fair value consists of the present value of the expected net unpaid loss and loss adjustment expense payments adjusted for an estimated risk margin. The estimated cash flows are discounted at a risk free rate. The estimated risk margin varies based on the inherent risks associated with each type of reserve. The fair value is amortized through Amortization of purchased intangibles on the Consolidated statements of operations through the year 2032, based on the estimated payout patterns of unpaid loss and loss expenses at the acquisition date.

Our loss reserves are presented net of contractual deductible recoverable amounts due from policyholders. Under the terms of certain high deductible policies which we offer, such as workers' compensation and general liability, our customers are responsible to reimburse us for an agreed-upon dollar amount per claim. In nearly all cases we are required under such policies to pay covered claims first, and then seek reimbursement for amounts within the applicable deductible from our customers. We generally seek to mitigate this risk through collateral agreements.

Prior period development arises from changes to loss estimates recognized in the current year that relate to loss reserves first reported in previous calendar years and excludes the effect of losses from the development of earned premiums from previous accident years.

For purposes of analysis and disclosure, management views prior period development to be changes in the nominal value of loss estimates from period to period, net of premium and profit commission adjustments on loss sensitive contracts. Prior period development generally excludes changes in loss estimates that do not arise from the emergence of claims, such as those related to uncollectible reinsurance, interest, unallocated loss adjustment expenses, or foreign currency. Accordingly, specific items excluded from prior period development include the following: gains/losses related to foreign currency remeasurement; losses recognized from the early termination or commutation of reinsurance agreements that principally relate to the time value of money; changes in the value of reinsurance business assumed reflected in losses incurred but principally related to the time value of money; and losses that arise from changes in estimates of earned premiums from prior accident years. Except for foreign currency remeasurement, which is included in Net realized gains (losses), these items are included in current year losses.

i) Future policy benefits

The valuation of long-duration contract reserves requires management to make estimates and assumptions regarding expenses, mortality, persistency, and investment yields. Estimates are primarily based on historical experience and include a margin for adverse deviation. Interest rates used in calculating reserves range from less than 1.0 percent to 9.0 percent at both December 31, 2021 and 2020. Actual results could differ materially from these estimates. Management monitors actual experience and where circumstances warrant, will revise assumptions and the related reserve estimates. Revisions are recorded in the period they are determined.

Certain of our long-duration contracts are supported by assets that do not qualify for separate account reporting under GAAP. These assets are classified as non-qualified separate account assets and reported in Other investments and the offsetting liabilities are reported in Future policy benefits in the Consolidated balance sheets. Changes in the fair value of separate account assets that do not qualify for separate account reporting under GAAP are reported in Other income (expense) and the offsetting movements in the liabilities are included in Policy benefits in the Consolidated statements of operations.

j) Assumed reinsurance programs involving minimum benefit guarantees under variable annuity contracts
Chubb reinsures various death and living benefit guarantees associated with variable annuities issued primarily in the United States. We generally receive a monthly premium during the accumulation phase of the covered annuities (in-force) based on a percentage of either the underlying accumulated account values or the underlying accumulated guaranteed values. Depending on an annuitant's age, the accumulation phase can last many years. To limit our exposure under these programs, all reinsurance treaties include annual or aggregate claim limits and many include an aggregate deductible.

The guarantees which are payable on death, referred to as guaranteed minimum death benefits (GMDB), principally cover shortfalls between accumulated account value at the time of an annuitant's death and either i) an annuitant's total deposits; ii) an annuitant's total deposits plus a minimum annual return; or iii) the highest accumulated account value attained at any policy anniversary date. In addition, a death benefit may be based on a formula specified in the variable annuity contract that uses a percentage of the growth of the underlying contract value. Liabilities for GMDBs are based on cumulative assessments or premiums to date multiplied by a benefit ratio that is determined by estimating the present value of benefit payments and related adjustment expenses divided by the present value of cumulative assessment or expected premiums during the contract period.

Under reinsurance programs covering GLBs, we assume the risk of guaranteed minimum income benefits (GMIB) associated with variable annuity contracts. The GMIB risk is triggered if, at the time the contract holder elects to convert the accumulated account value to a periodic payment stream (annuitize), the accumulated account value is not sufficient to provide a guaranteed minimum level of monthly income. Our GLB reinsurance products meet the definition of a derivative for accounting purposes and are carried at fair value with changes in fair value recognized in Realized gains (losses) in the Consolidated statements of operations. Refer to Note 10 a) for additional information.

k) Deposit assets and liabilities
Deposit assets arise from ceded reinsurance contracts purchased that do not transfer significant underwriting or timing risk. Deposit liabilities include reinsurance deposit liabilities and contract holder deposit funds. The reinsurance deposit liabilities arise from contracts sold for which there is not a significant transfer of risk. Contract holder deposit funds represent a liability for investment contracts sold that do not meet the definition of an insurance contract, and certain of these contracts are sold with a guaranteed rate of return. Under deposit accounting, consideration received or paid is recorded as a deposit asset or liability in the balance sheet as opposed to recording premiums and losses in the statements of operations.

Interest income on deposit assets, representing the consideration received or to be received in excess of cash payments related to the deposit contract, is earned based on an effective yield calculation. The calculation of the effective yield is based on the amount and timing of actual cash flows at the balance sheet date and the estimated amount and timing of future cash flows. The effective yield is recalculated periodically to reflect revised estimates of cash flows. When a change in the actual or estimated cash flows occurs, the resulting change to the carrying amount of the deposit asset is reported as income or expense. Deposit assets of $101 million and $107 million at December 31, 2021 and 2020, respectively, are reflected in Other assets in the Consolidated balance sheets and the accretion of deposit assets related to interest pursuant to the effective yield calculation is reflected in Net investment income in the Consolidated statements of operations.

Deposit liabilities include reinsurance deposit liabilities of $74 million and $86 million at December 31, 2021 and 2020, respectively and contract holder deposit funds of $2.2 billion for both periods. Deposit liabilities are reflected in Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets. At contract inception, the deposit liability equals net cash received. An accretion rate is established based on actuarial estimates whereby the deposit liability is increased to the estimated amount payable over the contract term. The deposit accretion rate is the rate of return required to fund expected future payment obligations. We periodically reassess the estimated ultimate liability and related expected rate of return. Changes to the deposit liability are generally reflected through Interest expense to reflect the cumulative effect of the period the contract has been in force, and by an adjustment to the future accretion rate of the liability over the remaining estimated contract term.

The liability for contract holder deposit funds equals accumulated policy account values, which consist of the deposit payments plus credited interest less withdrawals and amounts assessed through the end of the period.

l) Property and Equipment
Property and equipment used in operations are capitalized and carried at cost less accumulated depreciation and are reported within Other assets in the Consolidated balance sheets. At December 31, 2021, property and equipment totaled $2.0 billion, consisting principally of capitalized software costs of $1.4 billion incurred to develop or obtain computer software for internal use and company-owned facilities of $228 million. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets. For capitalized software, the estimated useful life is generally three to five years, but can be as long as 15 years and for company-owned facilities the estimated useful life is 40 years. At December 31, 2020, property and equipment totaled $2.0 billion.

m) Foreign currency remeasurement and translation
The functional currency for each of our foreign operations is generally the currency of the local operating environment. Transactions in currencies other than a foreign operation's functional currency are remeasured into the functional currency, and the resulting foreign exchange gains and losses are reflected in Net realized gains (losses) in the Consolidated statements of operations. Functional currency assets and liabilities are translated into the reporting currency, U.S. dollars, using period end exchange rates and the related translation adjustments are recorded as a separate component of AOCI in Shareholders' equity. Functional statement of operations amounts expressed in functional currencies are translated using average exchange rates.

n) Administrative expenses
Administrative expenses generally include all operating costs other than policy acquisition costs. The North America Commercial P&C Insurance segment manages and uses an in-house third-party claims administrator, ESIS Inc. (ESIS). ESIS performs claims management and risk control services for domestic and international organizations that self-insure P&C exposures as well as internal P&C exposures. The net operating income of ESIS is included within Administrative expenses in the Consolidated statements of operations and were $25 million, $18 million, and $47 million for the years ended December 31, 2021, 2020, and 2019, respectively.

o) Income taxes
Income taxes have been recorded related to those operations subject to income tax. Deferred tax assets and liabilities result from temporary differences between the amounts recorded in the Consolidated Financial Statements and the tax basis of our assets and liabilities. The effect on deferred tax assets and liabilities of a change in tax law or rates is recognized in the period that includes the enactment date. A valuation allowance against deferred tax assets is recorded if it is more likely than not that all, or some portion, of the benefits related to these deferred tax assets will not be realized. The valuation allowance assessment considers tax planning strategies, where appropriate.

We recognize uncertain tax positions that are determined to be more likely than not of being sustained upon examination. Recognized income tax positions are measured at the largest amount that has a greater than 50 percent likelihood of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

p) Earnings per share
Basic earnings per share is calculated using the weighted-average shares outstanding, including participating securities with non-forfeitable rights to dividends such as unvested restricted stock. All potentially dilutive securities, including stock options are excluded from the basic earnings per share calculation. In calculating diluted earnings per share, the weighted-average shares outstanding is increased to include all potentially dilutive securities. Basic and diluted earnings per share are calculated by dividing net income by the applicable weighted-average number of shares outstanding during the year.

q) Share-based compensation
Chubb measures and records compensation cost for all share-based payment awards at grant-date fair value. Compensation costs are recognized for vesting of share-based payment awards with only service conditions on a straight-line basis over the requisite service period for each separately vesting portion of the award as if the award were, in substance, multiple awards. For retirement-eligible participants, compensation costs for certain share-based payment awards are recognized immediately at the date of grant. Refer to Note 12 for additional information.

r) Chubb integration expenses
Direct costs related to the Chubb Corp acquisition were expensed as incurred. Chubb integration expenses were $23 million for the year ended December 31, 2019 and include all internal and external costs directly related to the integration activities of the Chubb Corp acquisition. These expenses principally consisted of personnel-related expenses, consulting fees, and rebranding.

s) New accounting pronouncements

Accounting guidance not yet adopted
Targeted Improvements to the Accounting for Long-Duration Contracts
In August 2018, the FASB issued guidance to improve the existing recognition, measurement, presentation, and disclosure requirements for long-duration contracts issued by an insurance entity. The amendments in this update require more frequent updating of assumptions and a standardized discount rate for the future policy benefit liability, a requirement to use the fair value measurement model for policies with market risk benefits, simplified amortization of deferred acquisition costs, and enhanced disclosures. This standard will be effective in the first quarter of 2023 with early adoption permitted. We are currently assessing the effect of adopting this guidance on our financial condition and results of operations. We will be better able to quantify the effect of adopting this standard as we progress in our implementation process and draw nearer to the date of adoption.

2. Acquisitions

Cigna's Life and Accident and Health (A&H) Insurance Business in Asia-Pacific Markets

On October 7, 2021, we entered into a definitive agreement to acquire the life and non-life insurance companies that house the personal accident, supplemental health and life insurance business of Cigna in seven Asia-Pacific markets, including Korea, Taiwan, New Zealand, Thailand, Hong Kong and Indonesia and its interest in a joint venture in Turkey, for approximately $5.75 billion in cash, subject to certain post-closing purchase adjustments. The transaction is expected to be completed in 2022. The timing of completion is subject to required regulatory approvals and customary closing conditions.

Huatai Group

Chubb maintains a direct investment in Huatai Insurance Group Co., Ltd. (Huatai Group). Huatai Group is the parent company of, and owns 100 percent of, Huatai Property & Casualty Insurance Co., Ltd. (Huatai P&C), approximately 80 percent of Huatai Life Insurance Co., Ltd. (Huatai Life), and approximately 82 percent of Huatai Asset Management Co., Ltd. (collectively, Huatai). Huatai Group's insurance operations have more than 600 branches and approximately 19 million customers in China.

As of December 31, 2021, Chubb's aggregate ownership interest in Huatai Group was approximately 47.3 percent. Chubb applies the equity method of accounting to its investment in Huatai Group by recording its share of net income or loss in Other (income) expense in the Consolidated statements of operations.

During 2021, Chubb entered into agreements with several counterparties to purchase incremental ownership interests in Huatai Group totaling approximately 31.8 percent for approximately $2.2 billion. In connection with these agreements, Chubb paid approximately $1.1 billion in deposits. In January 2022, we paid $113 million relating to these agreements. Chubb entered into an agreement to acquire an approximate 7.1 percent ownership interest in Huatai Group for approximately $0.5 billion, which was paid as a deposit in 2020. The purchase of the additional ownership interests is contingent upon important conditions. As Chubb's ownership interest increases, we will continue to evaluate the appropriateness of consolidation accounting in accordance with the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 810, *Consolidation*, and other applicable regulations.

3. Investments

a) Fixed maturities

December 31, 2021 (in millions of U.S. dollars)	Amortized Cost	Valuation Allowance	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value
Available for sale					
U.S. Treasury / Agency	$ 2,111	$ —	$ 109	$ (6)	$ 2,214
Non-U.S.	25,156	(8)	953	(272)	25,829
Corporate and asset-backed securities	37,844	(6)	1,410	(185)	39,063
Mortgage-backed securities	20,080	—	532	(123)	20,489
Municipal	5,302	—	216	(5)	5,513
	$ 90,493	$ (14)	$ 3,220	$ (591)	$ 93,108

	Amortized Cost	Valuation Allowance	Net Carrying Value	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value
Held to maturity						
U.S. Treasury / Agency	$ 1,213	$ —	$ 1,213	$ 34	$ (3)	$ 1,244
Non-U.S.	1,201	(5)	1,196	66	—	1,262
Corporate and asset-backed securities	2,032	(28)	2,004	197	—	2,201
Mortgage-backed securities	1,731	(1)	1,730	74	(1)	1,803
Municipal	3,976	(1)	3,975	162	—	4,137
	$ 10,153	$ (35)	$ 10,118	$ 533	$ (4)	$ 10,647

December 31, 2020 (in millions of U.S. dollars)	Amortized Cost	Valuation Allowance	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value
Available for sale					
U.S. Treasury / Agency	$ 2,471	$ —	$ 199	$ —	$ 2,670
Non-U.S.	24,594	(6)	1,808	(42)	26,354
Corporate and asset-backed securities	34,095	(14)	2,322	(72)	36,331
Mortgage-backed securities	17,456	—	1,022	(8)	18,470
Municipal	6,572	—	304	(2)	6,874
	$ 85,188	$ (20)	$ 5,655	$ (124)	$ 90,699

	Amortized Cost	Valuation Allowance	Net Carrying Value	Gross Unrealized Appreciation	Gross Unrealized Depreciation	Fair Value
Held to maturity						
U.S. Treasury / Agency	$ 1,392	$ —	$ 1,392	$ 60	$ —	$ 1,452
Non-U.S.	1,295	(7)	1,288	118	(1)	1,405
Corporate and asset-backed securities	2,185	(35)	2,150	288	—	2,438
Mortgage-backed securities	2,000	(1)	1,999	148	(1)	2,146
Municipal	4,825	(1)	4,824	245	—	5,069
	$ 11,697	$ (44)	$ 11,653	$ 859	$ (2)	$ 12,510

The following table presents the amortized cost of our HTM securities according to S&P rating:

	December 31			
	2021		2020	
(in millions of U.S. dollars)	**Amortized cost**	**% of Total**	Amortized cost	% of Total
AAA	**$ 2,089**	**21 %**	$ 2,511	22 %
AA	**5,303**	**52 %**	6,193	53 %
A	**1,964**	**19 %**	2,138	18 %
BBB	**773**	**8 %**	826	7 %
BB	**23**	**— %**	28	— %
Other	**1**	**— %**	1	— %
Total	**$ 10,153**	**100 %**	$ 11,697	100 %

The following table presents fixed maturities by contractual maturity:

	December 31			
	2021		2020	
(in millions of U.S. dollars)	**Net Carrying Value**	**Fair Value**	Net Carrying Value	Fair Value
Available for sale				
Due in 1 year or less	**$ 4,498**	**$ 4,498**	$ 4,760	$ 4,760
Due after 1 year through 5 years	**25,542**	**25,542**	26,227	26,227
Due after 5 years through 10 years	**28,207**	**28,207**	27,232	27,232
Due after 10 years	**14,372**	**14,372**	14,010	14,010
	72,619	**72,619**	72,229	72,229
Mortgage-backed securities	**20,489**	**20,489**	18,470	18,470
	$ 93,108	**$ 93,108**	$ 90,699	$ 90,699
Held to maturity				
Due in 1 year or less	**$ 888**	**$ 894**	$ 1,231	$ 1,240
Due after 1 year through 5 years	**3,744**	**3,846**	3,592	3,760
Due after 5 years through 10 years	**2,242**	**2,349**	3,029	3,228
Due after 10 years	**1,514**	**1,755**	1,802	2,136
	8,388	**8,844**	9,654	10,364
Mortgage-backed securities	**1,730**	**1,803**	1,999	2,146
	$ 10,118	**$ 10,647**	$ 11,653	$ 12,510

Expected maturities could differ from contractual maturities because borrowers may have the right to call or prepay obligations, with or without call or prepayment penalties.

b) Gross unrealized loss

Fixed maturities in an unrealized loss position at December 31, 2021 and 2020 comprised both investment grade and below investment grade securities for which fair value declined primarily due to widening credit spreads since the date of purchase.

The following tables present, for AFS fixed maturities in an unrealized loss position (including securities on loan) that are not deemed to have expected credit losses, the aggregate fair value and gross unrealized loss by length of time the security has continuously been in an unrealized loss position:

December 31, 2021 (in millions of U.S. dollars)	0 – 12 Months Fair Value	0 – 12 Months Gross Unrealized Loss	Over 12 Months Fair Value	Over 12 Months Gross Unrealized Loss	Total Fair Value	Total Gross Unrealized Loss
U.S. Treasury / Agency	$ 363	$ (3)	$ 70	$ (3)	$ 433	$ (6)
Non-U.S.	6,917	(196)	1,093	(62)	8,010	(258)
Corporate and asset-backed securities	9,449	(145)	806	(32)	10,255	(177)
Mortgage-backed securities	8,086	(116)	190	(7)	8,276	(123)
Municipal	226	(5)	—	—	226	(5)
Total AFS fixed maturities	$ 25,041	$ (465)	$ 2,159	$ (104)	$ 27,200	$ (569)

December 31, 2020 (in millions of U.S. dollars)	0 – 12 Months Fair Value	0 – 12 Months Gross Unrealized Loss	Over 12 Months Fair Value	Over 12 Months Gross Unrealized Loss	Total Fair Value	Total Gross Unrealized Loss
Non-U.S.	$ 1,628	$ (35)	$ 114	$ (5)	$ 1,742	$ (40)
Corporate and asset-backed securities	2,212	(33)	593	(14)	2,805	(47)
Mortgage-backed securities	875	(6)	35	(2)	910	(8)
Municipal	40	(1)	16	(1)	56	(2)
Total AFS fixed maturities	$ 4,755	$ (75)	$ 758	$ (22)	$ 5,513	$ (97)

c) Net realized gains (losses)

The following table presents the components of net realized gains (losses) and the change in net unrealized appreciation (depreciation) of investments:

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Fixed maturities:			
OTTI on fixed maturities, gross	**$ —**	$ —	$ (90)
OTTI on fixed maturities recognized in OCI (pre-tax)	**—**	—	32
OTTI on fixed maturities, net	**—**	—	(58)
Gross realized gains excluding OTTI	**142**	244	203
Gross realized losses excluding OTTI	**(123)**	(366)	(176)
Net (provision for) recovery of expected credit losses	**14**	11	—
Impairment [(1)]	**(30)**	(170)	—
Total fixed maturities	**3**	(281)	(31)
Equity securities	**662**	586	104
Other investments	**111**	(32)	(20)
Foreign exchange	**348**	(483)	7
Investment and embedded derivative instruments	**(72)**	81	(435)
Fair value adjustments on insurance derivative	**316**	(202)	(4)
S&P futures	**(202)**	(108)	(138)
Other derivative instruments	**(8)**	1	(8)
Other	**(6)**	(60)	(5)
Net realized gains (losses) (pre-tax)	**$ 1,152**	$ (498)	$ (530)
Change in net unrealized appreciation (depreciation) on investments (pre-tax):			
Fixed maturities available for sale	**$ (2,901)**	$ 2,628	$ 3,769
Fixed maturities held to maturity	**(18)**	(24)	(31)
Other	**(19)**	(12)	(3)
Income tax (expense) benefit	**521**	(462)	(647)
Change in net unrealized appreciation (depreciation) on investments (after-tax)	**$ (2,417)**	$ 2,130	$ 3,088

(1) Relates to certain securities we intended to sell and securities written to market entering default.

Realized gains and losses from Equity securities and Other investments from the table above include sales of securities and unrealized gains and losses from fair value changes as follows:

	Year Ended December 31								
	2021			2020			2019		
(in millions of U.S. dollars)	**Equity Securities**	**Other Investments**	**Total**	Equity Securities	Other Investments	Total	Equity Securities	Other Investments	Total
Net gains (losses) recognized during the period	**$ 662**	**$ 111**	**$ 773**	$ 586	$ (32)	$ 554	$ 104	$ (20)	$ 84
Less: Net gains (losses) recognized from sales of securities	**157**	**—**	**157**	455	—	455	58	(5)	53
Unrealized gains (losses) recognized for securities still held at reporting date	**$ 505**	**$ 111**	**$ 616**	$ 131	$ (32)	$ 99	$ 46	$ (15)	$ 31

The following table presents a roll-forward of valuation allowance for expected credit losses on fixed maturities:

(in millions of U.S. dollars)	Year Ended December 31 **2021**	2020
Available for sale		
Valuation allowance for expected credit losses - beginning of period	**$ 20**	$ —
Impact of adoption of new accounting guidance	**—**	25
Provision for expected credit loss	**14**	188
Initial allowance for purchased securities with credit deterioration	**—**	5
Write-offs charged against the expected credit loss	**—**	(5)
Recovery of expected credit loss	**(20)**	(193)
Valuation allowance for expected credit losses - end of period	**$ 14**	$ 20
Held to maturity		
Valuation allowance for expected credit losses - beginning of period	**$ 44**	$ —
Impact of adoption of new accounting guidance	**—**	44
Provision for expected credit loss	**1**	9
Recovery of expected credit loss	**(10)**	(9)
Valuation allowance for expected credit losses - end of period	**$ 35**	$ 44

The following table presents a roll-forward of pre-tax credit losses related to fixed maturities for which a portion of OTTI was recognized in OCI:

(in millions of U.S. dollars)	Year Ended December 31 2019
Balance of credit losses related to securities still held – beginning of year	$ 34
Additions where no OTTI was previously recorded	33
Additions where an OTTI was previously recorded	4
Reductions for securities sold during the period	(41)
Balance of credit losses related to securities still held – end of year	$ 30

d) Other investments

(in millions of U.S. dollars)	December 31 **2021**	2020
Alternative investments:		
Partially-owned investment companies	**$ 9,210**	$ 5,969
Limited partnerships	**631**	547
Investment funds	**267**	254
Alternative investments	**10,108**	6,770
Life insurance policies	**481**	438
Policy loans	**243**	233
Non-qualified separate account assets [(1)]	**278**	316
Other	**59**	188
Total	**$ 11,169**	$ 7,945

(1) Non-qualified separate account assets are comprised of mutual funds, supported by assets that do not qualify for separate account reporting under GAAP.

Alternative investments

Alternative investments include partially-owned investment companies, investment funds, and limited partnerships measured at fair value using net asset value (NAV) as a practical expedient. The following table presents, by investment category, the expected liquidation period, fair value, and maximum future funding commitments of alternative investments:

					December 31
		2021		2020	
(in millions of U.S. dollars)	Expected Liquidation Period of Underlying Assets	Fair Value	Maximum Future Funding Commitments	Fair Value	Maximum Future Funding Commitments
Financial	2 to 10 Years	$ 1,096	$ 267	$ 673	$ 237
Real assets	2 to 11 Years	1,193	766	805	598
Distressed	2 to 8 Years	753	641	358	970
Private credit	3 to 8 Years	84	279	88	270
Traditional	2 to 14 Years	6,647	5,200	4,519	1,125
Vintage	1 to 2 Years	68	—	73	—
Investment funds	Not Applicable	267	—	254	—
		$ 10,108	$ 7,153	$ 6,770	$ 3,200

Included in all categories in the above table, except for Investment funds, are investments for which Chubb will never have the contractual option to redeem but receives distributions based on the liquidation of the underlying assets. Further, for all categories except for Investment funds, Chubb does not have the ability to sell or transfer the investments without the consent from the general partner of individual funds.

Investment Category	Consists of investments in private equity funds:
Financial	targeting financial services companies, such as financial institutions and insurance services worldwide
Real assets	targeting investments related to hard physical assets, such as real estate, infrastructure and natural resources
Distressed	targeting distressed corporate debt/credit and equity opportunities in the U.S.
Private credit	targeting privately originated corporate debt investments, including senior secured loans and subordinated bonds
Traditional	employing traditional private equity investment strategies such as buyout and growth equity globally
Vintage	funds where the initial fund term has expired

Included in partially-owned investment companies and limited partnerships are 130 individual limited partnerships covering a broad range of investment strategies including large cap buyouts, specialist buyouts, growth capital, distressed, mezzanine, real estate, and co-investments. The underlying portfolio consists of various public and private debt and equity securities of publicly traded and privately held companies and real estate assets. The underlying investments across various partnerships, geographies, industries, asset types, and investment strategies provide risk diversification within the limited partnership portfolio and the overall investment portfolio.

Investment funds employ various investment strategies such as long/short equity and arbitrage/distressed. Included in this category are investments for which Chubb has the option to redeem at agreed upon value as described in each investment fund's subscription agreement. Depending on the terms of the various subscription agreements, investment fund investments may be redeemed monthly, quarterly, semi-annually, or annually. If Chubb wishes to redeem an investment fund investment, it must first determine if the investment fund is still in a lock-up period (a time when Chubb cannot redeem its investment so that the investment fund manager has time to build the portfolio). If the investment fund is no longer in its lock-up period, Chubb must then notify the investment fund manager of its intention to redeem by the notification date prescribed by the subscription agreement. Subsequent to notification, the investment fund can redeem Chubb's investment within several months of the notification. Notice periods for redemption of the investment funds are up to 270 days. Chubb can redeem its investment funds without consent from the investment fund managers.

e) Investments in partially-owned insurance companies
The following table presents Investments in partially-owned insurance companies:

	December 31, 2021			December 31, 2020			
(in millions of U.S. dollars, except for percentages)	**Carrying Value**	**Goodwill**	**Direct Ownership Percentage**	Carrying Value	Goodwill	Direct Ownership Percentage	Domicile
Huatai Group	**$ 2,698**	**$ 1,355**	**47 %**	$ 2,461	$ 1,313	47 %	China
Huatai Life Insurance Company	**253**	**71**	**20 %**	201	69	20 %	China
Freisenbruch-Meyer	**10**	**3**	**40 %**	10	3	40 %	Bermuda
Chubb Arabia Cooperative Insurance Company	**23**	**—**	**30 %**	23	—	30 %	Saudi Arabia
Russian Reinsurance Company	**4**	**—**	**23 %**	4	—	23 %	Russia
ABR Reinsurance Ltd.	**142**	**—**	**17 %**	114	—	16 %	Bermuda
Total	**$ 3,130**	**$ 1,429**		$ 2,813	$ 1,385		

Chubb’s aggregate direct and indirect ownership in Huatai Life is approximately 57.7 percent, comprising 20 percent direct and 37.7 percent indirect ownership interest.

The table above excludes the 38.7 percent of additional ownership commitment in Huatai Group that is contingent upon important conditions. Refer to Note 2 for additional information.

f) Net investment income

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Fixed maturities [(1)]	**$ 3,300**	$ 3,321	$ 3,385
Short-term investments	**35**	48	84
Other interest income	**11**	19	25
Equity securities	**150**	81	26
Other investments	**147**	82	78
Gross investment income [(1)]	**3,643**	3,551	3,598
Investment expenses	**(187)**	(176)	(172)
Net investment income [(1)]	**$ 3,456**	$ 3,375	$ 3,426
[(1)] Includes amortization expense related to fair value adjustment of acquired invested assets related to the Chubb Corp acquisition	**$ (84)**	$ (116)	$ (161)

g) Restricted assets
Chubb is required to maintain assets on deposit with various regulatory authorities to support its insurance and reinsurance operations. These requirements are generally promulgated in the statutory regulations of the individual jurisdictions. The assets on deposit are available to settle insurance and reinsurance liabilities. Chubb is also required to restrict assets pledged under repurchase agreements, which represent Chubb's agreement to sell securities and repurchase them at a future date for a predetermined price. We use trust funds in certain large reinsurance transactions where the trust funds are set up for the benefit of the ceding companies and generally take the place of letter of credit (LOC) requirements. We have investments in segregated portfolios primarily to provide collateral or guarantees for LOC and derivative transactions. Included in restricted assets are investments, primarily fixed maturities, totaling $17,092 million and $19,605 million, and cash of $152 million and $89 million, at December 31, 2021 and 2020, respectively.

The following table presents the components of restricted assets:

	December 31	
(in millions of U.S. dollars)	**2021**	2020
Trust funds	**$ 9,915**	$ 12,305
Deposits with U.S. regulatory authorities	**2,402**	2,438
Deposits with non-U.S. regulatory authorities	**2,873**	2,905
Assets pledged under repurchase agreements	**1,420**	1,462
Other pledged assets	**634**	584
Total	**$ 17,244**	$ 19,694

4. Fair value measurements

a) Fair value hierarchy

Fair value of financial assets and financial liabilities is estimated based on the framework established in the fair value accounting guidance. The guidance defines fair value as the price to sell an asset or transfer a liability (an exit price) in an orderly transaction between market participants and establishes a three-level valuation hierarchy based on the reliability of the inputs. The fair value hierarchy gives the highest priority to quoted prices in active markets and the lowest priority to unobservable data.

The three levels of the hierarchy are as follows:

- Level 1 – Unadjusted quoted prices for identical assets or liabilities in active markets;
- Level 2 – Includes, among other items, inputs other than quoted prices that are observable for the asset or liability such as interest rates and yield curves, quoted prices for similar assets and liabilities in active markets, and quoted prices for identical or similar assets and liabilities in markets that are not active; and
- Level 3 – Inputs that are unobservable and reflect management's judgments about assumptions that market participants would use in pricing an asset or liability.

We categorize financial instruments within the valuation hierarchy at the balance sheet date based upon the lowest level of inputs that are significant to the fair value measurement.

We use pricing services to obtain fair value measurements for the majority of our investment securities. Based on management's understanding of the methodologies used, these pricing services only produce an estimate of fair value if there is observable market information that would allow them to make a fair value estimate. Based on our understanding of the market inputs used by the pricing services, all applicable investments have been valued in accordance with GAAP. We do not adjust prices obtained from pricing services. The following is a description of the valuation techniques and inputs used to determine fair values for financial instruments carried at fair value, as well as the general classification of such financial instruments pursuant to the valuation hierarchy.

Fixed maturities

We use pricing services to estimate fair value measurements for the majority of our fixed maturities. The pricing services use market quotations for fixed maturities that have quoted prices in active markets; such securities are classified within Level 1. For fixed maturities other than U.S. Treasury securities that generally do not trade on a daily basis, the pricing services prepare estimates of fair value measurements using their pricing applications or pricing models, which include available relevant market information, benchmark curves, benchmarking of like securities, sector groupings, and matrix pricing. Additional valuation factors that can be taken into account are nominal spreads, dollar basis, and liquidity adjustments. The pricing services evaluate each asset class based on relevant market and credit information, perceived market movements, and sector news. The market inputs used in the pricing evaluation, listed in the approximate order of priority include: benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers, reference data, and industry and economic events. The extent of the use of each input is dependent on the asset class and the market conditions. Given the asset class, the priority of the use of inputs may change, or some market inputs may not be relevant. Additionally, fixed maturities valuation is more subjective when markets are less liquid due to the lack of market based inputs (i.e., stale pricing) and may require the use of models to be priced. The lack of market based inputs may increase the potential that an investment's estimated fair value is not reflective of the price at which an actual transaction would occur. The overwhelming majority of fixed maturities are classified within Level 2 because the most significant inputs used in the pricing techniques are observable. For a small number of fixed maturities, we obtain a single broker quote (typically from a market maker). Due to the disclaimers on the quotes that indicate that the price is indicative only, we include these fair value estimates in Level 3.

Equity securities
Equity securities with active markets are classified within Level 1 as fair values are based on quoted market prices. For equity securities in markets which are less active, fair values are based on market valuations and are classified within Level 2. Equity securities for which pricing is unobservable are classified within Level 3.

Short-term investments
Short-term investments, which comprise securities due to mature within one year of the date of purchase that are traded in active markets, are classified within Level 1 as fair values are based on quoted market prices. Securities such as commercial paper and discount notes are classified within Level 2 because these securities are typically not actively traded due to their approaching maturity, and as such, their cost approximates fair value. Short-term investments for which pricing is unobservable are classified within Level 3.

Other investments
Fair values for the majority of Other investments including investments in partially-owned investment companies, investment funds, and limited partnerships are based on their respective (NAV) and are excluded from the fair value hierarchy table below. Certain of our long-duration contracts are supported by assets that do not qualify for separate account reporting under GAAP. These assets comprise mutual funds, classified within Level 1 in the valuation hierarchy on the same basis as other equity securities traded in active markets. Other investments also include equity securities, classified within Level 1 and fixed maturities, classified within Level 2, held in rabbi trusts maintained by Chubb for deferred compensation plans and supplemental retirement plans and are classified within the valuation hierarchy on the same basis as other equity securities and fixed maturities.

Securities lending collateral
The underlying assets included in Securities lending collateral in the Consolidated balance sheets are fixed maturities which are classified in the valuation hierarchy on the same basis as other fixed maturities. Excluded from the valuation hierarchy is the corresponding liability related to Chubb's obligation to return the collateral plus interest as it is reported at contract value and not fair value in the Consolidated balance sheets.

Investment derivative instruments
Actively traded investment derivative instruments, including futures, options, and forward contracts are classified within Level 1 as fair values are based on quoted market prices. The fair value of cross-currency swaps and interest rate swaps is based on market valuations and is classified within Level 2. Investment derivative instruments are recorded in either Other assets or Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets.

Other derivative instruments
We maintain positions in exchange-traded equity futures contracts designed to limit exposure to a severe equity market decline, which would cause an increase in expected claims and, therefore, an increase in future policy benefit reserves for our guaranteed minimum death benefits (GMDB) and an increase in the fair value liability for our guaranteed living benefits (GLB) reinsurance business. Our positions in exchange-traded equity futures contracts are classified within Level 1. The fair value of the majority of the remaining positions in other derivative instruments is based on significant observable inputs including equity security and interest rate indices. Accordingly, these are classified within Level 2. Other derivative instruments based on unobservable inputs are classified within Level 3. Other derivative instruments are recorded in either Other assets or Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets.

