PUTTING OUR VALUES TO WORK

CROWN

Brand-Building Packaging™

ANNUAL REPORT 2019

Annual Meeting

We cordially invite you to attend the Annual Meeting of Shareholders to be held at 9:30 a.m. local time on Thursday, April 23, 2020, at the Company's Corporate Headquarters at 770 Township Line Road, Yardley, PA 19067. A formal notice of this meeting, together with the Proxy Statement and Proxy Card, was mailed to each shareholder of common stock of record as of the close of business on March 3, 2020, and only holders of record on said date will be entitled to vote. The Board of Directors of the Company requests the shareholders of common stock to sign proxies and return them in advance of the meeting or register your vote by telephone or through the Internet. You may also vote in person at the Annual Meeting if you are a shareholder of record.

Financial Highlights

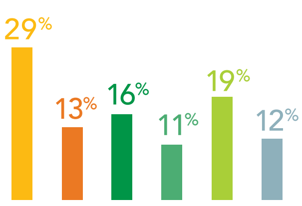
(in millions, except share, per share, employee and statistical data)

	2019	2018
NET SALES	$11,665	$11,151
INCOME FROM OPERATIONS	1,196	1,096
NET INCOME ATTRIBUTABLE TO CROWN HOLDINGS	510	439
PER AVERAGE COMMON SHARE:		
EARNINGS ATTRIBUTABLE TO CROWN HOLDINGS – DILUTED	$3.78	$3.28
MARKET PRICE (CLOSING)*	72.54	41.57
NUMBER OF EMPLOYEES	33,043	33,429
SHARES OUTSTANDING AT DECEMBER 31	135,577,878	135,173,948
AVERAGE SHARES OUTSTANDING – DILUTED	133,884,969	133,878,064

*Source: New York Stock Exchange – Composite Transactions

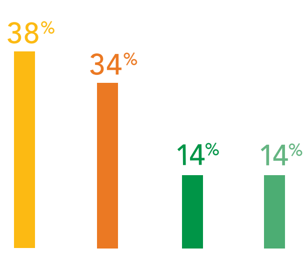
Net Sales

BY SEGMENT



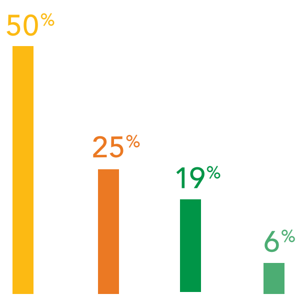
- Americas Beverage
- European Beverage
- European Food
- Asia Pacific
- Transit Packaging
- Other

BY GEOGRAPHIC AREA



- Europe, Middle East & North Africa
- United States & Canada
- Central & South America
- Asia

BY PRODUCT



- Beverage Cans
- Food Cans & Closures
- Transit Packaging
- Other

A LETTER TO SHAREHOLDERS

Our Company had a strong year in 2019 despite challenges facing certain of our markets. Robust global demand for beverage cans underpinned our performance. We generated a record $750 million in adjusted free cash flow in 2019 compared to $636 million in 2018 and an average of $557 million over the previous five years. As planned, we utilized our 2019 free cash flow to reduce debt following our 2018 acquisition of Signode Industrial Group, and debt reduction will continue to be a priority for capital allocation in 2020. We expect that the strong and stable cash flows generated across all of our businesses will enable us to reach our target range of 3.5x-4.0x net leverage and begin to return capital to our shareholders.

Crown's share price closed 2019 at $72.54, reflecting a one-year gain of 75% and a two-year cumulative increase of 29%. This compares to one-year and two-year cumulative advances in the S&P 500 Index of 31% and 23%, respectively, and to a one-year gain in the Dow Jones U.S. Containers & Packaging Index of 25% and a two-year cumulative decrease of 2%.

The theme of this annual report is "Putting Our Values to Work." Sustainability is a core value at Crown, fundamental to the future success of our Company and its stakeholders. To deepen our already strong commitment, in August we appointed Dr. John Rost as Vice President, Global Sustainability and Regulatory Affairs, and in the ensuing months he has constructed a global, dedicated sustainability team. Concurrently, Crown established a global Executive Sustainability Committee, which includes our Executive Vice President and Chief Operating Officer Jerry Gifford as well as senior representatives from various departments and the Company's operating divisions. The committee will oversee the continuing integration of sustainability into every aspect of the Company.

As the next step in our sustainability journey, the Company has signed the Science-Based Targets initiative, a program that aims to spur corporate climate action in the transition to a low carbon economy. Crown will announce specific goals for further reducing greenhouse gas (GHG) emissions in alignment with the Paris Agreement of 2015. These goals will be part of a broader long-term environmental, social and governance strategy that the Company will unveil later this year. In the meantime, Crown was recognized by CDP's 2018 Climate Change Evaluation Program with the second highest level that can be attained, ranking the Company well above most of our peers. Crown has also committed to reduce water usage in our global operations by 20% from 2019 levels by the end of 2025, which will result in saving over 500 million gallons annually. And, as a major step toward fulfillment of our pledge to the RE100 initiative, which focuses on accelerating the transition to zero carbon grids, Crown has signed a long-term virtual power purchase agreement to utilize wind power at all of our U.S. and Canadian beverage can plants beginning July 1, 2020.

In February 2020, we published our biennial digital 2019 Sustainability Report, available at www.sustainability.crowncork.com, which highlights further sustainability initiatives and the significant progress we have made toward reaching our stated 2020 sustainability goals. Metal has long been recognized as the most responsible and recycled packaging format. As a 100% permanent, recyclable material that can be reused infinitely with no physical loss of properties, metal plays an integral role in the circular economy.

Our global beverage can business, which comprised 50% of Crown's revenue in 2019, performed well during the year and will continue to be the major strategic focus of the Company's future growth. Our global beverage can volume of 70 billion units advanced 3% over the previous year, led by strong shipments in Brazil, Europe and Southeast Asia. For the five years ending in 2019, Crown's beverage can shipments have risen at a compound annual rate of over 4%, outpacing estimated annual industry expansion of 3% over the same period. With well over half of the Company's beverage can revenue generated from the faster-growing developing markets, and leadership positions in a number of those key regions, Crown has established an excellent platform for expansion in the coming years.

Recently installed beverage can capacity additions, including a third line at the Company's existing plant in Phnom Penh, Cambodia, a new one-line plant in Parma, Italy and a new two-line plant in Valencia, Spain, have helped us to meet the rising demand. In addition, we commenced operations at a new beverage can facility in Rio Verde, Brazil during November 2019 and have begun construction of a new one-line beverage can plant in Nong Khae, Thailand which will begin production during the third quarter of 2020.

After many years of relatively flat volumes, beverage can growth in the North American market in 2019 accelerated to over 3%, according to the Can Manufacturers Institute's shipment data. This expansion, driven by the outsized portion of new beverage products being introduced in cans versus other packaging formats, is expected to continue. Cans are gaining preference among both brand owners and consumers alike and are increasingly being viewed as the most responsible and sustainable beverage packaging option. A number of successful product launches of sparkling waters, energy drinks, carbonated soft drinks, teas, nutritional beverages, hard seltzers, craft beers and cocktails have fueled the surge in demand.

To meet these expanding customer requirements in North America, we installed a new aluminum beverage can line at our Weston, Ontario plant which began production in January 2020 and are constructing a third line at our Nichols, New York facility which will commence operations during the second quarter of 2020. Both the Nichols and Weston lines will be capable of producing multiple sizes.

Food cans and closures comprised 25% of the Company's revenue in 2019. As a global leader in food can production, Crown's footprint, particularly in Europe, provides close proximity to our customers. With plants in 16 countries across Europe, the Middle East and Africa, we provide our customers with the ability to pack their products at the peak of freshness. European consumers in particular view the can as a premium format, valuing product protection and flavor preservation that metal packaging offers. The infinitely recyclable food can is unrivaled from a sustainability standpoint, helping to eliminate over one billion liters a year in food waste. Although the food harvest improved somewhat in 2019 following extraordinary drought conditions throughout Europe in 2018, the yields were below our customers' original expectations.

Our Transit Packaging segment, which comprised 19% of the Company's 2019 revenue, provides critical in-transit protection to high value, high volume goods across a number of end markets, including food and beverage, metals, corrugated, construction and agriculture, among others. Combined with its highly engineered equipment and service business, the Transit Packaging segment, which holds leading positions in most of its markets, broadens and diversifies Crown's customer base and significantly bolsters free cash flow. Sales in 2019 were adversely impacted by a slowdown in manufacturing activity in many global markets, but its unlevered free cash flow was extraordinarily strong at 118% of EBITDA.

Our other operations, which include the Company's global aerosol, European promotional packaging and leading beverage can equipment business, performed well in 2019.

William G. Little and Hans J. Loliger are retiring as members of the Board of Directors of the Company. On behalf of the entire Board and the Company, I would like to thank Bill for his 17 years and Hans for his 19 years of outstanding service on the Board. We appreciate the strategic insights and wisdom that both Bill and Hans brought to the Board over the years.

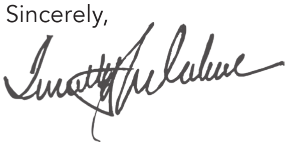
In December 2019, the Company elected three new independent directors to the Board of Directors: Richard H. Fearon, Stephen J. Hagge and B. Craig Owens. Rick is the Vice Chairman and Chief Financial and Planning Officer for Eaton Corporation, plc, a power management company with manufacturing facilities globally. Steve is the former President and Chief Executive Officer of AptarGroup, Inc., a global packaging manufacturer of dispensing and closure systems for the fragrance/cosmetic, personal care, pharmaceutical, household and food and beverage markets. Craig is the former Chief Financial Officer of Campbell Soup Company, the world's largest manufacturer of soup and vegetable juices, and Delhaize Group S.S./N.V., an international food retailer and operator of supermarkets. We are pleased to welcome Rick, Steve and Craig and are confident they will make valuable contributions to the Board and its drive to increase shareholder value.

During the summer of 2019, an exceptionally interesting and insightful book titled "Cork Wars" was published. Written by Johns Hopkins University professor of history David A. Taylor, the book focuses on the history of Crown, particularly the years surrounding World War II. Mr. Taylor nicely weaves the broader issues of war and life at home during wartime together with the lives of specific individuals and families. We are quite proud to be affiliated with an organization that helped to contribute to the successful efforts of the United States and our allies during this crucial time in our nation's history.

Looking ahead, we are excited about 2020 and the years beyond. Our global metal packaging and transit businesses are strong, holding leading market positions and generating significant and stable cash flows. Crown is poised to continue to outpace the industry expansion in beverage cans, the world's most sustainable and responsible beverage package.

In closing, I would like to express my appreciation to our 33,000 associates across operations in 47 countries. Their dedication, creativity and drive for results are the cornerstone of our success, and we are continually focused on their safety and well-being.

Sincerely,



Timothy J. Donahue
President and Chief Executive Officer

MAINTAINING STRONG BUSINESS PERFORMANCE

OUR GLOBAL BUSINESS TURNED IN A STRONG PERFORMANCE IN 2019.

The robust demand for beverage cans around the world helped fuel our growth. Consumers in emerging and established markets continue to express their preference for metal packaging due to its sustainability credentials, convenience, reliability and cost-effectiveness. To support the increased demand, we are adding capacity to strategically located existing beverage can plants and, where prudent, constructing new facilities. This report will explore our investments in greater detail and provide a closer look at some of the trends driving the dynamic global beverage can industry.

Cans continue to rank as the preferred food packaging format for consumers in Europe, with categories like fish, vegetables, ready meals, fruit and meat driving demand. Our footprint in 16 countries across Europe, the Middle East and Africa allows us to support customers with food cans and ends in a variety of styles, sizes and shapes while our advanced decorating options help enhance shelf appeal and build brands. Our Transit Packaging Division is doing an excellent job navigating the current manufacturing environment across a variety of end markets. Our extensive portfolio is organized into five application categories and includes packaging consumables, tools, software and equipment that optimize end-of-line packaging operations and protect products in transit. This broad spectrum of technologies enables us to serve as a single source for customers to build a complete transit packaging solution. The Division has helped broaden and diversify our customer base. Both food cans and transit packaging require relatively low levels of capital expenditure while generating solid, predictable cash flow.

Our proven track record of profitable and steady growth allows us to pursue new opportunities and continually build our business, delivering compelling value to customers, shareholders, employees and consumers alike.

This growth is underpinned by our close customer relationships, many of which have lasted decades. Our dedication to innovation and quality combined with our broad geographic reach – characteristics that have been the backbone of our business for over 125 years – are at the heart of these relationships.

As we enter the new decade, we are excited about the state of our business and the opportunities that lie ahead.

PUTTING OUR VALUES TO WORK

PUT PEOPLE FIRST

Our global workforce is the key to our success. Our Total Safety Culture provides the framework for all health and safety initiatives across the Company and empowers employees to take a proactive role in their personal safety and that of their peers.

We also support the well-being of employees and their families outside the walls of our facilities with a variety of physical, mental and social wellness programs. As part of this focus, we place a priority on employee development, offering a mix of learning opportunities including work experience, coaching, training and education.

INNOVATE EVERY DAY

Maintaining our position as a top global supplier requires innovation, determination and a deep understanding of customer and market needs. We remain inspired by our founder, William Painter, who revolutionized the beverage industry with the invention of the "crown cork," and are driven by a desire to help customers build their brands through packaging innovation. Today, our metal packaging technologies boost shelf appeal, enhance convenience and spur consumer engagement – all while enhancing production efficiency and being environmentally friendly. Our Transit Packaging Division is also focused on innovation, developing solutions for reducing and reusing packaging materials as part of a long-term strategy to optimize efficiencies and enhance the sustainability of the supply chain.

GOVERN ETHICALLY & RESPONSIBLY

We operate in the spirit and letter of the law, upholding high ethical standards wherever we conduct business. We maintain and regularly review our governance principles, policies and practices for the purpose of meeting or exceeding current legal requirements and commercial best practices.

Crown also prides itself on being a responsible citizen in all the locations in which we operate. We set out to make meaningful contributions that impact our employees, their families, friends and neighbors wherever we do business.

No matter where we are in the world, several values define our organization's culture. These values remain consistent even as we evolve our product portfolio and expand our geographic footprint to better serve customers. They inspire our future goals and everyday decisions while enabling us to maximize value for shareholders.

OPERATE SUSTAINABLY

Sustainable practices permeate the Company's entire Value Chain, including the way we operate our facilities and manufacture products, support our employees and communities and engage with suppliers. We are proud of our continued progress in reducing our use of materials and resources and decreasing energy consumption even as our manufacturing footprint has grown and production volumes have increased. We are currently establishing our next set of sustainability goals which will include activities to reduce the impacts of climate change, use natural resources efficiently, support circularity and enhance product performance. A preview of these goals is provided later in this report.

COMMITMENT TO QUALITY

Customer satisfaction is one of our highest priorities. We achieve this goal by continuously improving the performance and cost-effectiveness of all our products and processes. Around the world, our customer retention rate remains very high and much of our business is underpinned by multi-year contracts.

STRATEGIC GLOBAL PRESENCE

The depth and breadth of our geographic footprint is a key competitive advantage for Crown. We bring decades of experience in emerging and established economies to customers along with a keen understanding of each market's unique challenges and opportunities. Today, we operate 239 plants in 47 countries around the world, allowing us to function as a local supplier and partner for many customers. We built this footprint by making pragmatic investments to set us up for profitable future growth and support customers with capacity when and where they need it.

BREAKING NEW GROUND

Crown's legacy began with innovation, positioning the Company as a pioneer in the beverage industry. The desire to push the boundaries of creativity, solve problems and help brand owners connect with consumers is what still motivates us every day.

Our dedicated Innovation Team executes a phased, forward-looking process to drive new product development, whether we are seeking to improve existing technology or break ground with a new concept. The output of this process is packaging that is distinctive, efficient to produce and environmentally friendly.

IDEAS

IDENTIFY MARKET OPPORTUNITIES AND TECHNOLOGY RESPONSE.

CONCEPTS

EVALUATE AND SELECT A WINNING TECHNICAL/COMMERCIAL CONCEPT.

FEASIBILITY

CHALLENGE THE MARKET OPPORTUNITY AND ANALYZE THE TECHNICAL FEASIBILITY AND RISKS.

PRE-PRODUCTION

DEMONSTRATE COMMERCIAL AND TECHNICAL CAPABILITY.

IMPLEMENTATION

DEMONSTRATE PRODUCTION CAPABILITY AND COMMERCIAL SIGN-OFF.

LAUNCH

PRODUCE IN QUANTITY AND DELIVER TO CUSTOMER. AUDIT AND REACT.

ACCELERATING INNOVATION

Minimizing the time it takes for our customers to get to market is a cornerstone of our innovation process. However, we continue to find ways to introduce efficiencies, helping move high-quality packaging onto shelves faster. **Here are just a few examples of how we have done that:**

- Improving equipment and software capabilities, including developing new computational modeling techniques that reduce package development times.
- Leveraging partnerships with suppliers, design agencies and other resources to utilize new technologies that support our efforts.
- Launching advancements in additive manufacturing (i.e., 3D printing) that reduce tooling development time and more efficiently transform customers' visions into finished products.

DESIGNING DESIRABILITY

The beverage can often serves as a consumer's first experience with a product. Graphics and other design characteristics can be invaluable tools for creating connections with consumers and building brand preference.

However, even when starting the design process with a clear idea of desired imagery and colors, beverage manufacturers can miss the mark when they enter production without the proper resources and consultation. We established a new graphics studio in Ambler, PA to help North American beverage manufacturers avoid any issues during this crucial phase. It is equipped with advanced technologies that maximize the impact of graphics and shorten product development timelines, helping high-quality finished packages get to market faster. The studio centralizes our expertise into a single convenient location and gives our customers hands-on involvement during the entire development process.

Ambler is Crown's third beverage graphics studio, with additional locations in Leicester, U.K. and Dubai. The studios share knowledge and best practices, enabling us to deliver first-class graphics service and support around the world and ensuring customers' needs are met from design conception through to completion.

INNOVATION AT WORK

Enhancing the Consumer Experience with Easy-to-Open Closures

We developed the all metal Orbit® Closure with convenience and ease of opening in mind, with a distinct focus on the elderly demographic where dexterity issues are common. In Europe alone, consumers in the 60+ age bracket represent 25% of the population, a figure that is expected to reach 34% by 2060.[1] The unique design of the Orbit® Closure makes it twice as easy to open when compared to conventional closures. The closure has been adopted by brands across Europe for a wide variety of applications including pickles, vegetables and jams.

Cidacos, Spain's premier producer of packaged vegetables for over 70 years, recently adopted the closure to enhance convenience for consumers. The brand currently uses 63mm and 82mm diameter Orbit® Closures on its asparagus, tomato and mushroom products sold in Portugal and Spain. The award-winning closure will also begin appearing on packaging for Cidacos' Seprolesa brand in 2020.

[1] https://www.populationpyramid.net/europe/2020/

Snack Foods Turning to Eco-Friendly Packaging

With today's fast-paced lifestyle, snacking has become more popular than ever. There are snacks designed for on-the-go consumption or enjoyment before and after exercise, and options that are meant to be the perfect match for a beverage when time allows.

We are proud that an increasing number of snack food brands are choosing metal as they seek to deliver innovative, eco-friendly and practical packaging solutions to consumers. Many of them are launching products into this rapidly growing market in small food cans or bowls, featuring peelable ends or metal caps that enable sharing and facilitate on-the-go consumption. Made for Drink, Satisfied Snacks and Bier Nuts are among the brands that have recently introduced products in 100% recyclable metal packaging from Crown.

Moving at the Speed of E-Commerce

E-commerce growth is expected to outpace the rest of retail in 2020 and online transactions will account for 25% of all sales in the next four to five years.[2] Higher volume e-commerce fulfillment centers can keep pace with demand with our new LDX-RTB 4.0 Ultra case sealer, which maximizes productivity and adds versatility. Designed to overcome the most common sealing obstacles, the LDX-RTB 4.0 Ultra offers an industry leading belt speed of 185 feet per minute and can process void-filled and over-stuffed cases 30-80% faster than the competition. The case sealer also simplifies maintenance by easing access to motors, electrical components and belts.