Separate account assets
Separate account assets represent segregated funds where investment risks are borne by the customers, except to the extent of certain guarantees made by Chubb. Separate account assets comprise mutual funds classified within Level 1 in the valuation hierarchy on the same basis as other equity securities traded in active markets. Separate account assets also include fixed maturities classified within Level 2 because the most significant inputs used in the pricing techniques are observable. Excluded from the valuation hierarchy are the corresponding liabilities as they are reported at contract value and not fair value in the Consolidated balance sheets. Separate account assets are recorded in Other assets in the Consolidated balance sheets.

Guaranteed living benefits

The GLB arises from life reinsurance programs covering living benefit guarantees whereby we assume the risk of guaranteed minimum income benefits (GMIB) associated with variable annuity contracts. GLBs are recorded in Accounts payable, accrued expenses, and other liabilities in the Consolidated balance sheets. For GLB reinsurance, Chubb estimates fair value using an internal valuation model which includes current market information and estimates of policyholder behavior. All of the treaties contain claim limits, which are factored into the valuation model. The fair value depends on a number of factors, including interest rates, equity markets, credit risk, current account value, market volatility, expected annuitization rates and other policyholder behavior, and changes in policyholder mortality. Because of the significant use of unobservable inputs including policyholder behavior, GLB reinsurance is classified within Level 3.

Financial instruments measured at fair value on a recurring basis, by valuation hierarchy

December 31, 2021 (in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total
Assets:				
Fixed maturities available for sale				
U.S. Treasury / Agency	$ 1,680	$ 534	$ —	$ 2,214
Non-U.S.	—	25,196	633	25,829
Corporate and asset-backed securities	—	37,014	2,049	39,063
Mortgage-backed securities	—	20,463	26	20,489
Municipal	—	5,513	—	5,513
	1,680	88,720	2,708	93,108
Equity securities	4,705	—	77	4,782
Short-term investments	1,744	1,395	7	3,146
Other investments [(1)]	286	481	—	767
Securities lending collateral	—	1,831	—	1,831
Investment derivative instruments	58	—	—	58
Separate account assets	5,461	99	—	5,560
Total assets measured at fair value [(1)]	$ 13,934	$ 92,526	$ 2,792	$ 109,252
Liabilities:				
Investment derivative instruments	$ 166	$ —	$ —	$ 166
Other derivative instruments	16	—	—	16
GLB [(2)]	—	—	745	745
Total liabilities measured at fair value	$ 182	$ —	$ 745	$ 927

(1) Excluded from the table above are partially-owned investments, investment funds, and limited partnerships of $10,108 million, policy loans of $243 million and other investments of $51 million at December 31, 2021 measured using NAV as a practical expedient.

(2) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

December 31, 2020 (in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total
Assets:				
Fixed maturities available for sale				
U.S. Treasury / Agency	$ 2,148	$ 522	$ —	$ 2,670
Non-U.S.	—	25,808	546	26,354
Corporate and asset-backed securities	—	34,758	1,573	36,331
Mortgage-backed securities	—	18,410	60	18,470
Municipal	—	6,874	—	6,874
	2,148	86,372	2,179	90,699
Equity securities	3,954	—	73	4,027
Short-term investments	2,866	1,474	5	4,345
Other investments (1)	434	438	10	882
Securities lending collateral	—	1,844	—	1,844
Investment derivative instruments	35	—	—	35
Separate account assets	4,264	124	—	4,388
Total assets measured at fair value (1)	$ 13,701	$ 90,252	$ 2,267	$ 106,220
Liabilities:				
Investment derivative instruments	$ 52	$ —	$ —	$ 52
Other derivative instruments	17	—	—	17
GLB (2)	—	—	1,089	1,089
Total liabilities measured at fair value	$ 69	$ —	$ 1,089	$ 1,158

(1) Excluded from the table above are partially-owned investments, investment funds, and limited partnerships of $6,770 million, policy loans of $233 million and other investments of $60 million at December 31, 2020 measured using NAV as a practical expedient.

(2) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

Level 3 financial instruments

The following table presents the significant unobservable inputs used in the Level 3 liability valuations. Excluded from the table below are inputs used to determine the fair value of Level 3 assets which are based on single broker quotes and contain no quantitative unobservable inputs developed by management. The majority of our fixed maturities classified as Level 3 used external pricing when markets are less liquid due to the lack of market inputs (i.e., stale pricing, broker quotes).

(in millions of U.S. dollars, except for percentages)	Fair Value at December 31 2021	Valuation Technique	Significant Unobservable Inputs	Ranges	Weighted Average (1)
GLB (1)	**$ 745**	**Actuarial model**	**Lapse rate**	**3% - 31%**	**4.5 %**
			Annuitization rate	**0% - 100%**	**3.6 %**

(1) The weighted average lapse and annuitization rates are determined by weighting each treaty's rates by the GLB contracts fair value.

The most significant policyholder behavior assumptions include lapse rates and the GMIB annuitization rates. Assumptions regarding lapse rates and GMIB annuitization rates differ by treaty, but the underlying methodologies to determine rates applied to each treaty are comparable.

A lapse rate is the percentage of in-force policies surrendered in a given calendar year. All else equal, as lapse rates increase, ultimate claim payments will decrease. In general, the base lapse function assumes low lapse rates during the surrender charge period of the GMIB contract, followed by a "spike" lapse rate in the year immediately following the surrender charge period, and then reverting to an ultimate lapse rate, typically over a 2-year period. This base rate is adjusted downward for policies with more valuable guarantees (policies with guaranteed values far in excess of their account values). Partial withdrawals and the impact of older policyholders with tax-qualified contracts (due to required minimum distributions) are also reflected in our modeling.

The GMIB annuitization rate is the percentage of policies for which the policyholder will elect to annuitize using the guaranteed benefit provided under the GMIB. All else equal, as GMIB annuitization rates increase, ultimate claim payments will increase, subject to treaty claim limits. All GMIB reinsurance treaties include claim limits to protect Chubb in the event that actual annuitization behavior is significantly higher than expected. In general, Chubb assumes that GMIB annuitization rates will be higher for policies with more valuable guarantees (policies with guaranteed values far in excess of their account values). Chubb also assumes that GMIB annuitization rates increase as policyholders get older. In addition, we also assume that GMIB annuitization rates are higher in the first year immediately following the waiting period (the first year the policies are eligible to annuitize using the GMIB) in comparison to all subsequent years. We do not yet have fully credible annuitization experience for all clients.

The effect of changes in key market factors on assumed lapse and annuitization rates reflect emerging trends using data available from cedants. For treaties with limited experience, rates are established by blending the experience with data received from other ceding companies. The model and related assumptions are regularly re-evaluated by management and enhanced, as appropriate, based upon additional experience obtained related to policyholder behavior and availability of updated information such as market conditions, market participant assumptions, and demographics of in-force annuities. In the fourth quarter of 2021, we completed a review of policyholder behavior related to annuitizations, partial withdrawals, lapses, and mortality for our variable annuity reinsurance business. As a result, we refined our policyholder behavior assumptions (mainly those relating to annuitizations and partial withdrawals), which had an insignificant impact on net income. During the year ended December 31, 2021, we also made routine model refinements to the internal valuation model which had an insignificant impact on net income.

The following tables present a reconciliation of the beginning and ending balances of financial instruments measured at fair value using significant unobservable inputs (Level 3):

	Assets						Liabilities
	Available-for-Sale Debt Securities						
Year Ended December 31, 2021 (in millions of U.S. dollars)	Non-U.S.	Corporate and asset-backed securities	Mortgage-backed securities	Equity securities	Short-term investments	Other investments	GLB [(1)]
Balance, beginning of year	$ 546	$ 1,573	$ 60	$ 73	$ 5	$ 10	$ 1,089
Transfers into Level 3	24	91	—	—	—	—	—
Transfers out of Level 3	(11)	(76)	(18)	—	—	(10)	—
Change in Net Unrealized Gains/Losses in OCI	(30)	15	—	—	(1)	—	—
Net Realized Gains/Losses	(1)	(2)	—	8	—	—	(316)
Purchases	275	1,154	18	21	9	—	—
Sales	(48)	(99)	(1)	(25)	—	—	—
Settlements	(122)	(607)	(33)	—	(6)	—	—
Other	—	—	—	—	—	—	(28)
Balance, end of year	$ 633	$ 2,049	$ 26	$ 77	$ 7	$ —	$ 745
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ —	$ 3	$ —	$ 5	$ —	$ —	$ (316)
Change in Net Unrealized Gains/ Losses included in OCI at the Balance Sheet Date	$ (25)	$ 17	$ —	$ —	$ —	$ —	$ —

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

Year Ended December 31, 2020 (in millions of U.S. dollars)	Assets: Available-for-Sale Debt Securities: Non-U.S.	Corporate and asset-backed securities	Mortgage-backed securities	Equity securities	Short-term investments	Other investments	Liabilities: GLB [(1)]
Balance, beginning of year	$ 449	$ 1,451	$ 60	$ 69	$ 6	$ 10	$ 897
Transfers into Level 3	—	134	—	—	—	—	—
Transfers out of Level 3	(16)	(73)	(1)	(3)	—	—	—
Change in Net Unrealized Gains/Losses in OCI	19	(8)	—	—	—	—	—
Net Realized Gains/Losses	(1)	(30)	—	1	(1)	—	202
Purchases	274	708	2	23	14	—	—
Sales	(122)	(186)	—	(17)	(2)	—	—
Settlements	(57)	(423)	(1)	—	(12)	—	—
Other	—	—	—	—	—	—	(10)
Balance, end of year	$ 546	$ 1,573	$ 60	$ 73	$ 5	$ 10	$ 1,089
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ —	$ (5)	$ —	$ 4	$ —	$ —	$ 202
Change in Net Unrealized Gains/Losses included in OCI at the Balance Sheet Date	$ 16	$ (6)	$ —	$ —	$ —	$ —	$ —

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

Year Ended December 31, 2019 (in millions of U.S. dollars)	Assets: Available-for-Sale Debt Securities: Non-U.S.	Corporate and asset-backed securities	Mortgage-backed securities	Equity securities	Short-term investments	Other investments	Liabilities: GLB [(1)]
Balance, beginning of year	$ 345	$ 1,299	$ 61	$ 57	$ 1	$ 11	$ 861
Transfers into Level 3	11	23	—	—	—	—	—
Transfers out of Level 3	(24)	(38)	(16)	—	—	—	—
Change in Net Unrealized Gains/Losses in OCI	13	(2)	—	1	—	—	—
Net Realized Gains/Losses	(1)	(4)	—	(2)	—	—	4
Purchases	228	577	19	34	6	—	—
Sales	(70)	(125)	(1)	(21)	—	—	—
Settlements	(53)	(279)	(3)	—	(1)	(1)	—
Other	—	—	—	—	—	—	32
Balance, end of year	$ 449	$ 1,451	$ 60	$ 69	$ 6	$ 10	$ 897
Net Realized Gains/Losses Attributable to Changes in Fair Value at the Balance Sheet Date	$ —	$ (2)	$ —	$ (3)	$ —	$ —	$ 4
Change in Net Unrealized Gains/Losses included in OCI at the Balance Sheet Date	$ 7	$ (8)	$ —	$ —	$ —	$ —	$ —

(1) Our GLB reinsurance product meets the definition of a derivative instrument for accounting purposes and is accordingly carried at fair value.

b) Financial instruments disclosed, but not measured, at fair value
Chubb uses various financial instruments in the normal course of its business. Our insurance contracts are excluded from fair value of financial instruments accounting guidance, and therefore, are not included in the amounts discussed below.

The carrying values of cash, other assets, other liabilities, and other financial instruments not included below approximated their fair values.

Investments in partially-owned insurance companies
Fair values for investments in partially-owned insurance companies are based on Chubb's share of the net assets based on the financial statements provided by those companies and are excluded from the valuation hierarchy tables below.

Short- and long-term debt, repurchase agreements, and trust preferred securities
Where practical, fair values for short-term debt, long-term debt, repurchase agreements, and trust preferred securities are estimated using discounted cash flow calculations based principally on observable inputs including incremental borrowing rates, which reflect Chubb's credit rating, for similar types of borrowings with maturities consistent with those remaining for the debt being valued.

The following tables present fair value, by valuation hierarchy, and carrying value of the financial instruments not measured at fair value:

December 31, 2021				Fair Value	Net Carrying
(in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total	Value
Assets:					
Fixed maturities held to maturity					
U.S. Treasury / Agency	$ 1,192	$ 52	$ —	$ 1,244	$ 1,213
Non-U.S.	—	1,262	—	1,262	1,196
Corporate and asset-backed securities	—	2,201	—	2,201	2,004
Mortgage-backed securities	—	1,803	—	1,803	1,730
Municipal	—	4,137	—	4,137	3,975
Total assets	$ 1,192	$ 9,455	$ —	$ 10,647	$ 10,118
Liabilities:					
Repurchase agreements	$ —	$ 1,406	$ —	$ 1,406	$ 1,406
Short-term debt	—	1,019	—	1,019	999
Long-term debt	—	16,848	—	16,848	15,169
Trust preferred securities	—	460	—	460	308
Total liabilities	$ —	$ 19,733	$ —	$ 19,733	$ 17,882

December 31, 2020				Fair Value	
(in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total	Net Carrying Value
Assets:					
Fixed maturities held to maturity					
U.S. Treasury / Agency	$ 1,395	$ 57	$ —	$ 1,452	$ 1,392
Non-U.S.	—	1,405	—	1,405	1,288
Corporate and asset-backed securities	—	2,438	—	2,438	2,150
Mortgage-backed securities	—	2,146	—	2,146	1,999
Municipal	—	5,069	—	5,069	4,824
Total assets	$ 1,395	$ 11,115	$ —	$ 12,510	$ 11,653
Liabilities:					
Repurchase agreements	$ —	$ 1,405	$ —	$ 1,405	$ 1,405
Long-term debt	—	17,487	—	17,487	14,948
Trust preferred securities	—	473	—	473	308
Total liabilities	$ —	$ 19,365	$ —	$ 19,365	$ 16,661

5. Reinsurance

a) Consolidated reinsurance

Chubb purchases reinsurance to manage various exposures including catastrophe risks. Although reinsurance agreements contractually obligate Chubb's reinsurers to reimburse it for the agreed-upon portion of its gross paid losses, they do not discharge Chubb's primary liability. The amounts for net premiums written and net premiums earned in the Consolidated statements of operations are net of reinsurance. The following table presents direct, assumed, and ceded premiums:

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Premiums written			
Direct	**$ 42,811**	$ 37,749	$ 36,848
Assumed	**3,969**	3,512	3,276
Ceded	**(8,912)**	(7,441)	(7,849)
Net	**$ 37,868**	$ 33,820	$ 32,275
Premiums earned			
Direct	**$ 41,138**	$ 37,037	$ 35,876
Assumed	**3,650**	3,323	3,107
Ceded	**(8,433)**	(7,243)	(7,693)
Net	**$ 36,355**	$ 33,117	$ 31,290

Ceded losses and loss expenses incurred were $6.1 billion, $5.0 billion, and $4.9 billion for the years ended December 31, 2021, 2020, and 2019, respectively.

b) Reinsurance recoverable on ceded reinsurance

(in millions of U.S. dollars)	December 31, 2021 Net Reinsurance Recoverable [1]	December 31, 2021 Valuation allowance	December 31, 2020 Net Reinsurance Recoverable [1]	December 31, 2020 Valuation allowance
Reinsurance recoverable on unpaid losses and loss expenses	$ 16,184	$ 271	$ 14,647	$ 257
Reinsurance recoverable on paid losses and loss expenses	1,182	58	945	57
Reinsurance recoverable on losses and loss expenses	$ 17,366	$ 329	$ 15,592	$ 314
Reinsurance recoverable on policy benefits	$ 213	$ 4	$ 206	$ 5

(1) Net of valuation allowance for uncollectible reinsurance.

The increase in reinsurance recoverable on losses and loss expenses in 2021 was primarily due to higher underlying ceded exposures due to premium growth, and unfavorable prior period development in certain lines.

The following table presents a roll-forward of valuation allowance for uncollectible reinsurance related to Reinsurance recoverable on loss and loss expenses:

(in millions of U.S. dollars)	Year Ended December 31 2021	Year Ended December 31 2020
Valuation allowance for uncollectible reinsurance - beginning of period	$ 314	$ 316
Provision for uncollectible reinsurance	66	21
Write-offs charged against the valuation allowance	(50)	(25)
Foreign exchange revaluation	(1)	2
Valuation allowance for uncollectible reinsurance - end of period	$ 329	$ 314

The following tables present a listing, at December 31, 2021, of the categories of Chubb's reinsurers:

December 31, 2021 (in millions of U.S. dollars, except for percentages)	Gross Reinsurance Recoverable on Loss and Loss Expenses	Valuation allowance for Uncollectible Reinsurance	% of Gross Reinsurance Recoverable
Categories			
Largest reinsurers	$ 8,441	$ 102	1.2 %
Other reinsurers rated A- or better	5,435	63	1.2 %
Other reinsurers rated lower than A- or not rated	315	48	15.3 %
Pools	415	10	2.4 %
Structured settlements	516	13	2.5 %
Captives	2,325	28	1.2 %
Other	248	65	26.2 %
Total	$ 17,695	$ 329	1.9 %

Largest Reinsurers

ABR Reinsurance Capital Holdings
Berkshire Hathaway Insurance Group
HDI Group (Hannover Re)
Lloyd's of London
Munich Re Group
Partner Re Group
Swiss Re Group

Categories of Chubb's reinsurers	Comprises:
Largest reinsurers	• All groups of reinsurers or captives where the gross recoverable exceeds one percent of Chubb's total shareholders' equity.
Other reinsurers rated A- or better	• All reinsurers rated A- or better that were not included in the largest reinsurer category.
Other reinsurers rated lower than A- or not rated	• All reinsurers rated lower than A- or not rated that were not included in the largest reinsurer category.
Pools	• Related to Chubb's voluntary pool participation and Chubb's mandatory pool participation required by law in certain states.
Structured settlements	• Annuities purchased from life insurance companies to settle claims. Since we retain ultimate liability in the event that the life company fails to pay, we reflect the amounts as both a liability and a recoverable/receivable for GAAP purposes.
Captives	• Companies established and owned by our insurance clients to assume a significant portion of their direct insurance risk from Chubb; structured to allow clients to self-insure a portion of their reinsurance risk. It generally is our policy to obtain collateral equal to expected losses. Where appropriate, exceptions are granted but only with review and approval at a senior officer level. Excludes captives included in the largest reinsurer category.
Other	• Amounts recoverable that are in dispute or are from companies that are in supervision, rehabilitation, or liquidation.

The valuation allowance for uncollectible reinsurance is principally based on an analysis of the credit quality of the reinsurer and collateral balances. We establish the valuation allowance for uncollectible reinsurance for the Other category based on a case-by-case analysis of individual situations including the merits of the underlying matter, credit and collateral analysis, and consideration.

6. Goodwill and Other intangible assets

Goodwill

The following table presents a roll-forward of Goodwill by segment:

(in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Chubb Consolidated
Balance at December 31, 2019	$ 6,955	$ 2,234	$ 134	$ 4,785	$ 371	$ 817	$ 15,296
Acquisition of Banchile Seguros de Vida	—	—	—	16	—	28	44
Foreign exchange revaluation and other	17	6	—	35	—	2	60
Balance at December 31, 2020	$ 6,972	$ 2,240	$ 134	$ 4,836	$ 371	$ 847	$ 15,400
Foreign exchange revaluation and other	**—**	**—**	**—**	**(183)**	**—**	**(4)**	**(187)**
Balance at December 31, 2021	**$ 6,972**	**$ 2,240**	**$ 134**	**$ 4,653**	**$ 371**	**$ 843**	**$ 15,213**

Other intangible assets

Other intangible assets that are subject to amortization principally relate to agency distribution relationships and renewal rights and other intangible assets that are not subject to amortization principally relate to trademarks.

	December 31			
(in millions of U.S. dollars)		**2021**		2020
Subject to amortization	$	**2,508**	$	2,846
Not subject to amortization		**2,947**		2,965
Total	$	**5,455**	$	5,811

Amortization expense related to purchased intangibles was $287 million, $290 million, and $305 million for the years ended December 31, 2021, 2020, and 2019. The following table presents, as of December 31, 2021, the expected estimated pre-tax amortization expense (benefit) of purchased intangibles, at current foreign currency exchange rates, for the next five years:

	Associated with the Chubb Corp Acquisition									
For the Years Ending December 31 (in millions of U.S. dollars)		Agency distribution relationships and renewal rights		Fair value adjustment on Unpaid losses and loss expense [1]		Total		Other intangible assets		Total Amortization of purchased intangibles
2022	$	**196**	$	**(14)**	$	**182**	$	**99**	$	**281**
2023		**177**		**(6)**		**171**		**94**		**265**
2024		**160**		**(6)**		**154**		**88**		**242**
2025		**144**		**(6)**		**138**		**87**		**225**
2026		**130**		**(6)**		**124**		**85**		**209**
Total	$	**807**	$	**(38)**	$	**769**	$	**453**	$	**1,222**

(1) In connection with the Chubb Corp acquisition, we recorded an increase to Unpaid losses and loss expenses acquired to adjust the carrying value of Chubb Corp's historical Unpaid losses and loss expenses to fair value as of the acquisition date. This fair value adjustment amortizes through Amortization of purchased intangibles on the Consolidated statements of operations through the year 2032. The balance of the fair value adjustment on Unpaid losses and loss expense was $90 million and $110 million at December 31, 2021 and 2020, respectively. Refer to Note 1(h) for additional information.

VOBA

The following table presents a roll-forward of VOBA:

(in millions of U.S. dollars)		**2021**		2020		2019
Balance, beginning of year	$	**263**	$	306	$	295
Amortization of VOBA [1]		**(22)**		(27)		(24)
Foreign exchange revaluation and other		**(5)**		(16)		35
Balance, end of year	$	**236**	$	263	$	306

(1) Recognized in Policy acquisition costs in the Consolidated statements of operations.

The following table presents, as of December 31, 2021, the expected estimated pre-tax amortization expense related to VOBA for the next five years at current foreign exchange rates:

For the Years Ending December 31 (in millions of U.S. dollars)		VOBA
2022	$	20
2023		18
2024		17
2025		16
2026		14

7. Unpaid losses and loss expenses

Chubb establishes reserves for the estimated unpaid ultimate liability for losses and loss expenses under the terms of its policies and agreements. Reserves include estimates for both claims that have been reported and for IBNR claims, and include estimates of expenses associated with processing and settling these claims. Reserves are recorded in Unpaid losses and loss expenses in the consolidated balance sheets. While we believe that our reserves for unpaid losses and loss expenses at December 31, 2021 are adequate, new information or trends may lead to future developments in incurred loss and loss expenses significantly greater or less than the reserves provided. Any such revisions could result in future changes in estimates of losses or reinsurance recoverable and would be reflected in our results of operations in the period in which the estimates are changed.

The following table presents a reconciliation of beginning and ending Unpaid losses and loss expenses:

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Gross unpaid losses and loss expenses, beginning of year	**$ 67,811**	$ 62,690	$ 62,960
Reinsurance recoverable on unpaid losses [(1)]	**(14,647)**	(14,181)	(14,689)
Net unpaid losses and loss expenses, beginning of year	**53,164**	48,509	48,271
Net losses and loss expenses incurred in respect of losses occurring in:			
Current year	**22,966**	22,124	19,575
Prior years [(2)]	**(986)**	(414)	(845)
Total	**21,980**	21,710	18,730
Net losses and loss expenses paid in respect of losses occurring in:			
Current year	**7,836**	7,782	7,894
Prior years	**10,048**	9,652	10,579
Total	**17,884**	17,434	18,473
Foreign currency revaluation and other	**(501)**	379	(19)
Net unpaid losses and loss expenses, end of year	**56,759**	53,164	48,509
Reinsurance recoverable on unpaid losses [(1)]	**16,184**	14,647	14,181
Gross unpaid losses and loss expenses, end of year	**$ 72,943**	$ 67,811	$ 62,690

(1) Net of valuation allowance for uncollectible reinsurance.

(2) Relates to prior period loss reserve development only and excludes prior period development related to reinstatement premiums, expense adjustments and earned premiums totaling $60 million, $19 million, and $53 million for 2021, 2020, and 2019, respectively.

The increase in gross and net unpaid losses and loss expense in 2021 is due to an increase in underlying exposure due to premium growth, partially offset by favorable prior period development. The increase in gross and net unpaid losses and loss expense in 2020 was driven by catastrophe losses incurred, principally from the COVID-19 pandemic.

The loss development tables under section c) below, present Chubb's historical incurred and paid claims development by broad product line through December 31, 2021, net of reinsurance, as well as the cumulative number of reported claims, IBNR balances, and other supplementary information.

The following table presents a reconciliation of the loss development tables to the liability for unpaid losses and loss expenses in the consolidated balance sheet:

Reconciliation of Reserve Balances to Liability for Unpaid Loss and Loss Expenses

(in millions of U.S. dollars)		December 31, 2021
Presented in the loss development tables:		
North America Commercial P&C Insurance — Workers' Compensation	$	9,942
North America Commercial P&C Insurance — Liability		18,736
North America Commercial P&C Insurance — Other Casualty		2,304
North America Commercial P&C Insurance — Non-Casualty		2,963
North America Personal P&C Insurance		3,035
Overseas General Insurance — Casualty		7,052
Overseas General Insurance — Non-Casualty		2,984
Global Reinsurance — Casualty		1,191
Global Reinsurance — Non-Casualty		372
Excluded from the loss development tables:		
Other		5,361
Net unpaid loss and allocated loss adjustment expense		53,940
Ceded unpaid loss and allocated loss adjustment expense:		
North America Commercial P&C Insurance — Workers' Compensation		1,379
North America Commercial P&C Insurance — Liability		6,263
North America Commercial P&C Insurance — Other Casualty		638
North America Commercial P&C Insurance — Non-Casualty		1,631
North America Personal P&C Insurance		632
Overseas General Insurance — Casualty		2,363
Overseas General Insurance — Non-Casualty		1,868
Global Reinsurance — Casualty		33
Global Reinsurance — Non-Casualty		89
Other		1,414
Ceded unpaid loss and allocated loss adjustment expense		16,310
Unpaid loss and loss expense on other than short-duration contracts [1]		1,090
Unpaid unallocated loss adjustment expenses		1,603
Unpaid losses and loss expenses	$	72,943

(1) Primarily includes the claims reserve of our International A&H business and Life Insurance segment reserves.

Business excluded from the loss development tables
"Other" shown in the reconciliation table comprises businesses excluded from the loss development tables:
- North America Agricultural Insurance segment business, which is short-tailed with the majority of the liabilities expected to be resolved in the ensuing twelve months;
- Corporate, which includes run-off liabilities such as asbestos, environmental, and molestation and other mass tort exposures and which impact accident years older than those shown in the loss development tables below;
- Life Insurance segment business, which is generally written using long-duration contracts; and
- Certain subsets of our business due to data limitations or unsuitability to the loss development table presentation, including:
    - We underwrite loss portfolio transfers at various times; by convention, all premium and losses associated with these transactions are recorded to the policy period of the transaction, even though the accident dates of the claims covered may be a decade or more in the past. We also underwrite certain high attachment, high limit, multiple-line and excess of aggregate coverages for large commercial clients. Changes in incurred loss and cash flow patterns are volatile and sufficiently different from those of typical insureds. This category includes the loss portfolio transfer of Fireman's Fund personal lines run-off liabilities and Alternative Risk Solutions business within the North America Commercial P&C Insurance segment;
    - 2015 and prior paid history on a subset of previously acquired international businesses, within the Overseas General Insurance segment, due to limitations on the data prior to the acquisition;
    - Reinsurance recoverable bad debt; and
    - Purchase accounting adjustments related to unpaid losses and loss expenses for Chubb Corp.

a) Description of Reserving Methodologies
Our recorded reserves represent management's best estimate of the provision for unpaid claims as of the balance sheet date. The process of establishing loss and loss expense reserves can be complex and is subject to considerable uncertainty as it requires the use of estimates and judgments based on circumstances underlying the insured loss at the date of accrual. The reserves for our various product lines each require different qualitative and quantitative assumptions and judgments to be made. Management's best estimate is developed after collaboration with actuarial, underwriting, claims, legal, and finance departments and culminates with the input of reserve committees. Each business unit reserve committee includes the participation of the relevant parties from actuarial, finance, claims, and unit senior management and has the responsibility for finalizing, recommending and approving the estimate to be used as management's best estimate. Reserves are further reviewed by Chubb's Chief Actuary and senior management. The objective of such a process is to determine a single estimate that we believe represents a better estimate than any other and which is viewed by management to be the best estimate of ultimate loss settlements.

This estimate is based on a combination of exposure and experience-based actuarial methods (described below) and other considerations such as claims reviews, reinsurance recovery assumptions and/or input from other knowledgeable parties such as underwriting. Exposure-based methods are most commonly used on relatively immature origin years (i.e., the year in which the losses were incurred — "accident year" or "report year"), while experience-based methods provide a view based on the projection of loss experience that has emerged as of the valuation date. Greater reliance is placed upon experience-based methods as the pool of emerging loss experience grows and where it is deemed sufficiently credible and reliable as the basis for the estimate. In comparing the held reserve for any given origin year to the actuarial projections, judgment is required as to the credibility, uncertainty and inherent limitations of applying actuarial techniques to historical data to project future loss experience. Examples of factors that impact such judgments include, but are not limited to, the following:

- nature and complexity of underlying coverage provided and net limits of exposure provided;
- segmentation of data to provide sufficient homogeneity and credibility for loss projection methods;
- extent of credible internal historical loss data and reliance upon industry information as required;
- historical variability of actual loss emergence compared with expected loss emergence;
- reported and projected loss trends;
- extent of emerged loss experience relative to the remaining expected period of loss emergence;
- rate monitor information for new and renewal business;
- changes in claims handling practice, including impact of COVID-19 on adjudication environment;
- inflation;
- the legal environment, including impact of COVID-19 on judicial proceedings;
- facts and circumstances of large claims;
- terms and conditions of the contracts sold to our insured parties;
- impact of applicable reinsurance recoveries; and
- nature and extent of underlying assumptions.

We have actuarial staff within each of our business units who analyze loss reserves (including loss expenses) and regularly project estimates of ultimate losses and the corresponding indications of the required IBNR reserve. Our reserving approach is a comprehensive ground-up process using data at a detailed level that reflects the specific types and coverages of the diverse products written by our various operations. The data presented in this disclosure was prepared on a more aggregated basis and with a focus on changes in incurred loss estimates over time as well as associated cash flows. We note that data prepared on this basis may not demonstrate the full spectrum of characteristics that are evident in the more detailed level studied internally.

We perform an actuarial reserve review for each product line at least once a year. For most product lines, one or more standard actuarial reserving methods may be used to determine estimates of ultimate losses and loss expenses, and from these estimates, a single actuarial central estimate is selected. The actuarial central estimate is an input to the reserve committee process described above. For the few product lines that do not lend themselves to standard actuarial reserving methods, appropriate techniques are applied to produce the actuarial central estimates. For example, run-off asbestos and environmental liability estimates are better suited to the application of account-specific exposure-based analyses to best evaluate their associated aggregate reserve levels.

b) Standard actuarial reserving methods
The judgments involved in projecting the ultimate losses include the use and interpretation of various standard actuarial reserving methods that place reliance on the extrapolation of actual historical data, loss development patterns, industry data, and other benchmarks as appropriate.

Standard actuarial reserving methods include, but are not limited to, expected loss ratio, paid and reported loss development, and Bornhuetter-Ferguson methods. A general description of these methods is provided below. In addition to these standard methods, depending upon the product line characteristics and available data, we may use other recognized actuarial methods and approaches. Implicit in the standard actuarial methods that we generally utilize is the need for two fundamental assumptions: first, the pattern by which losses are expected to emerge over time for each origin year, and second, the expected loss ratio for each origin year.

The expected loss ratio for any particular origin year is selected after consideration of a number of factors, including historical loss ratios adjusted for rate changes, premium and loss trends, industry benchmarks, the results of policy level loss modeling at the time of underwriting, and/or other more subjective considerations for the product line (e.g., terms and conditions) and external environment as noted above. The expected loss ratio for a given origin year is initially established at the start of the origin year as part of the planning process. This analysis is performed in conjunction with underwriters and management. The expected loss ratio method arrives at an ultimate loss estimate by multiplying the expected ultimate loss ratio by the corresponding premium base. This method is most commonly used as the basis for the actuarial central estimate for immature origin periods on product lines where the actual paid or reported loss experience is not yet deemed sufficiently credible to serve as the principal basis for the selection of ultimate losses. The expected loss ratio for a given origin year may be modified over time if the underlying assumptions differ from the original assumptions (e.g., the assessment of prior year loss ratios, loss trend, rate changes, actual claims, or other information).

Our selected paid and reported development patterns provide a benchmark against which the actual emerging loss experience can be monitored. Where possible, development patterns are selected based on historical loss emergence by origin year. For product lines where the historical data is viewed to have low statistical credibility, the selected development patterns also reflect relevant industry benchmarks and/or experience from similar product lines written elsewhere within Chubb. This most commonly occurs for relatively new product lines that have limited historical data or for high severity/low frequency portfolios where our historical experience exhibits considerable volatility and/or lacks credibility. The paid and reported loss development methods convert the selected loss emergence pattern to a set of multiplicative factors which are then applied to actual paid or reported losses to arrive at an estimate of ultimate losses for each period. Due to their multiplicative nature, the paid and reported loss development methods will leverage differences between actual and expected loss emergence. These methods tend to be utilized for more mature origin periods and for those portfolios where the loss emergence has been relatively consistent over time.

The Bornhuetter-Ferguson method is a combination of the expected loss ratio method and the loss development method, where the loss development method is given more weight as the origin year matures. This approach allows a logical transition between the expected loss ratio method which is generally utilized at earlier maturities and the loss development methods which are typically utilized at later maturities. We usually apply this method using reported loss data although paid data may also be used.

Short-tail business

Short-tail business generally describes product lines for which losses are typically known and paid shortly after the loss occurs. This would include, for example, most property, personal accident, and automobile physical damage policies that we write. Due to the short reporting and development pattern for these product lines, the uncertainty associated with our estimate of ultimate losses for any particular accident period diminishes relatively quickly as actual loss experience emerges. We typically assign credibility to methods that incorporate actual loss emergence, such as the paid and reported loss development and Bornhuetter-Ferguson methods, sooner than would be the case for long-tail lines at a similar stage of development for a given origin year. The reserving process for short-tail losses arising from catastrophic events typically involves an assessment by the claims department, in conjunction with underwriters and actuaries, of our exposure and estimated losses immediately following an event and then subsequent revisions of the estimated losses as our insureds provide updated actual loss information.

Long-tail business

Long-tail business describes lines of business for which specific losses may not be known/reported for some period and for which claims can take significant time to settle/close. This includes most casualty lines such as general liability, D&O, and workers' compensation. There are various factors contributing to the uncertainty and volatility of long-tail business, including the indirect impact of COVID-19 that has changed loss reporting and development patterns. In addition, uncertain future inflationary trends, changes in future legal environments, and the potential impact of major claims, such as molestation claims including the Boy Scouts of America (BSA) agreement-in-principle, added to the uncertainty and volatility in the long-tail business. Other factors are:

- The nature and complexity of underlying coverage provided and net limits of exposure provided;
- Our historical loss data and experience is sometimes too immature and lacking in credibility to rely upon for reserving purposes. Where this is the case, in our reserve analysis we may utilize industry loss ratios or industry benchmark development patterns that we believe reflect the nature and coverage of the underwritten business and its future development, where available. For such product lines, actual loss experience may differ from industry loss statistics as well as loss experience for previous underwriting years;
- The difficulty in estimating loss trends, claims inflation (e.g., medical and judicial) and underlying economic conditions;
- The need for professional judgment to estimate loss development patterns beyond that represented by historical data using supplemental internal or industry data, extrapolation, or a blend of both;
- The need to address shifts in business mix or volume over time when applying historical paid and reported loss development patterns from older origin years to more recent origin years. For example, changes over time in the processes and procedures for establishing case reserves can distort reported loss development patterns or changes in ceded reinsurance structures by origin year can alter the development of paid and reported losses;
- Loss reserve analyses typically require loss or other data be grouped by common characteristics in some manner. If data from two combined lines of business exhibit different characteristics, such as loss payment patterns, the credibility of the reserve estimate could be affected. Additionally, since casualty lines of business can have significant intricacies in the terms and conditions afforded to the insured, there is an inherent risk as to the homogeneity of the underlying data used in performing reserve analyses; and
- The applicability of the price change data used to estimate ultimate loss ratios for most recent origin years.

As described above, various factors are considered when determining appropriate data, assumptions, and methods used to establish the loss reserve estimates for long-tail product lines. These factors may also vary by origin year for given product lines. The derivation of loss development patterns from data and the selection of a tail factor to project ultimate losses from actual loss emergence require considerable judgment, particularly with respect to the extent to which historical loss experience is relied upon to support changes in key reserving assumptions.

c) Loss Development Tables
The tables were designed to present business with similar risk characteristics which exhibit like development patterns and generally similar trends, in order to provide insight into the nature, amount, timing and uncertainty of cash flows related to our claims liabilities.

Each table follows a similar format and reflects the following:
- The incurred loss triangle includes both reported case reserves and IBNR liabilities.
- Both the incurred and paid loss triangles include allocated loss adjustment expense (i.e., defense and investigative costs particular to individual claims) but exclude unallocated loss adjustment expense (i.e., the costs associated with internal claims staff and third-party administrators).
- The amounts in both triangles for the years ended December 31, 2012 to December 31, 2020 and average historical claim duration as of December 31, 2021, are presented as supplementary information.
- All data presented in the triangles is net of reinsurance recoverables.
- The IBNR reserves shown to the right of each incurred loss development exhibit reflect the net IBNR recorded as of December 31, 2021.
- The tables are presented retrospectively with respect to acquisitions where these are material and doing so is practicable. Most notably, the Chubb Corp acquisition is presented retrospectively. The unaudited consolidated data is presented solely for informational purposes and is not necessarily indicative of the consolidated data that might have been observed had the transactions been completed prior to the date indicated.

Historical dollar amounts are presented in this footnote on a constant-dollar basis, which is achieved by assuming constant foreign exchange rates for all periods in the loss triangles, translating prior period amounts using the same local currency exchange rates as the current year end. The impact of this conversion is to show the change between periods exclusive of the effect of fluctuations in exchange rates, which would otherwise distort the change in incurred loss and cash flow patterns shown. The change in incurred loss shown will differ from other GAAP disclosures of incurred prior period reserve development amounts, which include the effect of fluctuations in exchanges rates.

We provided guidance above on key assumptions that should be considered when reviewing this disclosure and information relating to how loss reserve estimates are developed. We believe the information provided in the “Loss Development Tables” section of the disclosure is of limited use for independent analysis or application of standard actuarial estimations.

Cumulative Number of Reported Claims
Reported claim counts, on a cumulative basis, are provided to the far right of each incurred loss development table. In our North America segments, we generally consider a reported claim to be one claim per coverage per claimant. In our Overseas General Insurance segment, we generally consider a reported claim to be on a per occurrence basis. Global Reinsurance segment’s portfolio comprises a mix of proportional and non-proportional treaties. The proportional treaties are reported on a bulk basis and do not lend themselves to meaningful claim count data. As such, we do not provide claim count information for our Global Reinsurance segment.

We exclude claims closed without payment. Claims are counted on a direct basis without consideration of ceded reinsurance. Use of the presented claim counts in analysis of company experience has significant limitations, including:
- Claims for certain events and/or product lines, such as portions of our A&H business, are not reported on an individual basis, but rather in bulk and thus not available for inclusion in this disclosure.
- Each segment typically has a mixture of primary and excess experience which has shifted over time.
- Captive business, especially in Workers' Compensation and Liability, largely represents fronted business where our net exposure to loss is minimal; however, since the claim count is based on direct claims, there is a mismatch between direct claims and net loss dollars, the extent of which varies by accident year.

Reported claim counts include open claims which have case reserves but exclude claims that have been incurred but not reported. As such the reported claims are not consistent with the incurred losses in the triangle, which include incurred but not reported losses. One can calculate reported losses by subtracting incurred but not reported losses from incurred losses in the triangle. Reported claim counts are also inconsistent with losses in the paid loss triangle, since reported counts would include claims with case reserves but no payments to date.

North America Commercial P&C Insurance — Workers' Compensation — Long-tail
This product line has a substantial geographic spread and a broad mix across industries. Types of coverage include risk management business predominantly with high deductible policies, loss sensitive business (i.e., retrospectively-rated policies), business fronted for captives, as well as excess and primary guaranteed cost coverages.

The triangle below shows all loss and allocated expense development for the workers' compensation product line. In our prior period development disclosure, we exclude any loss development where there is a directly related premium adjustment. For workers' compensation, changes in the exposure base due to payroll audits will drive changes in ultimate losses. In addition, we record involuntary pool assumptions (premiums and losses) on a lagged basis. Both of these items will influence the development in the triangle, particularly the first prior accident year, and are included in the reconciliation table presented on page F-58.

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31 Unaudited										As of December 31 2021	
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**	**Reported Claims** (in thousands)
2012	$ 1,050	$ 1,011	$ 1,030	$ 1,040	$ 1,011	$ 989	$ 986	$ 977	$ 953	**$ 952**	**$ 224**	**44**
2013		1,109	1,108	1,122	1,127	1,086	1,073	1,037	1,014	**989**	**252**	**43**
2014			1,207	1,201	1,217	1,215	1,163	1,100	1,073	**1,037**	**305**	**45**
2015				1,282	1,259	1,276	1,279	1,217	1,154	**1,128**	**379**	**50**
2016					1,367	1,361	1,383	1,378	1,269	**1,206**	**439**	**52**
2017						1,413	1,380	1,399	1,393	**1,376**	**679**	**50**
2018							1,359	1,361	1,379	**1,385**	**681**	**51**
2019								1,391	1,384	**1,401**	**718**	**47**
2020									1,367	**1,387**	**903**	**31**
2021										**1,348**	**1,033**	**30**
Total										**$ 12,209**		

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31 Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 111	$ 271	$ 365	$ 436	$ 486	$ 532	$ 574	$ 592	$ 612	**$ 626**
2013		107	286	422	506	553	587	616	633	**650**
2014			113	295	410	484	532	566	599	**617**
2015				116	301	418	501	564	606	**628**
2016					122	326	452	529	584	**621**
2017						120	313	437	516	**564**
2018							130	329	451	**528**
2019								143	341	**467**
2020									111	**282**
2021										**120**
Total										**$ 5,103**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 2,836**
Accident years 2012 - 2021 from tables above	**7,106**
All Accident years	**$ 9,942**

North America Commercial P&C Insurance — Workers' Compensation — Long-tail (continued)

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	$ **(98)**
Accident years 2012 - 2021 from tables above	**(125)**
All Accident years	$ **(223)**

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	10 %	15 %	10 %	7 %	5 %	4 %	3 %	2 %	2 %	1 %

North America Commercial P&C Insurance — Liability — Long-tail

This line consists of primary and excess liability exposures, medical liability, and professional lines, including directors and officers (D&O) liability, errors and omissions (E&O) liability, employment practices liability (EPL), fidelity bonds, and fiduciary liability.

The primary and excess liability business represents the largest part of these exposures. The former includes both monoline and commercial package liability. The latter includes a substantial proportion of commercial umbrella, excess and high excess business, where loss activity can produce significant volatility in the loss triangles at later ages within an accident year (and sometimes across years) due to the size of the limits afforded and the complex nature of the underlying losses.

This line includes management and professional liability products provided to a wide variety of clients, from national accounts to small firms along with private and not-for-profit organizations, distributed through brokers, agents, wholesalers and MGAs. Many of these coverages, particularly D&O and E&O, are typically written on a claims-made form. While most of the coverages are underwritten on a primary basis, there are significant amounts of excess exposure with large policy limits.

Net Incurred Loss and Allocated Loss Adjustment Expenses

	Years Ended December 31										As of December 31 2021	
(in millions of U.S. dollars)	Unaudited											
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**	**Reported Claims** (in thousands)
2012	$3,552	$3,628	$3,614	$3,565	$3,525	$3,427	$3,331	$3,235	$3,235	$ **3,308**	$ **302**	**25**
2013		3,547	3,542	3,543	3,533	3,430	3,216	3,122	2,964	**2,956**	**252**	**25**
2014			3,535	3,586	3,675	3,718	3,656	3,470	3,346	**3,198**	**381**	**24**
2015				3,560	3,709	3,819	3,977	3,943	3,736	**3,709**	**714**	**27**
2016					3,534	3,595	3,692	3,805	3,799	**3,771**	**773**	**27**
2017						3,322	3,499	3,581	3,631	**3,552**	**1,156**	**27**
2018							3,375	3,494	3,697	**3,828**	**1,445**	**28**
2019								3,452	3,628	**3,867**	**1,982**	**30**
2020									4,106	**3,832**	**2,780**	**24**
2021										**4,322**	**3,941**	**25**
Total										**$36,343**		

North America Commercial P&C Insurance — Liability — Long-tail (continued)

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

	Years Ended December 31									
(in millions of U.S. dollars)	Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 166	$ 656	$ 1,172	$ 1,680	$ 2,093	$ 2,327	$ 2,502	$ 2,619	$ 2,688	**$ 2,783**
2013		130	548	1,192	1,597	2,007	2,232	2,374	2,465	**2,525**
2014			164	679	1,250	1,804	2,202	2,442	2,584	**2,673**
2015				138	605	1,206	1,856	2,291	2,533	**2,749**
2016					171	663	1,336	1,975	2,334	**2,596**
2017						161	617	1,162	1,701	**2,003**
2018							190	754	1,303	**1,777**
2019								176	671	**1,248**
2020									152	**590**
2021										**175**
Total										**$ 19,119**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 1,512**
Accident years 2012 - 2021 from tables above	**17,224**
All Accident years	**$ 18,736**

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ (86)**
Accident years 2012 - 2021 from tables above	**(121)**
All Accident years	**$ (207)**

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	4 %	14 %	17 %	15 %	11 %	7 %	5 %	3 %	2 %	3 %

North America Commercial P&C Insurance — Other Casualty — Long-tail

This product line consists of the remaining commercial casualty coverages such as automobile liability and aviation. There is also a small portion of commercial multi-peril (CMP) business in accident years 2014 and prior. The paid and reported data are impacted by some catastrophe loss activity primarily on the CMP exposures just noted.

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31										As of December 31 2021	
	Unaudited											
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**	**Reported Claims** (in thousands)
2012	$ 634	$ 606	$ 577	$ 561	$ 520	$ 519	$ 509	$ 507	$ 505	**$ 500**	**$ 2**	**16**
2013		527	531	523	516	469	462	462	458	**461**	**12**	**18**
2014			595	583	581	597	555	539	539	**531**	**14**	**17**
2015				487	470	502	515	458	455	**463**	**31**	**15**
2016					504	502	527	524	481	**480**	**51**	**16**
2017						532	566	577	616	**605**	**79**	**17**
2018							536	564	575	**580**	**110**	**17**
2019								606	637	**686**	**219**	**16**
2020									646	**634**	**372**	**11**
2021										**675**	**515**	**9**
Total										**$ 5,615**		

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31									
	Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 69	$ 223	$ 320	$ 387	$ 435	$ 470	$ 487	$ 493	$ 502	**$ 496**
2013		69	197	271	348	385	412	419	426	**439**
2014			80	220	317	391	455	473	501	**509**
2015				47	137	215	305	371	395	**412**
2016					52	145	246	324	375	**398**
2017						66	175	313	381	**446**
2018							74	169	270	**365**
2019								70	190	**318**
2020									53	**151**
2021										**60**
Total										**$ 3,594**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 283**
Accident years 2012 - 2021 from tables above	**2,021**
All Accident years	**$ 2,304**

North America Commercial P&C Insurance — Other-Casualty — Long-tail (continued)

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	December 31, 2021
Accident years prior to 2012	$ (7)
Accident years 2012 - 2021 from tables above	28
All Accident years	$ 21

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	11 %	21 %	19 %	15 %	11 %	5 %	3 %	1 %	2 %	— %

North America Commercial P&C Insurance — Non-Casualty — Short-tail

This product line represents first party commercial product lines that are short-tailed in nature, such as property, inland marine, ocean marine, surety and A&H. There is a wide diversity of products, primary and excess coverages, and policy sizes. During this ten-year period, this product line was also impacted by natural catastrophes mainly in the 2012, 2017, and 2018 accident years.

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31 (Unaudited)										As of December 31 2021	
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Net IBNR Reserves	Reported Claims (in thousands)
2012	$2,033	$1,916	$1,883	$1,864	$1,859	$1,847	$1,844	$1,850	$1,844	$ 1,848	$ 5	426
2013		1,434	1,424	1,337	1,360	1,340	1,340	1,338	1,344	1,343	5	455
2014			1,643	1,661	1,579	1,559	1,549	1,550	1,558	1,552	3	483
2015				1,736	1,745	1,650	1,638	1,605	1,589	1,592	(6)	545
2016					1,911	1,890	1,800	1,782	1,818	1,832	34	650
2017						2,704	2,608	2,504	2,521	2,513	51	763
2018							2,053	2,240	2,175	2,167	41	903
2019								2,052	2,037	1,959	67	1,042
2020									3,148	2,951	357	1,118
2021										2,947	1,249	726
Total										$ 20,704		

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31 (Unaudited)									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2012	$ 715	$ 1,577	$ 1,698	$ 1,767	$ 1,795	$ 1,822	$ 1,816	$ 1,842	$ 1,844	$ 1,839
2013		651	1,138	1,238	1,285	1,311	1,324	1,333	1,335	1,336
2014			820	1,373	1,484	1,506	1,532	1,546	1,554	1,558
2015				727	1,343	1,488	1,556	1,572	1,574	1,587
2016					846	1,505	1,656	1,733	1,760	1,786
2017						979	2,087	2,302	2,392	2,406
2018							1,027	1,825	2,018	2,074
2019								1,030	1,677	1,804
2020									1,396	2,271
2021										1,087
Total										$ 17,748

North America Commercial P&C Insurance — Non-Casualty — Short-tail (continued)

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	December 31, 2021
Accident years prior to 2012	$ 7
Accident years 2012 - 2021 from tables above	2,956
All Accident years	$ 2,963

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	December 31, 2021
Accident years prior to 2012	$ (3)
Accident years 2012 - 2021 from tables above	(277)
All Accident years	$ (280)

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	45 %	37 %	8 %	3 %	1 %	1 %	— %	1 %	— %	— %

North America Personal P&C Insurance — Short-tail

Chubb provides personal lines coverages for high-net-worth individuals and families in North America including homeowners, automobile, valuable articles (including fine art), umbrella liability, and recreational marine insurance offered through independent regional agents and brokers. A portfolio acquired from Fireman's Fund is presented on a prospective basis beginning in May of accident year 2015. Reserves associated with prior accident periods were acquired through a loss portfolio transfer, which does not allow for a retrospective presentation. During this ten-year period, this segment was also impacted by natural catastrophes, mainly in 2012, 2017 and 2018 accident years.

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31										As of December 31 2021	
	Unaudited											
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**	**Reported Claims** (in thousands)
2012	$2,186	$2,183	$2,183	$2,191	$2,186	$2,186	$2,189	$2,194	$2,190	$ **2,188**	$ **5**	**188**
2013		1,860	1,889	1,897	1,900	1,925	1,937	1,945	1,948	**1,949**	**23**	**132**
2014			2,205	2,206	2,192	2,146	2,160	2,147	2,141	**2,141**	**11**	**144**
2015				2,495	2,550	2,561	2,544	2,563	2,570	**2,566**	**12**	**148**
2016					2,440	2,536	2,545	2,482	2,471	**2,464**	**27**	**154**
2017						3,035	3,069	3,002	2,998	**2,998**	**63**	**163**
2018							3,010	3,037	3,103	**3,118**	**197**	**169**
2019								2,957	2,993	**2,994**	**209**	**156**
2020									2,931	**2,634**	**376**	**121**
2021										**3,037**	**1,025**	**103**
Total										$ **26,089**		

North America Personal P&C Insurance — Short-tail (continued)

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31									
	Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 1,177	$ 1,806	$ 1,957	$ 2,063	$ 2,117	$ 2,150	$ 2,164	$ 2,164	$ 2,165	**$ 2,177**
2013		1,043	1,505	1,688	1,787	1,843	1,885	1,895	1,917	**1,916**
2014			1,310	1,765	1,926	2,035	2,080	2,106	2,116	**2,123**
2015				1,499	2,084	2,271	2,392	2,478	2,508	**2,533**
2016					1,453	2,052	2,211	2,314	2,370	**2,398**
2017						1,698	2,520	2,668	2,799	**2,870**
2018							1,926	2,549	2,706	**2,865**
2019								1,668	2,437	**2,617**
2020									1,334	**1,995**
2021										**1,587**
Total										**$ 23,081**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 27**
Accident years 2012 - 2021 from tables above	**3,008**
All Accident years	**$ 3,035**

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ (2)**
Accident years 2012 - 2021 from tables above	**(293)**
All Accident years	**$ (295)**

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	56 %	24 %	6 %	5 %	3 %	1 %	1 %	— %	— %	1 %

Overseas General Insurance — Casualty — Long-tail

This product line is comprised of D&O liability, E&O liability, financial institutions (including crime/fidelity coverages), and non-U.S. general liability as well as aviation and political risk. Exposures are located around the world, including Europe, Latin America, and Asia. Approximately 46 percent of Chubb Overseas General business is generated by European accounts, exclusive of Lloyd's market. There is some U.S. exposure in Casualty from multinational accounts and in financial lines for Lloyd's market. The financial lines coverages are typically written on a claims-made form, while general liability coverages are typically on an occurrence basis and comprised of a mix of primary and excess businesses.

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31										As of December 31 2021	
	Unaudited											
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**	**Reported Claims** (in thousands)
2012	$1,249	$1,219	$1,282	$1,300	$1,297	$1,287	$1,267	$1,257	$1,227	**$ 1,237**	**$ 62**	**38**
2013		1,238	1,234	1,230	1,274	1,228	1,195	1,137	1,104	**1,124**	**73**	**39**
2014			1,237	1,307	1,316	1,331	1,248	1,165	1,125	**1,134**	**101**	**40**
2015				1,153	1,249	1,278	1,301	1,278	1,219	**1,202**	**137**	**42**
2016					1,189	1,289	1,356	1,385	1,373	**1,382**	**286**	**43**
2017						1,180	1,282	1,330	1,379	**1,343**	**205**	**44**
2018							1,279	1,330	1,392	**1,434**	**493**	**44**
2019								1,354	1,422	**1,447**	**620**	**42**
2020									1,740	**1,656**	**1,101**	**34**
2021										**1,678**	**1,373**	**29**
Total										**$13,637**		

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31									
	Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 72	$ 244	$ 427	$ 577	$ 690	$ 828	$ 898	$ 940	$ 1,005	**$ 1,061**
2013		82	258	412	557	699	799	866	917	**938**
2014			107	283	457	588	701	784	847	**890**
2015				82	276	478	655	774	853	**929**
2016					123	313	517	664	787	**883**
2017						94	310	516	676	**842**
2018							109	322	485	**627**
2019								121	327	**459**
2020									105	**283**
2021										**116**
Total										**$ 7,028**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 443**
Accident years 2012 - 2021 from tables above	**6,609**
All Accident years	**$ 7,052**

Overseas General Insurance — Casualty — Long-tail (continued)

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	December 31, 2021
Accident years prior to 2012	$ (76)
Accident years 2012 - 2021 from tables above	(22)
All Accident years	$ (98)

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	7 %	14 %	14 %	12 %	10 %	8 %	6 %	4 %	4 %	5 %

Overseas General Insurance — Non-Casualty — Short-tail

This product line is comprised of commercial fire, marine (predominantly cargo), surety, personal automobile (in Latin America, Asia Pacific and Japan), personal cell phones, personal residential (including high net worth), energy and construction. In general, these lines have relatively stable payment and reporting patterns although they are impacted by natural catastrophes mainly in the 2017 and 2018 accident years. Europe and Asia each make up about one third of the Chubb Overseas General non-casualty book.

Net Incurred Loss and Allocated Loss Adjustment Expenses

	Years Ended December 31										As of December 31 2021	
(in millions of U.S. dollars)	Unaudited											
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**	**Reported Claims** (in thousands)
2012	$1,634	$1,624	$1,584	$1,531	$1,524	$1,516	$1,501	$1,496	$1,489	**$ 1,488**	**$ 4**	**555**
2013		1,703	1,698	1,635	1,589	1,584	1,557	1,545	1,536	**1,527**	**12**	**573**
2014			1,774	1,839	1,785	1,775	1,740	1,730	1,723	**1,717**	**(3)**	**548**
2015				1,867	1,985	1,963	1,933	1,915	1,908	**1,890**	**3**	**570**
2016					1,975	1,973	1,960	1,938	1,942	**1,972**	**38**	**581**
2017						2,122	2,161	2,143	2,125	**2,149**	**15**	**589**
2018							2,083	2,169	2,132	**2,109**	**29**	**623**
2019								2,098	2,117	**2,049**	**22**	**640**
2020									2,448	**2,309**	**250**	**541**
2021										**2,521**	**699**	**531**
Total										**$19,731**		

Overseas General Insurance — Non-Casualty — Short-tail (continued)

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31									
	Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 643	$ 1,176	$ 1,357	$ 1,415	$ 1,437	$ 1,447	$ 1,458	$ 1,461	$ 1,460	**$ 1,471**
2013		659	1,221	1,410	1,441	1,477	1,495	1,502	1,505	**1,503**
2014			718	1,365	1,571	1,633	1,662	1,675	1,689	**1,696**
2015				811	1,481	1,707	1,786	1,807	1,836	**1,853**
2016					959	1,597	1,791	1,861	1,886	**1,895**
2017						1,000	1,765	1,938	2,012	**2,052**
2018							954	1,668	1,868	**1,936**
2019								996	1,657	**1,849**
2020									1,031	**1,649**
2021										**962**
Total										**$ 16,866**

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 119**
Accident years 2012 - 2021 from tables above	**2,865**
All Accident years	**$ 2,984**

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ (6)**
Accident years 2012 - 2021 from tables above	**(210)**
All Accident years	**$ (216)**

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	44 %	34 %	10 %	3 %	2 %	1 %	1 %	— %	— %	1 %

Global Reinsurance

Chubb analyzes its Global Reinsurance business on a treaty year basis rather than on an accident year basis. Treaty year data was converted to an accident year basis for the purposes of this disclosure. Mix shifts are an important consideration in these product line groupings. As proportional business and excess of loss business have different earning and loss reporting and payment patterns, this change in mix will affect the cash flow patterns across the accident years. In addition, the shift from excess to proportional business over time will make the cash flow patterns of older and more recent years difficult to compare. In general, the proportional business will pay out more quickly than the excess of loss business, as such, using older years development patterns may overstate the ultimate loss estimates in more recent years.

Global Reinsurance — Casualty — Long-tail

This product line includes proportional and excess coverages in general, automobile liability, professional liability, medical malpractice and workers' compensation, with exposures located around the world. In general, reinsurance exhibits less stable development patterns than primary business. In particular, general casualty reinsurance and excess coverages are long-tailed and can be very volatile.

Global Reinsurance — Casualty — Long-tail (continued)

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31										As of December 31 2021
	Unaudited										
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**
2012	$ 386	$ 382	$ 391	$ 393	$ 378	$ 372	$ 371	$ 373	$ 378	**$ 376**	**$ 5**
2013		320	326	329	329	331	323	316	310	**309**	**10**
2014			332	333	339	342	343	346	329	**330**	**11**
2015				284	288	299	300	308	304	**308**	**14**
2016					223	226	235	234	243	**243**	**16**
2017						213	215	219	217	**218**	**17**
2018							244	247	254	**250**	**25**
2019								238	246	**241**	**56**
2020									246	**250**	**97**
2021										**281**	**196**
Total										**$ 2,806**	

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31									
	Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 78	$ 168	$ 222	$ 262	$ 293	$ 308	$ 324	$ 335	$ 341	**$ 347**
2013		65	143	186	222	241	260	269	271	**278**
2014			91	184	217	248	264	276	286	**295**
2015				90	158	191	217	232	249	**266**
2016					57	113	142	159	175	**192**
2017						46	100	122	140	**155**
2018							41	96	125	**149**
2019								40	90	**116**
2020									41	**99**
2021										**35**
Total										**$ 1,932**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 317**
Accident years 2012 - 2021 from tables above	**874**
All Accident years	**$ 1,191**

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ (27)**
Accident years 2012 - 2021 from tables above	**(2)**
All Accident years	**$ (29)**

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	21 %	24 %	12 %	9 %	6 %	5 %	4 %	2 %	2 %	1 %

Global Reinsurance — Non-Casualty — Short-tail

This product line includes property, property catastrophe, marine, credit/surety, A&H and energy. This product line is impacted by natural catastrophes, particularly in the 2017, 2018, 2020, and 2021 accident years. Of the non-catastrophe book, the mixture of business varies by year with approximately 79 percent of loss on proportional treaties in treaty year 2012 and after. This percentage has increased over time with the proportion being approximately 54 percent for treaty year 2012 growing to an average of 83 percent for treaty years 2013 to 2021, with the remainder being written on an excess of loss basis.

Net Incurred Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31 Unaudited										As of December 31 2021
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**	**Net IBNR Reserves**
2012	$ 232	$ 211	$ 201	$ 192	$ 190	$ 188	$ 185	$ 185	$ 183	**$ 184**	**$ 1**
2013		160	158	146	141	142	140	140	139	**138**	**—**
2014			164	179	179	182	181	179	178	**177**	**1**
2015				146	154	161	161	153	159	**157**	**1**
2016					182	187	189	192	188	**186**	**2**
2017						396	423	453	450	**454**	**13**
2018							285	295	299	**294**	**1**
2019								139	137	**133**	**18**
2020									211	**255**	**34**
2021										**342**	**131**
Total										**$ 2,320**	

Net Cumulative Paid Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	Years Ended December 31 Unaudited									
Accident Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	**2021**
2012	$ 45	$ 130	$ 156	$ 166	$ 172	$ 177	$ 180	$ 180	$ 179	**$ 179**
2013		46	102	120	130	133	135	136	137	**137**
2014			65	128	151	162	167	170	172	**172**
2015				56	103	132	142	146	151	**152**
2016					57	132	159	170	176	**180**
2017						191	322	401	415	**428**
2018							94	255	273	**276**
2019								35	84	**99**
2020									62	**178**
2021										**158**
Total										**$ 1,959**

Net Liabilities for Loss and Allocated Loss Adjustment Expenses

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ 11**
Accident years 2012 - 2021 from tables above	**361**
All Accident years	**$ 372**

Supplementary Information: (Favorable)/ Adverse Prior Period Development

(in millions of U.S. dollars)	**December 31, 2021**
Accident years prior to 2012	**$ (4)**
Accident years 2012 - 2021 from tables above	**34**
All Accident years	**$ 30**

Global Reinsurance — Non-Casualty — Short-tail (continued)

Supplementary Information: Average Annual Percentage Payout of Net Incurred Claims by Age, as of December 31, 2021 (Unaudited)

Age in Years	1	2	3	4	5	6	7	8	9	10
Percentage	35 %	40 %	14 %	4 %	3 %	2 %	1 %	1 %	— %	— %

Prior Period Development — Supplementary Information

The following table presents a reconciliation of the loss development triangles above to prior period development:

Year Ended December 31, 2021 (in millions of U.S. dollars) (favorable)/unfavorable	Components of PPD: 2012 - 2020 accident years (implied PPD per loss triangles)	Accident years prior to 2012	Other [1]	PPD on loss reserves	RIPs, Expense adjustments, and earned premiums	Total
North America Commercial P&C Insurance						
Long-tail	$ (218)	$ (191)	$ (142)	$ (551)	$ 69	$ (482)
Short-tail	(277)	(3)	(10)	(290)	10	(280)
	(495)	(194)	(152) [2]	(841)	79 [3]	(762)
North America Personal P&C Insurance (Short-tail)	(293)	(2)	(9)	(304)	(1)	(305)
Overseas General Insurance						
Long-tail	(22)	(76)	(8)	(106)	—	(106)
Short-tail	(210)	(6)	(126)	(342)	7	(335)
	(232)	(82)	(134) [4]	(448)	7	(441)
Global Reinsurance						
Long-tail	(2)	(27)	1	(28)	3	(25)
Short-tail	34	(4)	(2)	28	—	28
	32	(31)	(1)	—	3	3
Subtotal	$ (988)	$ (309)	$ (296)	$ (1,593)	$ 88	$ (1,505)
North America Agricultural Insurance (Short-tail)				$ 38	$ (28)	$ 10
Corporate (Long-tail)				569	—	569
Consolidated PPD				$ (986)	$ 60	$ (926)

(1) Other includes the impact of foreign exchange.

(2) Includes favorable development of $96 million related to our Alternative Risk Solutions business (U.S. and Bermuda) and an adjustment to exclude $48 million in unfavorable development in the workers' compensation line, associated with an increase in exposure for which additional premiums were collected; the remaining difference relates to a number of other items, none of which are individually material.

(3) Includes premium returns associated with our Alternative Risk Solutions business, which is excluded from the triangles.

(4) Includes favorable development of $118 million related to International A&H business; the remaining difference relates to a number of other items, none of which are individually material.

Prior Period Development

Prior period development (PPD) arises from changes to loss estimates recognized in the current year that relate to loss events that occurred in previous calendar years and excludes the effect of losses from the development of earned premium from previous accident years. Long-tail lines include lines such as workers' compensation, general liability, and professional liability; while short-tail lines include lines such as most property lines, energy, personal accident, and agriculture. The following table summarizes (favorable) and adverse PPD by segment:

Years Ended December 31 (in millions of U.S. dollars, except for percentages)	Long-tail	Short-tail	Total	% of beginning net unpaid reserves [(1)]
2021				
North America Commercial P&C Insurance	**$ (482)**	**$ (280)**	**$ (762)**	**1.4 %**
North America Personal P&C Insurance	**—**	**(305)**	**(305)**	**0.6 %**
North America Agricultural Insurance	**—**	**10**	**10**	**— %**
Overseas General Insurance	**(106)**	**(335)**	**(441)**	**0.8 %**
Global Reinsurance	**(25)**	**28**	**3**	**— %**
Corporate	**569**	**—**	**569**	**1.1 %**
Total	**$ (44)**	**$ (882)**	**$ (926)**	**1.7 %**
2020				
North America Commercial P&C Insurance	$ (672)	$ (30)	$ (702)	1.4 %
North America Personal P&C Insurance	—	63	63	0.1 %
North America Agricultural Insurance	—	(10)	(10)	— %
Overseas General Insurance	(49)	(101)	(150)	0.3 %
Global Reinsurance	(25)	(4)	(29)	0.1 %
Corporate	433	—	433	0.9 %
Total	$ (313)	$ (82)	$ (395)	0.8 %
2019				
North America Commercial P&C Insurance	$ (668)	$ 19	$ (649)	1.3 %
North America Personal P&C Insurance	—	(95)	(95)	0.2 %
North America Agricultural Insurance	—	(80)	(80)	0.2 %
Overseas General Insurance	(68)	(24)	(92)	0.2 %
Global Reinsurance	(59)	30	(29)	0.1 %
Corporate	153	—	153	0.3 %
Total	$ (642)	$ (150)	$ (792)	1.6 %

(1) Calculated based on the beginning of period consolidated net unpaid losses and loss expenses.

Significant prior period movements by segment, principally driven by reserve reviews completed during each respective period, are discussed in more detail below. The remaining net development for long-tail lines and short-tail business for each segment and Corporate comprises numerous favorable and adverse movements across a number of lines and accident years, none of which is significant individually or in the aggregate.

North America Commercial P&C Insurance
2021

North America Commercial P&C Insurance experienced net favorable PPD of $762 million, which was the net result of several underlying favorable and adverse movements, including a favorable development on COVID-19 reserves of $303 million, principally in management liability portfolios as described below, and was driven by the following principal changes:

- Net favorable development of $482 million in long-tail business, primarily from:
  - Net favorable development of $278 million in management liability portfolios, mainly in accident year 2020, of which $256 million was related to COVID-19 estimates, driven by lower than expected claim frequency including securities class actions;

- Net favorable development of $260 million in our workers' compensation business, mainly in accident years 2016 and prior, driven by lower than expected loss experience and related improvements to loss development factors. In addition, there was favorable development in accident year 2020 of $36 million related to our annual assessment of multi-claimant events including industrial accidents;
- Net favorable development of $59 million in financial lines (errors & omissions and cyber), mainly in accident years 2016, 2017 and 2020, from lower than expected emergence, partly offset by higher than expected development in accident year 2019;
- Net favorable development of $43 million on large multi-line prospective deals, mainly in accident years 2017 and prior, from lower than expected reported loss activity. These structured deals typically cover large clients for multiple product lines and with varying loss limitations; this development is net of premium returns of $46 million tied to the loss performance of the particular deals;
- Net favorable development of $40 million in voluntary environmental lines, mainly in accident years 2017 and prior, from lower than expected emergence, partly offset by higher than expected development in accident year 2019;
- Adverse development of $26 million related to an agreement-in-principle as part of the BSA bankruptcy in the 2004 and prior accident years. Refer to the Molestation claims section below for further information;
- Net adverse development of $32 million in commercial excess and umbrella portfolios, with accident years 2016 through 2019 experiencing higher than expected reported loss activity, partly offset by lower than expected emergence in accident years 2015 and prior;
- Net adverse development of $66 million in medical liability businesses, mainly in accident years 2017 and 2018, driven by higher than expected reported loss emergence and associated changes to loss expectations; and
- Net adverse development of $71 million in commercial automobile liability, mainly in accident years 2017 and 2019, driven by adverse reported loss experience.