[2] Source: Retail Dive (https://www.retaildive.com/news/retail-to-keep-growing-in-2020-as-investments-pay-off-moodys-says/569237/)

Balancing Luxury with Sustainability

We were proud to partner with prestigious champagne brand Nicolas Feuillatte to celebrate the inclusion of the Hillsides, Houses and Cellars of the Champagne region on the illustrious Unesco World Heritage List. The striking limited-edition package includes metallic and opaque areas to maximize impact, embossed details to add depth and an overall matte finish that feels luxurious to the touch. In a nod to sustainability, the package's lid features a unique recess that holds the bottle in place, eliminating the need for a traditional plastic insert. Our design engineering team in Mansfield, U.K. played a critical role in bringing this innovation to market, conducting multiple tests to ensure the design was viable from production to the retail shelf and did not impact filling or other production processes.

INSPIRING NEW DECORATION OPTIONS

Consumers form their impressions of brands within seconds of seeing them on the shelf, making the right colors, graphics and textures a critical aspect of package design.

To help us drive future research and development efforts, we partnered with color and material designer and trend forecaster Laura Perryman to examine consumer behavior and how it influences their aesthetic preferences. The exercise identified three key overarching global design trends that are inspiring us to develop exciting new decorative finishes and effects.

RADICAL ECO

The "Radical Eco" trend is energetic and optimistic and focuses on organic offerings. Millennial and Gen Z consumers are key drivers of this trend, seeking products that balance fun and whimsy with eco-consciousness.

INCOGNITO

"Incognito" can be described as an unobtrusive, reassuring approach supported by a "less is more" feeling. Driving this trend is the assertion that people wish to purchase items freely and without pressure. Products in this category also eliminate conventional signifiers of age, race, gender and style.

HUMAN NATURE

The "Human Nature" trend focuses on the beauty of Earth's natural landscape. It resonates with the next generation of consumers who have a keen ecological awareness and wish to purchase goods that take greater care of the environment. The trend is wholesome and human with colors and textures that instill emotional connections with our surroundings.

SERVING AS A STEWARD

In 2019, we continued to advance our sustainability efforts across our global operations, leaving us well positioned to accomplish our first external sustainability goals by the end of 2020 as planned. Our progress is strengthened by the inherently sustainable nature of our primary product — metal packaging — and will accelerate as we embark on the next stage of our sustainability journey.

MAKING PROGRESS OUR BUSINESS

In 2016, to formalize our commitment to sustainability, we established a series of external goals to be achieved by December 31, 2020. Here is an update on how we are doing against our stated goals (as of December 31, 2018):

9.43%

Emissions Reduction

Goal:
Reduce Scope 1 and Scope 2 GHG emissions by 10% per billion standard units of production (versus 2015 levels).

Status:
We have achieved a 9.43% reduction in GHGs per billion standard units.

6.23%

Energy Consumption Reduction

Goal:
Reduce energy consumption by 5% per billion standard units of production (versus 2015 levels).

Status:
When focusing on results for just our metal packaging plants, we reduced energy consumption by 6.23% and surpassed our goal.

CHARTING OUR NEXT COURSE

The next phase of our sustainability journey will focus on several overarching priorities that present the greatest opportunity for impact and support our growth strategy.

CLIMATE

Reduce operations and value chain greenhouse gas emissions

RESOURCE EFFICIENCY

Water use, efficiency and stewardship
Responsible materials sourcing

CIRCULARITY

Support increased recycling rates
Move toward zero waste to landfill
Raw materials use efficiency

SOCIAL CHANGE

Diversity and inclusion
Community participation

PRODUCT STEWARDSHIP

Food product safety
Lifecycle thinking

GOVERNANCE & ETHICS

These focus areas will serve as the foundation for a series of new sustainability goals, which will be introduced in 2020. In the meantime, we have announced several initiatives that will enable us to achieve those goals:

By the end of 2025, we plan to reduce water usage in our global operations by 20% from 2019 levels. These efforts will decrease our water usage by over 500 million gallons annually. We will reach our target by changing behavior and capturing efficiencies through several methods. This pledge represents the first component of a larger water stewardship strategy that will be shared in 2020.

Our efforts to conserve resources and minimize our carbon footprint also drive us to set ambitious targets for transitioning to renewable energy. We have already made significant progress toward this goal, with 100% of our U.K. facilities directly powered by renewable energy since 2018.

In 2019, we made two new commitments to propel our renewable energy plan:

- Signed a 15-year Virtual Power Purchase Agreement (VPPA) with Longroad Energy, which will match and offset 100% of the electricity in our U.S. and Canadian beverage can plants with wind power generation.
- Joined RE100, a global corporate leadership initiative led by The Climate Group and CDP to accelerate the transition to zero-carbon grids. Milestones for completion include:

30% ADOPTION BY 2020

60% ADOPTION BY 2030

90% ADOPTION BY 2040

100% ADOPTION BY 2050

AN UNWAVERING REPUTATION

Metal has long been recognized as a responsible packaging format with undeniable sustainability credentials.

As a 100% recyclable, permanent material that can be reused infinitely with no physical loss of properties, metal plays an integral role in the circular economy.

Recent data confirms that aluminum cans have retained their standing as the most recycled package by both consumers and the industry. The latest figures from the Can Manufacturers Institute (CMI) track consumer recycling rates at 50% in the U.S. and 98% in Brazil.[3] Beverage can recycling rates in Europe have reached 74.5%.[4]

The high recycled content of aluminum cans reflects a commitment by the industry to conserve resources and minimize waste. On average, aluminum cans in the U.S. contain 73% recycled content according to reports from The Aluminum Association and CMI.[5, 6]

Finally, the recycling loop of aluminum cans enables significant energy savings, minimizing environmental impact. A Lifecycle Assessment (LCA) conducted by Metal Packaging Europe states that high recycling rates, weight reduction and operational improvements were major factors in a 31% reduction in the carbon footprint of beverage cans in Europe between the studied period of 2006 to 2016. These metrics showcase the industry's efforts to reduce emissions and serve customers with mindful production.[7]

BEST-IN-CLASS RECYCLING

ALUMINUM RECYCLING RATES

50%[8]
U.S. recycling rate

64%[9]
U.S. industry recycling rate*

75%[10]
Europe recycling rate

*Does not include used beverage container (UBC) imports/exports

73% Average recycled content for aluminum cans produced in the U.S.[11, 12]

STEEL RECYCLING RATES

70%[13]
U.S. recycling rate

81%[14]
Europe recycling rate

3 Source: Can Manufacturers Institute (http://www.cancentral.com/media/news/can-manufacturers-institute-affirms-positive-sustainability-attributes-aluminum-beverage)

4 Source: Metal Packaging Europe and European Aluminium (https://european-aluminium.eu/media/2673/european-aluminium-mpe-aluminium-beverage-can-2017-recycling-rate-press-release.pdf)

5 Source: The Aluminum Association (https://www.aluminum.org/sites/default/files/KPI%20Report%202019.pdf)

6 Source: Can Manufacturers Institute (http://www.cancentral.com/media/news/report-aluminum-can-maintains-position-most-sustainable-beverage-package)

7 Source: Metal Packaging Europe (https://www.metalpackagingeurope.org/article/metal-recycles-forevertm-microsite-launched-promotes-trademarked-logo-75-recycling-rate)

8 Source: The Aluminum Association (https://www.aluminum.org/sites/default/files/KPI%20Report%202019.pdf)

9 Source: The Aluminum Association (https://www.aluminum.org/sites/default/files/KPI%20Report%202019.pdf)

10 Source: European Aluminium (https://european-aluminium.eu/media/2673/european-aluminium-mpe-aluminium-beverage-can-2017-recycling-rate-press-release.pdf)

11 Source: Can Manufacturers Institute (http://www.cancentral.com/media/news/report-aluminum-can-maintains-position-most-sustainable-beverage-package)

12 Source: The Aluminum Association (https://www.aluminum.org/sites/default/files/KPI%20Report%202019.pdf)

13 Source: Steel Recycling Institute (https://www.steelsustainability.org/recycling)

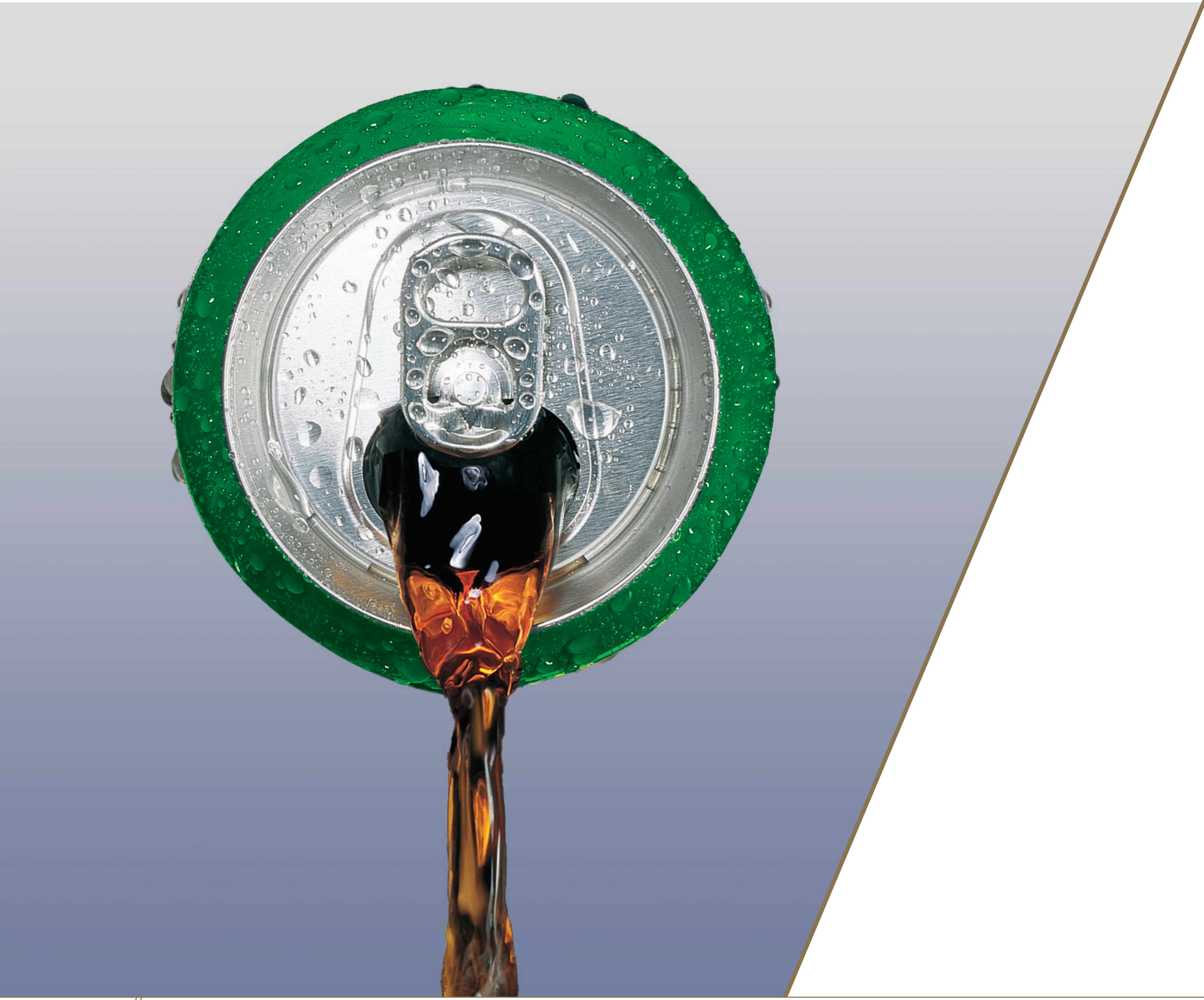
14 Source: APEAL (https://www.apeal.org/news/record-recycling-means-steel-packaging-hits-its-own-industry-target-in-europe-three-years-early/) also (https://www.cantechonline.com/news/23848/european-steel-recycling-levels-reach-record-levels/)

CELEBRATING THE 20TH ANNIVERSARY OF AN ECO-FRIENDLY INNOVATION

The SuperEnd® beverage end, launched in 2000, represents another innovation from Crown that revolutionized the beverage industry. Prior to its launch, this critical component of beverage cans had seen little advancement in almost three decades.

Offering lighter weight and greater strength than existing ends, the innovation provided a greener, more reliable alternative to beverage brands. The SuperEnd® beverage end uses 10% less metal than traditional ends, and, as a result, less energy during distribution, while still upholding product protection and reliability with increased panel strength and buckle resistance. Since its inception, more than 650 billion ends have been produced by Crown and its licensees, generating significant savings in aluminum, coatings and greenhouse gases.

Today, the SuperEnd® beverage end and similar lightweighting innovations that have followed it remain prominent worldwide and are the preferred choice for beverage customers. To continue advancing the technology, we recently developed the Interchangeable SuperEnd® beverage end. By making minor alterations to the original SuperEnd® beverage end design, we enabled it to run on the same seamer tooling as other designs, enhancing the ease and convenience of implementation for customers. We also recently licensed the technology more extensively to facilitate broader international use. These steps have increased accessibility to the innovation and helped our customers enhance their own sustainability credentials.

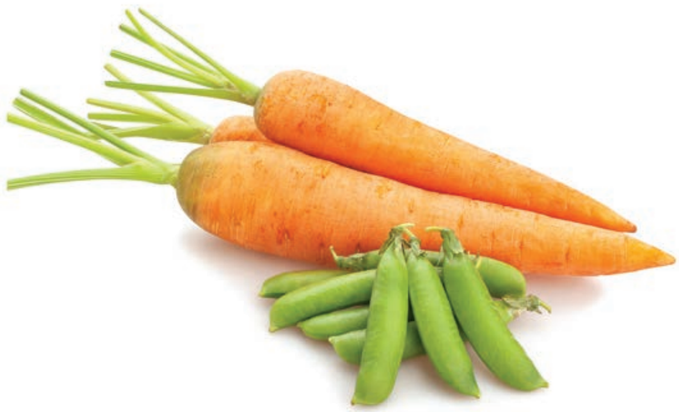


PROTECTOR OF PRODUCTS AND CONSUMERS

Metal packaging protects products across the distribution chain, ensuring goods reach consumers in peak condition. Its superior strength, durability and barrier properties help reduce waste and support healthy, nutritious diets.

COMBATS FOOD WASTE

- Metal packaging serves as an unbeatable barrier to the intrusion of oxygen, light and bacteria, extending the shelf life of products and preventing premature spoilage.
- Optimized sizes, whether fit for family dinner recipes or for individual portions, help reduce food wastage by consumers.



MAKES HEALTHY FOODS MORE ACCESSIBLE

- Canned produce is picked and packed within hours of harvesting, locking in freshness and nutrients. Fresh produce, in contrast, loses nutrients from the moment it is picked, throughout transportation and refrigeration, until the moment of consumption.
- A dependable seal locks in freshness without the need for preservatives, supporting organic and more natural, healthy foods.
- The ready-to-eat nature of canned foods enables busy consumers to prepare nutritious meals quickly.
- Cans make the important food groups of fruit and vegetables more accessible. In the U.S., for example, consumers who buy canned foods have more fruit and vegetables in their diets than the average American.[15]

SUPPORTS FOOD SAFETY

- Metal packaging has an unprecedented food safety record due to the high temperatures of retort cooking, which effectively sterilizes the food in cans.
- Cans offer 100% contamination protection, an important responsibility when foodborne illness reportedly costs Americans $15.6 billion annually.[16]
- Tamper-proof and tamper-resistant features indicate when a package has been compromised and help consumers feel confident about the quality and safety of their food products.

15 Source: Can Manufacturers Institute (http://www.cancentral.com/foodcans/nutritious)

16 Source: Centers for Disease Control and Prevention (https://www.cdc.gov/foodsafety/cdc-and-food-safety.html)

BEVERAGE CANS: THE IN-DEMAND FORMAT

With an estimated annual global demand of 350 billion units, the beverage can has captured significant market share in both established and emerging markets. The format continues to see steady growth, averaging 3% globally for the last several years, with particularly robust increases in developing markets such as Southeast Asia and Brazil. In 2019, there was also a notable acceleration in demand for beverage cans in the formerly mature North American market. The region represents the largest share of the global beverage can market with over 97 billion units shipped in 2019.

Several inherent characteristics are propelling this time-tested format with classic and dynamic new beverage categories:

SUSTAINABILITY

Aluminum cans are the most recycled beverage package in the world. They support the circular economy by being 100% and infinitely recyclable without loss of properties.

DIFFERENTIATION

Beverage manufacturers can enhance their brand image and express their unique personality by leveraging the format's diverse range of sizes, shapes and decoration options. The format's 360-degree billboard effect offers an unparalleled platform for brand promotion.

CONVENIENCE

Lightweight, durable and available in a wide variety of sizes, beverage cans are an ideal fit for active, on-the-go life-styles, support new drinking occasions and enable portion control. Cans also chill more quickly than other packaging formats.

PROTECTION

Beverage cans extend product shelf life by blocking the ingress of oxygen and light and protecting freshness, flavor and quality. By preventing premature spoilage, cans help reduce waste.

PERFORMANCE

Cans excel throughout their lifecycle due to impact- and puncture-resistance and ability to withstand extreme temperatures and pressures. Cans also maximize supply chain efficiencies by being lightweight, stackable and suitable for high filling speeds.

TRENDING NOW: NEW CATEGORIES FOR MODERN CONSUMERS

Evolving lifestyles are influencing the growth of beverage cans, altering the places and ways in which people enjoy their favorite drinks and making convenient packaging a must-have feature. Consumers are also prioritizing health benefits and artisan aesthetics when aligning with brands.

As a result, niche categories such as unflavored and flavored waters, flavored malt beverages, adult carbonated beverages and craft beer are securing more shelf space alongside "classic" applications like carbonated soft drinks and premium beer. These surging product segments are being disproportionately introduced in metal packaging – with a reported 70% of new beverage launches in North America appearing in the format – acting as a proof point to the beverage can's position as the preferred format for brands seeking to appeal to modern consumer tastes and preferences.

Zeroing in on the Wellness Trend

Immediate access to health information has made consumers more conscious of the products they consume. The high prioritization of health and wellness, a market valued at $4.5 trillion globally in 2018,[17] is driven by trends and movements which reflect growing consumer ownership over and investment in personal health, regardless of demographic.[18] This goal of maintaining well-being long-term encourages the consumption of beverages with fewer and more natural ingredients.

The rapid growth and proliferation of sparkling, still and flavored waters is a powerful example of the wellness trend as consumers seek healthier, "cleaner" beverage alternatives. The segment continues to expand its presence in the U.S. beverage market, reaching a value of $2.2 billion in 2018, up 54% in just four years.[19] Cans are a natural fit for this segment, offering a similar aesthetic to more indulgent beverages but also providing important flavor and carbonation protection that upholds product quality and features unparalleled sustainability credentials. Canned sparkling water has captured an outsized portion of the segment's expansion, achieving a 43% increase in sales in the U.S. between 2017 and 2018.[20]

[17] Source: Global Wellness Institute (https://globalwellnessinstitute.org/press-room/statistics-and-facts/)

[18] Source: Euromonitor (https://go.euromonitor.com/white-paper-EC-2019-Top-10-Global-Consumer-Trends.html?utm_source=press%20release&utm_medium=PR&utm_campaign=CT_WP_19_01_15_Top%2010%20GCT%202019%20EN&utm_content=organic)

[19] Source: Nielsen (https://www.nielsen.com/us/en/insights/article/2018/no-signs-of-fizzing-out-americas-love-of-sparkling-water-remains-strong/)

[20] Source: Nielsen (https://www.nielsen.com/us/en/insights/article/2018/no-signs-of-fizzing-out-americas-love-of-sparkling-water-remains-strong/)

MAKING A SPLASH WITH SUSTAINABLY PACKAGED WATER

We partnered with Marlish Waters, a U.K.-based family-run business on Marlish Farm, Northumberland, to introduce six canned spring water products in beverage cans. Marlish Farm has been sourcing its natural spring water for over 80 years, initially using it for its own daily operational needs. As the family farm evolved and the conversation around sustainability advanced, its owners became passionate about sharing their spring water with the world and taking a stand against non-sustainable packaging. Every Marlish product is made on the farm using natural spring water and canned at the source. In addition to unflavored varieties, Marlish's portfolio includes Sparkling Sicilian Lemon, Sparkling Brazilian Orange, Sparkling Raspberry and Elderflower, which launched in January 2020.