- Net favorable development of $280 million in short-tail business, primarily from:
  - Net favorable development of $164 million in property and marine coverages, mainly in accident years 2019 and 2020, driven by lower than expected loss development;
  - Net favorable development of $89 million in surety, mainly in accident years 2018 through 2020, driven by lower than expected loss emergence, including $35 million in accident year 2020, due to lower than expected COVID-19 claim activity;
  - Net favorable development of $45 million in accident and health, mainly in accident years 2019 and 2020, where loss emergence was lower than expected; and
  - Net adverse development of $42 million in first-party cyber risk, mainly in accident years 2018 through 2020, which experienced higher than expected loss development as well as higher than expected frequency and severity.

2020
North America Commercial P&C Insurance experienced net favorable PPD of $702 million, which was the net result of several underlying favorable and adverse movements, and was driven by the following principal changes:

- Net favorable development of $672 million in long-tail business, primarily from:
  - Net favorable development of $363 million in workers' compensation lines. The majority of the favorable development related to accident years 2016 and prior, driven by lower than expected loss emergence and related updates to loss development factors. In addition, we experienced favorable development of $62 million related to our annual assessment of multi-claimant events, including industrial accidents, in the 2019 accident year. Consistent with prior years, we reviewed these potential exposures after the close of the accident year to allow for late reporting or identification of significant losses. This favorable development in accident year 2019 was partially offset by some higher than expected activity from other claims;

- Net favorable development of $231 million in management liability portfolios, favorably impacting accident years 2015 and prior where paid and reported loss activity was lower than expected, partially offset by adverse development in the 2016 through 2019 accident years, mainly due to higher than expected claim severity in our Directors and Officers (D&O) portfolios;

- Net favorable development of $83 million in commercial excess and umbrella portfolios, mainly in accident years 2014 and prior, driven by lower paid and reported loss activity relative to prior expectations as well as an increase in weighting towards experience-based methods, partially offset by adverse development in more recent accident years, due to higher than expected loss activity;

- Net favorable development of $67 million in professional liability (errors & omissions and cyber risk), driven by accident years 2016 and prior, which experienced lower than expected loss emergence;

- Net favorable development of $43 million in voluntary environmental lines, in accident years 2016 and prior, due to lower than expected loss emergence and a related update to loss development factors;

- Net favorable development of $41 million on large multi-line prospective deals in the 2016 and prior accident years, due to lower than expected reported loss activity. These structured deals typically cover large clients for multiple product lines and with varying loss limitations; this development is net of premium returns of $26 million tied to the loss performance of the particular deals;

- Net favorable development of $40 million in foreign casualty businesses, mainly in accident year 2016, due to lower than expected reported loss activity, partially offset by adverse development on a large loss in accident year 2017;

- Net adverse development of $48 million in general liability coverages, driven by higher than expected reported loss activity in accident years 2017 through 2019, partially offset by favorable development in older accident years;

- Net adverse development of $64 million in medical liability businesses, mainly impacting accident years 2016 through 2019, primarily due to higher than expected reported loss emergence and associated changes to loss development factors and loss expectations; and

- Net adverse development of $77 million in commercial automobile liability, mainly in high deductible and excess portfolios, driven by adverse paid and reported loss emergence and related updates to loss development factors, mainly in accident years 2015 through 2019.

- Net favorable development of $30 million in short-tail business, primarily from:

  - Net favorable development of $37 million in accident & health, mainly in accident years 2018 and 2019, driven by lower than expected paid loss emergence;

  - Net favorable development of $31 million in surety businesses, driven by accident year 2018, where loss emergence was lower than expected; and

  - Net adverse development of $21 million in our marine portfolios, mainly impacting the 2019 accident year, driven by higher than expected non-catastrophe loss development.

2019
North America Commercial P&C Insurance experienced net favorable PPD of $649 million, representing 1.3 percent of the beginning consolidated net unpaid losses and loss expense reserves.

North America Personal P&C Insurance
2021
North America Personal P&C Insurance incurred net favorable PPD of $305 million, driven by favorable development of $253 million in homeowners, including valuables, mainly in accident year 2020, which experienced better than expected non-catastrophe loss development and a favorable $43 million in automobile, predominantly from better than expected frequency results in accident year 2020 for physical damage coverages.

2020
North America Personal P&C Insurance incurred net adverse PPD of $63 million, which was the net result of several underlying favorable and adverse movements, and was driven by the following principal changes:

- Net adverse development of $84 million in the homeowners product line, including valuables, mainly in accident years 2017 through 2019 due to higher than expected non-catastrophe loss emergence and adverse development arising from natural catastrophes in accident years 2017 and 2018; and

- Net favorable development of $22 million in the personal excess line, driven by favorable development mainly in the 2017 accident year, partially offset by adverse development in accident year 2019.

2019
North America Personal P&C Insurance incurred net favorable PPD of $95 million, representing 0.2 percent of the beginning consolidated net unpaid losses and loss expense reserves.

North America Agricultural Insurance
North America Agricultural Insurance experienced net adverse PPD of $10 million in 2021, and favorable PPD of $10 million and $80 million in 2020 and 2019, respectively. Actual claim development mainly relates to our Multiple Peril Crop Insurance business and is based on crop yield results in certain states at the prior year-end period (i.e., 2021 results based on crop yield results at year-end 2020).

Overseas General Insurance
2021
Overseas General Insurance experienced net favorable PPD of $441 million which was the net result of several underlying favorable and adverse movements, including a favorable development on COVID-19 reserves of $127 million, principally in financial lines as described below, and was driven by the following principal changes:

- Net favorable development of $106 million in long-tail business, primarily from:

    - Net favorable development of $67 million in casualty lines, including favorable development of $95 million in accident years 2017 and prior, due to lower than expected loss emergence across primary and excess lines in Continental Europe and U.K., partially offset by adverse development of $28 million in accident years 2018 through 2020, primarily due to higher than expected loss development and corresponding changes in loss development patterns on business in Asia Pacific; and

    - Net favorable development of $14 million in financial lines, which is the net result of $104 million favorable reduction in COVID-19 estimates in accident year 2020 and adverse development of $90 million primarily in accident years 2011 through 2020 in D&O on specific claims in Australia and U.K., and adverse professional indemnity development, including medical malpractice, in various regions.

- Net favorable development of $335 million in short-tail business, primarily from:

    - Net favorable development of $111 million in accident and health lines in accident years 2019 and 2020, across most regions. Included in the favorable development is a $20 million reduction in COVID-19 estimates in accident year 2020;

    - Net favorable development of $71 million in consumer lines in accident years 2019 and 2020, driven by reduced claim frequency in personal automobile and high net worth business;

    - Net favorable development of $67 million in property lines across most regions in accident years 2019 and 2020 driven by favorable loss emergence; and

    - Net favorable development of $62 million in marine lines in accident years 2018 through 2020, driven by favorable loss development, specific claim reductions, and salvage and subrogation recoveries across all regions.

2020

Overseas General Insurance experienced net favorable PPD of $150 million, which was the net result of several underlying favorable and adverse movements, and was driven by the following principal changes:

- Net favorable development of $49 million in long-tail business, primarily from:
    - Net favorable development of $94 million in casualty lines, including favorable development of $143 million in accident years 2016 and prior, due to lower than expected loss emergence across primary and excess lines in Continental Europe, U.K., and Asia Pacific, partially offset by adverse development of $49 million in accident years 2017 through 2019, primarily due to adverse large loss experience in U.K. and Asia Pacific;
    - Net favorable development of $22 million in political risk, driven by lower than expected loss emergence in accident years 2018 and 2019; and
    - Net adverse development of $80 million in financial lines, with favorable development of $61 million in accident years 2015 and prior, primarily from favorable case-specific settlements within Continental Europe and Asia Pacific financial institutions, which was more than offset by adverse development of $141 million in accident years 2016 through 2019, primarily due to adverse large loss experience in D&O portfolios in the U.K. and Asia Pacific.
- Net favorable development of $101 million in short-tail business, primarily from:
    - Net favorable development of $69 million in marine, driven by favorable loss emergence and claim-specific loss settlements across all regions in accident years 2012 through 2019; and
    - Net favorable development of $21 million in A&H, driven by favorable development across Continental Europe, U.K. and Latin America primarily in accident years 2018 and 2019.

2019

Overseas General Insurance experienced net favorable PPD of $92 million, representing 0.2 percent of the beginning consolidated net unpaid losses and loss expense reserves.

Global Reinsurance

2021

Global Reinsurance experienced net adverse PPD of $3 million, which was the net result of adverse development of $34 million from property catastrophes losses, primarily Hurricanes Delta, Laura and Sally in 2020, partially offset by other items, none of which is significant individually.

2020

Global Reinsurance experienced net favorable PPD of $29 million, which was the net result of several underlying favorable and adverse movements, none of which is significant individually or in the aggregate.

2019

Global Reinsurance experienced net favorable PPD of $29 million, representing 0.1 percent of the beginning consolidated net unpaid losses and loss expense reserves.

Corporate

2021

Corporate incurred adverse development of $569 million in long-tail lines, driven by the following principal changes:

- Adverse development of $417 million for U.S. child molestation claims, primarily driven by a settlement-in-principle with the BSA regarding molestation claims. Refer to the Molestation claims section below for further information;
- Adverse development of $83 million associated with asbestos and environmental liabilities, generally attributable to certain case specific incurred activity and higher than expected indemnity, expenses and defense costs on a limited number of accounts; and

- Adverse development of $43 million on unallocated loss adjustment expenses due to run-off operating expenses and $14 million from an increase in the provision for uncollectible reinsurance.

2020
Corporate incurred adverse development of $433 million in long-tail lines, driven by the following principal changes:

- Adverse development of $254 million for U.S. child molestation claims, predominantly reviver statute-related;
- Adverse development of $106 million associated with asbestos and environmental liabilities, generally attributable to certain case specific incurred activity and higher than expected indemnity, expenses and defense costs on a limited number of accounts; and
- Adverse development of $38 million on unallocated loss adjustment expenses due to run-off operating expenses and $27 million from an increase in the provision for uncollectible reinsurance.

2019
Corporate incurred adverse development of $153 million in long-tail lines, representing 0.3 percent of the beginning consolidated net unpaid losses and loss expense reserves.

Molestation claims
Chubb's exposure to molestation claims principally arises out of liabilities acquired when it purchased CIGNA's P&C business in 1999, and Chubb Corp in 2016. The vast majority of the current liability relates to exposure from recently enacted "reviver" legislation in certain states that allow civil claims relating to molestation to be asserted against policyholders that would otherwise be barred by statutes of limitations. These exposures are predominantly included in our inactive run-off operations included in the Corporate segment with an immaterial amount in the North America Commercial P&C segment.

In December 2021, Chubb reached an agreement-in-principle regarding the bankruptcy of the Boy Scouts of America (BSA). Under this agreement, which is contingent on a variety of conditions and court approvals, our inactive run-off company, Century Indemnity Company, and certain active Chubb companies will pay their respective share of $800 million and obtain a broad release for all Chubb companies from BSA-related abuse claims. This liability is included in our Unpaid losses and loss expenses as of December 31, 2021, and is gross of reinsurance recoverable and previously carried reserves, collectively, of $425 million.

Asbestos and environmental (A&E)
Chubb's exposure to A&E claims principally arises out of liabilities acquired when it purchased Westchester Specialty in 1998, CIGNA's P&C business in 1999, and Chubb Corp in 2016. The following table presents a roll-forward of consolidated A&E loss reserves including allocated loss expense reserves for A&E exposures, and the valuation allowance for uncollectible paid and unpaid reinsurance recoverables:

	Asbestos		Environmental		Total		
(in millions of U.S. dollars)	Gross	Net	Gross	Net	Gross	Net	
Balance at December 31, 2018	$ 1,492	$ 964	$ 625	$ 483	$ 2,117	$ 1,447	
Incurred activity	129	70	46	28	175	98	(1)
Paid activity	(162)	(118)	(142)	(101)	(304)	(219)	
Balance at December 31, 2019	1,459	916	529	410	1,988	1,326	
Incurred activity	150	90	79	41	229	131	(1)
Paid activity	(258)	(133)	(91)	(72)	(349)	(205)	
Balance at December 31, 2020	1,351	873	517	379	1,868	1,252	
Incurred activity	**96**	**64**	**52**	**40**	**148**	**104**	(1)
Paid activity	**(221)**	**(137)**	**(167)**	**(117)**	**(388)**	**(254)**	
Balance at December 31, 2021	**$ 1,226**	**$ 800**	**$ 402**	**$ 302**	**$ 1,628**	**$ 1,102**	

(1) Excludes unallocated loss expenses and the net activity reflects third-party reinsurance other than the aggregate excess of loss reinsurance provided by National Indemnity Company (NICO) to Westchester Specialty (see Westchester Specialty section below).

The A&E net loss reserves including allocated loss expense reserves and valuation allowance for uncollectible reinsurance at December 31, 2021 and 2020 shown in the table above is comprised of:

	December 31	
(in millions of U.S. dollars)	**2021**	2020
Brandywine operations	**$ 646**	$ 736
Westchester Specialty	**100**	103
Chubb Corp	**286**	333
Other, mainly Overseas General Insurance	**70**	80
Total	**$ 1,102**	$ 1,252

Brandywine Run-off entities – The Restructuring Plan and uncertainties relating to Chubb's ultimate Brandywine exposure

In 1996, the Pennsylvania Insurance Commissioner approved a plan to restructure INA Financial Corporation and its subsidiaries (the Restructuring) which included the division of Insurance Company of North America (INA) into two separate corporations:

(1) An active insurance company that retained the INA name and continued to write P&C business; and
(2) An inactive run-off company, now called Century Indemnity Company (Century).

As a result of the division, predominantly all A&E and certain other liabilities of INA were ascribed to Century and extinguished, as a matter of Pennsylvania law, as liabilities of INA.

As part of the Restructuring, most A&E liabilities of various U.S. affiliates of INA were reinsured to Century. Century and certain other run-off companies having A&E and other liabilities were contributed to Brandywine Holdings.

The U.S.-based Chubb INA companies assumed two contractual obligations in respect of the Brandywine operations in connection with the Restructuring: a surplus maintenance obligation in the form of the excess of loss (XOL) agreement and a dividend retention fund obligation.

XOL Agreement
In 1996, in connection with the Restructuring, a Chubb INA insurance subsidiary provided reinsurance coverage to Century in the amount of $800 million under an Aggregate Excess of Loss Reinsurance Agreement (XOL Agreement), triggerable if the statutory capital and surplus of Century falls below $25 million or if Century lacks liquid assets with which to pay claims as they become due.

Dividend Retention Fund
INA Financial Corporation established and funded a dividend retention fund (the Dividend Retention Fund) consisting of $50 million plus investment earnings. The full balance of the Dividend Retention Fund was contributed to Century as of December 31, 2002. Under the Restructuring Order, while any obligation to maintain the Dividend Retention Fund is in effect, to the extent dividends are paid by INA Holdings Corporation to its parent, INA Financial Corporation, and to the extent INA Financial Corporation then pays such dividends to INA Corporation, a portion of those dividends must be withheld to replenish the principal of the Dividend Retention Fund to $50 million. In 2021 and 2020, $50 million and $250 million, respectively, were withheld from such dividends and deposited into the Dividend Retention Fund as a result of dividends paid up to the INA Corporation. Pursuant to a 2011 amendment to the Restructuring Order, capital contributions from the Dividend Retention Fund to Century are not required until the XOL Agreement has less than $200 million of capacity remaining on an incurred basis for statutory reporting purposes. The amount of the required capital contribution shall be the lesser of the amount necessary to restore the XOL Agreement remaining capacity to $200 million or the Dividend Retention Fund balance. In 2021 and 2020, capital contributions of $18 million and $302 million were made, respectively, from the Dividend Retention Fund to Century. The Dividend Retention Fund may not be terminated without prior written approval from the Pennsylvania Insurance Commissioner.

In 2004, Chubb INA contributed $100 million to Century in exchange for a surplus note. After giving effect to the surplus note, contributions from the Dividend Retention Fund, results from operations and other items impacting statutory surplus, the statutory surplus of Century at December 31, 2021 was $25 million and $745 million in statutory-basis losses have been ceded to the XOL Agreement on an inception-to-date basis. The XOL Agreement statutory-basis remaining limit at December 31, 2021 is $55 million. Century reports the amount ceded under the XOL Agreement in accordance with statutory accounting principles, which differ from GAAP by, among other things, allowing Century to discount its liabilities, including certain asbestos related and environmental pollution liabilities and Century's reinsurance payable to active companies. For GAAP reporting purposes, intercompany reinsurance recoverables related to the XOL are eliminated upon consolidation.

While Chubb believes it has no legal obligation to fund Century losses above the XOL limit of coverage, Chubb's consolidated results would nevertheless continue to include any losses above the limit of coverage for so long as the Brandywine companies remain consolidated subsidiaries of Chubb.

Certain active Chubb companies are primarily liable for asbestos, environmental, and other exposures that they have reinsured to Century. Accordingly, if Century were to become insolvent and placed into rehabilitation or liquidation, some or all of the recoverables due to these active Chubb companies from Century could become uncollectible. At December 31, 2021 and 2020, the aggregate reinsurance recoverables owed by Century to certain active Chubb companies were approximately $1.8 billion and $1.6 billion, respectively, on an undiscounted basis. Chubb believes the active company intercompany reinsurance recoverables, which relate to direct liabilities payable over many years, are not impaired. At December 31, 2021 and 2020, Century's carried gross reserves (including reserves assumed from the active Chubb companies) were $2.2 billion and $2.1 billion, respectively. Should Century's loss reserves experience adverse development in the future and should Century be placed into rehabilitation or liquidation, the reinsurance recoverables due from Century to certain active Chubb companies would be payable only after the payment in full of certain expenses and liabilities, including administrative expenses and direct policy liabilities. Thus, the intercompany reinsurance recoverables would be at risk to the extent of the shortage of assets remaining to pay these recoverables.

Westchester Specialty – impact of NICO contracts on Chubb's run-off entities

As part of the Westchester Specialty acquisition in 1998, NICO provided a 75 percent pro-rata share of $1.0 billion of reinsurance protection on losses and loss adjustment expenses incurred on or before December 31, 1996, in excess of a retention of $721 million. At December 31, 2021, the remaining unused incurred limit under the Westchester NICO agreement was $359 million.

8. Taxation

Under Swiss law through December 31, 2021, a resident company is subject to income tax at the federal, cantonal, and communal levels that is levied on net worldwide income. Income attributable to permanent establishments or real estate located abroad is excluded from the Swiss tax base. Furthermore, participation relief (i.e., tax relief) is granted to Chubb Limited at the federal, cantonal, and communal level for qualifying dividend income. Chubb Limited is subject to an annual cantonal and communal capital tax on the taxable equity of Chubb Limited in Switzerland.

Chubb has two Swiss operating subsidiaries, an insurance company, Chubb Insurance (Switzerland) Limited and a reinsurance company, Chubb Reinsurance (Switzerland) Limited. Both are subject to federal, cantonal, and communal income tax and to annual cantonal and communal capital tax.

Under current Bermuda law, Chubb Limited and its Bermuda subsidiaries are not required to pay any taxes on income or capital gains. If a Bermuda law were enacted that would impose taxes on income or capital gains, Chubb Limited and the Bermuda subsidiaries have received written assurances from the Minister of Finance in Bermuda that would exempt such companies from Bermudian taxation until March 2035.

Income from Chubb's operations at Lloyd's is subject to United Kingdom (U.K.) corporation income taxes. Lloyd's is required to pay U.S. income tax on U.S. connected income written by Lloyd's syndicates. Lloyd's has a closing agreement with the Internal Revenue Service (IRS) whereby the amount of tax due on this business is calculated by Lloyd's and remitted directly to the IRS. These amounts are then charged to the accounts of Chubb's Corporate Members in proportion to their participation in the relevant syndicates. Chubb's Corporate Members are subject to this arrangement but, as U.K. domiciled companies, will receive U.K. corporation tax credits for any U.S. income tax incurred up to the value of the equivalent U.K. corporation income tax charge on this income.

Chubb Group Holdings and its respective subsidiaries are subject to income taxes imposed by U.S. authorities and file a consolidated U.S. Federal income tax return. Should Chubb Group Holdings pay a dividend to Chubb Limited, withholding taxes would apply. Currently, however, no withholding taxes are accrued with respect to such un-remitted earnings as management has no intention of remitting these earnings. Similarly, no taxes have been provided on the un-remitted earnings of certain foreign subsidiaries (Hong Kong and Korea life insurance companies) as management has no intention of remitting these earnings. The cumulative amount that would be subject to withholding tax, if distributed, as well as the determination of the associated tax liability are not practicable to compute; however, such amount would be material.

Certain international operations of Chubb are also subject to income taxes imposed by the jurisdictions in which they operate.

Chubb's domestic operations are in Switzerland, the jurisdiction where we are legally organized, incorporated, and registered. As a result of Swiss federal tax reform which was effective in 2020, the tax rate changed from 7.83 percent to 21.2 percent and further changed in 2021 to 19.7 percent due to Cantonal tax rates.

The following table presents pre-tax income and the related provision for income taxes:

(in millions of U.S. dollars)	Year Ended December 31 **2021**	2020	2019
Pre-tax income:			
Switzerland	**$ 349**	$ 350	$ 440
Outside Switzerland	**9,467**	3,812	4,809
Total pre-tax income	**$ 9,816**	$ 4,162	$ 5,249
Provision for income taxes			
Current tax expense:			
Switzerland	**$ 65**	$ 52	$ 29
Outside Switzerland	**1,294**	876	879
Total current tax expense	**1,359**	928	908
Deferred tax expense (benefit):			
Switzerland	**(15)**	2	11
Outside Switzerland	**(67)**	(301)	(124)
Total deferred tax expense (benefit)	**(82)**	(299)	(113)
Provision for income taxes	**$ 1,277**	$ 629	$ 795

The most significant jurisdictions contributing to the overall taxation of Chubb are calculated using the following rates in 2021: Switzerland 19.7 percent, U.S. 21.0 percent, U.K. 19.0 percent, and Bermuda 0.0 percent.

The following table presents a reconciliation of the difference between the provision for income taxes and the expected tax provision at the Swiss statutory income tax rate:

(in millions of U.S. dollars)	Year Ended December 31 **2021**	2020	2019
Expected tax provision at Swiss statutory tax rate	**$ 1,934**	$ 880	$ 411
Permanent differences:			
Taxes on earnings subject to rate other than Swiss statutory rate	**(740)**	(337)	376
Tax-exempt interest and dividends received deduction, net of proration	**(38)**	(41)	(49)
Net withholding taxes	**78**	67	40
Other	**43**	60	17
Provision for income taxes	**$ 1,277**	$ 629	$ 795

The following table presents the components of net deferred tax assets and liabilities:

(in millions of U.S. dollars)	December 31 2021	2020
Deferred tax assets:		
Loss reserve discount	$ 950	$ 884
Unearned premiums reserve	544	496
Foreign tax credits	156	222
Provision for uncollectible balances	32	46
Loss carry-forwards	139	123
Debt related amounts	70	69
Compensation related amounts	178	281
Cumulative translation adjustments	28	120
Investments	—	75
Lease liability	111	121
Depreciation	190	—
Total deferred tax assets	2,398	2,437
Deferred tax liabilities:		
Deferred policy acquisition costs	679	522
Other intangible assets, including VOBA	1,268	1,425
Un-remitted foreign earnings	121	77
Investments	144	—
Unrealized appreciation on investments	360	957
Depreciation	—	123
Lease right-of-use asset	100	111
Other, net	23	31
Total deferred tax liabilities	2,695	3,246
Valuation allowance	92	83
Net deferred tax liabilities	$ (389)	$ (892)

The valuation allowance of $92 million and $83 million at December 31, 2021 and 2020, respectively, reflects management's assessment, based on available information, that it is more likely than not that a portion of the deferred tax assets will not be realized due to the inability of certain non-U.S. subsidiaries to generate sufficient taxable income. Adjustments to the valuation allowance are made when there is a change in management's assessment of the amount of deferred tax assets that are realizable.

At December 31, 2021, Chubb has net operating loss carry-forwards of $461 million which, if unused, will expire starting in 2022, and a foreign tax credit carry-forward in the amount of $156 million which, if unused, will expire starting in 2026.

The following table presents a reconciliation of the beginning and ending amount of gross unrecognized tax benefits:

(in millions of U.S. dollars)	Year Ended December 31 2021	2020
Balance, beginning of year	$ 76	$ 47
Additions based on tax positions related to the current year	—	5
Additions based on tax positions related to prior years	7	24
Reductions for settlements with taxing authorities	(19)	—
Balance, end of year	$ 64	$ 76

At December 31, 2021 and 2020, the gross unrecognized tax benefits of $64 million and $76 million, respectively, can be reduced by $26 million and $31 million, respectively, associated with foreign tax credits. The net amounts of $38 million and

$45 million at December 31, 2021 and 2020, respectively, if recognized, would favorably affect the effective tax rate. It is reasonably possible that over the next twelve months, that the amount of unrecognized tax benefits may change further resulting from the re-evaluation of unrecognized tax benefits arising from examinations by taxing authorities and the lapses of statutes of limitations.

Chubb recognizes accruals for interest and penalties, if any, related to unrecognized tax benefits in Income tax expense in the Consolidated statements of operations. Tax-related interest expense and penalties reported in the Consolidated statements of operations were $1 million, $8 million, and $5 million at December 31, 2021, 2020, and 2019, respectively. Liabilities for tax-related interest and penalties in our Consolidated balance sheets were $14 million and $16 million at December 31, 2021 and 2020, respectively.

In March 2017, the IRS commenced its field examination of Chubb Group Holdings' U.S. Federal income tax returns for 2014 and 2015 which is still ongoing. In July 2020, the IRS commenced its field examination of Chubb Group Holdings' U.S. Federal income tax returns for 2016, 2017 and 2018 which is also still ongoing. No material adjustments have been proposed by the IRS for any year under examination. As a multinational company, we also have examinations under way in several foreign jurisdictions. With few exceptions, Chubb is no longer subject to income tax examinations for years prior to 2011.

The following table summarizes tax years open for examination by major income tax jurisdiction:

At December 31, 2021	
Australia	2015 - 2021
Canada	2012 - 2021
France	2019 - 2021
Germany	2015 - 2021
Italy	2011 - 2021
Mexico	2014 - 2021
Spain	2012 - 2021
Switzerland	2016 - 2021
United Kingdom	2015 - 2021
United States	2014 - 2021

9. Debt

(in millions of U.S. dollars)	December 31 2021	December 31 2020	Early Redemption Option
Repurchase agreements (weighted average interest rate of 0.2% in 2021 and 0.3% in 2020)	$ 1,406	$ 1,405	None
Short-term debt			
Chubb INA:			
$1,000 million 2.875% senior notes due November 2022	$ 999	$ —	Make-whole premium plus 20 bps
Total short-term debt	$ 999	$ —	
Long-term debt			
Chubb INA:			
$1,000 million 2.875% senior notes due November 2022	$ —	$ 998	Make-whole premium plus 20 bps
$475 million 2.7% senior notes due March 2023	474	474	Make-whole premium plus 10 bps
$700 million 3.35% senior notes due May 2024	698	698	Make-whole premium plus 15 bps
€700 million 0.3% senior notes due December 2024	787	841	Make-whole premium plus 15 bps
$800 million 3.15% senior notes due March 2025	798	797	Make-whole premium plus 15 bps
$1,500 million 3.35% senior notes due May 2026	1,494	1,493	Make-whole premium plus 20 bps
€575 million 0.875% senior notes due June 2027	645	691	Make-whole premium plus 20 bps
€900 million 1.55% senior notes due March 2028	1,009	1,079	Make-whole premium plus 15 bps
$100 million 8.875% debentures due August 2029	100	100	None
€700 million 0.875% senior notes due December 2029	785	840	Make-whole premium plus 20 bps
$1,000 million 1.375% senior notes due September 2030	992	991	Make-whole premium plus 15 bps
€575 million 1.4% senior notes due June 2031	642	687	Make-whole premium plus 25 bps
$200 million 6.8% debentures due November 2031	238	242	Make-whole premium plus 25 bps
$300 million 6.7% senior notes due May 2036	298	298	Make-whole premium plus 20 bps
$800 million 6.0% senior notes due May 2037	936	945	Make-whole premium plus 20 bps
€900 million 2.5% senior notes due March 2038	1,007	1,077	Make-whole premium plus 25 bps
$600 million 6.5% senior notes due May 2038	735	743	Make-whole premium plus 30 bps
$475 million 4.15% senior notes due March 2043	470	470	Make-whole premium plus 15 bps
$1,500 million 4.35% senior notes due November 2045	1,485	1,484	Make-whole premium plus 25 bps
$600 million 2.85% senior notes due December 2051	593	—	Make-whole premium plus 15 bps
$1,000 million 3.05% senior notes due December 2061	983	—	Make-whole premium plus 20 bps
Total long-term debt	$ 15,169	$ 14,948	
Trust preferred securities			
Chubb INA capital securities due April 2030	$ 308	$ 308	Redemption prices(1)

(1) Redemption prices are equal to accrued and unpaid interest to the redemption date plus the greater of (i) 100 percent of the principal amount thereof, or (ii) sum of present value of scheduled payments of principal and interest on the capital securities from the redemption date to April 1, 2030.

a) Repurchase agreements

Chubb has executed repurchase agreements with certain counterparties under which Chubb agreed to sell securities and repurchase them at a future date for a predetermined price.

b) Short-term debt
Short-term debt comprises the current maturities of our long-term debt instruments described below. These short-term debt instruments were reclassified from long-term debt and are reflected in the table above.

c) Long-term debt
On November 15, 2021, Chubb INA Holdings Inc. (Chubb INA) issued $600 million of 2.85 percent senior notes due December 2051 and $1,000 million of 3.05 percent senior notes due December 2061. With the exception of the $100 million of 8.875 percent debentures due August 2029, which do not have an early redemption option, the senior notes in the table above are redeemable at any time at Chubb INA's option subject to a “make-whole” premium plus additional basis points as defined in the table above. A "make-whole" premium is the present value of the remaining principal and interest discounted at the applicable U.S. Treasury rate. These debt securities are also redeemable at par plus accrued and unpaid interest in the event of certain changes in tax law.

The senior notes and debentures do not have the benefit of any sinking fund and are guaranteed on a senior basis by Chubb Limited and they rank equally with all of Chubb's other senior obligations. They also contain customary limitations on lien provisions as well as customary events of default provisions which, if breached, could result in the accelerated maturity of such senior debt.

d) Trust preferred securities
In March 2000, ACE Capital Trust II, a Delaware statutory business trust, publicly issued $300 million of 9.7 percent Capital Securities (the Capital Securities) due to mature in April 2030. At the same time, Chubb INA purchased $9.2 million of common securities of ACE Capital Trust II. The sole assets of ACE Capital Trust II consist of $309 million principal amount of 9.7 percent Junior Subordinated Deferrable Interest Debentures (the Subordinated Debentures) issued by Chubb INA due to mature in April 2030.

Distributions on the Capital Securities are payable semi-annually and may be deferred for up to ten consecutive semi-annual periods (but no later than April 1, 2030). Any deferred payments would accrue interest compounded semi-annually if Chubb INA defers interest on the Subordinated Debentures. Interest on the Subordinated Debentures is payable semi-annually. Chubb INA may defer such interest payments (but no later than April 1, 2030), with such deferred payments accruing interest compounded semi-annually. The Capital Securities and the ACE Capital Trust II Common Securities will be redeemed upon repayment of the Subordinated Debentures.

Chubb Limited has guaranteed, on a subordinated basis, Chubb INA's obligations under the Subordinated Debentures, and distributions and other payments due on the Capital Securities. These guarantees, when taken together with Chubb's obligations under expense agreements entered into with ACE Capital Trust II, provide a full and unconditional guarantee of amounts due on the Capital Securities.

10. Commitments, contingencies, and guarantees

a) Derivative instruments
Foreign currency management
As a global company, Chubb entities transact business in multiple currencies. Our policy is to generally match assets, liabilities, and required capital for each individual jurisdiction in local currency, which would include the use of derivatives discussed below. We do not hedge our net asset non-U.S. dollar capital positions; however, we do consider economic hedging for planned cross border transactions.

Derivative instruments employed
Chubb maintains positions in derivative instruments such as futures, options, swaps, and foreign currency forward contracts for which the primary purposes are to manage duration and foreign currency exposure, yield enhancement, or to obtain an exposure to a particular financial market. Chubb also maintains positions in convertible securities that contain embedded derivatives. Investment derivative instruments are recorded in either Other assets (OA) or Accounts payable, accrued expenses, and other liabilities (AP); convertible bonds are recorded in Fixed maturities available for sale (FM AFS); and convertible equity securities are recorded in Equity securities (ES) in the Consolidated balance sheets. These are the most numerous and frequent derivative transactions. In addition, Chubb, from time to time, purchases to be announced mortgage-backed securities (TBAs) as part of its investing activities.

Under reinsurance programs covering GLBs, Chubb assumes the risk of GLBs, principally GMIB, associated with variable annuity contracts. The GMIB risk is triggered if, at the time the contract holder elects to convert the accumulated account value to a periodic payment stream (annuitize), the accumulated account value is not sufficient to provide a guaranteed minimum level of monthly income. The GLB reinsurance product meets the definition of a derivative instrument and is classified within AP. Chubb also generally maintains positions in exchange-traded equity futures contracts on equity market indices to limit equity exposure in the GMDB and GLB book of business. All derivative instruments are carried at fair value with changes in fair value recorded in Net realized gains (losses) in the Consolidated statements of operations. None of the derivative instruments are designated as hedges for accounting purposes. The following table presents the balance sheet locations, fair values of derivative instruments in an asset or (liability) position, and notional values/payment provisions of our derivative instruments:

(in millions of U.S. dollars)	Consolidated Balance Sheet Location	December 31, 2021 Fair Value Derivative Asset	December 31, 2021 Fair Value Derivative (Liability)	December 31, 2021 Notional Value/ Payment Provision	December 31, 2020 Fair Value Derivative Asset	December 31, 2020 Fair Value Derivative (Liability)	December 31, 2020 Notional Value/ Payment Provision
Investment and embedded derivative instruments:							
Foreign currency forward contracts	**OA / (AP)**	**$ 25**	**$ (139)**	**$ 6,182**	$ 22	$ (49)	$ 2,807
Options/Futures contracts on notes, bonds, and equities	**OA / (AP)**	**33**	**(27)**	**12,944**	13	(3)	1,749
Convertible securities [(1)]	**FM AFS / ES**	**11**	**—**	**12**	9	—	11
		$ 69	**$ (166)**	**$ 19,138**	$ 44	$ (52)	$ 4,567
Other derivative instruments:							
Futures contracts on equities [(2)]	**OA / (AP)**	**$ —**	**$ (16)**	**$ 905**	$ —	$ (17)	$ 709
Other	**OA / (AP)**	**—**	**—**	**3**	—	—	16
		$ —	**$ (16)**	**$ 908**	$ —	$ (17)	$ 725
GLB [(3)]	**(AP)**	**$ —**	**$ (745)**	**$ 1,432**	$ —	$ (1,089)	$ 1,658

(1) Includes fair value of embedded derivatives.
(2) Related to GMDB and GLB book of business.
(3) Note that the payment provision related to GLB is the net amount at risk. The concept of a notional value does not apply to the GLB reinsurance contracts.

At December 31, 2021 and 2020, net derivative liabilities of $123 million and $30 million, respectively, included in the table above were subject to a master netting agreement. The remaining derivatives included in the table above were not subject to a master netting agreement. The following table presents net realized gains (losses) related to derivative instrument activity in the Consolidated statements of operations:

(in millions of U.S. dollars)	Year Ended December 31 **2021**	2020	2019
Investment and embedded derivative instruments:			
Foreign currency forward contracts	**$ (62)**	$ 65	$ (79)
Interest rate swaps	**—**	—	(270)
All other futures contracts, options, and equities	**(10)**	16	(88)
Convertible securities [(1)]	**—**	—	2
Total investment and embedded derivative instruments	**$ (72)**	$ 81	$ (435)
GLB and other derivative instruments:			
GLB	**$ 316**	$ (202)	$ (4)
Futures contracts on equities [(2)]	**(202)**	(108)	(138)
Other	**(8)**	1	(8)
Total GLB and other derivative instruments	**$ 106**	$ (309)	$ (150)
	$ 34	$ (228)	$ (585)

(1) Includes embedded derivatives.
(2) Related to GMDB and GLB book of business.

b) Derivative instrument objectives

(i) Foreign currency exposure management

A foreign currency forward contract (forward) is an agreement between participants to exchange specific currencies at a future date. Chubb uses forwards to minimize the effect of fluctuating foreign currencies as discussed above.

(ii) Duration management and market exposure

Futures

Futures contracts give the holder the right and obligation to participate in market movements, determined by the index or underlying security on which the futures contract is based. Settlement is made daily in cash by an amount equal to the change in value of the futures contract times a multiplier that scales the size of the contract. Exchange-traded futures contracts on money market instruments, notes and bonds are used in fixed maturity portfolios to more efficiently manage duration, as substitutes for ownership of the money market instruments, bonds and notes without significantly increasing the risk in the portfolio. Investments in futures contracts may be made only to the extent that there are assets under management not otherwise committed.

Exchange-traded equity futures contracts are used to limit exposure to a severe equity market decline, which would cause an increase in expected claims and therefore, an increase in future policy benefit reserves for GMDB and an increase in the fair value liability for GLB reinsurance business.

Options

An option contract conveys to the holder the right, but not the obligation, to purchase or sell a specified amount or value of an underlying security at a fixed price. Option contracts are used in our investment portfolio as protection against unexpected shifts in interest rates, which would affect the duration of the fixed maturity portfolio. By using options in the portfolio, the overall interest rate sensitivity of the portfolio can be reduced. Option contracts may also be used as an alternative to futures contracts in the synthetic strategy as described above.

The price of an option is influenced by the underlying security, level of interest rates, expected volatility, time to expiration, and supply and demand.

The credit risk associated with the above derivative financial instruments relates to the potential for non-performance by counterparties. Although non-performance is not anticipated, in order to minimize the risk of loss, management monitors the creditworthiness of its counterparties and obtains collateral. The performance of exchange-traded instruments is guaranteed by the exchange on which they trade. For non-exchange-traded instruments, the counterparties are principally banks which must meet certain criteria according to our investment guidelines.

Interest rate swaps

An interest rate swap is a contract between two counterparties in which interest payments are made based on a notional principal amount, which itself is never paid or received. Under the terms of an interest rate swap, one counterparty makes interest payments based on a fixed interest rate and the other counterparty's payments are based on a floating rate. Interest rate swap contracts are used occasionally in our investment portfolio as protection against unexpected shifts in interest rates, which would affect the fair value of the fixed maturity portfolio. By using interest rate swaps in the portfolio, the overall duration or interest rate sensitivity of the portfolio can be impacted.

Cross-currency swaps

Cross-currency swaps are agreements under which two counterparties exchange interest payments and principal denominated in different currencies at a future date. We use cross-currency swaps to reduce the foreign currency and interest rate risk by converting cash flows back into local currency. We invest in foreign currency denominated investments to improve credit diversification and also to obtain better duration matching to our liabilities that is limited in the local currency market.

Other

Included within Other are derivatives intended to reduce potential losses which may arise from certain exposures in our insurance business. The economic benefit provided by these derivatives is similar to purchased reinsurance. For example, Chubb may enter into crop derivative contracts to protect underwriting results in the event of a significant decline in commodity prices.

(iii) Convertible security investments
A convertible security is a debt instrument or preferred stock that can be converted into a predetermined amount of the issuer's equity. The convertible option is an embedded derivative within the host instruments which are classified in the investment portfolio as either available for sale or as an equity security. Chubb purchases convertible securities for their total return and not specifically for the conversion feature.

(iv) TBA
By acquiring TBAs, we make a commitment to purchase a future issuance of mortgage-backed securities. For the period between purchase of the TBAs and issuance of the underlying security, we account for our position as a derivative in the Consolidated Financial Statements. Chubb purchases TBAs, from time to time, both for their total return and for the flexibility they provide related to our mortgage-backed security strategy.

(v) GLB
Under the GLB program, as the assuming entity, Chubb is obligated to provide coverage until the expiration or maturity of the underlying deferred annuity contracts or the expiry of the reinsurance treaty. The GLB is accounted for as a derivative and is recorded at fair value. Fair value represents management's estimate of an exit price and thus, includes a risk margin. We may recognize a realized loss for other changes in fair value due to adverse changes in the capital markets (e.g., declining interest rates and/or declining U.S. and/or international equity markets) and changes in actual or estimated future policyholder behavior (e.g., increased annuitization or decreased lapse rates) although we expect the business to be profitable.

To mitigate adverse changes in the capital markets, we maintain positions in exchange-traded equity futures contracts, as noted under section "(ii) Futures" above. These futures increase in fair value when the S&P 500 index decreases (and decrease in fair value when the S&P 500 index increases). The net impact of gains or losses related to changes in fair value of the GLB liability and the exchange-traded equity futures are included in Net realized gains (losses).

c) Securities lending and secured borrowings
Chubb participates in a securities lending program operated by a third-party banking institution whereby certain assets are loaned to qualified borrowers and from which we earn an incremental return. The securities lending collateral can only be drawn down by Chubb in the event that the institution borrowing the securities is in default under the lending agreement. An indemnification agreement with the lending agent protects us in the event a borrower becomes insolvent or fails to return any of the securities on loan. The collateral is recorded in Securities lending collateral and the liability is recorded in Securities lending payable in the Consolidated balance sheets. The following table presents the carrying value of collateral held under securities lending agreements by investment category and remaining contractual maturity of the underlying agreements:

	Remaining contractual maturity	
	December 31, 2021	December 31, 2020
(in millions of U.S. dollars)	Overnight and Continuous	
Collateral held under securities lending agreements:		
Cash	**$ 931**	$ 551
U.S. Treasury / Agency	**128**	148
Non-U.S.	**752**	1,032
Corporate and asset-backed securities	**12**	30
Mortgage-backed securities	**1**	4
Equity securities	**7**	79
	$ 1,831	$ 1,844
Gross amount of recognized liability for securities lending payable	**$ 1,831**	$ 1,844

At December 31, 2021 and 2020, our repurchase agreement obligations of $1,406 million and $1,405 million, respectively, were fully collateralized. In contrast to securities lending programs, the use of cash received is not restricted for the repurchase obligations. The fair value of the underlying securities sold remains in Fixed maturities available for sale, and the repurchase agreement obligation is recorded in Repurchase agreements in the Consolidated balance sheets.

The following table presents the carrying value of collateral pledged under repurchase agreements by investment category and remaining contractual maturity of the underlying agreements:

	Remaining contractual maturity					
	December 31, 2021			December 31, 2020		
(in millions of U.S. dollars)	**30-90 Days**	**Greater than 90 Days**	**Total**	30-90 Days	Greater than 90 Days	Total
Collateral pledged under repurchase agreements:						
Cash	**$ —**	**$ 29**	**$ 29**	$ —	$ 4	$ 4
U.S. Treasury / Agency	**103**	**—**	**103**	—	106	106
Mortgage-backed securities	**—**	**1,288**	**1,288**	481	871	1,352
	$ 103	**$ 1,317**	**$ 1,420**	$ 481	$ 981	$ 1,462
Gross amount of recognized liabilities for repurchase agreements			**$ 1,406**			$ 1,405
Difference [(1)]			**$ 14**			$ 57

(1) Per the repurchase agreements, the amount of collateral posted is required to exceed the amount of gross liability.

Potential risks exist in our secured borrowing transactions due to market conditions and counterparty exposure. With collateral that we pledge, there is a risk that the collateral may not be returned at the expiration of the agreement. If the counterparty fails to return the collateral, Chubb will have free use of the borrowed funds until our collateral is returned. In addition, we may encounter the risk that Chubb may not be able to renew outstanding borrowings with a new term or with an existing counterparty due to market conditions including a decrease in demand as well as more restrictive terms from banks due to increased regulatory and capital constraints. Should this condition occur, Chubb may seek alternative borrowing sources or reduce borrowings. Additionally, increased margins and collateral requirements due to market conditions would increase our restricted assets as we are required to provide additional collateral to support the transaction.

d) Concentrations of credit risk

Our investment portfolio is managed following prudent standards of diversification. Specific provisions limit the allowable holdings of a single issue and issuer. We believe that there are no significant concentrations of credit risk associated with our investments. Our three largest corporate exposures by issuer at December 31, 2021, were Wells Fargo & Co., Bank of America Corp, and JP Morgan Chase & Co. Our largest exposure by industry at December 31, 2021 was financial services.

We market our insurance and reinsurance worldwide primarily through insurance and reinsurance brokers. We assume a degree of credit risk associated with brokers with whom we transact business. Approximately 12 percent of our gross premiums written was generated from or placed by Marsh & McLennan Companies, Inc., for the years ended December 31, 2021, 2020 and 2019. This entity is a large, well-established company, and there are no indications that it is financially troubled at December 31, 2021. No other broker or one insured accounted for more than 10 percent of our gross premiums written for these years.

e) Fixed maturities

At December 31, 2021, we have commitments to purchase fixed income securities of $771 million over the next several years.

At December 31, 2021, we entered into an off-balance sheet agreement with a third party to guarantee that party's commitment to purchase $500 million of a certain portfolio of securities in the event the third party does not purchase the portfolio. Chubb earns a fee on this agreement. The term of the agreement is 90 days and subject to renewal.

f) Other investments

At December 31, 2021, included in Other investments in the Consolidated balance sheet are investments in limited partnerships and partially-owned investment companies with a carrying value of $9.8 billion. In connection with these investments, we have commitments that may require funding of up to $7.2 billion over the next several years. At December 31, 2020, these investments had a carrying value of $6.5 billion with a commitment that may require funding of up to $3.2 billion.

g) Letters of credit
We have access to capital markets and to credit facilities with letter of credit capacity of $3.7 billion with a sub-limit of $1.9 billion for revolving credit. Our existing credit facilities have remaining terms expiring through October 2022. At December 31, 2021, our LOC usage was $1.4 billion.

h) Legal proceedings
Our insurance subsidiaries are subject to claims litigation involving disputed interpretations of policy coverages and, in some jurisdictions, direct actions by allegedly-injured persons seeking damages from policyholders. These lawsuits, involving claims on policies issued by our subsidiaries which are typical to the insurance industry in general and in the normal course of business, are considered in our loss and loss expense reserves. In addition to claims litigation, we are subject to lawsuits and regulatory actions in the normal course of business that do not arise from or directly relate to claims on insurance policies. This category of business litigation typically involves, among other things, allegations of underwriting errors or misconduct, employment claims, regulatory activity, or disputes arising from our business ventures. In the opinion of management, our ultimate liability for these matters could be, but we believe is not likely to be, material to our consolidated financial condition and results of operations.

i) Lease commitments
At December 31, 2021 and 2020, the right-of-use asset was $445 million and $473 million, respectively, recorded within Other assets on the Consolidated balance sheets, and the lease liability was $484 million and $517 million, respectively, which was recorded within Accounts payable, accrued expenses, and other liabilities on the Consolidated balance sheets. These leases consist principally of real estate operating leases that are amortized on a straight-line basis over the term of the lease, which expire at various dates. As of December 31, 2021, the weighted average remaining lease term and weighted average discount rate for the operating leases was 4.9 years and 2.1 percent, respectively. Rent expense was $149 million, $152 million, and $171 million for the years ended December 31, 2021, 2020, and 2019, respectively.

Future minimum lease payments under the operating leases are expected to be as follows:

For the years ending December 31 (in millions of U.S. dollars)	
Undiscounted cash flows:	
2022	$ 142
2023	117
2024	88
2025	58
2026	51
Thereafter	57
Total undiscounted lease payments	$ 513
Less: Present value adjustment	29
Net lease liabilities reported as of December 31, 2021	$ 484

As of December 31, 2021, we entered into an operating lease for office space that is expected to commence in 2023 for 21 years. This lease is not yet recorded on our Consolidated balance sheets and is not included in the total obligations referenced above. The total future cash requirement, undiscounted, is approximately $650 million.

11. Shareholders' equity

a) Common Shares

All of Chubb's Common Shares are authorized under Swiss corporate law. Though the par value of Common Shares is stated in Swiss francs, Chubb continues to use U.S. dollars as its reporting currency for preparing the Consolidated Financial Statements. Under Swiss corporate law, we are generally prohibited from issuing Common Shares below their par value. If there were a need to raise common equity at a time when the trading price of Chubb's Common Shares is below par value, we would need in advance to obtain shareholder approval to decrease the par value of the Common Shares.

Dividend approval

At our May 2021 annual general meeting, our shareholders approved an annual dividend for the following year of up to $3.20 per share, expected to be paid in four quarterly installments of $0.80 per share after the annual general meeting by way of distribution from capital contribution reserves, transferred to free reserves for payment. The Board of Directors (Board) will determine the record and payment dates at which the annual dividend may be paid until the date of the 2022 annual general meeting, and is authorized to abstain from distributing a dividend at its discretion. The first three quarterly installments each of $0.80 per share, have been distributed by the Board as expected.

At our May 2020 and 2019 annual general meetings, our shareholders approved annual dividends for the following year of up to $3.12 per share and $3.00 per share, respectively, which were paid in four quarterly installments of $0.78 per share and $0.75 per share, respectively, at dates determined by the Board after the annual general meeting by way of a distribution from capital contribution reserves, transferred to free reserves for payment.

Dividend distributions

Under Swiss corporate law, dividends must be stated in Swiss francs though dividend payments are made by Chubb in U.S. dollars. We issue dividends without subjecting them to withholding tax by way of distributions from capital contribution reserves and payment out of free reserves.

The following table presents dividend distributions per Common Share in Swiss francs (CHF) and U.S. dollars (USD):

	Year Ended December 31					
	2021		2020		2019	
	CHF	**USD**	CHF	USD	CHF	USD
Total dividend distributions per common share	**2.88**	**$ 3.18**	2.89	$ 3.09	2.94	$ 2.98

b) Shares issued, outstanding, authorized, and conditional

	Year Ended December 31		
	2021	2020	2019
Common Shares authorized and issued, beginning of year	**477,605,264**	479,783,864	479,783,864
Cancellation of treasury shares	**(3,584,150)**	(2,178,600)	—
Common Shares authorized and issued, end of year	**474,021,114**	477,605,264	479,783,864
Common Shares in treasury, beginning of year (at cost)	**(26,872,639)**	(27,812,297)	(20,580,486)
Net shares issued under employee share-based compensation plans	**3,484,487**	2,345,208	3,210,427
Shares repurchased	**(27,644,500)**	(3,584,150)	(10,442,238)
Cancellation of treasury shares	**3,584,150**	2,178,600	—
Common Shares in treasury, end of year (at cost)	**(47,448,502)**	(26,872,639)	(27,812,297)
Common Shares outstanding, end of year	**426,572,612**	450,732,625	451,971,567

Increases in Common Shares in treasury are due to open market repurchases of Common Shares and the surrender of Common Shares to satisfy tax withholding obligations in connection with the vesting of restricted stock and the forfeiture of unvested restricted stock. Decreases in Common Shares in treasury are principally due to grants of restricted stock, exercises of stock options, purchases under the Employee Stock Purchase Plan (ESPP), and share cancellations. At our May 2021 annual general meeting, our shareholders approved the cancellation of 3,584,150 shares purchased under our share repurchase program during 2020. The capital reduction by cancellation of shares was subject to publication requirements and a two-month waiting period in accordance with Swiss law and became effective August 4, 2021. At our May 2020 annual general meeting, our shareholders approved the cancellation of 2,178,600 shares purchased under our share repurchase program during the period beginning September 23, 2019 and ending December 31, 2019. The capital reduction by cancellation of shares was subject to publication requirements and a two-month waiting period in accordance with Swiss law and became effective August 3, 2020. At the Chubb Limited Extraordinary General Meeting of Shareholders, held on November 3, 2021, shareholders approved the cancellation of 14,465,400 shares repurchased under our share repurchase program during the first six months of 2021. The capital reduction by cancellation of shares was subject to publication requirements and a two-month waiting period in accordance with Swiss law and became effective on January 17, 2022.

Authorized share capital for general purposes under Swiss law
In accordance with Swiss law, the Board has shareholder-approved authority as set forth in the Articles of Association to increase Chubb's share capital from time to time until May 20, 2022, by the issuance for general purposes of up to 200,000,000 fully paid up Common Shares, with a par value equal to the par value of Chubb's Common Shares as set forth in the Articles of Association at the time of any such issuance. Any such increases would be subject to Swiss rules and procedure.

Conditional share capital for bonds and similar debt instruments
Chubb's share capital may be increased through the issuance of a maximum of 33,000,000 fully paid up Common Shares (with a par value of CHF 24.15 as of December 31, 2021) through the exercise of conversion and/or option or warrant rights granted in connection with bonds, notes, or similar instruments, issued or to be issued by Chubb, including convertible debt instruments.

Conditional share capital for employee benefit plans
Chubb's share capital may be increased through the issuance of a maximum of 25,410,929 fully paid up Common Shares (with a par value of CHF 24.15 as of December 31, 2021) in connection with the exercise of option rights granted to any employee of Chubb, director or other person providing services to Chubb.

c) Chubb Limited securities repurchases
From time to time, we repurchase shares as part of our capital management program and to partially offset potential dilution from the exercise of stock options and the granting of restricted stock under share-based compensation plans. The Board has authorized share repurchase programs as follows:

- $1.5 billion of Chubb Common Shares from December 1, 2018 through December 31, 2019
- $1.5 billion of Chubb Common Shares from November 21, 2019 through December 31, 2020
- $1.5 billion of Chubb Common Shares from November 19, 2020 through December 31, 2021

In February 2021, the Board approved an increase to the November 2020 share repurchase program of $1.0 billion to a total of $2.5 billion, effective through December 31, 2021. On July 19, 2021, the Board authorized a one-time incremental share repurchase program of up to $5.0 billion through June 30, 2022, which is the only board authorization currently in effect.

Share repurchases may be in the open market, in privately negotiated transactions, block trades, accelerated repurchases and through option or other forward transactions. The following table presents repurchases of Chubb's Common Shares conducted in a series of open market transactions under the Board authorizations:

	Year Ended December 31			January 1, 2022 through
(in millions of U.S. dollars, except share data)	**2021**	2020	2019	February 23, 2022
Number of shares repurchased	**27,644,500**	3,584,150	10,442,238	1,966,600
Cost of shares repurchased	**$ 4,861**	$ 516	$ 1,531	$ 405

d) General restrictions
The holders of the Common Shares are entitled to receive dividends as approved by the shareholders. Holders of Common Shares are allowed one vote per share provided that, if the controlled shares of any shareholder constitute ten percent or more of the outstanding Common Shares of Chubb, only a fraction of the vote will be allowed so as not to exceed ten percent in aggregate. Entry of acquirers of Common Shares as shareholders with voting rights in the share register may be refused if it would confer voting rights with respect to ten percent or more of the registered share capital recorded in the commercial register.

12. Share-based compensation

Chubb has share-based compensation plans which currently provide the Board the ability to grant awards of stock options, restricted stock, and restricted stock units to its employees and members of the Board.

In May 2021, our shareholders approved the Chubb Limited 2016 Long-Term Incentive Plan, as amended and restated (the Amended 2016 LTIP). Under the Amended 2016 LTIP, Common Shares of Chubb are authorized to be issued pursuant to awards including stock options, stock appreciation rights, performance shares, performance units, restricted stock, and restricted stock units.

Chubb principally issues restricted stock grants and stock options on a graded vesting schedule, with equal percentages of the award subject to vesting over a number of years (typically three or four). Chubb recognizes compensation cost for vesting of restricted stock and stock option grants with only service conditions on a straight-line basis over the requisite service period for each separately vesting portion of the award as if the award were, in-substance, multiple awards. We incorporate an estimate of future forfeitures in determining compensation cost for both grants of restricted stock and stock options.

In addition, Chubb grants performance-based restricted stock to certain executives that vest based on certain performance criteria as compared to a defined group of peer companies. Performance-based stock awards comprise target awards and premium awards that cliff vest at the end of a 3-year performance period based on both our tangible book value (shareholders' equity less goodwill and intangible assets, net of tax) per share growth and P&C combined ratio compared to our peer group. Premium awards are subject to an additional vesting provision based on total shareholder return (TSR) compared to our peer group. Shares representing target awards and premium awards are issued when the awards are approved and are subject to forfeiture if applicable performance criteria are not met at the end of the 3-year performance period. Prior to January 2017, performance-based restricted stock awards had a 4-year vesting period with the potential to vest as to a portion each year, and excluded the P&C combined ratio and TSR additional vesting criteria.

Under the Amended 2016 LTIP, 32,900,000 Common Shares are authorized to be issued (which includes all shares available for delivery since the establishment of the Chubb Limited 2016 Long-Term Incentive Plan in 2016). This is in addition to any shares subject to awards outstanding under the ACE Limited 2004 Long-Term Incentive Plan (2004 LTIP) immediately prior to the effective date of the Amended 2016 LTIP that are forfeited, expired or canceled after such effective date without delivery of shares (or which result in forfeiture of shares back to Chubb). At December 31, 2021, a total of 18,040,720 shares remain available for future issuance under the Amended 2016 LTIP, which includes shares forfeited, expired or canceled relating to grants under the 2004 LTIP.

Under the Employee Stock Purchase Plan (ESPP), 6,500,000 shares are authorized to be issued. At December 31, 2021, a total of 1,086,822 shares remain available for issuance under the ESPP.

Chubb generally issues Common Shares for the exercise of stock options, restricted stock, and purchases under the ESPP from Common Shares in treasury.

The following table presents pre-tax and after-tax share-based compensation expense:

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Stock options and shares issued under ESPP:			
Pre-tax	**$ 55**	$ 45	$ 42
After-tax [(1)]	**$ 36**	$ 38	$ 39
Restricted stock:			
Pre-tax	**$ 210**	$ 210	$ 224
After-tax [(1)]	**$ 164**	$ 164	$ 180

(1) The windfall tax benefit recorded to Income tax expense in the Consolidated statement of operations was $19 million, $10 million, and $12 million for the years ended December 31, 2021, 2020, and 2019, respectively.

Unrecognized compensation expense related to the unvested portion of Chubb's employee share-based awards of restricted stock, restricted stock units, and stock options was $263 million at December 31, 2021 and is expected to be recognized over a weighted-average period of approximately 1.5 years.

Stock options
Both incentive and non-qualified stock options are principally granted at an option price per share equal to the grant date fair value of Chubb's Common Shares. Stock options are generally granted with a 3-year vesting period and a 10-year term. Stock options vest in equal annual installments over the respective vesting period, which is also the requisite service period.

Chubb's 2021 share-based compensation expense includes a portion of the cost related to the 2018 through 2021 stock option grants. Stock option fair value was estimated on the grant date using the Black-Scholes option-pricing model that uses the weighted-average assumptions noted below:

	Year Ended December 31		
	2021	2020	2019
Dividend yield	**1.9 %**	2.1 %	2.2 %
Expected volatility	**26.0 %**	18.0 %	16.0 %
Risk-free interest rate	**1.0 %**	1.2 %	2.6 %
Expected life	**5.8 years**	5.7 years	5.7 years

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The expected life (estimated period of time from grant to exercise date) is estimated using the historical exercise behavior of employees. The expected volatility is calculated as a blend of (a) historical volatility based on daily closing prices over a period equal to the expected life assumption and (b) implied volatility derived from Chubb's publicly traded options.

The following table presents a roll-forward of Chubb's stock options:

(Intrinsic Value in millions of U.S. dollars)	Number of Options	Weighted-Average Exercise Price	Weighted-Average Fair Value	Total Intrinsic Value
Options outstanding, December 31, 2018	11,007,722	$ 108.25		
Granted	2,073,940	$ 133.90	$ 18.76	
Exercised	(1,944,604)	$ 84.13		$ 122
Forfeited and expired	(251,801)	$ 136.87		
Options outstanding, December 31, 2019	10,885,257	$ 116.79		
Granted	1,958,279	$ 150.10	$ 19.89	
Exercised	(1,158,633)	$ 86.90		$ 76
Forfeited and expired	(206,720)	$ 138.77		
Options outstanding, December 31, 2020	11,478,183	$ 125.09		
Granted	**1,805,234**	**$ 164.89**	**$ 33.05**	
Exercised	**(2,284,795)**	**$ 112.12**		**$ 140**
Forfeited and expired	**(236,135)**	**$ 150.16**		
Options outstanding, December 31, 2021	**10,762,487**	**$ 133.94**		**$ 639**
Options exercisable, December 31, 2021	**7,278,516**	**$ 124.03**		**$ 504**

The weighted-average remaining contractual term was 5.9 years for stock options outstanding and 4.7 years for stock options exercisable at December 31, 2021. Cash received from the exercise of stock options for the year ended December 31, 2021 was $253 million.

Restricted stock and restricted stock units

Grants of restricted stock and restricted stock units awarded under the Amended 2016 LTIP typically have a 4-year vesting period, subject to vesting as to one-quarter of the award each anniversary of grant. Restricted stock and restricted stock units are principally granted at market close price on the day of grant. Each restricted stock unit represents our obligation to deliver to the holder one Common Share upon vesting.

Chubb also grants restricted stock awards to non-management directors which vest at the following year's annual general meeting.

Chubb's 2021 share-based compensation expense includes a portion of the cost related to the restricted stock granted in the years 2017 through 2021.

The following table presents a roll-forward of our restricted stock awards. Included in the roll-forward below are 15,586 restricted stock awards, 27,679 restricted stock awards, and 19,019 restricted stock awards that were granted to non-management directors during the years ended December 31, 2021, 2020, and 2019, respectively:

	Service-based Restricted Stock Awards and Restricted Stock Units		Performance-based Restricted Stock Awards and Restricted Stock Units	
	Number of Shares	Weighted-Average Grant-Date Fair Value	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested restricted stock, December 31, 2018	3,294,849	$ 134.17	911,230	$ 127.27
Granted	1,492,900	$ 134.38	212,059	$ 133.90
Vested	(1,292,864)	$ 129.18	(196,640)	$ 115.62
Forfeited	(200,875)	$ 135.98	(50,437)	$ 132.36
Unvested restricted stock, December 31, 2019	3,294,010	$ 136.20	876,212	$ 131.16
Granted	1,425,667	$ 148.56	186,291	$ 151.14
Vested	(1,304,308)	$ 134.02	(490,185)	$ 125.66
Forfeited	(152,074)	$ 140.72	—	$ —
Unvested restricted stock, December 31, 2020	3,263,295	$ 142.32	572,318	$ 142.38
Granted	**1,288,042**	**$ 165.32**	**294,315**	**$ 164.75**
Vested	**(1,283,185)**	**$ 140.62**	**(169,442)**	**$ 143.07**
Forfeited	**(216,341)**	**$ 150.19**	**—**	**$ —**
Unvested restricted stock, December 31, 2021	**3,051,811**	**$ 152.19**	**697,191**	**$ 151.74**

Prior to 2009, legacy ACE granted restricted stock units with a 1-year vesting period to non-management directors. Delivery of Common Shares on account of these restricted stock units to non-management directors is deferred until after the date of the non-management directors' termination from the Board. Legacy Chubb Corp historically allowed directors and certain key employees of Chubb Corp and its subsidiaries to defer a portion of their compensation earned with respect to services performed in the form of deferred stock units. In addition, legacy Chubb Corp provided supplemental retirement benefits for certain employees through its Defined Contribution Excess Benefit Plan in the form of deferred shares of stock. The minimum vesting period under these legacy Chubb Corp deferred plans was 1-year and the maximum was 3-years. Employees and directors had the option to elect to receive their awards at a future specified date or upon their termination of service with Chubb. At December 31, 2021, there were 139,587 deferred restricted stock units.

ESPP

The ESPP gives participating employees the right to purchase Common Shares through payroll deductions during consecutive subscription periods at a purchase price of 85 percent of the fair value of a Common Share on the exercise date (Purchase Price). Annual purchases by participants are limited to the number of whole shares that can be purchased by an amount equal to ten percent of the participant's compensation or $25,000, whichever is less. The ESPP has two six-month subscription periods each year, the first of which runs between January 1 and June 30 and the second of which runs between July 1 and December 31. The amounts collected from participants during a subscription period are used on the exercise date to purchase full shares of Common Shares. An exercise date is generally the last trading day of a subscription period. The number of shares purchased is equal to the total amount, at the exercise date, collected from the participants through payroll deductions for that subscription period, divided by the Purchase Price, rounded down to the next full share. Participants may withdraw from an offering before the exercise date and obtain a refund of amounts withheld through payroll deductions. Pursuant to the provisions of the ESPP, during the years ended December 31, 2021, 2020, and 2019, employees paid $47 million, $45 million, and $41 million to purchase 315,405 shares, 383,751 shares, and 321,800 shares, respectively.

13. Postretirement benefits

Chubb provides postretirement benefits to eligible employees and their dependents through various defined contribution plans sponsored by Chubb. In addition, for certain employees, Chubb sponsors other postretirement benefit plans, and prior to 2020, Chubb sponsored defined benefit pension plans.

Defined contribution plans (including 401(k))

Under these plans, employees' contributions may be supplemented by Chubb matching contributions based on the level of employee contribution. These contributions are invested at the election of each employee in one or more of several investment portfolios offered by a third-party investment advisor. Expenses for these plans totaled $214 million, $211 million, and $171 million for the years ended December 31, 2021, 2020, and 2019, respectively.

Defined benefit pension plans

We maintain non-contributory defined benefit pension plans that cover certain employees located in the U.S., U.K., Canada, and various other statutorily required countries. We account for pension benefits using the accrual method. Benefits under these plans are based on employees' years of service and compensation during final years of service. All underlying plans are subject to periodic actuarial valuations by qualified actuarial firms using actuarial models to calculate the expense and liability for each plan. We use December 31 as the measurement date for our defined benefit pension plans.

Under the Chubb Corp plans, prior to 2001, benefits were generally based on an employee’s years of service and average compensation during the last five years of employment. Effective January 1, 2001, the formula for providing pension benefits was changed from the final average pay formula to a cash balance formula. Under the cash balance formula, a notional account is established for each employee, which is credited semi-annually with an amount equal to a percentage of eligible compensation based on age and years of service plus interest based on the account balance. Chubb Corp employees hired prior to 2001 will generally be eligible to receive vested benefits based on the higher of the final average pay or cash balance formulas.

Other postretirement benefit plans

Our assumption of Chubb Corp's other postretirement benefit plans, principally healthcare and life insurance, covers retired employees, their beneficiaries, and covered dependents. Healthcare coverage is contributory. Retiree contributions vary based upon the retiree’s age, type of coverage, and years of service requirements. Life insurance coverage is non-contributory. Chubb funds a portion of the healthcare benefits obligation where such funding can be accomplished on a tax-effective basis. Benefits are paid as covered expenses are incurred. We use December 31 as the measurement date for our postretirement benefit plans.

Amendments to U.S. qualified and excess pension plans and U.S. retiree healthcare plan

In 2016, we harmonized and amended several of our U.S. retirement programs to create a unified retirement savings program. In 2020, we transitioned from a traditional defined benefit pension program that had been in effect for certain employees to a defined contribution program. Additionally, after 2025, we plan to eliminate a subsidized U.S. retiree healthcare and life insurance plan that is currently in place for certain employees. Both amendments required a remeasurement of the plan assets and benefit obligations with updated assumptions, including discount rates and the expected return on assets. The amendment of the retiree healthcare plan resulted in a reduction in the obligation of $383 million, of which $410 million was amortized as a reduction to expense through June 2021 as it relates to benefits already accrued. For the years ended December 31, 2021, 2020, and 2019, $26 million, $79 million, and $79 million, respectively, were amortized as a reduction to expense.