Enhancing Usability

The fast-paced, mobile lifestyles of today's consumers are compelling them to use more products away from home and in diverse environments. As a result, they value options that save time or facilitate consumption on-the-go. In fact, studies show that 27% of global consumers wish there were more products that make their lifestyles easier and that 26% wish there were more products that are convenient to use.[21] Materials that travel well and features that minimize preparation time contribute to enhanced usability and flexibility for different occasions.

Growing by nearly 40% from 2018 to 2019, cocktails, mocktails and malted offerings remain popular with U.S. consumers seeking more portable, convenient formats for alcoholic beverages and their alternatives.[22] Spiked seltzers and mixed drinks are a trending category among a wide range of demographics, but chiefly among them millennials, who consume the beverages in diverse environments where metal packaging can offer a lightweight, ready-to-drink beverage that requires no mixing or tools.

[21] Source: Nielsen (https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/whitepaper-the-quest-for-convenience-aug-2018.pdf)

[22] Source: Nielsen (https://www.nielsen.com/us/en/insights/article/2019/how-ready-to-drink-beverages-and-packages-are-shaking-up-the-adult-beverage-market/)

PRIORITIZING CONVENIENCE

To appeal to local consumers and increase its brand presence, Brazil-based craft brewer Bierland enlisted our help to convert 100% of its product portfolio to be packaged in beverage cans. Recognizing the growing popularity of outdoor activities and events throughout Brazil, the format's portability will help Bierland's customers easily enjoy their favorite brews in diverse, active environments. Bierland also moved to cans for their robust sustainability platform. The metal packaging launch includes eight varieties: Bierland Pilsen, Bierland Weizen, Bierland IPA, Bierland Vienna, Bierland Stout, Bierland Strong and the recently released America Pure Malt Pilsen and Cocktail Classic Red Wine, a mixed ready-to-drink cocktail beverage. All SKUs are packaged in standard 350ml, 204.5-diameter cans.

Enjoying Local Flavors

Across markets, consumers are "shopping small," demonstrating a move away from mass-produced items and toward more artisanal offerings. Over the past six years, the craft food and beverage sector witnessed a 28% compound annual growth rate, with beverage representing the most pronounced shift toward this type of production.[23] This movement fosters the support of regional, budding brands that may not be available on a major scale. Offering a glimpse into a brand's story or identifying locally sourced ingredients and production can help sway purchasing decisions for those who seek to connect with brands on a more personal level and feel their consumption experience is one-of-a-kind.

Microbrews retain a significant share of the beer segment, with craft brewer volumes growing by 4% in the U.S. in 2018 even as the general beer industry decreased in value by 1%. Additionally, the category increased its share by volume of the beer market in the U.S. to 13.2%.[24] Europe is also a top market for craft beer, with a growing number of microbreweries and craft breweries. The market is predicted to grow at a compound annual growth rate of 13% from 2018 to 2022.[25]

Small-batch brews that offer limited-edition tastings or brews that feature unusual flavor blends give the sense that a beverage cannot be found just anywhere. Consumers often seek these beverages in a canned format, identifying the material as a sign of a handcrafted, high-quality offering. Brewers also find value in beverage cans due to their 360-degree wraparound surface which gives them the opportunity to highlight brand origins or unique production methods that will resonate with consumers.

[23] Source: Innova Market Insights/Ingredients Network (https://www.ingredientsnetwork.com/artisanal-trend-fuels-ingredient-innovation-news074695.html)

[24] Source: Brewers Association (https://www.brewersassociation.org/press-releases/brewers-association-releases-annual-growth-report/)

[25] Source: Technavio (https://www.technavio.com/report/craft-beer-market-in-europe-analysis-share)

ADDING SOME POP TO LIFE!

When Italian craft brewer Baladin was seeking to revamp the look of its product range, branded POP (short for popular beer), to engage millennials, we were happy to assist. Originally launched in metal packaging in 2015, the products were available in six different designs each featuring different labels – one for each design – lending a sophisticated, collector's item feel to the brand.

The brand's vision was to extend the collectible range while innovating with the printing process. With the help of our Accents™ variable printing technology, Baladin developed 12 new standout designs that could be printed simultaneously and mixed on a single pallet. This process creates a range of cans for brands seeking to encourage customers to view their products as highly customized or personalized, while printing the cans in one production run.

SPOTLIGHTING 43 NEIGHBORHOODS

The city of Joinville in south Brazil has a legacy of making the country's best beer. Local microbrewery Opa Bier was founded as an homage to the city's first settlers who found pure water that was ultimately used for beer production and to the brewers who made the city famous.

To help revive awareness for the city's history with consumers, Opa Bier recently designed packaging to honor the 43 neighborhoods that make up the city. The graphics highlighted the origin of each neighborhood's name and some of the best-known sites in the district. Our Accents™ variable printing technology allowed Opa Bier to mix 43 can designs and 24 custom labels onto a single pallet, enabling consumers to collect the entire series.

INVESTING IN OUR BUSINESS

As beverage cans continue to gain preference among brand owners and consumers, we are making strategic investments in our global footprint to support increased demand.

AMERICAS

- **Q4 2019**
  Began operations at a new one-line plant in Rio Verde, central Brazil.
- **Q1 2020**
  A new line began production in Weston, Ontario.
- **Q2 2020**
  Production expected to begin on a third line in Nichols, NY.

EUROPE

- **Q4 2018**
  Commenced production at a new one-line plant in Parma, Italy.
- **Q1 2019**
  Started up a second line at our new facility in Valencia, Spain.
- **Q2 2020**
  All beverage can capacity in Spain converted from steel to aluminum.

ASIA PACIFIC

- **Q1 2019**
  Began production on a third line at our existing plant in Phnom Penh, Cambodia.
- **Q3 2020**
  Commercial operations at a new one-line plant in Nong Khae, Thailand expected to begin.

BUILDING IN FLEXIBILITY

Each of our new plants is designed to produce a range of can sizes, helping customers deliver more choice to consumers and meet demands for convenience. Alternative can sizes – defined as sizes other than the standard diameter can for 12-ounce (330ml) beverages in the U.S. or 10- to 11-ounces (330ml) in Europe – are popular options for applications from soft drinks and beer to energy drinks and functional beverages. Our plants around the world produce 25 sizes and styles of beverage cans ranging from 5.1-ounce (202mm diameter) to 18.6-ounce (211mm diameter packages).

BOARD OF DIRECTORS

JOHN W. CONWAY (A)
Chairman of the Board

TIMOTHY J. DONAHUE (A)
President and Chief Executive Officer of the Company

RICHARD H. FEARON
Vice Chairman and Chief Financial and Planning Officer of Eaton Corporation

ANDREA J. FUNK (B, C)
VP Finance, Americas of EnerSys

STEPHEN J. HAGGE (C)
Former President and Chief Executive Officer of AptarGroup

ROSE LEE (B, D)
President of DuPont Safety & Construction

JAMES H. MILLER (A, C, D)
Former Chairman and Chief Executive Officer of PPL Corporation

JOSEF M. MÜLLER (B, C)
Former Chairman and Chief Executive Officer of Nestlé in the Greater China Region

B. CRAIG OWENS
Former Chief Financial Officer and Chief Administrative Officer of Campbell Soup Company

CAESAR F. SWEITZER (A, B, D)
Former Senior Advisor and Managing Director of Citigroup Global Markets

JIM L. TURNER (A, C, D)
Chief Executive Officer of JLT Beverages; former Chairman, President and Chief Executive Officer of Dr Pepper/Seven Up Bottling Group

WILLIAM S. URKIEL (B, D)
Former Senior Vice President and Chief Financial Officer of IKON Office Solutions

COMMITTEES: (A) EXECUTIVE, (B) AUDIT, (C) COMPENSATION, (D) NOMINATING AND CORPORATE GOVERNANCE

CORPORATE OFFICERS

TIMOTHY J. DONAHUE
President and Chief Executive Officer

GERARD H. GIFFORD
Executive Vice President and Chief Operating Officer

DANIEL A. ABRAMOWICZ
Executive Vice President – Corporate Technology and Regulatory Affairs

CARLOS BAILA
Senior Vice President – Global Procurement

WILLIAM T. GALLAGHER
Senior Vice President and General Counsel

THOMAS A. KELLY
Senior Vice President and Chief Financial Officer

SIDONIE LÉCLUSE
Senior Vice President – Diversity and Inclusion

DAVID A. BEAVER
Vice President and Corporate Controller

CHRISTOPHER A. BLAINE
Vice President – Corporate Risk Management

KEVIN C. CLOTHIER
Vice President and Treasurer

THOMAS T. FISCHER
Vice President – Investor Relations and Corporate Affairs

TORSTEN J. KREIDER
Vice President – Planning and Development

JOSEPH C. PEARCE
Vice President – Corporate Tax

JOHN ROST
Vice President – Global Sustainability and Regulatory Affairs

ADAM J. DICKSTEIN
Corporate Secretary, Assistant General Counsel and Vice President – Corporate Compliance

CHRISTY L. ROBESON
Assistant Corporate Controller

MICHAEL J. ROWLEY
Assistant Corporate Secretary and Assistant General Counsel

ROSEMARY M. HASELROTH
Assistant Corporate Secretary

DIVISION OFFICERS

AMERICAS DIVISION

DJALMA NOVAES, JR.
President

EDUARDO ARGUETA
President – Mexico and Caribbean

WILMAR ARINELLI
President – Beverage Packaging Brazil

THOMAS J. GORDON
President – Food Packaging North America

MARK KETCHESON
President – Beverage Packaging North America

JUAN CARLOS TRUJILLO
President – Colombia

JAMES D. WILSON
President – Closures, Aerosol and Promotional Packaging (CAPP) North America

TIMOTHY P. AUST
Senior Vice President and Chief Financial Officer

ALFRED J. DERMODY
Vice President – Human Resources

KENNETH W. TUTIN
Vice President – Continuous Improvement

EUROPEAN DIVISION

DIDIER SOURISSEAU
President

JOHN BEARDSLEY
Senior Vice President – Finance and Chief Financial Officer

ASHWINI KOTWAL
Senior Vice President – Bevcan

SIDONIE LÉCLUSE
Senior Vice President – EMEA Human Resources

FRANCOIS QUERRIOUX
Senior Vice President – Food

CLAUDINE SCHELP
Senior Vice President – Sourcing

LAURENT WATTEAUX
Vice President – Aerosols and Promotional Packaging

JEAN-FRANCOIS LELOUCH
Assistant General Counsel

LAURENT LEUCIO
WFOE (We Focus on Excellence) Coordinator Europe

ASIA PACIFIC DIVISION

HOCK HUAT GOH
President

MARTYN GOODCHILD
Senior Vice President – Manufacturing

FRANK KOH
Senior Vice President – Beverage Packaging Southeast Asia

YIN LENG CHAN
Vice President and Chief Financial Officer

PATRICK NG
Vice President – Sourcing

CLEMENT CHIN
Director – Beverage Packaging China and Hong Kong

PATRICK LEE
Director – Food and Aerosol Thailand

CHEE MENG WAN
Director – Supply Chain

TOH KAI YONG
Senior Regional Human Resource Manager

DRAGON WONG
Group General Manager – Superior Multi-Packaging Limited

CROWN PACKAGING TECHNOLOGY

DANIEL A. ABRAMOWICZ
President

KEVIN AMBROSE
Vice President – Development Technology

MICHAEL A. ANTRY
Vice President – Environment, Health and Safety

ANDREW KAYE
Vice President – Technology Services

BRIAN ROGERS
Vice President – Project Management and Engineering

TRANSIT PACKAGING

ROBERT H. BOURQUE, JR.
President

LENNART BANGMAN
Group President – Packaging Systems Europe

PAUL BYRON
Group President – Global Equipment and Tools

PATRICIA CHIDIAC
Senior Vice President – Global Human Resources

RICHARD MORGAN
Senior Vice President and General Counsel

RVS RAMAKRISHNA
Group President – Asia Pacific and MEA

LUCAS SCOTT
Vice President – Global Quality

ALDO TESI
Senior Vice President and Chief Financial Officer

RAMUNAS VANCLOVAS
Vice President – Business Optimization

MICHAEL WATTS
Vice President – Corporate Development and Global Marketing

LANCE WRIGHT
Group President – Signode Americas

INVESTOR INFORMATION

COMPANY PROFILE
Crown Holdings, Inc., through its subsidiaries, is a leading global supplier of rigid packaging products to consumer marketing companies, as well as transit and protective packaging products, equipment and services to a broad range of end markets. World headquarters are located in Yardley, Pennsylvania. As of December 31, 2019, the Company operated 239 plants located in 47 countries, employing 33,043 people.

STOCK TRADING INFORMATION
Stock Symbol: CCK (Common)
Stock Exchange Listing: New York Stock Exchange

CORPORATE HEADQUARTERS
770 Township Line Rd., Yardley, PA 19067
Main phone: +1 (215) 698-5100

SHAREHOLDER SERVICES
Registered shareholders needing information about stock holdings, transfer requirements, registration changes, account consolidations, lost certificates or address changes should contact the Company's stock transfer agent and registrar:

MAILING ADDRESS:
EQ Shareowner Services
1110 Centre Pointe Curve, Suite 101
Mendota Heights, MN 55120

GENERAL TELEPHONE NUMBER: 1-800-468-9716
WEBSITE: www.shareowneronline.com

Owners of shares in street name (shares held by any bank or broker in the name of the bank or brokerage house) should direct communications or administrative matters to their bank or stockbroker.

FORM 10-K AND OTHER REPORTS
The Company will provide without charge a copy of its Annual Report on Form 10-K, excluding exhibits, as filed with the U.S. Securities and Exchange Commission ("SEC"). To request a copy of the Company's Annual Report, call toll free 888-400-7789 or write to Investor Relations Department, Crown Holdings, Inc., 770 Township Line Road, Yardley, PA 19067.

INTERNET
Visit our website at www.crowncork.com for more information about the Company, including news releases and investor information.

CERTIFICATIONS
The Company included as Exhibit 31 to its 2019 Annual Report on Form 10-K, as filed with the U.S. Securities and Exchange Commission, certifications of the Chief Executive Officer and Chief Financial Officer of the Company. The CEO and CFO certify to, among other things, the information contained in the Company's Form 10-K. The Company has also submitted to the New York Stock Exchange a certification from the CEO certifying that he is not aware of any violation by the Company of New York Stock Exchange corporate governance listing standards.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2019

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from ___ to ___

COMMISSION FILE NUMBER 000-50189

CROWN HOLDINGS, INC.
(Exact name of registrant as specified in its charter)

Pennsylvania	75-3099507
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

770 Township Line Road	Yardley PA	19067-4232
(Address of principal executive offices)		(Zip Code)

Registrant's telephone number, including area code: 215-698-5100

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of each class	Trading Symbols	Name of each exchange on which registered
Common Stock $5.00 Par Value	CCK	New York Stock Exchange
7 3/8% Debentures Due 2026	CCK26	New York Stock Exchange
7 1/2% Debentures Due 2096	CCK96	New York Stock Exchange

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT: NONE
(Title of Class)

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 Exchange 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 filings 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 such shorter period that the registrant was required to submit such files). Yes ☒ No ☐
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or 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	☐

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

As of June 30, 2019, 135,434,877 shares of the Registrant's Common Stock, excluding shares held in Treasury, were issued and outstanding, and the aggregate market value of such shares held by non-affiliates of the Registrant on such date was $8,275,070,985 based on the New York Stock Exchange closing price for such shares on that date.

As of February 27, 2020, 135,753,410 shares of the Registrant's Common Stock were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Proxy Statement for the Annual Meeting of Shareholders to be held April 23, 2020	Part III to the extent described therein

Crown Holdings, Inc.

2019 FORM 10-K ANNUAL REPORT

TABLE OF CONTENTS

PART I

ITEM 1. BUSINESS

Crown Holdings, Inc. (the "Company" or the "Registrant") (where the context requires, the "Company" shall include reference to the Company and its consolidated subsidiary companies) is a Pennsylvania corporation.

The Company is a worldwide leader in the design, manufacture and sale of packaging products and equipment for consumer goods and industrial products. The Company's packaging for consumer goods includes steel and aluminum cans for food, beverage, household and other consumer products, glass bottles for beverage products, metal vacuum closures and steel crowns sold through the Company's sales organization to the soft drink, food, citrus, brewing, household products, personal care and various other industries. The Company's packaging for industrial products includes steel and plastic strap consumables and equipment, paper-based protective packaging, and plastic film consumables and equipment, which are sold into the metals, food and beverage, construction, agricultural, corrugated and general industries.

At December 31, 2019, the Company operated 239 plants along with sales and service facilities throughout 47 countries and had approximately 33,000 employees. Consolidated net sales for the Company in 2019 were $11.7 billion with 70% derived from operations outside the U.S.

DIVISIONS AND OPERATING SEGMENTS

The Company's business is generally organized by product line and geography within four divisions: Americas, Europe, Asia Pacific and Transit Packaging. See below for further information regarding the Company's divisions and reportable segments within each division. The Company's non-reportable segments include its North American food can business, its European aerosol and promotional packaging business, its North American aerosol can business and its tooling and equipment operations in the U.S. and U.K.

Additional financial information concerning the Company's operating segments is set forth within "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report and under Note Y to the consolidated financial statements.

AMERICAS DIVISION

The Americas Division includes operations in the U.S., Brazil, Canada, the Caribbean, Colombia and Mexico. These operations manufacture beverage, food and aerosol cans and ends, glass bottles, specialty packaging, metal vacuum closures, steel crowns and aluminum caps. At December 31, 2019, the division operated 48 plants in seven countries and had approximately 7,500 employees. In 2019, the Americas Division had net sales of $4.4 billion.

Americas Beverage

The Americas Beverage segment manufactures aluminum beverage cans and ends, glass bottles, steel crowns and aluminum caps. Manufacturing facilities are located in the U.S., Brazil, Canada, Colombia and Mexico. Americas Beverage had net sales in 2019 of $3.4 billion and segment income (as defined under Note Y to the consolidated financial statements) of $534 million.

EUROPEAN DIVISION

The European Division includes operations in Europe, the Middle East and Africa. These operations manufacture beverage, food and aerosol cans and ends, promotional packaging and metal vacuum closures and caps. At December 31, 2019, the division operated 60 plants in 22 countries and had approximately 11,500 employees. Net sales in 2019 were $3.6 billion.

European Beverage

The European Beverage segment manufactures steel and aluminum beverage cans and ends in Europe, the Middle East and North Africa. European Beverage had net sales in 2019 of $1.5 billion and segment income (as defined under Note Y to the consolidated financial statements) of $190 million.

European Food

The European Food segment manufactures steel and aluminum food cans and ends, and metal vacuum closures, in Europe, Africa and the Middle East. European Food had net sales in 2019 of $1.9 billion and segment income (as defined under Note Y to the consolidated financial statements) of $205 million.

ASIA PACIFIC DIVISION

The Asia Pacific Division is a reportable segment primarily consisting of beverage can operations in Cambodia, China, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Vietnam and also includes non-beverage can operations, primarily food cans and specialty packaging. At December 31, 2019, the division operated 28 plants in eight countries and had approximately 4,500 employees.

The Asia Pacific segment had net sales in 2019 of $1.3 billion and segment income (as defined under Note Y to the consolidated financial statements) of $194 million.

TRANSIT PACKAGING DIVISION

The Company's Transit Packaging Division is a reportable segment which includes the Company's industrial and protective solutions and equipment and tools businesses. Industrial solutions include steel strap, plastic strap, industrial film and other related products that are used in a wide range of industries, including steel, lumber, brick/block, corrugated boxes, food and beverage goods, agriculture products, and a large variety of other goods. Protective solutions include transit protection products, such as airbags, edge protectors, and honeycomb products that help prevent movement of, and/or damage to, a wide range of industrial and consumer goods during transport. Equipment and tools includes manual, semi-automatic and automatic equipment and tools, which are primarily used in end-of-line operations to apply consumables such as strap and film.

At December 31, 2019, the division operated 100 plants in 23 countries, including, Belgium, Germany, India, Sweden, Switzerland and the U.S., and had approximately 9,000 employees.

The Transit Packaging segment had net sales in 2019 of $2.3 billion and segment income (as defined under Note Y to the consolidated financial statements) of $290 million.

PRODUCTS

Beverage Cans and Glass Bottles

The Company supplies beverage cans and ends and other packaging products to a variety of beverage and beer companies, including Anheuser-Busch InBev, Coca-Cola, Keurig Dr Pepper, Heineken, Molson Coors, Pepsi-Cola and Refresco, among others. The Company's beverage can business is built around local, regional and global markets, which has served to develop the Company's understanding of global customer and consumer expectations. The Company's glass bottle business is based in Mexico and serves customers in the local market.