Obligations and funded status

The funded status of the pension and other postretirement benefit plans as well as the amounts recognized in the Consolidated balance sheets and Accumulated other comprehensive income at December 31, 2021 and 2020 was as follows:

	Pension Benefit Plans				Other Postretirement Benefit Plans	
	2021		2020		**2021**	2020
(in millions of U.S. dollars)	**U.S. Plans**	**Non-U.S. Plans**	U.S. Plans	Non-U.S. Plans		
Benefit obligation, beginning of year	**$ 3,967**	**$ 1,199**	$ 3,569	$ 1,042	**$ 86**	$ 103
Service cost	**—**	**4**	—	4	**1**	1
Interest cost	**70**	**19**	99	22	**1**	2
Actuarial loss (gain)	**(161)**	**(47)**	441	135	**(10)**	1
Benefits paid	**(133)**	**(33)**	(127)	(31)	**(15)**	(20)
Curtailments	**—**	**—**	—	(2)	**—**	—
Settlements	**(11)**	**—**	(15)	—	**—**	—
Foreign currency revaluation and other	**—**	**(20)**	—	29	**(1)**	(1)
Benefit obligation, end of year	**$ 3,732**	**$ 1,122**	$ 3,967	$ 1,199	**$ 62**	$ 86
Plan assets at fair value, beginning of year	**$ 3,739**	**$ 1,284**	$ 3,301	$ 1,141	**$ 120**	$ 152
Actual return on plan assets	**543**	**83**	563	126	**(1)**	6
Employer contributions	**13**	**8**	17	19	**15**	1
Benefits paid	**(133)**	**(33)**	(127)	(31)	**(15)**	(39)
Settlements	**(11)**	**—**	(15)	—	**—**	—
Foreign currency revaluation and other	**—**	**(24)**	—	29	**—**	—
Plan assets at fair value, end of year	**$ 4,151**	**$ 1,318**	$ 3,739	$ 1,284	**$ 119**	$ 120
Funded status at end of year	**$ 419**	**$ 196**	$ (228)	$ 85	**$ 57**	$ 34
Amounts recognized in the Consolidated balance sheets:						
Assets	**$ 492**	**$ 214**	$ —	$ 85	**$ 77**	$ 34
Liabilities	**(73)**	**(18)**	(228)	—	**(20)**	—
Total	**$ 419**	**$ 196**	$ (228)	$ 85	**$ 57**	$ 34
Amounts recognized in Accumulated other comprehensive income, pre-tax, not yet recognized in net periodic cost (benefit):						
Net actuarial loss (gain)	**$ (375)**	**$ 73**	$ 78	$ 163	**$ (10)**	$ (5)
Prior service cost (benefit)	**—**	**9**	—	9	**(5)**	(31)
Total	**$ (375)**	**$ 82**	$ 78	$ 172	**$ (15)**	$ (36)

For the U.S. pension plans, the $161 million actuarial gain and $441 million actuarial loss experienced in 2021 and 2020, respectively, were principally driven by the change in the discount rates.

The accumulated benefit obligation for the pension benefit plans was $4.8 billion and $5.1 billion at December 31, 2021 and 2020, respectively. The accumulated benefit obligation is the present value of pension benefits earned as of the measurement date based on employee service and compensation prior to that date. It differs from the pension (projected) benefit obligation in the table above in that the accumulated benefit obligation includes no assumptions regarding future compensation levels.

Chubb's funding policy is to contribute amounts that meet regulatory requirements plus additional amounts determined based on actuarial valuations, market conditions and other factors. All benefit plans satisfy minimum funding requirements of the Employee Retirement Income Security Act of 1974 (ERISA).

The following table provides information on pension plans where the benefit obligation is in excess of plan assets at December 31, 2021 and 2020:

	2021		2020	
(in millions of U.S. dollars)	**U.S. Plans**	**Non-U.S. Plans**	U.S. Plans	Non-U.S. Plans
Plans with projected benefit obligation in excess of plan assets:				
Projected benefit obligation	**$ 73**	**$ 418**	$ 3,967	$ 629
Fair value of plan assets	**—**	**400**	3,739	568
Net funded status	**$ (73)**	**$ (18)**	$ (228)	$ (61)
Plans with accumulated benefit obligation in excess of plan assets:				
Accumulated benefit obligation	**$ 73**	**$ 380**	$ 3,967	$ 593
Fair value of plan assets	**$ —**	**$ 367**	$ 3,739	$ 565

For other postretirement benefit plans with an accumulated benefit obligation in excess of plan assets, the accumulated benefit obligation was $20 million and $23 million at December 31, 2021 and 2020, respectively. These plans have no plan assets.

At December 31, 2021, we estimate that we will contribute $17 million to the pension plans and $1 million to the other postretirement benefits plan in 2022. The estimate is subject to change due to contribution decisions that are affected by various factors including our liquidity, market performance and management discretion.

At December 31, 2021, our estimated expected future benefit payments are as follows:

	Pension Benefit Plans		
For the years ending December 31 (in millions of U.S. dollars)	U.S. Plans	Non-U.S. Plans	Other Postretirement Benefit Plans
2022	$ 168	$ 30	$ 19
2023	173	30	15
2024	177	30	11
2025	182	32	6
2026	185	33	1
2027-2031	964	193	5

The weighted-average assumptions used to determine the projected benefit obligation were as follows:

	Pension Benefit Plans		
	U.S. Plans	Non-U.S. Plans	Other Postretirement Benefit Plans
December 31, 2021			
Discount rate	**2.75 %**	**2.23 %**	**2.06 %**
Rate of compensation increase [(1)]	**N/A**	**3.63 %**	**N/A**
Interest crediting rate	**4.10 %**		
December 31, 2020			
Discount rate	2.32 %	1.80 %	1.36 %
Rate of compensation increase [(1)]	N/A	3.24 %	N/A
Interest crediting rate	4.10 %		

(1) For the U.S. Pension Plans, benefit accruals were frozen as of December 31, 2019.

The projected benefit cash flows were discounted using the corresponding spot rates derived from a yield curve, which resulted in a single discount rate that would produce the same liability at the respective measurement dates. The same process was applied to service cost cash flows to determine the discount rate associated with the service cost. In general, the discount rates for the non-U.S. plans were developed using a similar methodology by using country-specific yield curves.

The components of net pension and other postretirement benefit costs (benefits) reflected in Net income and other changes in plan assets and benefit obligations recognized in other comprehensive income were as follows:

	Pension Benefit Plans						Other Postretirement Benefit Plans		
	U.S. Plans			Non-U.S. Plans					
Year Ended December 31 (in millions of U.S. dollars)	**2021**	2020	2019	**2021**	2020	2019	**2021**	2020	2019
Costs reflected in Net income, pre-tax:									
Service cost	**$ —**	$ —	$ 49	**$ 4**	$ 4	$ 11	**$ 1**	$ 1	$ —
Non-service cost (benefit):									
Interest cost	**70**	99	118	**19**	22	27	**1**	2	4
Expected return on plan assets	**(255)**	(224)	(189)	**(44)**	(41)	(45)	**(1)**	(5)	(4)
Amortization of net actuarial loss	**—**	—	—	**4**	2	3	**—**	—	—
Amortization of prior service cost	**—**	—	—	**—**	—	—	**(26)**	(83)	(84)
Curtailments	**—**	—	—	**—**	(1)	(1)	**—**	—	—
Settlements	**3**	3	2	**—**	—	1	**—**	—	—
Total non-service cost (benefit)	**(182)**	(122)	(69)	**(21)**	(18)	(15)	**(26)**	(86)	(84)
Net periodic benefit cost (benefit)	**$ (182)**	$ (122)	$ (20)	**$ (17)**	$ (14)	$ (4)	**$ (25)**	$ (85)	$ (84)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net actuarial loss (gain)	**$ (450)**	$ 102	$ (4)	**$ (86)**	$ 56	$ 6	**$ (5)**	$ (2)	$ (2)
Prior service cost (benefit)	**—**	—	—	**—**	—	1	**—**	—	—
Amortization of net actuarial loss	**—**	—	—	**(4)**	(2)	(3)	**—**	—	—
Amortization of prior service cost	**—**	—	—	**—**	(1)	—	**26**	83	84
Curtailments	**—**	—	—	**—**	(1)	(3)	**—**	—	—
Settlements	**(3)**	(3)	(2)	**—**	—	(1)	**—**	—	—
Total decrease (increase) in other comprehensive income, pre-tax	**$ (453)**	$ 99	$ (6)	**$ (90)**	$ 52	$ —	**$ 21**	$ 81	$ 82

The line items in which the service cost and non-service cost (benefit) components of net periodic benefit cost (benefit) are included in the Consolidated statements of operations were as follows:

	Pension Benefit Plans			Other Postretirement Benefit Plans		
Year Ended December 31 (in millions of U.S. dollars)	**2021**	2020	2019	**2021**	2020	2019
Service cost:						
Losses and loss expenses	**$ —**	$ —	$ 6	**$ —**	$ —	$ —
Administrative expenses	**4**	4	54	**1**	1	—
Total service cost	**4**	4	60	**1**	1	—
Non-service cost (benefit):						
Losses and loss expenses	**(18)**	(12)	(7)	**(3)**	(9)	(8)
Administrative expenses	**(185)**	(128)	(77)	**(23)**	(77)	(76)
Total non-service cost (benefit)	**(203)**	(140)	(84)	**(26)**	(86)	(84)
Net periodic benefit cost (benefit)	**$ (199)**	$ (136)	$ (24)	**$ (25)**	$ (85)	$ (84)

The weighted-average assumptions used to determine the net periodic pension and other postretirement benefit costs were as follows:

Year Ended December 31	Pension Benefit Plans U.S. Plans	Pension Benefit Plans Non-U.S. Plans	Other Postretirement Benefit Plans
2021			
Discount rate in effect for determining service cost	**N/A**	**5.58 %**	**2.53 %**
Discount rate in effect for determining interest cost	**1.81 %**	**1.57 %**	**1.23 %**
Rate of compensation increase	**N/A**	**3.24 %**	**N/A**
Expected long-term rate of return on plan assets	**7.00 %**	**3.37 %**	**1.00 %**
Interest crediting rate	**4.10 %**	**N/A**	**N/A**
2020			
Discount rate in effect for determining service cost	N/A	6.04 %	3.00 %
Discount rate in effect for determining interest cost	2.85 %	2.24 %	2.64 %
Rate of compensation increase	N/A	3.26 %	N/A
Expected long-term rate of return on plan assets	7.00 %	3.83 %	3.00 %
Interest crediting rate	4.10 %	N/A	N/A
2019			
Discount rate in effect for determining service cost	4.23 %	4.48 %	4.04 %
Discount rate in effect for determining interest cost	3.94 %	2.88 %	3.69 %
Rate of compensation increase	4.00 %	3.37 %	N/A
Expected long-term rate of return on plan assets	7.00 %	4.40 %	3.00 %
Interest crediting rate	4.10 %	N/A	N/A

The weighted-average healthcare cost trend rate assumptions used to measure the expected cost of healthcare benefits were as follows:

	U.S. Plans			Non-U.S. Plans		
	2021	2020	2019	**2021**	2020	2019
Healthcare cost trend rate	**5.59 %**	5.96 %	6.32 %	**5.26 %**	5.04 %	5.24 %
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	**4.50 %**	4.50 %	4.50 %	**4.00 %**	4.00 %	4.00 %
Year that the rate reaches the ultimate trend rate	**2038**	2038	2038	**2040**	2040	2040

Plan Assets

The long term objective of the pension plan is to provide sufficient funding to cover expected benefit obligations, while assuming a prudent level of portfolio risk. The assets of the pension plan are invested, either directly or through pooled funds, in a diversified portfolio of predominately equity securities and fixed maturities. We seek to obtain a rate of return that over time equals or exceeds the returns of the broad markets in which the plan assets are invested. The target allocation of U.S. plan assets is 55 percent to 65 percent invested in equity securities (including certain other investments measured using NAV), with the remainder primarily invested in fixed maturities. The target allocation of non-U.S. plans varies by country, but the plan assets are principally invested in fixed maturities. We rebalance our pension assets to the target allocation as market conditions permit. We determined the expected long term rate of return assumption for each asset class based on an analysis of the historical returns and the expectations for future returns. The expected long term rate of return for the portfolio is a weighted aggregation of the expected returns for each asset class.

In order to minimize risk, the Plan maintains a listing of permissible and prohibited investments. In addition, the Plan has certain concentration limits and investment quality requirements imposed on permissible investments options. Investment risk is measured and monitored on an ongoing basis.

The following tables present the fair values of the pension plan assets, by valuation hierarchy. For additional information on how we classify these assets within the valuation hierarchy, refer to Note 4 to the Consolidated Financial Statements.

December 31, 2021				**Pension Benefit Plans**
(in millions of U.S. dollars)	**Level 1**	**Level 2**	**Level 3**	**Total**
U.S. Plans:				
Short-term investments	$ 33	$ —	$ —	$ 33
U.S. Treasury / Agency	380	92	—	472
Non-U.S. and corporate bonds	—	923	—	923
Municipal	—	4	—	4
Equity securities	1,871	—	1	1,872
Investment derivative instruments	3	—	—	3
Total U.S. Plan assets [(1)]	$ 2,287	$ 1,019	$ 1	$ 3,307
Non-U.S. Plans:				
Short-term investments	$ 5	$ —	$ —	$ 5
Non-U.S. and corporate bonds	—	679	—	679
Equity securities	153	291	—	444
Total Non-U.S. Plan assets [(1)]	$ 158	$ 970	$ —	$ 1,128

(1) Excluded from the table above are $542 million and $175 million of other investments related to the U.S. Plans and Non-U.S. Plans, respectively, limited partnerships of $175 million and $15 million in U.S. Plans and Non-U.S. Plans, respectively, measured using NAV as a practical expedient, and $127 million in cash and accrued income related to the U.S. Plans.

December 31, 2020				Pension Benefit Plans
(in millions of U.S. dollars)	Level 1	Level 2	Level 3	Total
U.S. Plans:				
Short-term investments	$ 59	$ —	$ —	$ 59
U.S. Treasury / Agency	250	186	—	436
Non-U.S. and corporate bonds	—	793	—	793
Municipal	—	2	—	2
Equity securities	1,818	—	—	1,818
Total U.S. Plan assets [(1)]	$ 2,127	$ 981	$ —	$ 3,108
Non-U.S. Plans:				
Short-term investments	$ 5	$ —	$ —	$ 5
Non-U.S. and corporate bonds	—	609	—	609
Equity securities	127	388	—	515
Total Non-U.S. Plan assets [(1)]	$ 132	$ 997	$ —	$ 1,129

(1) Excluded from the table above are $543 million and $147 million of other investments related to the U.S. Plans and Non-U.S. Plans, respectively, limited partnerships of $74 million and $8 million in U.S. Plans and Non-U.S. Plans, respectively, measured using NAV as a practical expedient, and $14 million in cash related to the U.S. Plans.

The other postretirement benefit plan had $119 million and $120 million of other investments measured using NAV as a practical expedient at December 31, 2021 and 2020, respectively.

14. Other income and expense

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Equity in net income of partially-owned entities [(1)]	**$ 2,433**	$ 1,019	$ 617
Gains (losses) from fair value changes in separate account assets [(2)]	**(8)**	58	44
Federal excise and capital taxes	**(19)**	(22)	(23)
Other	**(41)**	(61)	(42)
Total	**$ 2,365**	$ 994	$ 596

(1) Equity in net income of partially-owned entities includes $233 million, $167 million, and $74 million attributable to our investments in Huatai (Huatai Group, Huatai P&C, and Huatai Life) for the years ended December 31, 2021, 2020, and 2019, respectively.

(2) Related to gains (losses) from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP.

Other income and expense includes equity in net income of partially-owned entities, which includes our share of net income or loss, both underlying operating income and mark-to-market movement, related to partially-owned investment companies (private equity) and partially-owned insurance companies. Also included in Other income and expense are gains (losses) from fair value changes in separate account assets that do not qualify for separate account reporting under GAAP. The offsetting movement in the separate account liabilities is included in Policy benefits in the Consolidated statements of operations. Certain federal excise and capital taxes incurred as a result of capital management initiatives are included in Other income and expense as these are considered capital transactions and are excluded from underwriting results. Bad debt expense for uncollectible premiums is also included in Other income and expense.

15. Segment information

Chubb operates through six business segments: North America Commercial P&C Insurance, North America Personal P&C Insurance, North America Agricultural Insurance, Overseas General Insurance, Global Reinsurance, and Life Insurance. These segments distribute their products through various forms of brokers, agencies, and direct marketing programs. All business segments have established relationships with reinsurance intermediaries.

- The North America Commercial P&C Insurance segment provides both commercial and consumer P&C products and services. This segment includes the business written by Chubb divisions that provide P&C insurance and services to large, middle market and small commercial businesses in the U.S., Canada, and Bermuda. This segment includes our retail divisions: Major Accounts, Commercial Insurance, including Small Commercial Insurance; and our wholesale and specialty divisions: Westchester and Chubb Bermuda. These divisions write a variety of coverages, including property, casualty, workers' compensation, package policies, risk management, financial lines, marine, construction, environmental, medical risk, cyber risk, surety, and excess casualty; as well as group A&H insurance.

- The North America Personal P&C Insurance segment includes the business written by Chubb Personal Risk Services division, which includes high net worth personal lines business, with operations in the U.S. and Canada. This segment provides affluent and high net worth individuals and families with homeowners, high value automobile and collector cars, valuable articles (including fine arts), personal and excess liability, travel insurance, and recreational marine insurance and services.

- The North America Agricultural Insurance segment includes the business written by Rain and Hail Insurance Service, Inc. in the U.S. and Canada, which provides comprehensive multiple peril crop insurance (MPCI) and crop-hail insurance, and Chubb Agribusiness, which offers farm and ranch property as well as specialty P&C coverages, including commercial agriculture products.

- The Overseas General Insurance segment includes the business written by two Chubb divisions that provides both commercial and consumer P&C insurance and services in the 51 countries and territories outside of North America where the company operates. Chubb International, our retail division, provides commercial P&C, A&H and traditional and specialty personal lines for large corporations, middle markets and small customers through retail brokers, agents and other channels locally around the world. CGM provides commercial P&C excess and surplus lines wholesale business and A&H through wholesale brokers in the London market and through Lloyd's. These divisions write a variety of coverages, including traditional commercial P&C, specialty categories such as financial lines, marine, energy, aviation, political risk and construction, as well as group A&H and traditional and specialty personal lines.

- The Global Reinsurance segment includes the reinsurance business written by Chubb Tempest Re, comprising Chubb Tempest Re Bermuda, Chubb Tempest Re USA, Chubb Tempest Re International, and Chubb Tempest Re Canada. Chubb Tempest Re provides a broad range of traditional and specialty reinsurance coverages to a diverse array of primary P&C companies, including small, mid-sized, and multinational ceding companies.

- The Life Insurance segment includes our international life operations written by Chubb Life and Chubb Tempest Life Re, and the North American supplemental A&H and life business of Combined Insurance.

Corporate primarily includes the results of all run-off A&E exposures, run-off Brandywine business, Westchester specialty operations for 1996 and prior years, and certain other run-off exposures, including molestation claims. In addition, Corporate includes the results of our non-insurance companies including Chubb Limited, Chubb Group Management and Holdings Ltd., and Chubb INA Holdings Inc. Our exposure to A&E and molestation claims principally arises out of liabilities acquired when we purchased Westchester Specialty in 1998, CIGNA's P&C business in 1999, and Chubb Corp in 2016.

In addition, revenue and expenses managed at the corporate level, including realized gains and losses, interest expense, the non-operating income of our partially-owned entities, Chubb integration expenses and income taxes are reported within Corporate. In addition, the amortization expense of purchased intangibles, amortization of the fair value adjustment on acquired invested assets and assumed long-term debt as part of the Chubb Corp acquisition are considered Corporate costs as these are incurred by the overall company. The Chief Executive Officer does not manage segment results or allocate resources to segments when considering these costs and they are therefore excluded from our definition of segment income (loss).

Management uses underwriting income (loss) as the basis for segment performance. Chubb calculates underwriting income (loss) by subtracting Losses and loss expenses, Policy benefits, Policy acquisition costs, and Administrative expenses from Net premiums earned. Segment income (loss) includes underwriting income (loss), net investment income (loss), and other operating income and expense items such as each segment's share of the operating income (loss) related to partially-owned entities and miscellaneous income and expense items for which the segments are held accountable. Our main measure of segment performance is Segment income (loss), which also includes amortization of purchased intangibles acquired by the segment. We determined that this definition of segment income (loss) is appropriate and aligns with how the business is managed. We continue to evaluate our segments as our business continues to evolve and may further refine our segments and segment income (loss) measures. Certain items are presented in a different manner for segment reporting purposes than in the Consolidated Financial Statements. These items are reconciled to the consolidated presentation in the Segment measure reclass column below and include:

- Losses and loss expenses include realized gains and losses on crop derivatives. These derivatives were purchased to provide economic benefit, in a manner similar to reinsurance protection, in the event that a significant decline in commodity pricing impacts underwriting results. We view gains and losses on these derivatives as part of the results of our underwriting operations, and therefore, realized gains (losses) from these derivatives are reclassified to losses and loss expenses.

- Policy benefits include fair value changes on separate accounts that do not qualify for separate accounting under U.S. GAAP. These gains and losses have been reclassified from Other (income) expense. We view gains and losses from fair value changes in both separate account assets and liabilities as part of the results of our underwriting operations, and therefore these gains and losses are reclassified to policy benefits.

- Net investment income includes investment income reclassified from Other (income) expense related to partially-owned investment companies (private equity partnerships) where our ownership interest is in excess of three percent. We view investment income from these equity-method private equity partnerships as net investment income for segment reporting purposes.

The following tables present the Statement of Operations by segment:

For the Year Ended December 31, 2021 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Segment Measure Reclass	Chubb Consolidated
Net premiums written	**$ 16,415**	**$ 5,002**	**$ 2,388**	**$10,713**	**$ 873**	**$ 2,477**	**$ —**	**$ —**	**$ 37,868**
Net premiums earned	**15,461**	**4,915**	**2,338**	**10,441**	**798**	**2,402**	**—**	**—**	**36,355**
Losses and loss expenses	**10,015**	**2,924**	**1,962**	**5,143**	**632**	**740**	**572**	**(8)**	**21,980**
Policy benefits	**—**	**—**	**—**	**—**	**—**	**707**	**—**	**(8)**	**699**
Policy acquisition costs	**2,082**	**1,001**	**124**	**2,799**	**200**	**712**	**—**	**—**	**6,918**
Administrative expenses	**1,052**	**276**	**(3)**	**1,078**	**35**	**333**	**365**	**—**	**3,136**
Underwriting income (loss)	**2,312**	**714**	**255**	**1,421**	**(69)**	**(90)**	**(937)**	**16**	**3,622**
Net investment income (loss)	**2,078**	**249**	**28**	**597**	**331**	**407**	**(55)**	**(179)**	**3,456**
Other (income) expense	**31**	**(2)**	**1**	**—**	**—**	**(106)**	**(2,118)**	**(171)**	**(2,365)**
Amortization expense of purchased intangibles	**—**	**10**	**26**	**48**	**—**	**5**	**198**	**—**	**287**
Segment income	**$ 4,359**	**$ 955**	**$ 256**	**$ 1,970**	**$ 262**	**$ 418**	**$ 928**	**$ 8**	**$ 9,156**
Net realized gains (losses)							**1,160**	**(8)**	**1,152**
Interest expense							**492**	**—**	**492**
Income tax expense							**1,277**	**—**	**1,277**
Net income							**$ 319**	**$ —**	**$ 8,539**

For the Year Ended December 31, 2020 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Segment Measure Reclass	Chubb Consolidated
Net premiums written	$ 14,474	$ 4,920	$ 1,846	$ 9,335	$ 731	$ 2,514	$ —	$ —	$ 33,820
Net premiums earned	13,964	4,866	1,822	9,285	698	2,482	—	—	33,117
Losses and loss expenses	10,129	3,187	1,544	5,255	435	724	435	1	21,710
Policy benefits	—	—	—	—	—	726	—	58	784
Policy acquisition costs	1,942	974	123	2,568	174	766	—	—	6,547
Administrative expenses	1,006	270	9	1,034	37	320	303	—	2,979
Underwriting income (loss)	887	435	146	428	52	(54)	(738)	(59)	1,097
Net investment income (loss)	2,061	260	30	534	307	385	(87)	(115)	3,375
Other (income) expense	23	5	1	13	2	(74)	(791)	(173)	(994)
Amortization expense of purchased intangibles	—	11	27	45	—	4	203	—	290
Segment income (loss)	$ 2,925	$ 679	$ 148	$ 904	$ 357	$ 401	$ (237)	$ (1)	$ 5,176
Net realized gains (losses)							(499)	1	(498)
Interest expense							516	—	516
Income tax expense							629	—	629
Net income (loss)							$(1,881)	$ —	$ 3,533

For the Year Ended December 31, 2019 (in millions of U.S. dollars)	North America Commercial P&C Insurance	North America Personal P&C Insurance	North America Agricultural Insurance	Overseas General Insurance	Global Reinsurance	Life Insurance	Corporate	Segment Measure Reclass	Chubb Consolidated
Net premiums written	$ 13,375	$ 4,787	$ 1,810	$ 9,262	$ 649	$ 2,392	$ —	$ —	$ 32,275
Net premiums earned	12,922	4,694	1,795	8,882	654	2,343	—	—	31,290
Losses and loss expenses	8,206	3,043	1,616	4,606	352	757	158	(8)	18,730
Policy benefits	—	—	—	—	—	696	—	44	740
Policy acquisition costs	1,831	948	84	2,501	169	620	—	—	6,153
Administrative expenses	1,028	286	6	1,033	35	323	319	—	3,030
Underwriting income (loss)	1,857	417	89	742	98	(53)	(477)	(36)	2,637
Net investment income (loss)	2,109	258	30	588	279	373	(125)	(86)	3,426
Other (income) expense	24	3	1	12	1	(48)	(459)	(130)	(596)
Amortization expense of purchased intangibles	—	12	28	45	—	2	218	—	305
Segment income (loss)	$ 3,942	$ 660	$ 90	$ 1,273	$ 376	$ 366	$ (361)	$ 8	$ 6,354
Net realized gains (losses) including OTTI							(522)	(8)	(530)
Interest expense							552	—	552
Chubb integration expenses							23	—	23
Income tax expense							795	—	795
Net income (loss)							$ (2,253)	$ —	$ 4,454

Underwriting assets are reviewed in total by management for purposes of decision-making. Other than Unpaid losses and loss expenses, Future policy benefits, Reinsurance recoverables, Goodwill and Other intangible assets, Chubb does not allocate assets to its segments.

The following table presents net premiums earned for each segment by line of business:

	For the Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
North America Commercial P&C Insurance			
Property & other short-tail lines	**$ 2,942**	$ 2,423	$ 1,987
Casualty & all other	**11,905**	10,812	10,136
A&H	**614**	729	799
Total North America Commercial P&C Insurance	**15,461**	13,964	12,922
North America Personal P&C Insurance			
Personal automobile	**781**	822	829
Personal homeowners	**3,384**	3,327	3,183
Personal other	**750**	717	682
Total North America Personal P&C Insurance	**4,915**	4,866	4,694
North America Agricultural Insurance	**2,338**	1,822	1,795
Overseas General Insurance			
Property & other short-tail lines	**3,105**	2,468	2,244
Casualty & all other	**3,114**	2,738	2,494
Personal lines	**2,109**	1,981	1,896
A&H	**2,113**	2,098	2,248
Total Overseas General Insurance	**10,441**	9,285	8,882
Global Reinsurance			
Property	**151**	104	131
Property catastrophe	**190**	173	142
Casualty & all other	**457**	421	381
Total Global Reinsurance	**798**	698	654
Life Insurance			
Life	**1,320**	1,317	1,101
A&H	**1,082**	1,165	1,242
Total Life Insurance	**2,402**	2,482	2,343
Total net premiums earned	**$ 36,355**	$ 33,117	$ 31,290

The following table presents net premiums earned by geographic region. Allocations have been made on the basis of location of risk:

	North America	Europe [(1)]	Asia Pacific / Japan	Latin America
2021	**70 %**	**12 %**	**12 %**	**6 %**
2020	70 %	11 %	12 %	7 %
2019	70 %	11 %	12 %	7 %

(1) Europe includes Middle East and Africa regions.

16. Earnings per share

(in millions of U.S. dollars, except share and per share data)	Year Ended December 31 2021	2020	2019
Numerator:			
Net income	**$ 8,539**	$ 3,533	$ 4,454
Denominator:			
Denominator for basic earnings per share:			
Weighted-average shares outstanding	**439,968,422**	451,602,820	455,910,463
Denominator for diluted earnings per share:			
Share-based compensation plans	**3,228,856**	1,838,692	3,004,200
Weighted-average shares outstanding and assumed conversions	**443,197,278**	453,441,512	458,914,663
Basic earnings per share	**$ 19.41**	$ 7.82	$ 9.77
Diluted earnings per share	**$ 19.27**	$ 7.79	$ 9.71
Potential anti-dilutive share conversions	**1,532,066**	6,811,966	2,410,337

Excluded from weighted-average shares outstanding and assumed conversions is the impact of securities that would have been anti-dilutive during the respective years. These securities consisted of stock options in which the underlying exercise prices were greater than the average market prices of our Common Shares. Refer to Note 12 for additional information on stock options.

17. Related party transactions

Starr Indemnity & Liability Company and its affiliates (collectively, Starr)

We have agency, claims services and underwriting services agreements with Starr, the Chairman of which is related to a member of our senior management team. The Board has reviewed and approved our arrangements with Starr. We have agency, claims services and underwriting services agreements with various Starr subsidiaries. Under the agency agreement, we secure the ability to sell our insurance policies through Starr as one of our non-exclusive agents for writing policies, contracts, binders, or agreements of insurance or reinsurance. Under the claims services agreements, Starr adjusts the claims under policies and arranges for third party treaty and facultative agreements covering such policies. Under the underwriting services agreements, Starr underwrites insurance policies on our behalf and we agree to reinsure such policies to Starr under quota share reinsurance agreements.

The agency agreement also contains a profit-sharing arrangement based on loss ratios, triggered if Starr underwrites a minimum of $20 million of annual program business net premiums written on our behalf. No profit share commission has been payable yet under this arrangement. Transactions generated under Starr agreements were as follows:

(in millions of U.S. dollars)	Year Ended December 31 2021	2020	2019
Consolidated statement of operations			
Gross premiums written	**$ 592**	$ 507	$ 394
Ceded premiums written	**$ 321**	$ 253	$ 207
Commissions paid	**$ 114**	$ 97	$ 77
Commissions received	**$ 73**	$ 59	$ 46
Losses and loss expenses	**$ 157**	$ 170	$ 185
Consolidated balance sheets			
Reinsurance recoverable on losses and loss expenses	**$ 516**	$ 432	
Ceded reinsurance premium payable	**$ 88**	$ 80	

ABR Re

At December 31, 2021, we own 17.1 percent of the common equity of ABR Reinsurance Capital Holdings Ltd. and warrants to acquire 0.5 percent of additional equity. ABR Reinsurance Capital Holdings Ltd., is the parent company of ABR Reinsurance Ltd. (ABR Re), an independent reinsurance company. Through long-term arrangements, Chubb will be the sole source of reinsurance risks ceded to ABR Re, and BlackRock, Inc. will be ABR Re's exclusive investment management service provider. As an investor, Chubb is expected to benefit from underwriting profit generated by ABR Re's reinsuring a wide range of Chubb's primary insurance business and the income and capital appreciation BlackRock, Inc. seeks to deliver through its investment management services. In addition, Chubb has entered into an arrangement with BlackRock, Inc. under which both Chubb and BlackRock, Inc. will be entitled to an equal share of the aggregate amount of certain fees, including underwriting and investment management performance related fees, in connection with their respective reinsurance and investment management arrangements with ABR Re. In connection with this arrangement with BlackRock, Inc., we recorded income of $11 million in 2021, which is recorded in Other (income) expense on the Consolidated statements of operations.

ABR Re is a variable interest entity; however, Chubb is not the primary beneficiary and does not consolidate ABR Re because Chubb does not have the power to control and direct ABR Re's most significant activities, including investing and underwriting. Our ownership interest is accounted for under the equity method of accounting. Chubb cedes premiums to ABR Re and recognizes the associated commissions.

Transactions generated under ABR Re agreements were as follows:

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Consolidated statement of operations			
Ceded premiums written	**$ 442**	$ 350	$ 321
Commissions received	**$ 133**	$ 100	$ 92
Consolidated balance sheets			
Reinsurance recoverable on losses and loss expenses	**$ 963**	$ 806	
Ceded reinsurance premium payable	**$ 107**	$ 67	

18. Statutory financial information

Our subsidiaries file financial statements prepared in accordance with statutory accounting practices prescribed or permitted by insurance regulators. Statutory accounting differs from GAAP in the reporting of certain reinsurance contracts, investments, subsidiaries, acquisition expenses, fixed assets, deferred income taxes, and certain other items. Some jurisdictions impose complex regulatory requirements on insurance companies while other jurisdictions impose fewer requirements. In some jurisdictions, we must obtain licenses issued by governmental authorities to conduct local insurance business. These licenses may be subject to reserves and minimum capital and solvency tests. Jurisdictions may impose fines, censure, and/or criminal sanctions for violation of regulatory requirements. The 2021 amounts below are based on estimates.

Chubb's insurance and reinsurance subsidiaries are subject to insurance laws and regulations in the jurisdictions in which they operate. These regulations include restrictions that limit the amount of dividends or other distributions, such as loans or cash advances, available to shareholders without prior approval of the local insurance regulatory authorities. The amount of dividends available to be paid in 2022 without prior approval totals $6.8 billion.

The statutory capital and surplus of our insurance subsidiaries met regulatory requirements for 2021, 2020, and 2019. The minimum amounts of statutory capital and surplus necessary to satisfy regulatory requirements was $32.7 billion and $29.9 billion for December 31, 2021 and 2020, respectively. These minimum regulatory capital requirements were significantly lower than the corresponding amounts required by the rating agencies which review Chubb's insurance and reinsurance subsidiaries.

The following tables present the combined statutory capital and surplus and statutory net income (loss) of our Property and casualty and Life subsidiaries:

	December 31	
(in millions of U.S. dollars)	**2021**	2020
Statutory capital and surplus		
Property and casualty	**$ 46,397**	$ 46,494
Life	**$ 2,187**	$ 1,632

	Year Ended December 31		
(in millions of U.S. dollars)	**2021**	2020	2019
Statutory net income (loss)			
Property and casualty	**$ 7,711**	$ 4,354	$ 6,046
Life	**$ 425**	$ (245)	$ (210)

Several insurance subsidiaries follow accounting practices prescribed or permitted by the jurisdiction of domicile that differ from the applicable local statutory practice. The application of prescribed or permitted accounting practices does not have a material impact on Chubb's statutory surplus and income. As prescribed by the Restructuring discussed previously in Note 7, certain of our U.S. subsidiaries discount certain A&E liabilities, which increased statutory capital and surplus by approximately $129 million and $140 million at December 31, 2021 and 2020, respectively.

Federal Insurance Company (Federal), a direct subsidiary of Chubb INA Holdings Inc., has a permitted practice granted by the Indiana Department of Insurance that relates to its investment in a foreign affiliate. Under Statement of Statutory Accounting Principles No. 97, Investments in Subsidiary, Controlled and Affiliated Entities, in order for a reporting entity to admit its investments in foreign subsidiaries and affiliates, audited financial statements of the subsidiary or affiliate must be obtained to support the carrying value. Such financial statements must be prepared in accordance with U.S. GAAP, or alternatively, in accordance with the local statutory requirements in the subsidiary's or affiliate's country of domicile, with an audited footnote reconciliation of net income and shareholder's equity as reported to a U.S. GAAP basis. With the explicit permission of the Indiana Department of Insurance, Federal obtains audited financial statements for its admitted foreign affiliate, which had an aggregate carrying value of approximately $72 million and $55 million at December 31, 2021 and 2020, respectively, prepared in accordance with their respective local statutory requirements and supplemented with a separate unaudited reconciliation of shareholder's equity as reported to a U.S. GAAP basis.

SCHEDULE I

Chubb Limited and Subsidiaries

SUMMARY OF INVESTMENTS – OTHER THAN INVESTMENTS IN RELATED PARTIES

December 31, 2021 (in millions of U.S. dollars)	Cost or Amortized Cost, Net (1)	Fair Value	Amount at Which Shown in the Balance Sheet
Fixed maturities available for sale			
U.S. Treasury / Agency	$ 2,111	$ 2,214	$ 2,214
Non-U.S.	25,148	25,829	25,829
Corporate and asset-backed securities	37,838	39,063	39,063
Mortgage-backed securities	20,080	20,489	20,489
Municipal	5,302	5,513	5,513
Total fixed maturities available for sale	90,479	93,108	93,108
Fixed maturities held to maturity			
U.S. Treasury / Agency	1,213	1,244	1,213
Non-U.S.	1,196	1,262	1,196
Corporate and asset-backed securities	2,004	2,201	2,004
Mortgage-backed securities	1,730	1,803	1,730
Municipal	3,975	4,137	3,975
Total fixed maturities held to maturity	10,118	10,647	10,118
Equity securities			
Industrial, miscellaneous, and all other	4,782	4,782	4,782
Short-term investments	3,147	3,146	3,146
Other investments (2)	10,924	10,924	10,924
Total investments - other than investments in related parties	$ 119,450	$ 122,607	$ 122,078

(1) Net of valuation allowance for expected credit losses.

(2) Excludes $245 million of related party investments.

SCHEDULE II

Chubb Limited and Subsidiaries

CONDENSED FINANCIAL INFORMATION OF REGISTRANT

BALANCE SHEETS (Parent Company Only)

(in millions of U.S. dollars)		December 31 2021		December 31 2020
Assets				
Investments in subsidiaries and affiliates on equity basis	$	58,850	$	56,148
Total investments		58,850		56,148
Cash		1		84
Due from subsidiaries and affiliates, net		1,218		3,578
Other assets		16		10
Total assets	$	60,085	$	59,820
Liabilities				
Affiliated notional cash pooling programs	$	8	$	—
Accounts payable, accrued expenses, and other liabilities		363		379
Total liabilities		371		379
Shareholders' equity				
Common Shares		10,985		11,064
Common Shares in treasury		(7,464)		(3,644)
Additional paid-in capital		8,478		9,815
Retained earnings		47,365		39,337
Accumulated other comprehensive income		350		2,869
Total shareholders' equity		59,714		59,441
Total liabilities and shareholders' equity	$	60,085	$	59,820

The condensed financial information should be read in conjunction with the Consolidated Financial Statements and notes thereto.

SCHEDULE II (continued)

Chubb Limited and Subsidiaries

CONDENSED FINANCIAL INFORMATION OF REGISTRANT

STATEMENTS OF OPERATIONS (Parent Company Only)

(in millions of U.S. dollars)	Year Ended December 31 2021	2020	2019
Revenues			
Investment income [1]	$ 96	$ 155	$ 227
Equity in net income of subsidiaries and affiliates	8,514	3,457	4,307
Total Revenues	8,610	3,612	4,534
Expenses			
Administrative and other (income) expense	56	55	65
Chubb integration expenses	—	—	1
Income tax expense	15	24	14
Total Expenses	71	79	80
Net income	$ 8,539	$ 3,533	$ 4,454
Comprehensive income	$ 6,020	$ 5,783	$ 7,521

[1] Includes net investment income, interest income, and net realized gains (losses).

The condensed financial information should be read in conjunction with the Consolidated Financial Statements and notes thereto.

STATEMENTS OF CASH FLOWS (Parent Company Only)

(in millions of U.S. dollars)	Year Ended December 31 2021	2020	2019
Net cash flows from operating activities [1]	$ 4,167	$ 1,933	$ 412
Cash flows from investing activities			
Capital contribution	—	(1,200)	(1,000)
Other	—	(2)	—
Net cash flows used for investing activities	—	(1,202)	(1,000)
Cash flows from financing activities			
Dividends paid on Common Shares	(1,401)	(1,388)	(1,354)
Common Shares repurchased	(4,861)	(523)	(327)
Repayment of intercompany loans	2,003	1,265	2,301
Net proceeds from (payments to) affiliated notional cash pooling programs [2]	8	—	(35)
Net cash flows from (used for) financing activities	(4,251)	(646)	585
Effect of foreign currency rate changes on cash and restricted cash	1	(3)	4
Net increase (decrease) in cash and restricted cash	(83)	82	1
Cash and restricted cash – beginning of year	84	2	1
Cash and restricted cash – end of year	$ 1	$ 84	$ 2

[1] Includes cash dividends received from subsidiaries of $3.7 billion, $2.0 billion, and $200 million in 2021, 2020, and 2019, respectively.

[2] Chubb maintains two notional multicurrency cash pools (Pools) with a third-party bank. Refer to Note 1 f) for additional information.

The condensed financial information should be read in conjunction with the Consolidated Financial Statements and notes thereto.

SCHEDULE IV

Chubb Limited and Subsidiaries

SUPPLEMENTAL INFORMATION CONCERNING REINSURANCE

Premiums Earned

For the years ended December 31, 2021, 2020, and 2019 (in millions of U.S. dollars, except for percentages)	Direct Amount	Ceded To Other Companies	Assumed From Other Companies	Net Amount	Percentage of Amount Assumed to Net
2021					
Property and Casualty	**$ 35,767**	**$ 7,982**	**$ 3,441**	**$ 31,226**	**11 %**
Accident and Health	**4,062**	**362**	**109**	**3,809**	**3 %**
Life	**1,309**	**89**	**100**	**1,320**	**8 %**
Total	**$ 41,138**	**$ 8,433**	**$ 3,650**	**$ 36,355**	**10 %**
2020					
Property and Casualty	$ 31,546	$ 6,782	$ 3,044	$ 27,808	11 %
Accident and Health	4,249	368	111	3,992	3 %
Life	1,242	93	168	1,317	13 %
Total	$ 37,037	$ 7,243	$ 3,323	$ 33,117	10 %
2019					
Property and Casualty	$ 30,339	$ 7,236	$ 2,797	$ 25,900	11 %
Accident and Health	4,546	376	119	4,289	3 %
Life	991	81	191	1,101	17 %
Total	$ 35,876	$ 7,693	$ 3,107	$ 31,290	10 %

SCHEDULE VI

Chubb Limited and Subsidiaries

SUPPLEMENTARY INFORMATION CONCERNING PROPERTY AND CASUALTY OPERATIONS

As of and for the years ended December 31, 2021, 2020, and 2019
(in millions of U.S. dollars)

	Deferred Policy Acquisition Costs	Net Reserves for Unpaid Losses and Loss Expenses	Unearned Premiums	Net Premiums Earned	Net Investment Income	Net Losses and Loss Expenses Incurred Related to: Current Year	Net Losses and Loss Expenses Incurred Related to: Prior Year	Amortization of Deferred Policy Acquisition Costs	Net Paid Losses and Loss Expenses	Net Premiums Written
2021	**$ 4,260**	**$ 56,759**	**$ 19,101**	**$ 35,035**	**$ 3,133**	**$ 22,966**	**$ (986)**	**$ 6,440**	**$ 17,884**	**$ 36,474**
2020	$ 4,244	$ 53,164	$ 17,652	$ 31,800	$ 3,074	$ 22,124	$ (414)	$ 6,076	$ 17,434	$ 32,471
2019	$ 4,161	$ 48,509	$ 16,771	$ 30,189	$ 3,141	$ 19,575	$ (845)	$ 5,831	$ 18,473	$ 31,126

REPORT OF THE STATUTORY AUDITOR TO THE GENERAL MEETING OF CHUBB LIMITED, ZURICH ON THE (US GAAP) CONSOLIDATED FINANCIAL STATEMENTS

Report of the statutory auditor on the consolidated financial statements

Opinion
We have audited the accompanying consolidated financial statements of Chubb Limited and its subsidiaries ("the Company"), which comprise the consolidated balance sheets as of December 31, 2021 and 2020, and the consolidated statements of operations and comprehensive income, consolidated statements of shareholders' equity, and consolidated statements of cash flows for each of the three years in the period ended December 31, 2021, and the related notes including a summary of significant accounting policies (collectively referred to as the "consolidated financial statements").

In our opinion, the accompanying consolidated financial statements (pages F-7 to F-95) present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in accordance with accounting principles generally accepted in the United States of America (US GAAP) and comply with Swiss law.

Basis for opinion
We conducted our audit in accordance with Swiss law, Swiss Auditing Standards and auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those provisions and standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Company and have fulfilled our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key audit matters
Key audit matters are those matters that were communicated with those charged with governance and, in our professional judgement, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Valuation of Unpaid Losses and Loss Expenses, Net of Reinsurance

Key audit matter	How our audit addressed the key audit matter
As described in Note 7 to the consolidated financial statements, as of December 31, 2021, the Company's liability for unpaid losses and loss expenses, net of reinsurance, was $56.8 billion. The majority of the Company's net unpaid losses and loss expenses arise from the Company's long-tail casualty business (such as general liability and professional liability), U.S. sourced workers' compensation, asbestos-related, environmental pollution and other exposures with high estimation uncertainty. The process of establishing loss and loss expense reserves requires the use of estimates and judgments based on circumstances underlying the insured loss at the date of accrual. The judgments involved in projecting the ultimate losses include the use and interpretation of various standard actuarial reserving methods that place reliance on the extrapolation of actual historical data, loss development patterns, industry data, and other benchmarks as appropriate. The reserves for the various product lines each require different qualitative and quantitative assumptions and judgments, including changes in business mix or volume, changes in ceded reinsurance structures, changes in claims handling practices, reported and projected loss trends, inflation, the legal environment, and the terms and conditions of the contracts sold to the Company's insured parties. The principal considerations for our determination that performing procedures relating to the valuation of unpaid losses and loss expenses, net of reinsurance, from the long-tail and other exposures as described above, is a critical audit matter are (i) the significant judgment by management in determining the reserve liability, which in turn led to a high degree of auditor subjectivity and judgment in performing procedures relating to the valuation; (ii) the significant audit effort and judgment in evaluating the audit evidence relating to the actuarial reserving methods and assumptions related to extrapolation of actual historical data, loss development patterns, industry data, other benchmarks, and the impact of qualitative and quantitative subjective assumptions and judgements; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.	Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the Company's valuation of unpaid losses and loss expenses, net of reinsurance, including controls over the selection of actuarial reserving methods and development of significant assumptions. These procedures also included, among others, the involvement of professionals with specialized skill and knowledge to assist in performing one or a combination of procedures, including (i) independently estimating reserves on a sample basis using actual historical data and loss development patterns, as well as industry data and other benchmarks, to develop an independent estimate and comparing the independent estimate to management's actuarially determined reserves and (ii) evaluating the appropriateness of management's actuarial reserving methods and the reasonableness of the aforementioned assumptions, as well as assessing qualitative adjustments to carried reserves and the consistency of management's approach period-over-period. Performing these procedures involved testing the completeness and accuracy of data provided by management.

Valuation of Level 3 Investments in the Valuation Hierarchy

Key audit matter	How our audit addressed the key audit matter
As described in Note 4 to the consolidated financial statements, as of December 31, 2021, the Company had total assets measured at fair value of $109.3 billion, of which $2.8 billion were categorized as level 3 in the valuation hierarchy. The level 3 investments are measured at fair value using inputs that are unobservable and reflect management's judgments about assumptions that market participants would use in pricing or, for certain of the investments, management obtains and evaluates a single broker quote, which is typically from a market maker. The valuation of certain of the investments is more subjective when markets are less liquid due to the lack of market based inputs (i.e., stale pricing), which may increase the potential that an investment's estimated fair value is not reflective of the price at which an actual transaction would occur. The principal considerations for our determination that performing procedures relating to the valuation of level 3 investments in the valuation hierarchy is a critical audit matter are (i) the significant judgment by management in determining the fair value of these investments as they are measured using inputs that are unobservable and are priced using inputs other than quoted prices, which in turn led to a high degree of auditor subjectivity and judgment in performing procedures relating to the estimate; (ii) the significant audit effort and judgement in evaluating the audit evidence related to the valuation; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.	Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of the controls relating to the valuation of level 3 investments. These procedures also included, among others (i) obtaining pricing from sources other than those used by management for a sample of investments and comparing management's estimate to the prices independently obtained and (ii) the involvement of professionals with specialized skill and knowledge to assist in developing an independent range of prices for a sample of investments and comparing management's estimate to the independently developed range of prices.

Responsibilities of the Board of Directors for the consolidated financial statements

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America (US GAAP) and the requirements of Swiss law, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date the financial statements are available to be issued; to disclose, as applicable, matters related to going concern; and to use the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has realistic alternative but to do so.

Auditor's responsibility for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with Swiss law, Swiss Auditing Standards and US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the consolidated financial statements.

In performing an audit in accordance with Swiss law, Swiss Auditing Standards and US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made, as well as evaluate the overall presentation of the consolidated financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the financial statements. We are responsible for the direction, supervision, and performance of the Group audit. We remain solely responsible for our audit opinion.

We are required to communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

We also provide the Board of Directors or its relevant committee with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safe-guards applied.

From the matters communicated with the Board of Directors or its relevant committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor’s report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other matter

Accounting principles generally accepted in the United States of America (US GAAP) requires that the supplementary information based on the requirements of ASU 2015-09, Disclosures about Short-Duration Contracts, on pages F-46 to F-57 be presented to supplement the consolidated financial statements. Such information, although not part of the consolidated financial statements, is required by the Financial Accounting Standards Board, which considers it an essential part of financial reporting for placing the consolidated financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America (US GAAS), which consisted of inquiries of the Company about the methods of preparing the information and comparing the information for consistency with the Company’s responses to our inquiries, the consolidated financial statements and other knowledge we obtained during our audit of the consolidated financial statements. We do not express an opinion or provide any assurance on the supplementary information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Report on other legal and regulatory requirements

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements according to the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

PricewaterhouseCoopers AG

/s/ Peter Eberli	/s/ Nicolas Juillerat
Peter Eberli	Nicolas Juillerat
Audit expert	Audit expert
Auditor in charge	

Zurich, February 24, 2022

CHUBB LIMITED

SWISS STATUTORY FINANCIAL STATEMENTS

December 31, 2021

SWISS STATUTORY BALANCE SHEETS (Unconsolidated)

Chubb Limited

(in millions of Swiss francs)	**December 31 2021**	December 31 2020
Assets		
Cash and cash equivalents	**1**	75
Prepaid expenses and other assets	**9**	2
Receivable from subsidiaries	**40**	234
Total current assets	**50**	311
Investments in subsidiaries	**34,074**	33,242
Loans to subsidiaries	**1,495**	2,934
Other assets	**7**	8
Total non-current assets	**35,576**	36,184
Total assets	**35,626**	36,495
Liabilities		
Accounts payable	**27**	28
Payable to subsidiaries	**991**	498
Capital distribution payable	**317**	316
Deferred unrealized exchange gain	**10**	2
Total short-term liabilities	**1,345**	844
Total liabilities	**1,345**	844
Shareholders' equity		
Share capital	**11,448**	11,534
Statutory capital reserves:		
Capital contribution reserves	**8,115**	9,458
Reserve for dividends from capital contributions	**1,257**	1,171
Reserves for treasury shares	**2,599**	3,046
Treasury shares	**(4,445)**	(486)
Statutory retained earnings:		
Retained earnings	**10,977**	8,507
Profit for the period	**4,330**	2,421
Total shareholders' equity	**34,281**	35,651
Total liabilities and shareholders' equity	**35,626**	36,495

The accompanying notes form an integral part of these statutory financial statements

SWISS STATUTORY STATEMENTS OF INCOME (Unconsolidated)
Chubb Limited

For the years ended December 31, 2021 and December 31, 2020 (in millions of Swiss francs)	**2021**	2020
Dividend income	**4,304**	2,497
Interest income (expense) from subsidiaries	**102**	128
Debt guarantee fee income	**38**	39
Other Income	**10**	—
Administrative and other expenses	**(96)**	(88)
Foreign exchange gains/(losses)	**(17)**	15
Operating results	**4,341**	2,591
Interest income (expense) third party only	**3**	(1)
Foreign exchange translation losses	**—**	(144)
Earnings before taxes	**4,344**	2,446
Tax expense	**(14)**	(25)
Profit for the year	**4,330**	2,421

The accompanying notes form an integral part of these statutory financial statements

1. Basis of presentation

Chubb Limited (Chubb), domiciled in Zurich, Switzerland, is the holding company of Chubb Group (Group) with a listing on the New York Stock Exchange (NYSE). Chubb's principal activity is the holding of subsidiaries. Revenues consist mainly of dividend and interest income. The accompanying financial statements comply with Swiss law. The financial statements present the financial position of the holding company on a standalone basis and do not represent the consolidated financial position of the holding company and its subsidiaries.

The financial statements have been prepared in accordance with the provisions of commercial accounting as set out in the Swiss Code of Obligations (Art. 957 to 963b CO, effective since January 1, 2013).

All amounts in the notes are shown in millions of Swiss francs unless otherwise stated.

2. Significant accounting policies

a) Cash and cash equivalents

Cash and cash equivalents includes cash on hand and deposits with an original maturity of three months or less at time of purchase.

Chubb and certain of its subsidiaries (participating entities) have agreements with a third-party bank provider which implemented two international multi-currency notional cash pooling programs. In each program, participating entities establish deposit accounts in different currencies with the bank provider and each day the credit or debit balances in every account are notionally translated into a single currency (U.S. dollars) and then notionally pooled. Participants of the notional pool either pay or receive interest from the third-party bank provider. The bank extends overdraft credit to any participating entity as needed, provided that the overall notionally-pooled balance of all accounts in each pool at the end of each day is at least zero. Actual cash balances are not physically converted and are not commingled between legal entities. Any overdraft balances incurred under this program by a participating entity would be guaranteed by Chubb up to CHF 273 million ($300 million) in the aggregate. Our syndicated letter of credit facility allows for same day drawings to fund a net pool overdraft should participating entities withdraw contributed funds from the pool.

b) Investments in subsidiaries

Investments in subsidiaries are equity interests, which are held on a long-term basis for the purpose of the holding company's business activities. They are carried at a value no higher than their cost less adjustments for impairment. An impairment analysis of the investments in subsidiaries is performed on an annual basis.

c) Translation of foreign currencies

The financial statements are translated from U.S. dollar into Swiss francs using the following exchange rates:
- Investments in subsidiaries at historical exchange rates;
- Other assets and liabilities at period end exchange rates;
- Treasury shares and shareholders' equity at historical exchange rates; and
- Revenues and expenses at average exchange rates (where approximatively accurate), otherwise at transaction date exchange rates

Exchange losses are recorded in the statement of income and unrealized exchange gains are recorded on the balance sheet and deferred until realized.

d) Dividend income

Chubb collects dividend income from its direct subsidiaries.

e) Interest income (expense) from subsidiaries

Chubb collects interest income from loans issued to its subsidiaries which are reflected within operating income. Additionally, Chubb either collects or pays interest related to a reciprocal line of credit with one of its subsidiaries.

f) Debt guarantee fee income

Chubb collects a fee for Chubb's guarantee of the debt issued by one of its subsidiaries.

g) Other Income
Chubb has entered into an arrangement with BlackRock, Inc. under which both Chubb and BlackRock, Inc. will be entitled to an equal share of the aggregate amount of certain fees, including underwriting and investment management performance related fees, in connection with their respective reinsurance and investment management arrangements with ABR Re, an independent reinsurance Company. The fees received by Chubb were CHF 10 million and CHF 3 million for the years ended December 31, 2021 and 2020, respectively. The 2020 amount was presented within Administrative expenses.

3. Commitments, contingencies, and guarantees

a) Letters of credit (LOC)
Chubb has access to capital markets and credit facilities with a letter of credit capacity of CHF 3.4 billion ($3.7 billion) with a sub-limit of CHF 1.7 billion ($1.9 billion) for revolving credit. Chubb's LOC usage was CHF 1.43 billion ($1.4 billion) and CHF 1.5 billion ($1.7 billion) for the years ended December 31, 2021 and 2020, respectively.

The letter of credit facility required that Chubb maintains certain financial covenants, all of which were met at December 31, 2021.

b) Lease commitments
Chubb leases property under an operating lease which expires in 2023. The following table presents future annual minimum lease payments as of December 31, 2021.

Year ending December 31 (in millions of Swiss francs)	
2022	1.5
2023	1.1
Thereafter	—
Total minimum future lease commitments	2.6

At December 31, 2020, the total minimum future lease commitments were CHF 4.1 million.

c) Guarantee of debt
Chubb fully and unconditionally guarantees certain subsidiary debt totaling CHF 14.9 billion ($16.4 billion) and CHF 13.5 billion ($15.3 billion) at December 31, 2021 and 2020, respectively, and receives a fee.

4. Significant investments

a) Share capital:
The following table presents information regarding share capital held of subsidiaries at both December 31, 2021 and 2020. Amounts are expressed in whole U.S. dollars or Swiss francs.

Holdings as of December 31, 2021 and 2020	Country	% of Possession	Currency	Share Capital	Purpose
Chubb Group Holdings, Inc.	U.S.A.	100 %	USD	11	Holding company
Chubb INA Holdings, Inc.	U.S.A.	20 %	USD	1	Holding company
Chubb Insurance (Switzerland) Limited	Switzerland	100 %	CHF	100,000,000	Insurance company
Chubb Reinsurance (Switzerland) Limited	Switzerland	100 %	CHF	44,000,000	Reinsurance company
Chubb Group Management and Holdings Ltd.	Bermuda	100 %	USD	100	Holding company

b) Investments in subsidiaries:
The following table presents information regarding investments in subsidiaries at both December 31, 2021 and 2020. Investments in subsidiaries increased CHF 0.8 billion ($0.9 billion) in 2021 due to capital contributions to Chubb Group Management Holdings Limited.

(in millions of Swiss francs)	**2021**	2020
Chubb Group Holdings, Inc.	**17,004**	17,004
Chubb INA Holdings, Inc.	**2,043**	2,043
Chubb Group Management Holdings Ltd.	**14,600**	13,768
Chubb Insurance (Switzerland) Limited	**185**	185
Chubb Reinsurance (Switzerland) Limited	**242**	242
Balance - end of year	**34,074**	33,242

5. Common Share ownership of the Board of Directors and Group Executives

a) Board of Directors

The following table presents information, at December 31, 2021 and 2020, with respect to the ownership of Common Shares by each member of the Board of Directors. Unless otherwise indicated, the named individual has sole voting and investment power over the Common Shares listed in the Common Shares Beneficially Owned column. Common Share ownership of Evan G. Greenberg, the Chairman of the Board, is included in Note 5 b) below.

Name of Beneficial Owner	Year	Common Shares Beneficially Owned	Restricted Stock Units (1)	Restricted Common Stock (2)
Michael G. Atieh (3)	**2021**	**847**	**36,812**	**1,083**
	2020	3,501	36,115	1,721
Sheila P. Burke	**2021**	**5,244**	**39,805**	**1,083**
	2020	3,954	39,598	1,721
James Cash	**2021**	**—**	**—**	**—**
	2020	3,756	19,465	1,721
Mary A. Cirillo	**2021**	**26,070**	**15,328**	**1,956**
	2020	23,740	15,038	3,107
Michael P. Connors	**2021**	**14,279**	**—**	**1,083**
	2020	12,989	—	1,721
John A. Edwardson	**2021**	**—**	**—**	**—**
	2020	10,014	—	2,916
Robert J. Hugin (4)	**2021**	**13,251**	**—**	**1,836**
	2020	10,335	—	2,916
Robert W. Scully (5)	**2021**	**42,802**	**—**	**2,047**
	2020	40,364	—	3,251
Eugene B. Shanks, Jr.	**2021**	**11,369**	**—**	**1,083**
	2020	10,079	—	1,721
Theodore E. Shasta	**2021**	**15,017**	**—**	**1,083**
	2020	14,017	—	1,721
David H. Sidwell	**2021**	**11,150**	**—**	**1,083**
	2020	9,860	—	1,721
Olivier Steimer	**2021**	**19,251**	**3,713**	**1,083**
	2020	17,649	3,643	1,721
Luis Tellez	**2021**	**—**	**—**	**1,083**
	2020	—	—	—
Frances F. Townsend	**2021**	**1,290**	**—**	**1,083**
	2020	—	—	1,721
Total	**2021**	**160,570**	**95,658**	**15,586**
	2020	160,258	113,859	27,679

(1) Represents Common Shares that will be issued to the director upon his or her separation from the Board. These Common Shares relate to stock units granted as director's compensation prior to 2008 and associated dividend reinvestment accruals.

For Ms. Burke includes deferred stock units and market value units granted prior to the merger that will settle following separation from service. The number of vested market value units for Ms. Burke was 10,969 at December 31, 2021. The market value units include dividend reinvestment accruals for 2021 valued at $34,259.

(2) Represents Common Shares with respect to which the individual has the power to vote (but not to dispose of).

(3) Common Shares beneficially owned includes 847 shares held by a family foundation. Mr. Atieh has no pecuniary interest in these shares.

(4) Common Shares beneficially owned includes 335 shares held by Mr. Hugin's sons, of which Mr. Hugin disclaims beneficial ownership.

(5) Common Shares beneficially owned includes 2,775 shares held by Mr. Scully's daughter, of which Mr. Scully disclaims beneficial ownership.

b) Group Executives

The following table presents information, at December 31, 2021 and 2020, with respect to the beneficial ownership of Common Shares by each of the following Group Executives. Unless otherwise indicated, the named individual has sole voting and investment power over the Common Shares listed in the Common Shares Beneficially Owned column.

Name of Beneficial Owner	Year	Common Shares Beneficially Owned	Common Shares Subject to Options (1)	Weighted Average Option Exercise Price in CHF	Option Exercise Years	Restricted Common Stock (2)
Evan G. Greenberg (3) (4)	**2021**	**753,083**	**790,532**	**109.58**	**4.38**	**163,646**
	2020	761,463	819,566	103.26	4.37	148,653
Peter c. Enns (5)	**2021**	**3,000**	—	—	—	**19,374**
	2020	—	—	—	—	—
Philip V. Bancroft (5)	**2021**	—	—	—	—	—
	2020	197,471	111,264	115.11	5.48	24,930
John W. Keogh (6)	**2021**	**182,178**	**224,670**	**117.42**	**5.19**	**69,082**
	2020	166,136	221,635	112.15	5.21	67,309
Joseph Wayland	**2021**	**34,552**	**84,869**	**119.30**	**5.39**	**22,452**
	2020	37,263	72,018	119.31	5.90	24,148
Total	**2021**	**972,813**	**1,100,071**			**274,554**
	2020	1,162,333	1,224,483			265,040

(1) Represents Common Shares that the individual has the right to acquire within 60 days of December 31, 2021 and 2020, through option exercises, both vested and unvested.

(2) Represents Common Shares with respect to which the individual has the power to vote (but not to dispose of).

(3) Mr. Greenberg shares with other persons the power to vote and/or dispose of 72,085 of the Common Shares listed at December 31, 2021 and 2020. The amount included in the table for Mr. Greenberg also contains 318,885 additional pledged Common shares that are owned by trusts or entities in which adult family members of Mr. Greenberg are beneficiaries.

(4) Mr. Greenberg pledged 240,000 Common Shares Beneficially Owned in connection with a margin account at December 31, 2021 and 2020.

(5) Mr. Bancroft retired as Chief Financial Officer and a member of Executive Management on July 1,2021, and was replaced by Mr. Enns. Mr. Bancroft pledged 41,000 Common Shares Beneficially Owned in connection with a margin account at December 31, 2020.

(6) Mr. Keogh shares with other persons the power to vote and/or dispose of 7,978 of the Common Shares listed at December 31, 2021 and 2020.

6. Shareholders' equity

The following table presents issued, authorized, and conditional share capital, at December 31, 2021 and 2020. Treasury shares held by Chubb which are issued, but not outstanding totaled 27,644,500 and 3,606,053 shares for the periods ending December 31, 2021 and 2020, respectively. In addition to the treasury shares held by Chubb, subsidiaries of Chubb held 19,804,002 treasury shares at a cost of CHF 2.6 billion ($2.7 billion) and 23,266,586 treasury shares at a cost of CHF 3.0 billion ($3.1 billion), for the periods ending December 31, 2021 and 2020, respectively.

	Year ended December 31	
	2021	2020
Shares Issued	**474,021,114**	477,605,264
Authorized share capital for general purposes	**200,000,000**	200,000,000
Conditional share capital for bonds and similar debt instruments	**33,000,000**	33,000,000
Conditional share capital for employee benefit plans	**25,410,929**	25,410,929

a) Shares authorized and issued

All Common Shares are authorized under Swiss Corporate law. Chubb's share capital consisted of 474,021,114 and 477,605,264 Common Shares, with a par value of CHF 24.15 per share for the period ending December 31, 2021 and 2020, respectively. The Board has shareholder-approved authority as set forth in the Articles of Association to increase for general purposes Chubb's share capital from time to time until May 20, 2022, by the issuance of up to 200,000,000 fully paid up Common Shares with a par value equal to the par value of Chubb's Common Shares as set forth in the Articles of Association at the time of any such issuance.

b) Conditional share capital

(i) Conditional share capital for bonds and similar debt instruments

At both December 31, 2021 and 2020, the share capital of Chubb was authorized to be increased through the issuance of a maximum of 33,000,000 fully paid up shares each with a par value of CHF 24.15 per share through the exercise of conversion and/or option or warrant rights granted in connection with bonds, notes, or similar instruments, issued or to be issued by Chubb, including convertible debt instruments.

(ii) Conditional share capital for employee benefit plans

At both December 31, 2021 and 2020, the share capital of Chubb was authorized to be increased through the issuance of a maximum of 25,410,929 fully paid up shares each with a par value of CHF 24.15 per share in connection with the exercise of option rights granted to any employee of Chubb or a subsidiary, and any consultant, director, or other person providing services to Chubb or a subsidiary.

c) Capital contribution reserves

At our May 2020 annual general meeting, our shareholders approved an annual dividend for the following year of up to $3.12 per share, expected to be paid in four quarterly installments of $0.78 per share at dates determined by the Board of Directors (Board) after the annual general meeting by way of distribution from capital contribution reserves, transferred to free reserves for payment.

At our May 2021 annual general meeting, our shareholders approved an annual dividend for the following year of up to $3.20 per share, expected to be paid in four quarterly installments of $0.80 per share after the annual general meeting by way of distribution from capital contribution reserves, transferred to free reserves for payment. The Board will determine the record and payment dates at which the annual dividend may be paid until the date of the 2022 annual general meeting, and is authorized to abstain from distributing a dividend at its discretion. The first three quarterly installments each of $0.80 per share have been distributed by the Board as expected.

The following table presents dividend distributions per Common Share in Swiss francs (CHF) and U.S. dollars (USD) for the years ended December 31, 2021 and 2020:

	2021		2020	
	CHF	**USD**	CHF	USD
Dividends - distributed from Capital contribution reserves	**2.88**	**$ 3.18**	2.89	$ 3.09
Total dividend distributions per common share	**2.88**	**$ 3.18**	2.89	$ 3.09

d) Treasury Shares - Owned by Chubb

Treasury shares held by Chubb are carried at cost. At our May 2021 annual general meeting, our shareholders approved the cancellation of 3,584,150 shares purchased under our share repurchase program during 2020. The capital reduction by cancellation of shares was subject to publication requirements and a two-month waiting period in accordance with Swiss law and became effective August 4, 2021. Subsequently, at the Chubb Limited Extraordinary General Meeting of Shareholders, held on November 3, 2021, shareholders approved the cancellation of 14,465,400 shares repurchased under our share repurchase program during the first six months of 2021. The capital reduction by cancellation of shares was subject to publication requirements and a two-month waiting period in accordance with Swiss law and became effective on January 17, 2022. The following table presents a roll-forward of treasury shares held by Chubb for the years ended December 31, 2021 and 2020:

	2021		2020	
(cost in millions of Swiss francs)	**Number of Shares**	**Cost**	Number of Shares	Cost
Balance – beginning of year	**3,606,053**	**486**	2,200,503	334
Repurchase of shares	**27,644,500**	**4,445**	3,584,150	484
Cancellation of shares	**(3,584,150)**	**(484)**	(2,178,600)	(332)
Redeemed under share-based compensation plans	**(21,903)**	**(2)**	—	—
Balance – end of year	**27,644,500**	**4,445**	3,606,053	486

e) Treasury Shares - Reserve for Treasury Shares

Treasury shares held by Chubb subsidiaries are carried at cost. The following table presents a roll-forward of treasury shares held by Chubb subsidiaries for the years ended December 31, 2021 and 2020:

	2021		2020	
(cost in millions of Swiss francs)	**Number of Shares**	**Cost**	Number of Shares	Cost
Balance – beginning of year	**23,266,586**	**3,046**	25,611,794	3,346
Additions related to share-based compensation plans	**717,377**	**104**	814,043	104
Redeemed under share-based compensation plans	**(4,179,961)**	**(551)**	(3,159,251)	(405)
Balance – end of year	**19,804,002**	**2,599**	23,266,586	3,046

Decreases in treasury shares held by Chubb and its subsidiaries are principally due to issuances of shares upon the exercise of employee stock options, grants of restricted stock, and purchases under the Employee Stock Purchase Plan (ESPP). Increases in treasury shares are due to open market repurchases of shares and the surrender of shares to satisfy tax withholding obligations in connection with the vesting of restricted stock and the forfeiture of unvested restricted stock.

f) Movements in Statutory Retained earnings

	Year ended December 31	
(in millions of Swiss francs)	**2021**	2020
Balance – beginning of year	**10,928**	8,486
Attribution to / release reserve for treasury shares	**447**	301
Cancellation of treasury shares	**(398)**	(280)
Profit for the year	**4,330**	2,421
Balance – end of year	**15,307**	10,928

g) Chubb securities repurchase authorization

From time to time, Chubb repurchases shares as part of our capital management program and to partially offset potential dilution from the exercise of stock options and the granting of restricted stock under share-based compensation plans. Our Board of Directors has authorized share repurchase programs as follows:

- $1.5 billion of Chubb Common Shares from November 21, 2019 through December 31, 2020
- $1.5 billion of Chubb Common Shares from November 19, 2020 through December 31, 2021

In February 2021, the Board approved an increase to the November 2020 share repurchase program of $1.0 billion to a total of $2.5 billion, effective through December 31, 2021. On July 19, 2021, the Board authorized a one-time incremental share repurchase program of up to $5.0 billion through June 30, 2022, which is the only board authorization currently in effect.