The beverage market is dynamic and highly competitive, with each packaging manufacturer working together with its customers to satisfy consumers' ever-changing needs. The Company competes by offering its customers broad market knowledge, resources at all levels of its worldwide organization and extensive research and development capabilities that have enabled the Company to provide its customers with innovative products. The Company meets its customers' beverage packaging needs with an array of two-piece beverage cans and ends and metal bottle caps. Innovations include the SuperEnd® and 360 End™ beverage can ends, and size variations. Size variations include slim and sleek cans for portion control, low calorie products or other product differentiation, as well as larger sizes for high volume consumption. The Company expects to continue to add capacity in many of its growing markets around the world.

Beverage can and glass bottle manufacturing is capital intensive, requiring significant investment in tools and machinery. The Company seeks to effectively manage its invested capital and is continuing its efforts to reduce the metal content of its cans and reduce non-metal costs, including water and energy usage, while improving production processes.

Food Cans and Closures

The Company manufactures a variety of food cans and ends, including two-piece and three-piece cans in assorted shapes and sizes, and sells food cans to food marketers such as Abbott Laboratories, Bonduelle, Morgan Foods, Nestlé, Princes Group and Simmons Foods, among others. The Company offers a wide variety of metal vacuum closures and sealing equipment solutions to leading marketers such as Abbott Laboratories, Danone, Nestlé and Unilever, among others, from a network of metal vacuum closure plants around the world. The Company supplies total packaging solutions, including metal and composite closures, capping systems and services while working closely with customers, retailers and glass and plastic container manufacturers to develop innovative closure solutions and meet customer requirements.

Technologies used to produce food cans include three-piece welded, two-piece drawn and wall-ironed and two-piece drawn and redrawn. The Company also offers its LIFTOFF™ series of food ends, including its Easylift™ full aperture steel food can ends, and PeelSeam™ and PeelFit™ flexible aluminum foil laminated ends. The Company offers expertise in closure design and decoration, ranging from quality printing of the closure in up to nine colors, to inside-the-cap printing, which offers customers new promotional possibilities, to better product protection through Ideal Closures™, Orbit™ and Superplus™. The Company's commitment to innovation has led to developments in packaging materials, surface finishes, can shaping, lithography, filling, retorting, sealing and opening techniques and environmental performance. The Company manufactures easy open, vacuum and conventional ends for a variety of heat-processed and dry food products including fruits and vegetables, meat and seafood, soups, ready-made meals, infant formula, coffee and pet food.

Transit Packaging

The Company's transit packaging products are used to contain, unitize, and protect goods during manufacturing, transport, and warehousing and are sold around the world under a broad array of well-known brand names such as Signode, Strapex, Orgapack, Shippers Airbags, Angleboard, and MIMA. The Company serves diverse end markets, including metals, food and beverage, construction, agricultural, corrugated and general industrial. The Company's long operational history has resulted in a large base of equipment, which drives recurring revenue through the sale of consumables, parts and service offerings and future equipment replacement sales. The Company's customer concentration is low.

Aerosol Cans

The Company's customers for aerosol cans and ends include manufacturers of personal care, food, household and industrial products, including Friesland Campina, Procter & Gamble, SC Johnson and Unilever, among others. The aerosol can business is highly competitive. The Company competes by offering its customers a broad range of products including multiple sizes, multiple color schemes and shaped packaging.

Promotional and Specialty Packaging

The Company's promotional and specialty packaging businesses are primarily located in Europe and Asia. The Company produces a wide range of promotional and specialty packaging containers with numerous lid and closure variations. The Company's customers include Britvic and Nestlé among others.

SALES AND DISTRIBUTION

Global marketers qualify suppliers on the basis of their ability to provide global service, innovative designs and technologies in a cost-effective manner.

With its global reach, the Company primarily markets and sells products to customers through its own sales and marketing staffs. In some instances, contracts with customers are centrally negotiated, but products are ordered through and distributed directly by the Company's local facilities. The Company's facilities are generally located in proximity to their respective major customers. The Company works closely with customers in order to develop new business and to extend the duration of existing contracts.

Many customers provide the Company with quarterly or annual estimates of product requirements along with related quantities pursuant to which periodic commitments are given. Such estimates assist the Company in managing production and controlling use of working capital. The Company schedules its production to meet customer requirements. Because the production time for the Company's products is short, any backlog of customer orders in relation to overall sales is not significant.

SEASONALITY

The food packaging business is somewhat seasonal with the first quarter tending to be the slowest period as the autumn packing period in the Northern Hemisphere has ended and new crops are not yet planted. The industry generally enters its busiest period in the third quarter when the majority of fruits and vegetables are harvested and immediately canned. Due to this seasonality, inventory levels increase in the first half of the year to meet peak demand in the second and third quarters. Weather represents a substantial uncertainty in the yield of food products and is a major factor in determining the demand for food cans in any given year. Generally, beverage products are consumed in greater amounts during the warmer months of the year and sales have generally been higher in the second and third quarters of the calendar year.

The Company’s other businesses tend not to be as significantly affected by seasonal variations.

COMPETITION

Most of the Company’s packaging products for consumer goods are sold in highly competitive markets, primarily based on price, quality, service and performance. The Company competes with other packaging manufacturers as well as with fillers, food processors and packers, some of whom manufacture containers for their own use and for sale to others. The Company’s competitors include, but are not limited to, Ardagh Group, Ball Corporation, Ball Metalpack, BWAY Corporation, Can-Pack S.A., Metal Container Corporation, Silgan Holdings Inc., and Trivium Packaging.

The Transit Packaging Division also faces substantial competition from many regional and local competitors of various sizes in the manufacture, distribution and sale of its products. The division differentiates itself from the competition by leveraging its global scale, broad product portfolio and established brand reputation. The division's products compete, to some extent, with various other packaging materials, including other products made of paper, plastics, wood and various types of metal.

CUSTOMERS

The Company’s largest customers consist of many of the leading manufacturers and marketers of packaged consumer products in the world. Consolidation trends among beverage and food marketers have led to a concentrated customer base. The Company’s top ten global customers represented in the aggregate approximately 28% of its 2019 net sales. In each of the years in the period 2017 through 2019, no one customer accounted for more than ten percent of the Company’s net sales. Each operating segment, with the exception of the Transit Packaging Segment, has major customers and the loss of one or more of these major customers could have a material adverse effect on an individual segment or the Company as a whole. Major customers include those listed above under the caption "Products". In addition to sales to Coca-Cola and Pepsi-Cola, the Company also supplies independent licensees of Coca-Cola and Pepsi-Cola.

RESEARCH AND DEVELOPMENT

The Company's principal Research, Development & Engineering ("RD&E") Centers for packaging products for consumer goods are located in Alsip, Illinois and Wantage, United Kingdom. The Company utilizes its centralized RD&E capabilities to advance and deliver technologies for the Company's worldwide packaging activities that (1) promote development of value-added metal packaging systems for its customers, (2) design cost-efficient manufacturing processes, systems and materials and material-efficient container designs that further the sustainability of metal packaging, (3) provide continuous quality and/or production efficiency improvements in its manufacturing facilities, (4) advance customer and supplier relationships, and (5) provide value-added engineering services and technical support. These capabilities facilitate (1) the identification of new and/or expanded market opportunities by working directly with customers to develop new packaging products or enhance existing packaging products through the application of new technologies that better differentiate customers' products in the retail environment (for example, the creation of new packaging shapes, novel decoration methods, or the addition of digital content through unique codes) and/or the incorporation of consumer-valued features (for example, improved openability and/or ease of use) and (2) the reduction of manufacturing costs by reducing the material content of the Company's products (while retaining necessary performance characteristics), reducing spoilage, and increasing operating efficiencies in manufacturing facilities.

The Company maintains a substantial portfolio of patents and other intellectual property ("IP") in the field of metal packaging systems and seeks strategic partnerships to extend its IP in existing and emerging markets. As a result, the Company has licensed IP in geographic regions where the Company has a limited market presence today. Existing technologies such as SuperEnd® beverage ends, 360 End™ beverage ends, Easy-Flow™ beverage ends, Eole™ easy-open food ends and can shaping have been licensed in Australia, Japan, and Africa to provide customers with global access to Crown's brand building innovations.

The Transit Packaging Division is well known throughout its markets for its ability to drive product innovation and leadership in new technologies. The division focuses on market driven innovation and has a long history of creating product and service solutions that solve problems and create value for its customers. The division's individual business units are primarily responsible for designing and executing their own research and development projects and the division's development process is comprised of a customer-oriented, "outside-in" approach. The division works with customers to determine their most pressing industrial packaging challenges, utilizing a rigorous multi-step product development process to ensure that they shape the ultimate product for both the customer and the broader market. Transit Packaging's track record of new product innovation is largely due to the success of this model.

The Transit Packaging Division has been an industry leader in industrial packaging innovation over the last 100 years as evidenced by their introduction of the first strap packaging product (1913), the first fully-automatic strapping machine (1946), the industry's first battery operated plastic strap hand tools (1995), and most recently the industry's first battery-operated steel strap hand tools (2013). At the core of its intellectual property strategy is a focus on obtaining quality patents that cover key products and technologies, in alignment with its business objectives. The Transit Packaging Division has grown its global patent portfolio to over 335 United States issued patents or pending patent applications and over 1,230 foreign issued patents or pending patent applications. The portfolio broadly covers about 370 customized technologies and spans diverse business platforms, as well as the different countries in which it operates.

The Company spent $55 million in 2019, $51 million in 2018, and $39 million in 2017 in its RD&E activities. Certain of these activities are expected to improve and expand the Company's product lines in the future. These expenditures include projects to improve manufacturing efficiencies, reduce unit costs, and develop new and improved value-added packaging systems.

MATERIALS AND SUPPLIERS

The Company uses various raw materials, primarily aluminum and steel, in its manufacturing operations. The Transit Packaging division also uses materials derived from crude oil and natural gas, such as polyethylene and polypropylene. In general, these raw materials are purchased in highly competitive, price-sensitive markets, which have historically exhibited price and demand cyclicality. These and other materials used in the manufacturing process have historically been available in adequate supply from multiple sources.

The Company has agreements for what it considers adequate supplies of raw materials. However, sufficient quantities may not be available in the future due to, among other things, shortages due to excessive demand, weather or other factors, including disruptions in supply caused by raw material transportation or production delays. From time to time, some of the raw materials have been in short supply but, to date, these shortages have not had a significant impact on the Company’s operations.

In 2019, consumption of steel and aluminum represented 20% and 34% of consolidated cost of products sold, excluding depreciation and amortization. Due to the significance of these raw materials to the overall cost of products sold, raw material efficiency is a critical cost component of the products manufactured. Supplier consolidations, changes in ownership, government regulations, political unrest and increased demand for raw materials in the packaging and other industries, among other risk factors, could cause uncertainty as to the availability of and the level of prices at which the Company might be able to source such raw materials in the future. Moreover, the prices of aluminum and steel can be subject to significant volatility. The Company’s raw material supply contracts vary as to terms and duration, with steel contracts typically one year in duration with fixed prices or set repricing dates, and aluminum contracts typically multi-year in duration with fluctuating prices based on aluminum ingot costs. The Company generally attempts to mitigate its steel and aluminum price risk by matching its purchase obligations with its sales agreements; however, there can be no assurance that the Company will be able to fully mitigate that risk.

The Company also uses commodity and foreign currency forwards in an attempt to manage its exposure to aluminum price volatility.

There can be no assurance that the Company will be able to fully recover from its customers the impact of aluminum and steel price increases or that the use of derivative instruments will effectively manage the Company’s exposure to price volatility. In addition, if the Company were unable to purchase steel and aluminum for a significant period of time, its operations would be disrupted, and if the Company were unable to fully recover the higher cost of steel and aluminum, its financial results may be adversely affected. As a result of continuing global supply and demand pressures, other commodity-related costs affecting the Company’s business may increase as well, including utility and freight-related costs. The Company will attempt to increase prices on its products accordingly in order to recover these costs.

In response to the volatility of raw material prices, ongoing productivity and cost reduction efforts in recent years have focused on improving raw material cost management.

The Company's manufacturing facilities are dependent, in varying degrees, upon the availability of water and processed energy, such as natural gas and electricity. Certain of these may become difficult or impossible to obtain on acceptable terms due to external factors, which could increase the Company's costs or interrupt its business.

Aluminum and steel, by their very nature, can be recycled at high effectiveness and can be repeatedly reused to form new consumer packaging with minimal or no degradation in performance, quality or safety. By recycling these metals, large amounts of energy can be saved and significant water use and carbon dioxide emissions avoided.

SUSTAINABILITY AND ENVIRONMENTAL, HEALTH AND SAFETY MATTERS

The Company's operations are subject to numerous laws and regulations governing the protection of the environment, disposal of waste, discharges into water, emissions into the atmosphere and the protection of employee health and safety. Future regulations may impose stricter environmental requirements on the packaging industry and may require additional capital investment. Anticipated future restrictions in some jurisdictions on the use of certain coatings may require the Company to employ additional control equipment or process modifications. The Company has a Corporate Sustainability Policy and a Corporate Environmental Protection Policy. Environmental awareness is a key component of sustainability. Environmental considerations are among the criteria by which the Company evaluates projects, products, processes and purchases. The Company is committed to continuous improvement in product design and manufacturing practices to provide the best outcome for the human and natural environment, both now and in the future. By reducing the per-unit amount of raw materials used in manufacturing its products, the Company can significantly reduce the amount of energy, water and other resources and associated emissions necessary to manufacture metal containers. The Company aims to continue that process of improvement in its manufacturing process to assure that consumers and the environment are best served through the use of metal packaging. The Company is also committed to providing a safe work environment for its employees through programs that emphasize safety awareness and the elimination of injuries and incidents. There can be no assurance that current or future environmental laws or liabilities will not have a material effect on the Company's financial condition, liquidity or results of operations. Discussion of the Company's environmental matters is contained within "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report under the caption "Environmental Matters," and under Note P to the consolidated financial statements.

WORKING CAPITAL

The Company generally uses cash during the first nine months of the year to finance seasonal working capital needs. The Company's working capital requirements are funded by cash flows from operations, revolving credit facilities and receivables securitization and factoring programs.

Further information relating to the Company's liquidity and capital resources is set forth within "Management's Discussion and Analysis of Financial Condition and Results of Operations" of this Annual Report under the caption "Liquidity" and under Note M to the consolidated financial statements.

EMPLOYEES

At December 31, 2019, the Company had approximately 33,000 employees. Collective bargaining agreements with varying terms and expiration dates cover approximately 18,000 employees. The Company does not expect that renegotiation of the agreements expiring in 2020 will have a material adverse effect on its consolidated results of operations, financial position or cash flow.

AVAILABLE INFORMATION

The Company's website address is www.crowncork.com. Information on the Company's website is not incorporated by reference in this Annual Report on Form 10-K. The Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports filed by the Company with the U.S. Securities and Exchange Commission pursuant to sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are accessible free of charge through the Company's website as soon as reasonably practicable after the documents are filed with, or otherwise furnished to, the U. S. Securities and Exchange Commission ("SEC"). The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers, including the Company, that file electronically with the SEC. The public can obtain any documents that the Company files with the SEC at http://www.sec.gov.

The Company's Code of Business Conduct and Ethics, its Corporate Governance Guidelines, and the charters of its Audit, Compensation and Nominating and Corporate Governance committees are available on the Company's website. These documents are also available in print to any shareholder who requests them. Amendments to and waivers of the Code of Business Conduct and Ethics requiring disclosure under applicable SEC rules will be disclosed on the Company's website.

ITEM 1A. RISK FACTORS

In addition to factors discussed elsewhere in this Annual Report and in “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” the following are some of the important factors that could materially and adversely affect the Company’s business, financial condition and results of operations.

The Company's international operations, which generated approximately 70% of its consolidated net sales in 2019, are subject to various risks that may lead to decreases in its financial results.

The Company is an international company, and the risks associated with operating in foreign countries may have a negative impact on the Company's liquidity and net income. The Company's international operations generated approximately 70%, 73% and 78% of its consolidated net sales in the years ended 2019, 2018 and 2017. In addition, the Company's business strategy includes continued expansion of international activities, including within developing markets and areas, such as the South America, Eastern Europe and Asia, that may pose greater risk of political or economic instability. Approximately 35% of the Company's consolidated net sales in the year ended 2019 and 2018 and approximately 38% of the Company's consolidated net sales in the years ended 2017 were generated outside of the developed markets in Western Europe, the United States and Canada. Furthermore, if global economic conditions deteriorate, there will likely be a negative effect on the Company's business, as well as the businesses of the Company's customers and suppliers. Further, if a downturn in European economic conditions ultimately leads to a significant devaluation of the euro, the value of the Company's financial assets that are denominated in euro would be significantly reduced when translated to U.S. dollars for financial reporting purposes. Any of these conditions could ultimately harm the Company's overall business, prospects, operating results, financial condition and cash flows.

Emerging markets are a focus of the Company's international growth strategy. The developing nature of these markets and the nature of the Company's international operations generally are subject to various risks, including:

- foreign governments' restrictive trade policies;
- inconsistent product regulation or policy changes by foreign agencies or governments;
- duties, taxes or government royalties, including the imposition or increase of withholding and other taxes on remittances and other payments by non-U.S. subsidiaries;
- customs, import/export and other trade compliance regulations;
- foreign exchange rate risks;
- difficulty in collecting international accounts receivable and potentially longer payment cycles;
- increased costs in maintaining international manufacturing and marketing efforts;
- non-tariff barriers and higher duty rates;
- difficulties associated with expatriating cash generated or held abroad in a tax-efficient manner and changes in tax laws;
- difficulties in enforcement of contractual obligations and intellectual property rights and difficulties in protecting intellectual property or sensitive commercial and operations data or information technology systems generally;
- exchange controls;
- national and regional labor strikes;
- geographic, language and cultural differences between personnel in different areas of the world;
- high social benefit costs for labor, including costs associated with restructurings;
- civil unrest or political, social, legal and economic instability;
- product boycotts, including with respect to the products of the Company's multi-national customers;
- customer, supplier, and investor concerns regarding operations in areas such as the Middle East;
- taking of property by nationalization or expropriation without fair compensation;
- imposition of limitations on conversions of foreign currencies into dollars or payment of dividends and other payments by non-U.S. subsidiaries;
- hyperinflation and currency devaluation in certain foreign countries where such currency devaluation could affect the amount of cash generated by operations in those countries and thereby affect the Company's ability to satisfy its obligations;
- war, civil disturbance, global or regional catastrophic events, natural disasters, including in emerging markets, and acts of terrorism;

- geographical concentration of the Company's factories and operations and regional shifts in its customer base;
- periodic health epidemic concerns, such as the recent coronavirus outbreak in China;
- the complexity of managing global operations; and
- compliance with applicable anti-corruption or anti-bribery laws.

There can be no guarantee that a deterioration of economic conditions in countries in which the Company operates or may seek to operate in the future would not have a material impact on the Company's results of operations.

The Company is subject to the effects of fluctuations in foreign exchange rates, which may reduce its net sales and cash flow.

The Company is exposed to fluctuations in foreign currencies as a significant portion of its consolidated net sales, costs, assets and liabilities, are denominated in currencies other than the U.S. dollar. The Company's international operations generated approximately 70%, 73% and 78% of its consolidated net sales in the years ended 2019, 2018 and 2017. Volatility in exchange rates may increase the costs of its products, impair the purchasing power of its customers in different markets, result in significant competitive benefit to certain of its competitors who incur a material part of their costs in other currencies than it does, and increase its hedging costs and limit its ability to hedge exchange rate exposure. In its consolidated financial statements, the Company translates local currency financial results into U.S. dollars based on average exchange rates prevailing during a reporting period. During times of a strengthening U.S. dollar, its reported international revenue and earnings will be reduced because the local currency will translate into fewer U.S. dollars. Conversely, a weakening U.S. dollar will effectively increase the dollar-equivalent of the Company's expenses and liabilities denominated in foreign currencies. See “Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Market Risk” and "Quantitative and Qualitative Disclosure about Market Risk" in this Annual Report. Although the Company may use financial instruments such as foreign currency forwards from time to time to reduce its exposure to currency exchange rate fluctuations in some cases, it may not elect or have the ability to implement hedges or, if it does implement them, there can be no assurance that such agreements will achieve the desired effect.

For the year-ended December 31, 2019, a 0.10 movement in the average euro rate would have reduced net income by $11 million.

As the Company seeks to expand its business globally, growth opportunities may be impacted by greater political, economic and social uncertainty and the continuing and accelerating globalization of businesses could significantly change the dynamics of the Company's competition, customer base and product offerings.

The Company's efforts to grow its businesses depend to a large extent upon access to, and its success in developing market share and operating profitably in, geographic markets including but not limited to the Middle East, South America, Eastern Europe and Asia. In some cases, countries in these regions have greater political and economic volatility, greater vulnerability to infrastructure and labor disruptions and differing local customer product preferences and requirements than the Company's other markets. Operating and seeking to expand business in a number of different regions and countries exposes the Company to multiple and potentially conflicting cultural practices, business practices and legal and regulatory requirements that are subject to change, including those related to tariffs and trade barriers, investments, property ownership rights, taxation, repatriation of earnings and regulation of advanced technologies. Such expansion efforts may also use capital and other resources of the Company that could be invested in other areas. Expanding business operations globally also increases exposure to currency fluctuations which can materially affect the Company's financial results. As these emerging geographic markets become more important to the Company, its competitors are also seeking to expand their production capacities and sales in these same markets, which may lead to industry overcapacity that could adversely affect pricing, volumes and financial results in such markets. Although the Company is taking measures to adapt to these changing circumstances, the Company's reputation and/or business results could be negatively affected should these efforts prove unsuccessful.

The Company may not be able to manage its anticipated growth, and it may experience constraints or inefficiencies caused by unanticipated acceleration and deceleration of customer demand.

Unanticipated acceleration and deceleration of customer demand for the Company's products may result in constraints or inefficiencies related to the Company's manufacturing, sales force, implementation resources and administrative infrastructure, particularly in emerging markets where the Company is seeking to expand production. Such constraints or inefficiencies may adversely affect the Company as a result of delays, lost potential product sales or loss of current or potential customers due to their dissatisfaction. Similarly, over-expansion, including as a result of overcapacity due to expansion by the Company's competitors, or investments in anticipation of growth that does not materialize, or develops more slowly than the Company expects, could harm the Company's financial results and result in overcapacity.

To manage the Company's anticipated future growth effectively, the Company must continue to enhance its manufacturing capabilities and operations, information technology infrastructure, and financial and accounting systems and controls. Organizational growth and scale-up of operations could strain its existing managerial, operational, financial and other resources. The Company's growth requires significant capital expenditures and may divert financial resources from other projects, such as the development of new products or enhancements of existing products or reduction of the Company's outstanding indebtedness. If the Company's management is unable to effectively manage the Company's growth, its expenses may increase more than expected, its revenue could grow more slowly than expected and it may not be able to achieve its research and development and production goals. The Company's failure to manage its anticipated growth effectively could have a material effect on its business, operating results or financial condition.

The Company's profits will decline if the price of raw materials or energy rises and it cannot increase the price of its products, and the Company's financial results could be adversely affected if the Company was not able to obtain sufficient quantities of raw materials.

The Company uses various raw materials, such as steel, aluminum, tin, water, natural gas, electricity and other processed energy, as well as materials derived from crude oil and natural gas, such as polyethylene and polypropylene resins, in its manufacturing operations. Sufficient quantities of these raw materials may not be available in the future or may be available only at increased prices. The Company's raw material supply contracts vary as to terms and duration, with steel contracts typically one year in duration with fixed prices and aluminum contracts typically multi-year in duration with fluctuating prices based on aluminum ingot costs. The availability of various raw materials and their prices depends on global and local supply and demand forces, governmental regulations (including tariffs and duties), level of production, resource availability, transportation, and other factors, including natural disasters such as floods and earthquakes. In particular, in recent years the consolidation of steel suppliers, shortage of raw materials affecting the production of steel and the increased global demand for steel, including in China and other developing countries, have contributed to an overall tighter supply for steel, resulting in increased steel prices and, in some cases, special surcharges and allocated cut backs of products by steel suppliers. In addition, new tariffs and potential limits on steel supply in the United States from certain foreign countries could further negatively impact the Company's ability to obtain sufficient quantities of steel at competitive prices. Moreover, future steel supply contracts may provide for prices that fluctuate or adjust rather than provide a fixed price during a one-year period. As a result of continuing global supply and demand pressures, other commodity-related costs affecting the Company's business may increase as well, including natural gas, electricity and freight-related costs.

The prices of certain raw materials used by the Company, such as steel, aluminum, resins and processed energy, have historically been subject to volatility. In 2019, consumption of steel and aluminum represented 20% and 34% of the Company's consolidated cost of products sold, excluding depreciation and amortization. While certain, but not all, of the Company's contracts pass through raw material costs to customers, the Company may be unable to increase its prices to offset increases in raw material costs without suffering reductions in unit volume, revenue and operating income. In addition, any price increases may take effect after related cost increases, reducing operating income in the near term. Significant increases in raw material costs may increase the Company's working capital requirements, which may increase the Company's average outstanding indebtedness and interest expense and may exceed the amounts available under the Company's senior secured credit facilities and other sources of liquidity. In addition, the Company hedges raw material costs on behalf of certain customers and may suffer losses if such customers are unable to satisfy their purchase obligations.

If the Company is unable to purchase steel, aluminum, resins or other raw materials for a significant period of time, the Company's operations would be disrupted and any such disruption may adversely affect the Company's financial results. If customers believe that the Company's competitors have greater access to raw materials, perceived certainty of supply at the Company's competitors may put the Company at a competitive disadvantage regarding pricing and product volumes.

The substantial indebtedness of the Company could prevent it from fulfilling its obligations under its indebtedness.

The Company has substantial outstanding indebtedness. As a result of the Company's substantial indebtedness, a significant portion of the Company's cash flow will be required to pay interest and principal on its outstanding indebtedness, and the Company may not generate sufficient cash flow from operations, or have future borrowings available under its senior secured credit facilities, to enable it to repay its indebtedness or to fund other liquidity needs. As of December 31, 2019, the Company and its subsidiaries had approximately $8.0 billion of indebtedness.

The Company’s current sources of liquidity includes a securitization facility with a program limit up to a maximum of $375 that expires in July 2020, a securitization facility with a program limit of $265 that expires in November 2022, and an uncommitted securitization facility with a program limit of $175 that expires in December 2020. Additional sources of the Company's liquidity include borrowings that mature as follows: its $1,650 billion revolving credit facilities in December 2024; its €650 million ($729 million at December 31, 2019) 4.0% senior notes in July 2022; its $1 billion 4.50% senior notes in January 2023; its €335 million

($376 million at December 31, 2019) 2.25% senior notes in February 2023; its €550 million ($617 million at December 31, 2019) 0.75% senior notes in February 2023; its €600 million ($673 million at December 31, 2019) 2.625% senior notes in September 2024; its €600 million ($673 million at December 31, 2019) 3.375% senior notes in May 2025; its $875 million 4.75% senior notes in February 2026; its €500 million ($561 million at December 31, 2019) 2.875% senior notes in February 2026; its $400 million 4.25% senior notes in September 2026; its $350 million 7.375% senior notes in December 2026; its $40 million 7.5% senior notes in December 2096; and its $45 million of other indebtedness in various currencies at various dates through 2036. In addition, the Company's term loan facilities mature as follows: $40 million in 2020, $40 million in 2021, $80 million in 2022, $80 million in 2023, and $1,365 million in 2024.

The substantial indebtedness of the Company could:

- increase the Company's vulnerability to general adverse economic and industry conditions, including rising interest rates;
- restrict the Company from making strategic acquisitions or exploiting business opportunities, including any planned expansion in emerging markets;
- limit the Company's ability to make capital expenditures both domestically and internationally in order to grow the Company's business or maintain manufacturing plants in good working order and repair;
- limit, along with the financial and other restrictive covenants under the Company's indebtedness, the Company's ability to obtain additional financing, dispose of assets or pay cash dividends;
- require the Company to dedicate a substantial portion of its cash flow from operations to service its indebtedness, thereby reducing the availability of its cash flow to fund future working capital, capital expenditures, research and development expenditures and other general corporate requirements;
- require the Company to sell assets used in its business;
- limit the Company's ability to refinance its existing indebtedness, particularly during periods of adverse credit market conditions when refinancing indebtedness may not be available under interest rates and other terms acceptable to the Company or at all;
- increase the Company's cost of borrowing;
- limit the Company's flexibility in planning for, or reacting to, changes in its business and the industry in which it operates; and
- place the Company at a competitive disadvantage compared to its competitors that have less debt.

If its financial condition, operating results and liquidity deteriorate, the Company's creditors may restrict its ability to obtain future financing and its suppliers could require prepayment or cash on delivery rather than extend credit, which could further diminish the Company's ability to generate cash flows from operations sufficient to service its debt obligations. In addition, the Company's ability to make payments on and refinance its debt and to fund its operations will depend on the Company's ability to generate cash in the future.

Some of the Company's indebtedness is subject to floating interest rates, which would result in the Company's interest expense increasing if interest rates rise.

As of December 31, 2019, approximately $1.6 billion of the Company's $8.0 billion of total indebtedness and other outstanding obligations were subject to floating interest rates. Changes in economic conditions could result in higher interest rates, thereby increasing the Company's interest expense and reducing funds available for operations or other purposes. The Company's annual interest expense was $378 million, $384 million and $252 million for 2019, 2018 and 2017, respectively. Based on the amount of variable rate debt outstanding at December 31, 2019, a 0.25% increase in variable interest rates would increase its annual interest expense by approximately $4 million before tax. Accordingly, the Company may experience economic losses and a negative impact on earnings as a result of interest rate fluctuation. The actual effect of a 0.25% increase in these floating interest rates could be more than $4 million as the Company's average borrowings on its variable rate debt may be higher during the year than the amount at December 31, 2019. In addition, the cost of the Company's securitization and factoring facilities would also increase with an increase in floating interest rates. Although the Company may use interest rate protection agreements from time to time to reduce its exposure to interest rate fluctuations in some cases, it may not elect or have the ability to implement hedges or, if it does implement them, there can be no assurance that such agreements will achieve the desired effect. See "Management's Discussion and Analysis of Financial Condition and Results of Operations-Liquidity and Capital Resources-Market Risk" and "Quantitative and Qualitative Disclosures About Market Risk" in this Annual Report.

Notwithstanding the Company's current indebtedness levels and restrictive covenants, the Company may still be able to incur substantial additional debt or make certain restricted payments, which could exacerbate the risks described above.

The Company may be able to incur additional debt in the future, including in connection with acquisitions or joint ventures. Although the Company's senior secured credit facilities and indentures governing certain of its outstanding notes contain restrictions on the Company's ability to incur indebtedness, those restrictions are subject to a number of exceptions, and, under certain circumstances, indebtedness incurred in compliance with these restrictions could be substantial. The Company may also consider investments in joint ventures or acquisitions or increased capital expenditures, which may increase the Company's indebtedness. Moreover, although the Company's senior secured credit facilities and indentures governing certain of its outstanding notes contain restrictions on the Company’s ability to make restricted payments, including the declaration and payment of dividends and the repurchase of the Company’s common stock, the Company is able to make such restricted payments under certain circumstances which may increase indebtedness, and the Company may in the future establish a regular dividend on the Company's common stock. Adding new debt to current debt levels or making otherwise restricted payments could intensify the related risks that the Company and its subsidiaries now face.

Restrictive covenants in the debt agreements governing the Company's current or future indebtedness could restrict the Company's operating flexibility.

The indentures and agreements governing the Company's senior secured credit facilities and outstanding notes contain affirmative and negative covenants that limit the ability of the Company and its subsidiaries to take certain actions. These restrictions may limit the Company's ability to operate its businesses and may prohibit or limit its ability to enhance its operations or take advantage of potential business opportunities as they arise. The Company's senior secured credit facilities require the Company to maintain specified financial ratios and satisfy other financial conditions. The agreements or indentures governing the Company's senior secured credit facilities and certain of its outstanding notes restrict, among other things, the ability of the Company and the ability of all or substantially all of its subsidiaries to:

- incur additional debt;
- pay dividends or make other distributions, repurchase capital stock, repurchase subordinated debt and make certain investments or loans;
- create liens and engage in sale and leaseback transactions;
- create restrictions on the payment of dividends and other amounts to the Company from subsidiaries;
- make loans, investments and capital expenditures;
- change accounting treatment and reporting practices;
- enter into agreements restricting the ability of a subsidiary to pay dividends to, make or repay loans to, transfer property to, or guarantee indebtedness of, the Company or any of its subsidiaries;
- sell or acquire assets, enter into leaseback transactions and merge or consolidate with or into other companies; and
- engage in transactions with affiliates.

In addition, the indentures and agreements governing the Company's senior secured credit facilities and certain of its outstanding notes limit, among other things, the ability of the Company to enter into certain transactions, such as mergers, consolidations, joint ventures, asset sales, sale and leaseback transactions and the pledging of assets. Furthermore, if the Company or certain of its subsidiaries experience specific kinds of changes of control, the Company's senior secured credit facilities will be due and payable and the Company will be required to offer to repurchase outstanding notes.

The breach of any of these covenants by the Company or the failure by the Company to meet any of these ratios or conditions could result in a default under any or all of such indebtedness. If a default occurs under any such indebtedness, all of the outstanding obligations thereunder could become immediately due and payable, which could result in a default under the Company's other outstanding debt and could lead to an acceleration of obligations related to the Company's senior secured credit facilities, outstanding notes and other outstanding debt. The ability of the Company to comply with these covenants or indentures governing other indebtedness it may incur in the future and its outstanding notes can be affected by events beyond its control and, therefore, it may be unable to meet these ratios and conditions.

Pending and future asbestos litigation and payments to settle asbestos-related claims could reduce the Company's cash flow and negatively impact its financial condition.

Crown Cork & Seal Company, Inc. (Crown Cork), a wholly-owned subsidiary of the Company, is one of many defendants in a substantial number of lawsuits filed throughout the United States by persons alleging bodily injury as a result of exposure to asbestos. In 1963, Crown Cork acquired a subsidiary that had two operating businesses, one of which is alleged to have manufactured asbestos-containing insulation products. Crown Cork believes that the business ceased manufacturing such products in 1963.

As of December 31, 2019, Crown Cork's accrual for pending and future asbestos-related claims and related legal costs was $273 million, including $232 million for unasserted claims. The Company determines its accrual without limitation to a specific time period. Assumptions underlying the accrual include that claims for exposure to asbestos that occurred after the sale of the subsidiary's insulation business in 1964 would not be entitled to settlement payouts and that state statutes described under Note O to the Company's audited consolidated financial statements included in this Annual Report, including Texas and Pennsylvania statutes, are expected to have a highly favorable impact on Crown Cork's ability to settle or defend against asbestos-related claims in those states and other states where Pennsylvania law may apply.

During the year ended December 31, 2019, Crown Cork received approximately 2,000 new claims, settled or dismissed approximately 2,000 claims, and had approximately 56,000 claims outstanding at the end of the period. Of these outstanding claims, approximately 16,500 claims relate to claimants alleging first exposure to asbestos after 1964 and approximately 39,500 relate to claimants alleging first exposure to asbestos before or during 1964, of which approximately 13,000 were filed in Texas, 1,500 were filed in Pennsylvania, 6,000 were filed in other states that have enacted asbestos legislation and 19,000 were filed in other states. The outstanding claims at December 31, 2019 also exclude approximately 19,000 inactive claims. Due to the passage of time, the Company considers it unlikely that the plaintiffs in these cases will pursue further action. The exclusion of these inactive claims had no effect on the calculation of the Company's accrual as the claims were filed in states where the Company's liability is limited by statute. The Company devotes significant time and expense to defend against these various claims, complaints and proceedings, and there can be no assurance that the expenses or distractions from operating the Company's businesses arising from these defenses will not increase materially.

On October 22, 2010, the Texas Supreme Court, in a 6-2 decision, reversed a lower court decision, Barbara Robinson v. Crown Cork & Seal Company, Inc., No. 14-04-00658-CV, Fourteenth Court of Appeals, Texas, which had upheld the dismissal of an asbestos-related case against Crown Cork. The Texas Supreme Court held that the Texas legislation was unconstitutional under the Texas Constitution when applied to asbestos-related claims pending against Crown Cork when the legislation was enacted in June of 2003. The Company believes that the decision of the Texas Supreme Court is limited to retroactive application of the Texas legislation to asbestos-related cases that were pending against Crown Cork in Texas on June 11, 2003 and therefore continues to assign no value to claims filed after June 11, 2003.

Crown Cork made cash payments of $22 million, $21 million and $30 million in 2019, 2018 and 2017 for asbestos-related claims including settlement payments and legal fees. These payments and any such future payments will reduce the cash flow available to Crown Cork for its business operations and debt payments.

Asbestos-related payments including defense costs may be significantly higher than those estimated by Crown Cork because the outcome of this type of litigation (and, therefore, Crown Cork's reserve) is subject to a number of assumptions and uncertainties, such as the number or size of asbestos-related claims or settlements, the number of financially viable responsible parties, the extent to which state statutes relating to asbestos liability are upheld and/or applied by the courts, Crown Cork's ability to obtain resolution without payment of asbestos-related claims by persons alleging first exposure to asbestos after 1964, and the potential impact of any pending or future asbestos-related legislation. Accordingly, Crown Cork may be required to make payments for claims substantially in excess of its accrual, which could reduce the Company's cash flow and impair its ability to satisfy its obligations.

As a result of the uncertainties regarding its asbestos-related liabilities and its reduced cash flow, the ability of the Company to raise new money in the capital markets is more difficult and more costly, and the Company may not be able to access the capital markets in the future. Further information regarding Crown's Cork's asbestos-related liabilities is presented within “Management's Discussion and Analysis of Financial Condition and Results of Operations” under the headings, “Provision for Asbestos” and “Critical Accounting Policies” and under Note O to the Company's audited consolidated financial statements included in this Annual Report.

The Company has significant pension plan obligations worldwide and significant unfunded postretirement obligations, which could reduce its cash flow and negatively impact its results of operations and its financial condition.

The Company sponsors various pension plans worldwide, with the largest funded plans in the U.K., U.S. and Canada. In 2019, 2018 and 2017, the Company contributed $23 million, $20 million and $294 million to its pension plans. Pension expense was $66 million, including settlement charges of $44 million and a curtailment gain of $14 million, in 2019 and is expected to be $22 million in 2020, using foreign currency exchange rates in effect at December 31, 2019. In addition, the Company may trigger additional settlement charges in 2020 of approximately $30 million. A 0.25% change in the 2020 expected rate of return assumptions would change 2020 pension expense by approximately $12 million. A 0.25% change in the discount rates assumptions as of December 31, 2019 would change 2019 pension expense by approximately $2 million. The Company may be required to accelerate the timing of its contributions under its pension plans. The actual impact of any accelerated funding will depend upon the interest rates required for determining the plan liabilities and the investment performance of plan assets. An acceleration in the timing of pension plan contributions could decrease the Company's cash available to pay its outstanding obligations and its net income and increase the Company's outstanding indebtedness.

Based on current assumptions, the Company expects to make pension contributions of $21 million in 2020, $52 million in 2021, $37 million in 2022, $69 million in 2023 and $115 million in 2024. Future changes in the factors used to determine pension contributions, including investment performance of plan assets, could have a significant impact on the Company’s future contributions and its cash flow available for debt reduction, capital expenditures or other purposes.

The difference between pension plan obligations and assets, or the funded status of the plans, significantly affects the net periodic benefit costs of the Company's pension plans and the ongoing funding requirements of those plans. Among other factors, significant volatility in the equity markets and in the value of illiquid alternative investments, changes in discount rates, investment returns and the market value of plan assets can substantially increase the Company's future pension plan funding requirements and could have a negative impact on the Company's results of operations and profitability. See Note R to the Company's audited consolidated financial statements in this Annual Report. As long as the Company continues to maintain its various pension plans, the Company will continue to incur additional pension obligations. The Company's pension plan assets consist primarily of common stocks and fixed income securities and also include alternative investments such as interests in private equity and hedge funds. If the performance of plan assets does not meet the Company's assumptions or discount rates decline, the underfunding of the pension plans may increase and the Company may have to contribute additional funds to the pension plans, and the Company's pension expense may increase. In addition, the Company's supplemental executive retirement plan and retiree medical plans are unfunded.