Share repurchases may be in the open market, in privately negotiated transactions, block trades, accelerated repurchases and/or through option or other forward transactions.

The following table presents repurchases of Chubb's Common Shares conducted in a series of open market transactions under the Board authorizations:

	Year ended December 31	
(cost in millions of Swiss francs)	**2021**	2020
Number of shares repurchased	**27,644,500**	3,584,150
Cost of shares repurchased	**4,445**	484

h) General restrictions

Holders of Common Shares are entitled to receive dividends as proposed by the Board and approved by the shareholders. Holders of Common Shares are allowed one vote per share provided that, if the controlled shares of any shareholder constitute ten percent or more of the outstanding Common Shares of Chubb, only a fraction of the vote will be allowed so as not to exceed ten percent. Entry of acquirers of Common Shares as shareholders with voting rights in the share register may be refused if it would confer voting rights with respect to ten percent or more of the registered share capital recorded in the commercial register.

7. Significant shareholders

The following table presents information regarding each person, including corporate groups, known to Chubb to own beneficially or of record more than five percent of Chubb's outstanding Common Shares at December 31, 2021 and December 31, 2020.

	2021		2020	
Name of Beneficial Owner	**Number of Shares Beneficially Owned**	**Percent of Class**	Number of Shares Beneficially Owned	Percent of Class
Vanguard Group, Inc.	**35,503,624**	**8.24 %**	35,934,796	7.97 %
Wellington Management Group, LLP	**27,645,799**	**6.42 %**	27,670,712	6.14 %
BlackRock, Inc.	**27,072,528**	**6.30 %**	29,455,172	6.53 %
T. Rowe Price Associates, Inc.	**22,571,047**	**5.20 %**	23,852,906	5.29 %
State Street Corporation	**21,994,670**	**5.11 %**	*	*
Capital International Investors	**21,774,217**	**5.10 %**	23,360,900	5.18 %

* Represented less than five percent

8. Other disclosures required by Swiss law

a) Expenses

Total personnel expenses amounted to CHF 10.4 million and CHF 9.7 million for the years ended December 31, 2021 and 2020, respectively. The number of full-time positions on an annual average was no more than 50 for years ended December 31, 2021 and 2020.

Total amortization expense related to tangible property amounted to CHF 0.3 million and CHF 0.1 million for the years ended December 31, 2021 and 2020, respectively.

b) Fees paid to auditors
Fees paid to auditors by Chubb Limited totaled CHF 3.9 million and CHF 3.7 million for the years ended December 31, 2021 and 2020, respectively. An allocation of audit fees for professional services rendered in connection with the integrated audit of our consolidated financial statements and internal controls over financial reporting and audit fees for the standalone Swiss statutory financial statements totaled CHF 3.6 million and CHF 3.5 million for the years ended December 31, 2021 and 2020, respectively. Tax fees totaled CHF 0.3 million and CHF 0.2 million for the years ended December 31, 2021 and 2020, respectively.

c) Loans to subsidiaries
The following table presents information regarding loans to subsidiaries at December 31, 2021 and 2020. Loans to Chubb Group Holdings decreased CHF 1.3 billion primarily due to principal repayments in 2021.

(in millions of Swiss francs)	**2021**	2020
Loans to Chubb Group Holdings, Inc.	**1,229**	2,522
Loans to Chubb INA Holdings, Inc.	**—**	137
Loans to Chubb INA International Holdings Ltd., Agencia en Chile	**266**	275
Total loans to subsidiaries	**1,495**	2,934

d) Receivables from subsidiaries
The following table presents information regarding receivables from subsidiaries at December 31, 2021 and 2020.

(in millions of Swiss francs)	**2021**	2020
Receivables from Chubb Group Holdings, Inc.	**39**	53
Receivables from Chubb Group Management and Holdings, Ltd.	**1**	181
Total receivables from subsidiaries	**40**	234

e) Payable to subsidiaries
The following table presents information regarding payables to subsidiaries at December 31, 2021 and 2020, respectively.

(in millions of Swiss francs)	**2021**	2020
Payable to Chubb Group Holdings, Inc.	**475**	391
Payable to Chubb INA Holdings, Inc.	**317**	—
Payable to Chubb Group Management and Holdings, Ltd.	**191**	105
Payable to Chubb Insurance (Switzerland) Ltd.	**4**	2
Payable to Chubb Reinsurance (Switzerland) Ltd.	**4**	—
Total payable to subsidiaries	**991**	498

Proposed appropriation of available earnings

Our Board of Directors proposes to the Annual General Meeting that the Company's disposable profit (including the net income and the other items as shown below) be carried forward. The following table shows the appropriation of available earnings as proposed by the Board of Directors for the year ended December 31, 2021.

(in millions of Swiss francs)	**2021**	2020
Balance brought forward	**10,928**	8,486
Profit for the year	**4,330**	2,421
Cancellation of treasury shares	**(398)**	(280)
Attribution to reserve for treasury shares	**447**	301
Balance carried forward	**15,307**	10,928

In order to pay dividends, our Board of Directors proposes that an aggregate amount equal to CHF 2.2 billion be released from the capital contribution reserves account in 2021 and allocated to a segregated reserve for dividends account (the "Dividend Reserve"). The Board proposes to distribute a dividend to the shareholders up to an aggregate amount totaling $3.32 per Common Share from, and limited at a maximum to the amount of, the Dividend Reserve in one or more installments, in such amounts and on such record and payment dates as determined by the Board in its discretion. If the Board deems it advisable for the Company, the Board shall be authorized to abstain (in whole or in part) from distributing a dividend in its discretion. The authorization of the Board to distribute the installments from the Dividend Reserve will expire on the date of the 2023 annual general meeting, on which date any balance remaining in the Dividend Reserve will be automatically reallocated to the capital contribution reserves account.

If the Annual General Meeting approves this proposal, our Board currently intends to distribute the dividend in four equal installments of $0.83 each, on record dates at about the end of June, September, December and March, respectively, with payment dates about 21 days thereafter.

At December 31, 2021, 426,572,612 of the Company's Common Shares were eligible for dividends.

At the 2021 annual general meeting, the Company’s shareholders approved an aggregate annual dividend by way of a distribution from Capital contribution reserves, transferred to free reserves at the time of payment in 2020 totaling $3.20 per Common Share. The annual dividend was payable in four installments, each denominated in CHF but adjusted appropriately so that the U.S. dollar value of the installment remained at $0.80. The installments were subject to a dividend cap expressed in CHF which was not reached for 2021.

REPORT OF THE STATUTORY AUDITOR TO THE GENERAL MEETING OF CHUBB LIMITED, ZURICH ON THE (SWISS STATUTORY) FINANCIAL STATEMENTS

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the accompanying financial statements of Chubb Limited, which comprise the balance sheet as at December 31, 2021, the statement of income and notes (pages S-2 to S-13) for the year then ended.

Board of Directors' responsibility

The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the company's articles of association. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements for the year ended December 31, 2021 comply with Swiss law and the company's articles of association.

Report on key audit matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Investments in subsidiaries

Key audit matter	How our audit addressed the key audit matter
As set out in the balance sheet and at footnote 4, the Company owns five direct subsidiaries as at December 31, 2021 with a total book value of CHF 34.1 billion, representing 96% of the Company's total assets. We focused on this area due to the size of the investments in subsidiaries relative to the total assets, and the fact that there is judgment involved in assessing whether the carrying values of the investments in subsidiaries were impaired. The Swiss accounting law generally requires an individual impairment test at the investment or unit of account level.	We obtained an understanding of management's process and controls, and assessed and tested the design and operating effectiveness of a selected key control over the recoverability of the carrying value of investments in subsidiaries. In relation to the particular matters set out opposite, our testing procedures included the following: • We tested the Company's impairment analyses performed for the five direct subsidiaries. The assessment of potential impairment indicators included as a first step the comparison of the recorded Swiss statutory carrying value with the net asset value of each subsidiary. In case the net asset value was smaller than the carrying value, a secondary, more judgmental, step was followed using additional valuation techniques, such as a value-in-use assessment, to assess whether there was any potential need for impairment. • Where a value-in-use metric was used, we challenged management as to whether the input data and assumptions to their model were reliable and reasonable. The most important parameters were underwriting income, investment income and operating expenses. Based on the work performed we consider management's impairment analyses including the assumptions used to support the carrying value of investments in subsidiaries as reasonable.

Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a paragraph 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of association. We recommend that the financial statements submitted to you be approved.

PricewaterhouseCoopers AG

/s/ Peter Eberli	/s/ Nicolas Juillerat
Peter Eberli	Nicolas Juillerat
Audit expert Auditor in charge	Audit expert

Zurich, February 25, 2022

CHUBB LIMITED

SWISS STATUTORY COMPENSATION REPORT

December 31, 2021

A. General

Under the Swiss ordinance against excessive compensation in stock exchange listed companies (the “Ordinance”) and our Articles of Association, we are required to prepare a separate Swiss Statutory Compensation Report each year that contains specific items in a presentation format determined by these regulations.

Our Executive Management (as defined under Swiss law) is appointed by our Board. For 2021 our Executive Management consisted of Evan G. Greenberg, Chairman and Chief Executive Officer; Peter C. Enns, Chief Financial Officer (from July 1); Philip V. Bancroft, former Chief Financial Officer (who served as Chief Financial Officer and a member of Executive Management through June 30); John W. Keogh, President and Chief Operating Officer; and Joseph F. Wayland, General Counsel and Secretary. For 2020, our Executive Management consisted of Messrs. Greenberg, Bancroft, Keogh and Wayland.

For more detailed information about compensation for our Board of Directors and Executive Management, please review our Proxy Statement in connection with our 2022 annual general meeting of shareholders. You may access this report on the Investor Information section of our website at http://investors.chubb.com/investor-relations/shareholder-resources/shareholder-meeting-materials/default.aspx or by contacting Investor Relations by telephone, email or mail at:

Telephone: +1 (212) 827-4445

Email: investorrelations@chubb.com

Mail: Investor Relations, Chubb Limited, 1133 Avenue of the Americas, 11th Floor, New York, New York 10036

References in this report to “we,” “our” or “Chubb” are to Chubb Limited.

B. Compensation of the Board of Directors and Executive Management

Basis of Presentation

The following information sets forth the compensation for the years ended December 31, 2021 and 2020, of the members of the Board and Executive Management for all of the functions that they have performed for Chubb. Compensation of the Board is paid by Chubb. Compensation of Executive Management is paid by Chubb and the Chubb group entities where they are employed. Compensation is paid as a combination of both U.S. dollars, our functional reporting currency, with translation of certain amounts to whole Swiss francs. Where presented, 2021 and 2020 Swiss franc compensation figures have been translated at the average exchange rates. Swiss franc-equivalent total compensation of the Board and Executive Management is included in Tables 1 and 2 below. The average exchange rate we used for U.S. dollars into Swiss francs was 0.9143082 for 2021 and 0.93808 for 2020.

This report is established in accordance with the provisions of the Ordinance.

Compensation of the Board of Directors

Our directors receive compensation in accordance with our Outside Directors Compensation Parameters. No changes were made to our Outside Director Compensation Parameters in 2021. In 2020, the Board approved a change to the Outside Directors Compensation Parameters effective May 2020 to increase the Risk & Finance Committee chair fee from $20,000 to $25,000. No other changes were made to our Outside Directors Compensation Parameters in 2020.

Non-employee directors received $305,000 (CHF 278,864) in 2021 for their services. This amount consisted of an equity retainer of $180,000 (CHF 164,575) in the form of restricted stock awards, based on the fair value of Chubb's Common Shares as of the date of the award, and a cash retainer of $125,000 (CHF 114,289). Restricted stock awards vest at the following year's annual general meeting. The cash portion of the annual fee is paid to non-employee directors in cash quarterly, although directors may elect to receive up to all of their compensation, other than compensation for special meetings, in the form of restricted stock awards.

The Lead Director received a fee of $50,000 (CHF 45,715) in 2021. Committee chair fees were received as follows:

Audit Committee - $35,000 (CHF 32,001)
Compensation Committee - $25,000 (CHF 22,858)
Nominating & Governance Committee - $20,000 (CHF 18,286)
Risk & Finance Committee - $25,000 (CHF 22,858)

Directors are not paid fees for attending regular Board or committee meetings, but, at the discretion of the Chairman of the Board and the Lead Director, Chubb may pay an additional $2,000 fee for each special meeting attended by telephone and $3,000 for each special meeting attended in person. A $2,000 (CHF 1,829) meeting fee was paid to each non-employee director that attended a special Board meeting in 2021. Meeting fees were not paid in 2020.

Chubb's Corporate Governance Guidelines specify director equity ownership requirements. Chubb awards non-employee directors restricted stock awards and mandates minimum equity ownership of $600,000 (based on the stock price on the date of award). Each director has until the fifth anniversary of his or her initial election to the Board to achieve this minimum. The previously granted restricted stock awards (whether or not vested) are counted toward achieving this minimum.

Once a director has achieved the minimum equity ownership, this requirement will remain satisfied going forward as long as he or she retains the number of shares valued at the minimum amount based on the New York Stock Exchange closing price for Chubb's Common Shares as of the date the minimum threshold is initially met. Any vested shares held by a director in excess of the minimum share equivalent specified above may be sold at the director's discretion after consultation with Chubb's General Counsel.

Chubb credits dividend equivalents on previously granted deferred restricted stock units (which Chubb stopped issuing in 2009) held by a few longer-serving directors and market value units held by directors that were assumed in connection with the acquisition of The Chubb Corporation in 2016. Stock units are issued equivalent in value to the dividend payments that those directors would have received if they held stock. The fair value of these dividend payments totaled $216,813 (CHF 198,234) and $269,680 (CHF 252,982) in the aggregate for these directors in 2021 and 2020, respectively. These dividend payments are omitted from Table 1 below because the dividends relate to awards granted many years ago and the underlying awards were granted at fair value based on the closing stock price on the date of the award, which factored in future dividend payments.

No compensation was paid to former directors nor did any former director receive any benefits in kind or waivers of claims during the years ended December 31, 2021 and 2020. During the years ended December 31, 2021 and 2020, no current directors received benefits in kind or waivers of claims and no compensation had been paid to any related party of current or former directors, except as noted below with respect to our director charitable contributions program. Additionally, no related party of current or former directors received any benefits in kind or waivers of claims during 2021 or 2020. At each of December 31, 2021 and 2020, no current or former directors or any related party of current or former directors had outstanding loans or credits from Chubb.

Chubb has a matching contribution program for directors under which Chubb will match director charitable contributions to eligible registered charities, churches, and other places of worship or schools up to a maximum of $20,000 per year. In each of 2021 and 2020, in line with Chubb's commitment to COVID-19 pandemic relief efforts globally, Chubb also matched director contributions up to an additional $20,000 to eligible non-profit organizations delivering pandemic relief support. For Swiss law purposes, some of these matching contributions during the years ended December 31, 2021 and 2020 qualified as related party transactions because our directors or members of their immediate family were directors or officers of the organization. Chubb matched a total of $62,000 (CHF 56,687) in contributions to four such organizations in 2021 and $124,500 (CHF 116,791) in contributions to seven such organizations in 2020.

The following table presents information concerning director compensation paid or, in the case of restricted stock awards, earned in the years ended December 31, 2021 and 2020. Although Evan G. Greenberg is Chairman of the Board, Mr. Greenberg received no compensation in respect of these duties. Details of Mr. Greenberg's compensation in his capacity as a member of Executive Management are included in Table 2 below.

Table 1 - audited

Name	Year	Board Function	Fees Earned or Paid	Stock Awards [1]	All Other [2]	Total in USD	Total in CHF
Michael G. Atieh	2021	Member	$ 127,000	$ 180,000	$ —	$ 307,000	CHF 280,693
	2020	Member	$ 125,000	$ 180,000	$ —	$ 305,000	CHF 286,115
Sheila P. Burke	2021	Member	127,000	180,000	—	307,000	280,693
	2020	Member	125,000	180,000	—	305,000	286,115
James I. Cash	2021	Member (Retired)	33,250	67,500	6,956	107,706	98,476
	2020	Member	125,000	180,000	—	305,000	286,115
Mary Cirillo	2021	Member Chair - Nominating & Governance	2,000	325,000	—	327,000	298,979
	2020	Member Chair - Nominating & Governance	—	325,000	—	325,000	304,877
Michael P. Connors	2021	Lead Director	183,250	180,000	—	363,250	332,122
	2020	Lead Director Chair - Compensation	187,500	180,000	—	367,500	344,745
John A. Edwardson	2021	Member (Retired)	2,000	114,375	3,304	119,679	109,423
	2020	Member	—	305,000	—	305,000	286,115
Robert M. Hernandez	2021	Retired	—	—	—	—	—
	2020	Lead Director (Retired)	43,750	67,500	4,628	115,878	108,703
Robert J. Hugin	2021	Member	2,000	305,000	—	307,000	280,693
	2020	Member	—	190,625	—	190,625	178,822
Kimberly A. Ross	2021	Retired	—	—	—	—	—
	2020	Member (Retired)	31,250	67,500	3,500	102,250	95,919
Robert W. Scully	2021	Member Chair - Audit	2,000	340,000	—	342,000	312,693
	2020	Member Chair - Audit	—	340,000	—	340,000	318,948
Eugene B. Shanks, Jr.	2021	Member	127,000	180,000	—	307,000	280,693
	2020	Member	125,000	180,000	—	305,000	286,115
Theodore E. Shasta	2021	Member	127,000	180,000	—	307,000	280,693
	2020	Member	125,000	180,000	—	305,000	286,115
David H. Sidwell	2021	Member	127,000	180,000	—	307,000	280,693
	2020	Member	125,000	180,000	—	305,000	286,115
Olivier Steimer	2021	Member Chair - Risk & Finance	152,000	180,000	—	332,000	303,550
	2020	Member Chair - Risk & Finance	148,750	180,000	—	328,750	308,394
Luis Tellez [3]	2021	Member	93,750	112,500	—	206,250	188,576
Frances F. Townsend	2021	Member Chair - Compensation	145,750	180,000	—	325,750	297,836
	2020	Member	93,750	112,500	—	206,250	193,479
Total [4]	2021		$ 1,251,000	$ 2,704,375	$ 10,260	$ 3,965,635	$ 3,625,813
	2020		$ 1,255,000	$ 2,848,125	$ 8,128	$ 4,111,253	$ 3,856,692

(1) The Stock Awards column reflects restricted stock awards earned during 2021 and 2020. These stock awards were granted at fair value in May 2021 and May 2020, respectively, at the annual general meetings and vest at the subsequent year's annual general meeting.

(2) The All Other column includes retirement gifts for retiring directors.

(3) Prior to his election to the Board in May 2021, Mr. Luis Tellez served a consultant to the Board. For such service, which terminated prior to his election to the Board, Mr. Tellez received consultant fees in 2021 of $33,250 (CHF 30,401), none of which relating to service as a director.

(4) Total director compensation in 2021 reflects one less director for a portion of the year compared to 2020 as a result of the election of Luis Tellez and retirements of James I. Cash and John A. Edwardson as of the date of the May 2021 annual general meeting of shareholders.

Compensation of Executive Management

The following table presents information concerning Executive Management’s 2021 and 2020 compensation.

Table 2 - audited

Name and Principal Position	Year	Salary	Bonus	Stock Awards (1)	Option Awards (2)	All Other Compensation (3)	Total in USD	Total in CHF
Evan G. Greenberg Chairman and Chief Executive Officer, Chubb Limited (highest paid executive)	**2021**	**$ 1,400,000**	**$ 7,500,000**	**$ 11,625,143**	**$ 3,022,290**	**$ 1,159,233**	**$ 24,706,666**	**CHF 22,589,507**
	2020	$ 1,400,000	$ 5,700,000	$ 10,125,007	$ 2,996,944	$ 1,185,811	$ 21,407,762	CHF 20,082,234
All Other Executive Management (4)	**2021**	**$ 2,934,846**	**$ 6,989,100**	**$ 11,930,339**	**$ 2,814,383**	**$ 1,213,729**	**$ 25,882,397**	**CHF 23,664,487**
	2020	$ 2,690,769	$ 4,576,800	$ 7,030,402	$ 2,080,895	$ 1,301,790	$ 17,680,656	CHF 16,585,903
Total (5)	**2021**	**$ 4,334,846**	**$14,489,100**	**$ 23,555,482**	**$ 5,836,673**	**$ 2,372,962**	**$ 50,589,063**	**CHF 46,253,995**
	2020	$ 4,090,769	$10,276,800	$ 17,155,409	$ 5,077,839	$ 2,487,601	$ 39,088,418	CHF 36,668,137

(1) The Stock Awards column discloses the fair value of the stock awards granted on February 24, 2022 for 2021 and February 25, 2021 for 2020, respectively. This column includes time-based restricted stock and performance share awards. This column also includes the fair value of restricted stock and performance share awards granted to Mr. Enns in April 2021 as a buyout or replacement of a portion of his unvested deferred cash and equity and a bonus he forfeited upon leaving his prior employer to join the Company. In comparison, the Summary Compensation Table in the Company's annual proxy statement (unaudited) only discloses equity grants for a particular fiscal year based on the grants made during that fiscal year.

(2) The Option Awards column discloses the fair value of the stock options granted on February 24, 2022 for 2021 and February 25, 2021 for 2020, respectively. This column also includes the fair value of options granted to Mr. Enns in April 2021 for the purposes described in footnote (1). In comparison, the Summary Compensation Table in the Company's annual proxy statement (unaudited) only discloses equity grants for a particular fiscal year based on the grants made during that fiscal year.

(3) All Other Compensation column includes perquisites and other personal benefits, consisting of the following:

For Mr. Greenberg, contributions to retirement plans of $852,000 (CHF 778,991) in 2021 and $972,000 (CHF 911,816) in 2020, personal use of corporate aircraft of $269,494 (CHF 246,401) in 2021 and $164,043 (CHF 153,886) in 2020, and miscellaneous other benefits of $37,739 (CHF 34,505) in 2021 and $49,768 (CHF 46,686) in 2020, including executive medical coverage and matching contributions made under our matching charitable contributions program. The Board required Mr. Greenberg to use corporate aircraft for all travel whenever practicable for security reasons.

For the other members of Executive Management, contributions to retirement plans, personal use of corporate aircraft and corporate apartment, and miscellaneous other benefits, including, as applicable, club memberships, financial planning, executive medical coverage, matching contributions made under our matching charitable contributions program, car allowance or car lease and car maintenance allowance.

Personal use of the corporate aircraft was limited to space available on normally scheduled management business flights.

Other personal benefits including housing allowances and cost of living allowance.

Contributions to retirement plans for 2021 and 2020 totaled $1.62 million (CHF 1.48 million) and $1.78 million (CHF 1.67 million), respectively. These consist of discretionary and non-discretionary employer contributions. The discretionary employer contributions for 2021 have been calculated and are expected to be paid in April 2022.

(4) On July 1, 2021, Peter C. Enns was appointed Chief Financial Officer and a new member of Executive Management, replacing Philip V. Bancroft who retired from the position of Chief Financial Officer and member of Executive Management on such date. As a result, "All Other Executive Management" compensation includes Mr. Bancroft's compensation for 2020 and the first six months of 2021 in the performance of his duties as Chief Financial Officer, and Mr. Enns for all of 2021.

(5) In accordance with Article 25(d) of Chubb's Articles of Association, compensation payable for 2021 to a new member of Executive Management may be paid in addition to the aggregate maximum amount of compensation approved by shareholders, as long as the additional amount does not exceed $18.4 million, or 40% of the approved maximum aggregate amount. Mr. Enns was a new member of Executive Management in 2021. A total amount of $4.59 million of his compensation was paid out of such additional amount as per Article 25(d) of Chubb's Articles of Association, and the balance of compensation paid to Executive Management was paid out of the shareholder-approved amount. This includes a one-time equity award grant with a fair value of $3.6 million to Mr. Enns as a buyout or replacement of a portion of his unvested deferred cash and equity and a bonus he forfeited upon leaving his prior employer to join the Company, as described in footnotes (1) and (2). Compensation paid to our Executive Management for 2021 was therefore within the limits prescribed by Swiss law, our Articles of Association and the resolution adopted by shareholders at Chubb's 2020 annual general meeting.

No former member of Executive Management or any related party of current or former Executive Management received non-market standard compensation from Chubb during each of the years ended December 31, 2021 and 2020. Following his retirement as Chief Financial Officer and a member of Executive Management effective July 1, 2021, for the remainder of 2021 Mr. Bancroft served as an advisor to Chubb and continued to receive his base salary, which for 2021 was $870,000 (CHF 795,448). No current or former member of Executive Management or any related party thereto received benefits in kind or waivers of claims during 2021 or 2020 other than as described in the footnotes to Table 2.

At each of December 31, 2021 and 2020, no current or former member of Executive Management or any related party of a current or former member of Executive Management had outstanding loans or credits from Chubb.

REPORT OF THE STATUTORY AUDITOR TO THE GENERAL MEETING OF CHUBB LIMITED, ZURICH ON THE (SWISS STATUTORY) COMPENSATION REPORT

Report of the statutory auditor on the compensation report
We have audited the accompanying compensation report of Chubb Limited for the year ended December 31, 2021. The audit was limited to the information according to articles 14-16 of the Ordinance against Excessive Compensation in Stock Exchange Listed Companies (Ordinance) contained in the tables labeled 'audited' on pages SC-4 to SC-5 of the compensation report.

Board of Directors' responsibility
The Board of Directors is responsible for the preparation and overall fair presentation of the compensation report in accordance with Swiss law and the Ordinance against Excessive Compensation in Stock Exchange Listed Companies (Ordinance). The Board of Directors is also responsible for designing the remuneration system and defining individual remuneration packages.

Auditor's responsibility
Our responsibility is to express an opinion on the accompanying compensation report. We conducted our audit in accordance with Swiss Auditing Standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the compensation report complies with Swiss law and articles 14-16 of the Ordinance.

An audit involves performing procedures to obtain audit evidence on the disclosures made in the compensation report with regard to compensation, loans and credits in accordance with articles 14-16 of the Ordinance. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatements in the compensation report, whether due to fraud or error. This audit also includes evaluating the reasonableness of the methods applied to value components of remuneration, as well as assessing the overall presentation of the compensation report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion
In our opinion, the compensation report of Chubb Limited for the year ended December 31, 2021 complies with Swiss law and articles 14-16 of the Ordinance.

PricewaterhouseCoopers AG

/s/ Peter Eberli	/s/ Nicolas Juillerat
Peter Eberli	Nicolas Juillerat
Audit expert Auditor in charge	Audit expert

Zurich, March 24, 2022

ENVIRONMENTAL STATEMENT

Chubb Greenhouse Gas Reduction Programs

As an insurance company, Chubb's environmental footprint is relatively modest, but through our corporate greenhouse gas inventory program and corporate environmental strategy, we work to reduce it even further. Some of the primary objectives of our environmental strategy are to measure, record and reduce Chubb's corporate GHG emissions.

In 2019, Chubb announced companywide goals to reduce GHG emissions globally 20% on an absolute basis by 2025 and 40% by 2035. Both goals use 2016 emissions levels as the baseline and are aligned with the two-degree Celsius target outlined in the Paris Climate Agreement, as well as the quantitatively supported science-based standards (SBTs) methodology of the United Nations Environment Program (UNEP). Chubb achieved its first goal of reducing emissions by 20% in 2019. Chubb is now pursuing its longer-term 40% emissions reduction goal. While 2020 and 2021 resulted in emissions reductions of 41% and 49% off the 2016 baseline respectively, emissions in 2020 and 2021 were anomalous because of the global Covid-19 pandemic and do not indicate achievement of Chubb's medium-term GHG reduction goal. Chubb's 2020 and 2021 emissions reductions build on earlier progress. In 2007, the company, then named ACE, joined the voluntary U.S. Environmental Protection Agency (EPA)-sponsored Climate Leaders program, through which the company was able to develop long-term, comprehensive climate change strategies, inventory its emissions and set a six-year GHG reduction goal of 8% per employee. While the EPA program was discontinued in September 2011, Chubb's corporate GHG inventory program remains active using its methodology, which is based on the World Resources Institute and the World Business Council for Sustainable Development (WRI/WBCSD) GHG Protocol for data collection and analysis. In 2012, Chubb successfully met its first-generation GHG reduction goal with a 27% reduction in emissions per employee since 2006. In September 2014, the company announced a second GHG reduction target to reduce emissions 10% per employee by 2020 from a 2012 base year. From 2015 to 2018, Chubb reduced its global absolute GHG emissions by 21%.

Chubb 2021 GHG Inventory Data	2021
Global Absolute Emissions (CO_2-eq.)	44,326

The data above represent 19,933 metric tons of CO_2-eq. of Scope 1 emissions from fossil fuel combustion; 31,340 metric tons of CO_2-eq. of location-based Scope 2 emissions; and 24,393 metric tons of CO_2-eq. of market-based Scope 2 emissions from purchased electricity. Chubb's GHG emissions data are reviewed by a third-party on an annual basis. The company's most recent 2021 GHG inventory was reviewed by Apex Companies, LLC and the verification statement can be found on the following page.

In addition to tracking GHG emissions versus its goals, Chubb reports its GHG emissions data to the CDP, an organization that scores carbon emissions information from thousands of corporations on behalf of the global investment community. In 2021, Chubb's response to the questionnaire resulted in a score of B.

Chubb's global GHG management plan partly consists of reducing energy consumption at the facility level – specifically, in owned buildings and larger, long-term leased spaces. Projects have been implemented at a number of major offices including Philadelphia, Pa.; Wilmington, Del.; Whitehouse Station, N.J.; Hamilton, Bermuda; Sydney, Australia; London, U.K.; and Monterrey, Mexico.

In Chubb's office building in Philadelphia, the company has reduced energy consumption by over 20% since 2006 through the installation of new boilers and LED lighting, the use of variable speed drive HVAC equipment and installation of an exhaust energy recovery ventilator. Through these steps, the company earned LEED Silver certification in 2009 and was awarded LEED Platinum certification in 2020.

In July 2011, the company's Bermuda office building was awarded LEED Gold certification and became the first building in Bermuda to be awarded the designation. Energy efficiency projects done in the course of pursuing the certification reduced electrical needs by approximately 500,000 kWh (358 metric tons CO_2e) per year. In 2014, the company engaged with the U.S. Green Building Council (USGBC) and the Bermuda facility became one of the first buildings using LEED Dynamic Plaque, a tool that continuously monitors and encourages improvement of overall building performance. The building was re-certified LEED Platinum in 2019.

In Chubb's two office buildings in Whitehouse Station, N.J., the company has reduced energy consumption through the installation of LED lighting, the use of variable speed drive HVAC equipment and careful management. The buildings were awarded LEED Gold certification for the first time in 2020.

Chubb's global GHG management plan also includes purchase of renewable electricity for many of the company's largest offices. Chubb's U.K. locations are 100% powered by renewable energy. As of July 2020, Chubb's locations in Pennsylvania, Delaware, and Illinois are powered by renewable energy. Locations in New Jersey and Connecticut followed in July 2021.

Information about Chubb's full range of environmental efforts, including insurance solutions to help customers manage their environmental and climate change risks, corporate initiatives to control our own ecological impact and philanthropic actions in support of environmental causes, can be found in the company's annual Environmental Report, which is available at https://www.chubb.com/environment.

VERIFICATION OPINION DECLARATION
GREENHOUSE GAS EMISSIONS

Apex Companies, LLC (Apex) was engaged to provide Limited Assurance and conduct an independent verification of the greenhouse gas (GHG) emissions and energy consumption reported by Chubb from January 1, 2021 to December 31, 2021. This Verification Opinion Declaration applies to the related information included within the scope of work described below.

The determination of the GHG emissions is the sole responsibility of Chubb. Apex was not involved in determining the GHG emissions. Our sole responsibility was to provide independent verification on the accuracy of the GHG emissions reported, and on the underlying systems and processes used to collect, analyze and review the information.

Boundaries of the reporting company GHG emissions covered by the verification:

- Operational Control
- Global

Emissions verified in Metric tonnes of CO_2-equivalent (tCO_2e):

- Scope 1 Emissions: **19,933**
- Scope 2 Emissions (Location-Based): **31,340**
- Scope 2 Emissions (Market-Based): **24,393**
- Scope 3 Emissions (Business Travel - Air): **3,555**

Data and information supporting the Scope 1 & Scope 2 GHG emissions were historical in nature and in some cases estimated, based on historical data for similar properties in similar locations. Data and information supporting the Scope 3 GHG emissions assertion were in some cases estimated rather than historical in nature.

Period covered by GHG emissions verification:

- January 1, 2021 to December 31, 2021

Reporting Protocols against which verification was conducted:

- World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol, Corporate Accounting and Reporting Standard **(Scope 1 & 2)**
- WRI/WBCSD Corporate Value Chain (Scope 3) Accounting and Reporting Standard **(Scope 3)**

GHG Verification Protocols used to conduct the verification:

- ISO 14064-3 Second Edition 2019-04: Greenhouse gases - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

Level of Assurance and Qualifications:

- Limited
- Materiality Threshold: ±5%

Verification Methodology:

- Interviews with relevant personnel of Chubb;
- Review of documentary evidence produced by Chubb;
- Review of Chubb data and information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions;
- Audit of samples of data used by Chubb to determine GHG emissions.

Assurance Opinion:

Based on the results of our verification process, Apex provides Limited Assurance of the GHG emissions and energy assertion shown above, and found no evidence that the assertion:

- is not materially correct and is not a fair representation of the GHG emissions data and information; and
- is not prepared in accordance with the WRI/WBCSD GHG Protocol Corporate Accounting and Reporting Standard.

It is our opinion that Chubb has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of GHG emissions for the stated period and boundaries.

Statement of independence, impartiality and competence

Apex has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. We are particularly vigilant in the prevention of conflicts of interest.

No member of the verification team has a business relationship with Chubb, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes, has over 30 years combined experience in this field and an excellent understanding of Apex standard methodology for the verification of greenhouse gas emissions data.

Attestation:

Mary E. Armstrong-Friberg, Lead Verifier

Senior Project Manager

Sustainability and Climate Change Services

Apex Companies, LLC

March 8, 2022

This verification statement, including the opinion expressed herein, is provided to Chubb and is solely for the benefit of Chubb in accordance with the terms of our agreement. We consent to the release or publication of this statement by Chubb in order to satisfy its ESG disclosure requirements and objectives, but without accepting or assuming any responsibility or liability on our part to any party who may have access to this statement.

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