The Company's U.S. funded pension plan is subject to the Employee Retirement Income Security Act of 1974, or ERISA. Under ERISA, the Pension Benefit Guaranty Corporation, or PBGC, has the authority to terminate an underfunded plan under certain circumstances. In the event its U.S. pension plan is terminated for any reason while the plan is underfunded, the Company will incur a liability to the PBGC that may be equal to the entire amount of the underfunding, which under certain circumstances may be senior to the notes. In addition, as of December 31, 2019 the unfunded accumulated postretirement benefit obligation, as calculated in accordance with U.S. generally accepted accounting principles, for retiree medical benefits was approximately $164 million, based on assumptions set forth under Note R to the Company's audited consolidated financial statements in this Annual Report.

Acquisitions or investments that the Company is considering or may pursue could be unsuccessful, consume significant resources and require the incurrence of additional indebtedness.

The Company may consider acquisitions and investments that complement its existing business. These possible acquisitions and investments involve or may involve significant cash expenditures, debt incurrence (including the incurrence of additional indebtedness under the Company's senior secured revolving credit facilities or other secured or unsecured debt), operating losses and expenses that could have a material effect on the Company's financial condition and operating results.

In particular, if the Company incurs additional debt, the Company's liquidity and financial stability could be impaired as a result of using a significant portion of available cash or borrowing capacity to finance an acquisition. Moreover, the Company may face an increase in interest expense or financial leverage if additional debt is incurred to finance an acquisition, which may, among other things, adversely affect the Company's various financial ratios and the Company's compliance with the conditions of its existing indebtedness. In addition, such additional indebtedness may be incurred under the Company's senior secured credit facilities or otherwise secured by liens on the Company's assets.

Acquisitions involve numerous other risks, including:

- diversion of management time and attention;
- failures to identify material problems and liabilities of acquisition targets or to obtain sufficient indemnification rights to fully offset possible liabilities related to the acquired businesses;
- difficulties integrating the operations, technologies and personnel of the acquired businesses;
- inefficiencies and complexities that may arise due to unfamiliarity with new assets, businesses or markets;
- disruptions to the Company's ongoing business;
- inaccurate estimates of fair value made in the accounting for acquisitions and amortization of acquired intangible assets which would reduce future reported earnings;
- the inability to obtain required financing for the new acquisition or investment opportunities and the Company's existing business;
- the need or obligation to divest portions of an acquired business;
- challenges associated with operating in new geographic regions;
- difficulties in achieving anticipated cost savings, synergies, business opportunities and growth prospects;
- potential loss of key employees, contractual relationships, suppliers or customers of the acquired businesses or of the Company; and
- inability to obtain required regulatory approvals.

To the extent the Company pursues an acquisition that causes it to incur unexpected costs or that fails to generate expected returns, the Company's financial position, results of operations and cash flows may be adversely affected, and the Company's ability to service its indebtedness may be negatively impacted.

The Company's principal markets may be subject to overcapacity and intense competition, which could reduce the Company's net sales and net income.

Food and beverage cans are standardized products, allowing for relatively little differentiation among competitors. This could lead to overcapacity and price competition among food and beverage can producers if capacity growth outpaced the growth in demand for food and beverage cans and overall manufacturing capacity exceeded demand. These market conditions could reduce product prices and contribute to declining revenue and net income and increasing debt balances. As a result of industry overcapacity (including in developed markets and certain emerging markets) and price competition, the Company may not be able to increase prices sufficiently to offset higher costs or to generate sufficient cash flow. The North American and Western European food and beverage can markets, in particular, are considered to be mature markets, characterized by slow growth and a sophisticated distribution system. Competitive pricing pressures, overcapacity, the failure to develop new product designs and technologies for products, as well as other factors, such as consolidation among the Company's competitors, could cause the Company to lose existing business or opportunities to generate new business and could result in decreased cash flow and net income.

The Company is subject to competition from substitute products and decreases in demand for its products, which could result in lower profits and reduced cash flows.

The Company is subject to substantial competition from producers of alternative packaging made from glass, paper, flexible materials and plastic. The Company's sales depend heavily on the volumes of sales by the Company's customers in the food and beverage markets. Changes in preferences for products and packaging by consumers of prepackaged food and beverage cans significantly influence the Company's sales. Changes in packaging by the Company's customers may require the Company to re-tool manufacturing operations, which could require material expenditures. In addition, a decrease in the costs of, or a further increase in consumer demand for, alternative packaging could result in lower profits and reduced cash flows for the Company. For example, increases in the price of aluminum and steel and decreases in the price of plastic resin, which is a petrochemical product and may fluctuate with prices in the oil and gas market, may increase substitution of plastic food and beverage containers for metal containers or increases in the price of steel may increase substitution of aluminum packaging for aerosol products. Moreover, due to its high percentage of fixed costs, the Company may be unable to maintain its gross margin at past levels if it is not able to achieve high capacity utilization rates for its production equipment. In periods of low worldwide demand for its products or in situations where industry expansion created excess capacity, the Company experiences relatively low capacity utilization rates in its operations, which can lead to reduced margins during that period and can have an adverse effect on the Company's business.

The Transit Packaging Division also faces substantial competition from many regional and local competitors of various sizes in the manufacture, distribution and sale of its products. Its products compete, to some extent, with various other packaging materials, including other products made of paper, plastics, wood and various types of metal. Although the division has long-term relationships with many of its customers, these relationships are typically not contractual. As a result, its customers may unilaterally reduce the purchase of its products and the division may not be able to quickly replace the revenue source, which could harm the Company's financial results.

The Company's business results depend on its ability to understand its customers' specific preferences and requirements, and to develop, manufacture and market products that meet customer demand.

The Company's ability to develop new product offerings for a diverse group of global customers with differing preferences, while maintaining functionality and spurring innovation, is critical to its success. This requires a thorough understanding of the Company's existing and potential customers on a global basis, particularly in potential high developing markets, including South America, Eastern Europe and Asia (including India). Failure to deliver quality products that meet customer needs ahead of competitors could have a significant adverse effect on the Company's business.

Loss of third-party transportation providers upon whom the Company depends or increases in fuel prices could increase the Company's costs or cause a disruption in the Company's operations.

The Company depends generally upon third-party transportation providers for delivery of products to customers. Strikes, slowdowns, transportation disruptions or other conditions in the transportation industry, including, but not limited to, shortages of truck drivers, disruptions in rail service, decreases in the availability of vessels or increases in fuel prices, could increase the Company's costs and disrupt Company’s operations and its ability to service customers on a timely basis.

The loss of a major customer and/or customer consolidation could reduce the Company's net sales and profitability.

Many of the Company's largest customers have acquired companies with similar or complementary product lines. This consolidation has increased the concentration of the Company's business with its largest customers. In many cases, such consolidation has been accompanied by pressure from customers for lower prices, reflecting the increase in the total volume of product purchased or the elimination of a price differential between the acquiring customer and the company acquired. Increased pricing pressures from the Company's customers may reduce the Company's net sales and net income.

The majority of the Company's sales are to companies that have leading market positions in the sale of packaged food, beverages and household products to consumers. Although no one customer accounted for more than 10% of its net sales in the years ended 2019, 2018 or 2017, the loss of any of its major customers, a reduction in the purchasing levels of these customers or an adverse change in the terms of supply agreements with these customers could reduce the Company's net sales and net income. A continued consolidation of the Company's customers could exacerbate any such loss.

The Company's business is seasonal and weather conditions could reduce the Company's net sales.

The Company manufactures metal and glass packaging primarily for the food and beverage can market. Its sales can be affected by weather conditions. Due principally to the seasonal nature of the soft drink, brewing, iced tea and other beverage industries, in which demand is stronger during the summer months, sales of the Company's products have varied and are expected to vary by quarter. Shipments in the U.S. and Europe are typically greater in the second and third quarters of the year. Unseasonably cool weather can reduce consumer demand for certain beverages packaged in its containers. In addition, poor weather conditions that reduce crop yields of packaged foods can decrease customer demand for its food containers.

The Company is subject to costs and liabilities related to stringent environmental and health and safety standards.

Laws and regulations relating to environmental protection and health and safety may increase the Company’s costs of operating and reduce its profitability. The Company's operations are subject to numerous U.S. federal and state and non-U.S. laws and regulations governing the protection of the environment, including those relating to operating permits, treatment, storage and disposal of waste, the use of chemicals in the Company's products and manufacturing process, discharges into water, emissions into the atmosphere, remediation of soil and groundwater contamination and protection of employee health and safety. Future regulations may impose stricter environmental or employee safety requirements affecting the Company's operations or may impose additional requirements regarding consumer health and safety, such as potential restrictions on the use of bisphenol-A, a starting material used to produce internal and external coatings for some food, beverage, and aerosol containers and metal closures. Although the U.S. FDA currently permits the use of bisphenol-A in food packaging materials and confirmed in a January 2010 update that studies employing standardized toxicity tests have supported the safety of current low levels of human exposure to bisphenol-A, the FDA in that January 2010 update noted that more research was needed, and further suggested reasonable steps to reduce exposure to bisphenol-A. The FDA subsequently entered into a consent decree under which it agreed to issue, by March 31, 2012, a final decision on a citizen's petition requesting the agency take further regulatory steps with regard to bisphenol-A. On March 30, 2012, the FDA denied the request, responding, in part, that the appropriate course of action was to continue scientific study and review of all new evidence regarding the safety of bisphenol-A. In March 2010, the EPA issued an action plan for bisphenol-A, which includes, among other things, consideration of whether to add bisphenol-A to the chemical concern list on the basis of potential environmental effects and use of the EPA's Design for the Environment program to encourage reductions in bisphenol-A manufacturing and use. Moreover, certain U.S. Congressional bodies, states and municipalities, as well as certain foreign nations and some member states of the European Union, such as Denmark, Belgium and France, have considered, proposed or already passed legislation banning or suspending the use of bisphenol-A in certain products or requiring warnings regarding bisphenol-A. In July 2012, the FDA banned the use of bisphenol-A in baby bottles and children's drinking cups, and in July 2013, the FDA banned the use of bisphenol-A in epoxy resins that coat infant formula cans. In France, the production, importation, exportation and the placement on the market of baby bottles containing bisphenol-A was suspended by a law of 2010. This suspension was extended in 2013 to packaging and utensils for food intended for children under 3 and in 2015 to packaging and utensils for all other foods. Following a decision of the French Constitutional Court, the suspension is currently limited to the importation and the placement on the market of those packaging and utensils containing bisphenol-A. The law also includes certain product labeling requirements. More generally, France is very attentive to the issue of endocrine disruptors and food safety (e.g. Food Conference in 2017 (*Etats généraux de l'alimentation*)). In the first quarter of 2014, the European Food Safety Authority recommended that the tolerable daily intake of bisphenol-A be lowered. Further, the U.S. or additional international, federal, state or other regulatory authorities could restrict or prohibit the use of bisphenol-A in the future. For example, in 2015, the State of California declared bisphenol-A a reproductive system hazard and listed BPA as a hazardous chemical under California's Safe Water and Toxic Environment Act, which may trigger a requirement to include warning labels on consumer items containing bisphenol-A. In addition, recent public reports, litigation and other allegations regarding the potential health hazards of bisphenol-A could contribute to a perceived safety risk about the Company's products and adversely impact sales or otherwise disrupt the Company's business. While the Company is exploring various alternatives to the use of bisphenol-A and conversion to alternatives is underway in some applications, there can be no assurance the Company will be completely successful in its efforts or that the alternatives will not be more costly to the Company.

Also, for example, future restrictions in some jurisdictions on air emissions of volatile organic compounds and the use of certain paint and lacquering ingredients may require the Company to employ additional control equipment or process modifications. The Company's operations and properties, both in the United States and abroad, must comply with these laws and regulations. In addition, a number of governmental authorities in the United States and abroad have introduced or are contemplating enacting legal requirements, including emissions limitations, cap and trade systems or mandated changes in energy consumption, in response to the potential impacts of climate change. Given the wide range of potential future climate change regulations in the jurisdictions in which the Company operates, the potential impact to the Company's operations is uncertain. In addition, the potential impact of climate change on the Company's operations is highly uncertain. The impact of climate change may vary by geographic location and other circumstances, including weather patterns and any impact to natural resources such as water.

A number of governmental authorities both in the U.S. and abroad also have enacted, or are considering, legal requirements relating to product stewardship, including mandating recycling, the use of recycled materials and/or limitations on certain kinds of packaging materials such as plastics. In addition, some companies with packaging needs have responded to such developments, and/or to perceived environmental concerns of consumers, by using containers made in whole or in part of recycled materials. Such developments may reduce the demand for some of the Company's products, and/or increase its costs.

The Company is subject to certain restrictions that may limit its ability to make payments on its debt out of the cash reserves shown on the Company's consolidated financial statements.

The ability of the Company's subsidiaries and joint ventures to pay dividends, make distributions, provide loans or make other payments to the Company may be restricted by applicable state and foreign laws, potentially adverse tax consequences and their agreements, including agreements governing their debt.

In addition, the equity interests of the Company's joint venture partners or other shareholders in the Company's non-wholly owned subsidiaries in any dividend or other distribution made by these entities would need to be satisfied on a proportionate basis with the Company. As a result, the Company may not be able to access a portion of its cash flow to service the Company's debt.

The Company has a significant amount of goodwill that, if impaired in the future, would result in lower reported net income and a reduction of its net worth.

Impairment of the Company's goodwill would require a write down of goodwill, which would reduce the Company's net income in the period of any such write down. At December 31, 2019, the carrying value of the Company's goodwill was $4.4 billion. The Company is required to evaluate goodwill reflected on its balance sheet at least annually, or when circumstances indicate a potential impairment. If it determines that the goodwill is impaired, the Company would be required to write off a portion or all of the goodwill.

If the Company fails to retain key management and personnel, the Company may be unable to implement its business plan.

Members of the Company's senior management have extensive industry experience, and it might be difficult to find new personnel with comparable experience. Because the Company's business is highly specialized, the Company believes that it would also be difficult to replace its key technical personnel. The Company believes that its future success depends, in large part, on its experienced senior management team. Losing the services of key members of its management team could limit the Company's ability to implement its business plan. In addition, under the Company's unfunded Senior Executive Retirement Plan certain members of senior management are entitled to lump sum payments upon retirement or other termination of employment and a lump sum death benefit of five times the annual retirement benefit.

A significant portion of the Company's workforce is unionized and labor disruptions could increase the Company's costs and prevent the Company from supplying its customers.

A significant portion of the Company's workforce is unionized and a prolonged work stoppage or strike at any facility with unionized employees could increase its costs and prevent the Company from supplying its customers. In addition, upon the expiration of existing collective bargaining agreements, the Company may not reach new agreements without union action in certain jurisdictions and any such new agreements may not be on terms satisfactory to the Company. If the Company is unable to negotiate acceptable collective bargaining agreements, it may become subject to union-initiated work stoppages, including strikes. Moreover, additional groups of currently non-unionized employees may seek union representation in the future.

Failure by the Company's joint venture partners to observe their obligations could adversely affect the business and operations of the joint ventures and, in turn, the business and operations of the Company.

A portion of the Company's operations, including certain beverage can operations in Asia, the Middle East and South America, is conducted through joint ventures. The Company participates in these ventures with third parties. In the event that the Company's joint venture partners do not observe their obligations or are unable to commit additional capital to the joint ventures, it is possible that the affected joint venture would not be able to operate in accordance with its business plans or that the Company would have to increase its level of commitment to the joint venture.

If the Company fails to maintain an effective system of internal control, the Company may not be able to accurately report financial results or prevent fraud.

Effective internal controls are necessary to provide reliable financial reports and to assist in the effective prevention of fraud. Any inability to provide reliable financial reports or prevent fraud could harm the Company's business. The Company must annually evaluate its internal procedures to satisfy the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, which requires management and auditors to assess the effectiveness of internal controls. If the Company fails to remedy or maintain the adequacy of its internal controls, as such standards are modified, supplemented or amended from time to time, the Company could be subject to regulatory scrutiny, civil or criminal penalties or shareholder litigation.

In addition, failure to maintain adequate internal controls could result in financial statements that do not accurately reflect the Company's financial condition. There can be no assurance that the Company will be able to complete the work necessary to fully comply with the requirements of the Sarbanes-Oxley Act or that the Company's management and external auditors will continue to conclude that the Company's internal controls are effective.

The Company is subject to litigation risks which could negatively impact its operations and net income.

The Company is subject to various lawsuits and claims with respect to matters such as governmental, environmental and employee benefits laws and regulations, securities, labor, and actions arising out of the normal course of business, in addition to asbestos-related litigation described under the risk factor titled “Pending and future asbestos litigation and payments to settle asbestos-related claims could reduce the Company's cash flow and negatively impact its financial condition.” The Company is currently unable to determine the total expense or possible loss, if any, that may ultimately be incurred in the resolution of such legal proceedings. Regardless of the ultimate outcome of such legal proceedings, they could result in significant diversion of time by the Company's management. The results of the Company's pending legal proceedings, including any potential settlements, are uncertain and the outcome of these disputes may decrease its cash available for operations and investment, restrict its operations or otherwise negatively impact its business, operating results, financial condition and cash flow.

Some of the Company's transit packaging products are relied upon by customers or end users in their facilities or operations, or are manufactured for relatively broad industrial, transportation or consumer use. The Company faces an inherent risk of exposure to claims and damage to its reputation or brands in the event that the failure, use or misuse of its products results, or is alleged to result, in death, bodily injury, property damage or economic loss. For instance, certain of these products may fail while being used to transport heavy, industrial equipment. A successful product liability claim or series of claims against the Company, or a significant warranty claim or series of claims, could have a material adverse effect on the Company.

In March 2015, the Bundeskartellamt, or German Federal Cartel Office ("FCO"), conducted unannounced inspections of the premises of several metal packaging manufacturers, including one of the Company's German subsidiaries. The local court order authorizing the inspection cited FCO suspicions of anti-competitive agreements in the market for the supply of metal packaging products. The Company conducted an internal investigation into the matter and discovered instances of inappropriate conduct by certain employees of German subsidiaries of the Company. The Company cooperated with the FCO and submitted a leniency application with the FCO which disclosed the findings of its internal investigation to date. In April 2018, the FCO discontinued its national investigation and referred the matter to the European Commission (the "Commission"). Following the referral, Commission officials conducted unannounced inspections of the premises of several metal packaging manufacturers, including Company subsidiaries in Germany, France and the United Kingdom.

The Commission's investigation is ongoing and, to date, the Commission has not officially charged the Company or any of its subsidiaries with violations of competition law. The Company is cooperating with the Commission and submitted a leniency application with the Commission with respect to the findings of the investigation in Germany referenced above. This application may lead to the reduction of possible future penalties. At this stage of the investigation the Company believes that a loss is probable but is unable to predict the ultimate outcome of the Commission's investigation and is unable to estimate the loss or possible range of losses that could be incurred, and has therefore not recorded a charge in connection with the actions by the Commission. If the Commission finds that the Company or any of its subsidiaries violated competition law, fines levied by the Commission could be material to the Company's operating results and cash flows for the periods in which they are resolved or become reasonably estimable.

The downturn in certain global economies could have adverse effects on the Company.

The downturn in certain global economies could have significant adverse effects on the Company's operations, including as a result of any the following:

- downturns in the business or financial condition of any of the Company's key customers or suppliers, potentially resulting in customers' inability to pay the Company's invoices as they become due, or at all, or suppliers' failure to fulfill their commitments;
- potential losses associated with hedging activity by the Company for the benefit of the Company's customers including counterparty risk associated with such hedging activity, or costs associated with changing suppliers;
- a decline in the fair value of the Company's pension assets or a decline in discount rates used to measure the Company's pension obligations, potentially requiring the Company to make significant additional contributions to its pension plans to meet prescribed funding levels;
- the deterioration of any of the lending parties under the Company's senior secured revolving credit facilities or the creditworthiness of the counterparties to the Company's derivative transactions, which could result in such parties' failure to satisfy their obligations under their arrangements with the Company;
- noncompliance with the covenants under the Company's indebtedness as a result of a weakening of the Company's financial position or results of operations; and
- the lack of currently available funding sources, which could have a negative impact upon the liquidity of the Company as well as that of its customers and suppliers.

The vote by the United Kingdom to leave the European Union could adversely affect the Company.

The United Kingdom has ceased to be a member of the European Union ("E.U.") on January 31, 2020, with a transition period through December 31, 2020 (commonly referred to as "Brexit"). During such period, the United Kingdom continues to apply E.U. law and is treated for all material purposes as part of the E.U. There is uncertainty as to the scope, nature and terms of the relationship between the United Kingdom and the E.U. after Brexit as negotiations for the terms of the Brexit continue. The uncertainty could continue to adversely affect economic and market conditions in the United Kingdom, in the E.U. and its member states and elsewhere, and also contribute to uncertainty and instability in global financial markets. In particular, Brexit significantly impacts volatility, liquidity and/or the market value of securities. Accordingly, Brexit could adversely affect the Company's business, results of operations, financial condition and cash flows.

The Company relies on its information technology and the failure or disruption of its information technology could disrupt its operations and adversely affect its results of operations.

The Company's business increasingly relies on the successful and uninterrupted functioning of its information technology systems to process, transmit, and store electronic information. A significant portion of the communication between the Company's personnel around the world, customers, and suppliers depends on information technology. As with all large systems, the Company's information technology systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components thereof, power outages, hardware failures, computer viruses, attacks by computer hackers, telecommunication failures, user errors or catastrophic events. In addition, security breaches could result in unauthorized disclosure of confidential information.

The concentration of processes in shared services centers means that any disruption could impact a large portion of the Company's business within the operating zones served by the affected service center. If the Company does not allocate, and effectively manage, the resources necessary to build, sustain and protect the proper technology infrastructure, the Company could be subject to transaction errors, processing inefficiencies, loss of customers, business disruptions, the loss of or damage to intellectual property through security breach, as well as potential civil liability and fines under various states' laws in which the Company does business. While the Company has security measures in place designed to protect the integrity of customer information and prevent data loss, misappropriation, and other security breaches, the Company's information technology system could nevertheless be penetrated by outside parties intent on extracting information, corrupting information or disrupting business processes. In addition, if the Company's information technology systems suffer severe damage, disruption or shutdown and the Company's business continuity plans do not effectively resolve the issues in a timely manner, the Company may lose revenue and profits as a result of its inability to timely manufacture, distribute, invoice and collect payments from its customers, and could experience delays in reporting its financial results, including with respect to the Company's operations in emerging markets. Furthermore, if the Company is unable to prevent security breaches, it may suffer financial and reputational damage because of lost or misappropriated confidential information belonging to the Company or to its customers or suppliers. Failure or disruption of these systems, or the back-up systems, for any reason could disrupt the Company's operations and negatively impact the Company's cash flows or financial condition.

The Company may not be able to use all of its foreign tax credit carryforwards in the event it undergoes an ownership change as defined by the U.S. Internal Revenue Code of 1986.

The Company has substantial foreign tax carryforwards that can, subject to complex limitations, reduce U.S. taxes owed on foreign income. In the event the Company undergoes an ownership change as determined, its use of those foreign tax credit carryovers may be severely curtailed under section 383 of the U.S. Internal Revenue Code of 1986. An ownership change may occur if the percentage of the Company's stock owned by one or more 5% shareholders increases by more than 50 percentage points over the lowest percentage of the Company's stock owned by those shareholders, measured over a three year period.

Changes in accounting standards, taxation requirements and other law could negatively affect the Company's financial results.

New accounting standards or pronouncements that may become applicable to the Company from time to time, or changes in the interpretation of existing standards and pronouncements, could have a significant effect on the Company's reported results for the affected periods. The Company is also subject to income tax in the numerous jurisdictions in which the Company operates. Increases in income tax rates or other changes to tax laws could reduce the Company's after-tax income from affected jurisdictions or otherwise affect the Company's tax liability. For example, while final regulations related to certain elements of the Tax Cuts and Jobs Act of 2017 (the "Tax Act") have been promulgated, other elements, including the limitation of tax deductions for interest expense, the treatment of global intangible low-taxed income and foreign-derived intangible income for Corporate taxpayers and the allocation of deductions for purposes of computing the foreign tax credit limitation, among others, are pending final regulations from the Internal Revenue Service and the enactment of these final regulations could adversely affect the Company's financial results.

In addition, the Company's products are subject to import and excise duties and/or sales or value-added taxes in many jurisdictions in which it operates. Increases in indirect taxes could affect the Company's products' affordability and therefore reduce demand for its products.

The Company may experience significant negative effects to its business as a result of new federal, state or local taxes, increases to current taxes or other governmental regulations specifically targeted to decrease the consumption of certain types of beverages.

Public health and government officials have become increasingly concerned about the health consequences associated with over-consumption of certain types of beverages, such as sugar-sweetened beverages and including those sold by certain of the Company's significant customers. Possible new federal, state or local taxes, increases to current taxes or other governmental regulations specifically targeted to decrease the consumption of these beverages may significantly reduce demand for the beverages of the Company's customers, which could in turn affect demand of the Company's customers for the Company's products. For example, taxes on certain sugar-sweetened beverages have been enacted in France, the United Kingdom, and Mexico. France has also imposed taxes on energy drinks using certain amounts of taurine and caffeine. Some state and local governments are also considering similar taxes, and Philadelphia, Pennsylvania (where the Company's Americas and Corporate headquarters were located prior to September 2018), Cook County, Illinois (where the Company's Transit Packaging headquarters is located), and several cities in California have enacted taxes on certain sugar-sweetened beverages. The imposition of such taxes may decrease the demand for certain soft drinks and beverages that the Company's customers produce, which may cause the Company's customers to respond by decreasing their purchases from the Company. Consumer tax legislation and future attempts to tax sugar-sweetened or energy drinks by other jurisdictions could reduce the demand for the Company's products, adversely affect the Company's profitability and materially adversely affect the Company's business and financial results.

The Company's senior secured credit facilities provide that certain change of control events constitute an event of default. In the event of a change of control, the Company may not be able to satisfy all of its obligations under the senior secured credit facilities or other indebtedness.

The Company may not have sufficient assets or be able to obtain sufficient third-party financing on favorable terms to satisfy all of its obligations under the Company's senior secured credit facilities or other indebtedness in the event of a change of control. The Company's senior secured credit facilities provide that certain change of control events constitute an event of default under the senior secured credit facilities. Such an event of default entitles the lenders thereunder to, among other things, cause all outstanding debt obligations under the senior secured credit facilities to become due and payable and to proceed against the collateral securing the senior secured credit facilities. Any event of default or acceleration of the senior secured credit facilities will likely also cause a default under the terms of other indebtedness of the Company. In addition, the indentures governing certain of the Company's outstanding notes require that the Company offer to repurchase the notes at an offer price of 101% of principal upon certain change of control repurchase events.

The loss of the Company's intellectual property rights may negatively impact its ability to compete.

If the Company is unable to maintain the proprietary nature of its technologies, its competitors may use its technologies to compete with it. The Company has a number of patents covering various aspects of its products, including its SuperEnd® beverage can end, whose primary patent expired in 2016, Easylift™ full aperture steel food can ends, PeelSeam™ and PeelFit™ flexible lidding and Ideal™ product line. The Company's patents may not withstand challenge in litigation, and patents do not ensure that competitors will not develop competing products or infringe upon the Company's patents. Moreover, the costs of litigation to defend the Company's patents could be substantial and may outweigh the benefits of enforcing its rights under its patents. The Company markets its products internationally and the patent laws of foreign countries may offer less protection than the patent laws of the United States. Not all of the Company's domestic patents have been registered in other countries. The Company also relies on trade secrets, know-how and other unpatented proprietary technology, and others may independently develop the same or similar technology or otherwise obtain access to the Company's unpatented technology. In addition, the Company has from time to time received letters from third parties suggesting that it may be infringing on their intellectual property rights, and third parties may bring infringement suits against the Company, which could result in the Company needing to seek licenses from these third parties or refraining altogether from use of the claimed technology.

Demand for the Company's products could be affected by changes in laws and regulations applicable to food and beverages and changes in consumer preferences.

The Company manufactures and sells metal and glass packaging primarily for the food and beverage can market. As a result, many of the Company's products come into direct contact with food and beverages. Accordingly, the Company's products must comply with various laws and regulations for food and beverages applicable to its customers. Changes in such laws and regulations could negatively impact customers' demand for the Company's products as they comply with such changes and/or require the Company to make changes to its products. Such changes to the Company's products could include modifications to the coatings and compounds that the Company uses, possibly resulting in the incurrence of additional costs. Additionally, because many of the Company's products are used to package consumer goods, the Company is subject to a variety of risks that could influence consumer behavior and negatively impact demand for the Company's products, including changes in consumer preferences driven by various health-related concerns and perceptions.

ITEM 1B. UNRESOLVED STAFF COMMENTS

There are no unresolved written comments that were received from the SEC staff 180 days or more before the end of the Company's fiscal year relating to its periodic or current reports under the Securities Exchange Act of 1934.

ITEM 2. PROPERTIES

As of December 31, 2019, the Company operated 239 manufacturing facilities of which 69 were leased. The Company has four divisions, primarily defined geographically, within which it manufactures and markets its products. The Americas Division had 48 operating facilities of which eight were leased. Within the Americas Division, 28 facilities operated in the U.S. of which six were leased. The European Division had 60 operating facilities of which nine were leased and the Asia Pacific Division had 28 operating facilities of which three were leased. The Transit Packaging Division had 100 operating facilities of which 47 were leased. The Company also had three canmaking equipment and spare part operations in the U.S. and the U.K., one of which was a leased facility. Certain leases provide renewal or purchase options. The principal manufacturing facilities at December 31, 2019 are listed below and are grouped by product and by division.

The Company's Americas and Corporate headquarters is in Yardley, Pennsylvania. Its European headquarters is in Baar, Switzerland, its Asia Pacific headquarters is in Singapore and its Transit Packaging headquarters is in Glenview, Illinois. The Company maintains research facilities in Alsip, Illinois and Wantage, England.

The Company's manufacturing and support facilities are designed according to the requirements of the products to be manufactured. Therefore, the type of construction may vary from plant to plant. Warehouse space is generally provided at each of the manufacturing locations, although the Company also leases outside warehouses.

Ongoing productivity improvements and cost reduction efforts in recent years have focused on upgrading and modernizing facilities to reduce costs, improve efficiency and productivity and phase out uncompetitive facilities. The Company has also opened new facilities to meet increases in market demand for its products. These actions reflect the Company's continued commitment to realign manufacturing facilities to maintain its competitive position in its markets. The Company continually reviews its operations and evaluates strategic opportunities. Further discussion of the Company's recent restructuring actions is contained within "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the caption "Provision for Restructuring," and under Note L to the consolidated financial statements.

Utilization of any particular facility varies based upon product demand. While not possible to measure with any degree of certainty or uniformity the productive capacity of these facilities, management believes that, if necessary, production can be increased at several existing facilities through the addition of personnel, capital equipment and, in some facilities, square footage available for production. In addition, the Company may from time to time acquire additional facilities or dispose of existing facilities.

Excluded from the list below are operating facilities in unconsolidated subsidiaries as well as service or support facilities. The service or support facilities include machine shop operations, plant operations dedicated to printing for cans and closures, coil shearing, coil coating and RD&E operations. Some operating facilities produce more than one product but have been presented below under the product with the largest contribution to sales.

	Americas		Europe		Asia Pacific
Beverage and Closures	Kankakee, IL Mankato, MN Batesville, MS Nichols, NY Dayton, OH Cheraw, SC Conroe, TX Fort Bend, TX Winchester, VA Olympia, WA La Crosse, WI Worland, WY Cabreuva, Brazil Teresina, Brazil Estancia, Brazil	Manaus, Brazil Ponta Grossa, Brazil Rio Verde, Brazil Calgary, Canada Weston, Canada Santafe de Bogota, Colombia Chihuahua, Mexico Ensenada, Mexico Guadalajara, Mexico Monterrey, Mexico (2) Orizaba, Mexico Toluca, Mexico	Custines, France Korinthos, Greece Patras, Greece Amman, Jordan Dammam, Saudi Arabia Jeddah, Saudi Arabia Kosice, Slovakia Agoncillo, Spain	Sevilla, Spain Valencia, Spain El Agba, Tunisia Izmit, Turkey Osmaniye, Turkey Dubai, UAE Botcherby, U.K. Braunstone, U.K.	Phnom Penh, Cambodia (2) Sihanoukville, Cambodia Hangzhou, China Heshan, China Ziyang, China Karawang, Indonesia Bangi, Malaysia Yangon, Myanmar Singapore Nong Khae, Thailand Danang, Vietnam Dong Nai, Vietnam Hanoi, Vietnam Ho Chi Minh City, Vietnam
Food and Closures	Owatonna, MN Omaha, NE Lancaster, OH Massillon, OH Mill Park, OH Connellsville, PA	Hanover, PA Suffolk, VA Oshkosh, WI Kingston, Jamaica La Villa, Mexico Barbados, West Indies	Carpentras, France Concarneau, France Laon, France Nantes, France Outreau, France Perigueux, France Mühldorf, Germany Seesen, Germany (2) Thessaloniki, Greece Tema, Ghana Kornye, Hungary Nagykoros, Hungary Athy, Ireland Aprilia, Italy Battipaglia, Italy Calerno S. Ilario d'Enza, Italy Nocera Superiore, Italy Parma, Italy	Abidjan, Ivory Coast Toamasina, Madagascar Agadir, Morocco Casablanca, Morocco Goleniow, Poland Pruszcz, Poland Alcochete, Portugal Novotitarovskaya, Russia Timashevsk, Russia Aldeanueva De Ebro, Spain Las Torres De Cotillas, Spain Llanera, Spain Merida, Spain Osuna, Spain Pontavedra, Spain Sevilla, Spain Karacabey, Turkey Wisbech, U.K.	Bangpoo, Thailand Hat Yai, Thailand Nakhon Pathom, Thailand Samrong, Thailand Songkhla, Thailand
Aerosol	Alsip, IL Decatur, IL	Faribault, MN Spartanburg, SC	Spilamberto, Italy (2)	Sutton, U.K.	
Promotional & Specialty Packaging	Belcamp, MD		Chatillon-sur-Seine, France Hoorn, Netherlands	Carlisle, U.K. Mansfield, U.K.	Henan, China Huizhou, China Kunshan, China Qingdao Chengyan, China Shanghai, China Tianjin, China Singapore Dong Nai, Vietnam
Canmaking Equipment and Other	Norwalk, CT Trevose, PA	Chippewa Falls, WI Acayucan, Mexico	Shipley, U.K. (2)		

	Americas		Europe		Asia Pacific
Transit	Benton, AR (2)	Cincinnati, OH	Virton, Belgium	Gorey, Ireland	Derrimut, Australia
Packaging	Fordyce, AR	Cleveland, OH	Kardjali, Bulgaria	Kilkenny, Ireland	Kurri Kurri, Australia
	Sheridan, AR	Loveland, OH	Noerresundby, Denmark	Nairobi, Kenya	Qingdao, China
	Phoenix, AZ	Elizabethtown, PA	Soenderborg, Denmark	Heerlen, Netherlands	Bangalore, India (3)
	Bay Point, CA	Hazleton, PA	Liljendal, Finland	Nuenen, Netherlands	Dahej, India
	Stockton, CA	South Canaan, PA	Masku, Finland	Zwijndrecht, Netherlands	Karnataka, India
	Denver, CO	Imperial, PA	Castelsarrasin, France	Kosice, Slovakia	Rudrapur, India
	Carrollton, GA	East Providence, RI (2)	Fontaine les Luxeuil,	Burseryd, Sweden	Rudraram, India (2)
	Douglasville, GA	Chapin, SC	France	Hjo, Sweden	Silvassa, India (2)
	LaGrange, GA	Darlington, SC (2)	Manneville sur Risle,	Sandared, Sweden	Pohang, South Korea
	Macon, GA	Greer, SC	France	Ystad, Sweden	Sriracha, Thailand
	Bridgeview, IL	Latta, SC	Tournus, France	Dietikon, Switzerland (2)	
	Dixmoor, IL	Orange, TX	Dinslaken, Germany (2)	Merenschwand, Switzerland	
	Glenview, IL	San Antonio, TX	Goldkronach, Germany	Izmir, Turkey	
	Kankakee, IL (2)	Danville, VA	Hilden, Germany	Andover, U.K.	
	Elkhart, IN	Martinsville, VA	Nurnberg, Germany	Dudley, U.K.	
	Gary, IN	Woodland, WA	Weischlitz, Germany		
	Florence, KY	Cabreuva, Brazil			
	Monroe, LA	Cambridge Ontario,			
	West Monroe, LA	Canada			
	Brighton, MI	Amatlan de los Reyes,			
	Eden, NC	Mexico			
	Salisbury, NC (2)	Cienega de Flores,			
	Irvington, NJ	Mexico			
	Newark, NJ	Toluca, Mexico			

ITEM 3. LEGAL PROCEEDINGS

Crown Cork is one of many defendants in a substantial number of lawsuits filed throughout the U.S. by persons alleging bodily injury as a result of exposure to asbestos. These claims arose from the insulation operations of a U.S. company, the majority of whose stock Crown Cork purchased in 1963. Approximately ninety days after the stock purchase, this U.S. company sold its insulation assets and was later merged into Crown Cork. At December 31, 2019, the accrual for pending and future asbestos claims and related legal costs that are probable and estimable was $273 million.

The Company has been identified by the Environmental Protection Agency as a potentially responsible party (along with others, in most cases) at a number of sites.

Further information on these matters and other legal proceedings is presented within “Management’s Discussion and Analysis of Financial Condition and Results of Operations” under the captions “Provision for Asbestos” and “Environmental Matters,” within the risk factor titled "The Company is subject to litigation risks which could negatively impact its operations and net income" and under Note O and Note P to the consolidated financial statements.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Information concerning the principal executive officers of the Company, including their ages and positions, is set forth in “Directors, Executive Officers and Corporate Governance” of this Annual Report.

PART II

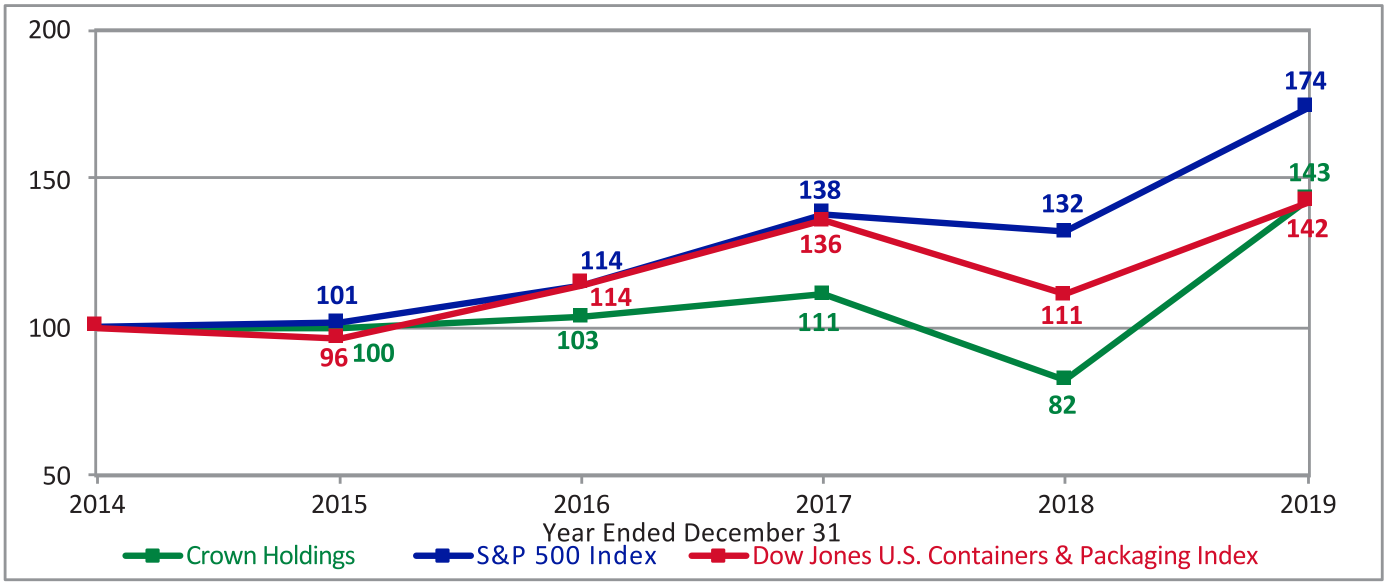
ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The Registrant’s common stock is listed on the New York Stock Exchange under ticker symbol CCK. On February 27, 2020 there were 3,825 registered shareholders of the Registrant’s common stock, including 1,352 participants in the Company’s Employee Stock Purchase Plan. The market price of the Registrant’s common stock at December 31, 2019 is set forth in Part II of this Annual Report under Quarterly Data (unaudited). The foregoing information regarding the number of registered shareholders of common stock does not include persons holding stock through clearinghouse systems. Details regarding the Company’s policy as to payment of cash dividends and repurchase of shares are set forth under Note T to the consolidated financial statements included in this Annual Report. Information with respect to shares of common stock that may be issued under the Company’s equity compensation plans is set forth in “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters,” of this Annual Report.

Issuer Purchases of Equity Securities

During the three months ended December 31, 2019, there were 71,288 of the Company's shares surrendered to cover taxes on the vesting of restricted stock.

COMPARATIVE STOCK PERFORMANCE (a)
Comparison of Five-Year Cumulative Total Return (b)
Crown Holdings, S&P 500 Index, Dow Jones U.S. Containers & Packaging Index (c)



December 31,	2014	2015	2016	2017	2018	2019
Crown Holdings	$ 100	$ 100	$ 103	$ 111	$ 82	$ 143
S&P 500 Index	100	101	114	138	132	174
Dow Jones U.S. Containers & Packaging Index	100	96	114	136	111	142

(a) The preceding Comparative Stock Performance Graph is not deemed filed with the SEC and shall not be incorporated by reference in any of the Company's filings under the Security Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

(b) Assumes that the value of the investment in Crown Holdings common stock and each index was $100 on December 31, 2014 and that all dividends were reinvested.

(c) Industry index is weighted by market capitalization and, as of December 31, 2019, was composed of Crown Holdings, Amcor, AptarGroup, Avery Dennison, Ball, Berry Global, Graphic Packaging, International Paper, O-I Glass, Packaging Corp. of America, Sealed Air, Silgan, Sonoco and WestRock.

ITEM 6. SELECTED FINANCIAL DATA

(in millions, except per share, ratios and other statistics)	2019	2018 (a) (b)	2017	2016	2015 (c)
Summary of Operations					
Net sales	$ 11,665	$ 11,151	$ 8,698	$ 8,284	$ 8,762
Cost of products sold, excluding depreciation and amortization	9,349	9,028	7,006	6,623	7,140
Depreciation and amortization	490	425	247	247	237
Selling and administrative expense	631	558	367	366	382
Provision for asbestos	—	—	3	21	26
Restructuring and other	(26)	44	51	30	64
Goodwill impairment	25	—	—	—	—
Loss from early extinguishments of debt	27	—	7	37	9
Other pension and postretirement	13	(25)	(53)	(24)	(14)
Interest expense, net of interest income	361	363	237	231	259
Foreign exchange	9	18	4	(16)	20
Income before income taxes and equity earnings	786	740	829	769	639
Provision for income taxes	166	216	401	186	178
Equity in net earnings of affiliates	5	4	—	—	—
Net income	625	528	428	583	461
Net income attributable to noncontrolling interests	(115)	(89)	(105)	(87)	(68)
Net income attributable to Crown Holdings	$ 510	$ 439	$ 323	$ 496	$ 393
Financial Position at December 31					
Working capital	$ 103	$ 166	$ (176)	$ (55)	$ 141
Total assets (d)	15,505	15,262	10,663	9,599	10,050
Total cash and cash equivalents	607	607	424	559	717
Total debt	7,955	8,663	5,314	4,911	5,518
Total equity	2,092	1,286	923	668	385
Common Share Data (dollars per share)					
Earnings:					
Basic	$ 3.81	$ 3.28	$ 2.39	$ 3.58	$ 2.85
Diluted	3.78	3.28	2.38	3.56	2.82
Market price on December 31	72.54	41.57	56.25	52.57	50.70
Number of shares outstanding at year-end	135.6	135.2	134.3	139.8	139.4
Average shares outstanding:					
Basic	133.9	133.6	135.3	138.5	137.9
Diluted	134.9	133.9	135.6	139.3	139.1

(a) On January 1 2018, the Company adopted new accounting guidance on accounting for revenue recognition. This guidance was applied on a modified retrospective basis. Prior period amounts have not been recast and continue to be reported in accordance with accounting guidance in effect for those periods.

(b) Includes the results of the Signode acquisition from April 3, 2018 through December 31, 2018.

(c) Includes the results of the Empaque acquisition from February 18, 2015 through December 31, 2015.

(d) On January 1, 2019, the Company adopted new accounting guidance on lease accounting. This guidance was applied on a modified retrospective basis. Prior period amounts have not been recast and continue to be reported in accordance with accounting guidance in effect for those periods.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

(in millions, except per share, average settlement cost per asbestos claim, employee, shareholder and statistical data)

INTRODUCTION

The following discussion summarizes the significant factors affecting the results of operations and financial condition of Crown Holdings, Inc. (the "Company") as of and during the three-year period ended December 31, 2019. This discussion should be read in conjunction with the consolidated financial statements included in this Annual Report.

BUSINESS STRATEGY AND TRENDS

The Company's strategy is to grow its businesses in targeted growth markets, while improving operations and results in more mature markets through disciplined pricing, cost control and careful capital allocation.

In April 2018, the Company completed its acquisition of Signode Industrial Group, a leading global provider of transit packaging systems and solutions, for consideration of $3.9 billion. With the acquisition, the Company added a portfolio of premier transit and protective packaging franchises to its existing metal packaging businesses, thereby broadening and diversifying its customer base and product offerings and significantly increasing cash flow.

In November 2019, the Company announced a Board-led review of the Company's portfolio and capital allocation, which is ongoing.

The Company's global beverage can business continues to be a major strategic focus for organic growth. For several years, global industry demand for beverage cans has been growing and this is expected to continue in the coming years. After many years of relatively flat volumes, beverage can growth in North America has accelerated mainly due to the outsized portion of new beverage products being introduced in cans versus other packaging formats. In addition, markets such as Brazil, Europe and Southeast Asia have also experienced higher volumes and market expansion. Beverage cans are the world’s most sustainable and recycled beverage packaging and continue to gain market share in new beverage product launches. The Company continues to drive brand differentiation by increasing its ability to offer multiple product sizes.

In addition, the Company continues to generate strong returns on invested capital and significant cash flow from its non-beverage can operations including its global food can and transit packaging businesses. The Company's primary capital allocation focus will be to reduce leverage, as was successfully accomplished following previous acquisitions, and begin to return capital to its shareholders.

RESULTS OF OPERATIONS

The key measure used by the Company in assessing performance is segment income, a non-GAAP measure generally defined by the Company as income from operations adjusted to exclude intangibles amortization charges, provisions for asbestos and restructuring and other, and the impact of fair value adjustments to inventory acquired in an acquisition.

The foreign currency translation impacts referred to in the discussion below were primarily due to changes in the euro and pound sterling in the Company's European segments, the Canadian dollar and Mexican peso in the Company's Americas segments, the Chinese renminbi, Malaysian ringgit and Thai baht in the Company's Asia Pacific segment and the euro in the Company's Transit Packaging segment. The Company calculates the impact of foreign currency translation by multiplying or dividing, as appropriate, current year U.S. dollar results by the current year average foreign exchange rates and then multiplying or dividing, as appropriate, those amounts by the applicable prior year average exchange rates.

NET SALES AND SEGMENT INCOME

	2019	2018	2017
Net sales	$11,665	$11,151	$8,698

Year ended December 31, 2019 compared to 2018

Net sales increased primarily due to $569 from an additional three months of Signode's operations and 3% higher global beverage sales unit volumes, partially offset by the impact of foreign currency translation.

Year ended December 31, 2018 compared to 2017

Net sales increased primarily due to $1,800 from the acquisition of Signode, pass-through of higher raw material costs, 4% higher global beverage sales unit volumes, $134 from the impact of foreign currency translation and $27 from the impact of new accounting guidance adopted during the year which accelerated the timing of revenue recognition on certain products.

Americas Beverage

The Americas Beverage segment manufactures aluminum beverage cans and ends, steel crowns, glass bottles and aluminum closures and supplies a variety of customers from its operations in the U.S., Brazil, Canada, Colombia and Mexico. The U.S. and Canadian beverage can markets have experienced recent market growth due to the introduction of new beverage products in cans versus other packaging formats. To meet volume requirements in the U.S. and Canadian beverage can markets, the Company has begun construction of a third line at its Nichols, NY facility which is expected to begin production during the second quarter of 2020. Additionally, a new beverage can line at the Weston, Ontario plant began production in January 2020.

In Brazil and Mexico, the Company's sales unit volumes have increased in recent years primarily due to market growth driven by increased per capita incomes and consumption, combined with an increased preference for cans over other forms of beverage packaging. In January 2018, the Company commenced operations at a new glass bottle facility in Chihuahua, Mexico, to serve the expanding beer market in the northern part of the country. Additionally, in November 2019, the Company commenced operations at a new one-line beverage can facility in Rio Verde, Brazil.

Net sales and segment income in the Americas Beverage segment were as follows:

	2019	2018	2017
Net sales	$ 3,369	$ 3,282	$ 2,928
Segment income	534	454	470

Year ended December 31, 2019 compared to 2018

Net sales increased primarily due to 2% higher sales unit volumes partially offset by the pass-through of lower aluminum costs and $20 from the impact of foreign currency translation.

Segment income increased primarily due to higher sales unit volumes, lower freight costs and improved pricing in North America.

Year ended December 31, 2018 compared to 2017

Net sales increased primarily due to 6% higher sales unit volumes and the pass-through of higher aluminum costs of $167 partially offset by $11 from the impact of foreign currency translation.

Segment income decreased primarily due to higher freight costs in North America, which offset the impact of higher sales unit volumes.

European Beverage

The Company's European Beverage segment manufactures steel and aluminum beverage cans and ends and supplies a variety of customers from its operations throughout Europe, the Middle East and North Africa. In recent years, the Western European beverage can markets have been growing.

In October 2018, the first line of a new beverage can plant in Valencia, Spain began operations and a second line began operations in February 2019. The multi-year project to convert beverage can capacity in Spain from steel to aluminum is nearing completion as both lines in the Seville, Spain plant, which have multi-size capability, will be in commercial production in the second quarter of 2020. Additionally, in December 2018, the Company commenced operations at a new one-line plant in Parma, Italy.

Net sales and segment income in the European Beverage segment were as follows:

	2019	2018	2017
Net sales	$ 1,497	$ 1,489	$ 1,457
Segment income	190	193	235

Year ended December 31, 2019 compared to 2018

Net sales increased primarily due to 6% higher sales unit volumes, partially offset by $56 related to the impact of foreign currency translation and the pass-through of lower aluminum costs.

Segment income decreased primarily due to higher depreciation related to recent capacity expansion and line conversions and $5 from the impact of foreign currency translation, partially offset by higher sales unit volumes.

Year ended December 31, 2018 compared to 2017

Net sales increased primarily due to $34 related to the impact of foreign currency translation and the pass-through of higher raw material costs, partially offset by 10% lower sales unit volumes in the Middle East.

Segment income decreased primarily due to lower sales in the Middle East and higher startup costs at new operations.

European Food

The European Food segment manufactures steel and aluminum food cans and ends and metal vacuum closures, and supplies a variety of customers from its operations throughout Europe and Africa. The European food can market is a mature market where consumer preference continues to favor the can due to product protection and food preservation, however, challenging harvest yields have led to volume declines in recent years.

Net sales and segment income in the European Food segment were as follows:

	2019	2018	2017
Net sales	$ 1,887	$ 1,982	$ 1,935
Segment income	205	257	264

Year ended December 31, 2019 compared to 2018

Net sales decreased primarily due to $102 from the impact of foreign currency translation, partially offset by the pass-through of higher raw material costs.

Segment income decreased primarily due to unfavorable product mix, higher tinplate and other operating costs that were not fully passed through in selling price and $11 from the impact of foreign currency translation.

Year ended December 31, 2018 compared to 2017

Net sales increased primarily due to the pass-through of higher tinplate costs and $78 related to the impact of foreign currency translation partially offset by 6% lower sales unit volumes. Lower sales unit volumes were primarily the result of lower demand due to challenging weather conditions which resulted in poor harvest yields.

Segment income decreased primarily due to lower sales unit volumes, partially offset by improved cost performance and $10 related to the impact of foreign currency translation.

Asia Pacific

The Company's Asia Pacific segment consists of beverage can operations in Cambodia, China, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Vietnam and non-beverage can operations, primarily food cans and specialty packaging. In recent years, the beverage can market in Southeast Asia has been growing. Production began at a new beverage can plant in Yangon, Myanmar in July 2018. A third beverage can line at the Phnom Penh, Cambodia plant commenced operations in January 2019 and the Company has begun construction of a new beverage can plant in Nong Khae, Thailand, which will begin production during the third quarter of 2020. In response to market conditions in China, the Company closed its Putian facility in 2018 and its Huizhou facility in early 2019. Following these closures, the Company has three beverage can plants in China with approximately $75 in annual sales.

Net sales and segment income in the Asia Pacific segment were as follows:

	2019	2018	2017
Net sales	$ 1,290	$ 1,316	$ 1,177
Segment income	194	186	168

Year ended December 31, 2019 compared to 2018

Net sales decreased primarily due to lower sales unit volumes related to plant closures in China and the pass-through of lower aluminum costs, partially offset by 12% higher sales unit volumes in Southeast Asia.

Segment income increased due to higher sales unit volumes.

Year ended December 31, 2018 compared to 2017

Net sales increased primarily due to 13% higher sales unit volume in Southeast Asia and $21 related to the impact of foreign currency translation, partially offset by lower sales related to the closure of the Beijing beverage can facility in 2017.

Segment income increased primarily due to higher sales unit volumes.

Transit Packaging

On April 3, 2018, the Company completed its acquisition of Signode, which is reported as the Company's Transit Packaging segment. The Transit Packaging segment includes the Company's global industrial and protective solutions and equipment and tools businesses.

Net sales and segment income in the Transit Packaging segment were as follows:

	2019	2018
Net sales	$ 2,274	1,800
Segment income	290	255

Year ended December 31, 2019 compared to 2018

Net sales and segment income increased primarily due to $569 and $73 from an additional quarter of ownership in 2019 partially offset by lower sales unit volumes due to a slowdown in manufacturing activity in many global markets, unfavorable product mix and $33 and $4 from the impact of foreign currency translation.

Non-reportable Segments

The Company's non-reportable segments include its North American food can business, its European aerosol can and promotional packaging business, its North American aerosol can business and its tooling and equipment operations in the U.S. and U.K.

Net sales and segment income in non-reportable segments were as follows:

	2019	2018	2017
Net sales	$ 1,348	$ 1,282	$ 1,201
Segment income	126	122	123

Year ended December 31, 2019 compared to 2018

Net sales increased primarily due to the pass-through of higher tinplate costs and 5% higher sales unit volumes in the Company's North America food can business partially offset by lower sales unit volumes in the Company's equipment operations and $17 from the impact of foreign currency translation.

Segment income increased primarily due to higher sales unit volumes and lower freight costs in the Company's North America food can business and favorable product mix in the Company's equipment operations, partially offset by higher tinplate and other operating costs in the Company's global aerosol businesses that were not fully passed through in selling price.

Year ended December 31, 2018 compared to 2017

Net sales increased primarily due to $67 related to the pass-through of higher tinplate costs in the North America food can business and global aerosol businesses and $12 related to the impact of foreign currency translation. Higher sales volumes in the Company's North America food can business and equipment operations were offset by lower sales unit volumes in the Company's global aerosol businesses.

Segment income was comparable as the impact of higher sales unit volumes in the North America food can business and the Company's equipment operations were partially offset by higher freight costs in the North America food can business.

Corporate and unallocated

	2019	2018	2017
Corporate and unallocated	$ (158)	$ (139)	$ (143)

Corporate and unallocated costs increased from 2018 to 2019 primarily due to higher incentive compensation in 2019 and lower claims activity in 2018.

COST OF PRODUCTS SOLD (EXCLUDING DEPRECIATION AND AMORTIZATION)

Cost of products sold (excluding depreciation and amortization) increased from $9,028 in 2018 to $9,349 in 2019 primarily due to the Signode acquisition in April 2018, partially offset by $214 from the impact of foreign currency translation.

Cost of products sold (excluding depreciation and amortization) increased from $7,006 in 2017 to $9,028 in 2018 primarily due to the Signode acquisition, the impact of higher raw material costs and $115 from the impact of foreign currency translation.

Cost of products sold (excluding depreciation and amortization) as a percentage of net sales was 80% in 2019 and 81% in 2018 and 2017.

DEPRECIATION AND AMORTIZATION

Depreciation and amortization expense increased from $425 in 2018 to $490 in 2019 primarily due to the impact of an additional quarter of ownership of Signode in 2019 and higher depreciation due to recent capacity expansion.

Depreciation and amortization expense increased from $247 in 2017 to $425 in 2018 primarily due to the impact of the Signode acquisition.

SELLING AND ADMINISTRATIVE EXPENSE

Selling and administrative expense increased from $367 in 2017 to $558 in 2018 and $631 in 2019 primarily due to the impact of the Signode acquisition.

INTEREST EXPENSE

Interest expense decreased from $384 in 2018 to $378 in 2019 primarily due to lower interest rates offset by higher average outstanding debt incurred to finance the Signode acquisition.

Interest expense increased from $252 in 2017 to $384 in 2018 primarily due to higher outstanding debt from borrowings incurred to finance the Signode acquisition.

TAXES ON INCOME

The Company's effective income tax rates were as follows:

	2019	2018	2017
Income before income taxes	$ 786	$ 740	$ 829
Provision for income taxes	166	216	401
Effective income tax rate	21.1%	29.2%	48.4%

The lower effective tax rate in 2019 was primarily due to a tax benefit of $36 from the release of a valuation allowance against the Company's net deferred tax assets in Luxembourg and a tax benefit of $9 arising from tax law changes in India, partially offset by a charge of $15 to settle a tax contingency arising from a transaction that occurred prior to the acquisition of Signode.

The effective rate in 2018 included $24 related to taxes on the distributions of foreign earnings, which were previously asserted to be indefinitely reinvested.

The higher effective tax rate in 2017 was primarily due to a net charge of $177 to recognize the impact of U.S. federal tax reform which reduced the U.S. corporate tax rate from 35% to 21%, imposed a limitation on the tax deduction for interest expense, net of interest income, to 30% of a U.S. corporation's adjusted taxable income and also changed certain provisions related to the taxation of non-U.S. subsidiary earnings.

For additional information regarding income taxes, see Note S to the consolidated financial statements and the Critical Accounting Policies section of this “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for a discussion of the Company’s policies with respect to valuation allowances.

NET INCOME ATTRIBUTABLE TO NONCONTROLLING INTERESTS

Net income attributable to noncontrolling interest increased from $89 in 2018 to $115 in 2019 primarily due to higher earnings in the Company's beverage can operations in Brazil, including the impact of a favorable court ruling related to the recovery of indirect taxes paid in prior years.

Net income attributable to noncontrolling interest decreased from $105 in 2017 to $89 in 2018 primarily due to lower earnings in the Company's beverage can operations in Brazil and the Middle East.

LIQUIDITY AND CAPITAL RESOURCES

OPERATING ACTIVITIES

Cash provided by operating activities increased from $571 in 2018 to $1,163 in 2019 primarily due to higher income from operations and changes in working capital partially offset by cash used for interest payments in 2019 related to outstanding borrowings incurred to finance the Signode acquisition.

Receivables decreased from $1,602 at December 31, 2018 to $1,528 at December 31, 2019 primarily due to increased securitization and factoring and lower aluminum costs, partially offset by higher sales unit volumes. Days sales outstanding for trade receivables, excluding the impact of unbilled receivables, decreased from 41 at December 31, 2018 to 36 at December 31, 2019, primarily related to increased securitization and factoring.

Inventories decreased from $1,690 at December 31, 2018 to $1,626 at December 31, 2019 primarily due to lower inventory levels in the Transit Packaging segment. Inventory turnover was 64 days at December 31, 2018 compared to 63 days at December 31, 2019.

The food can business is seasonal with the first quarter tending to be the slowest period as the autumn packaging period in the Northern Hemisphere has ended and new crops are not yet planted. The industry enters its busiest period in the third quarter when the majority of fruits and vegetables in the Northern Hemisphere are harvested. Due to this seasonality, inventory levels increase in the first half of the year to meet peak demand in the second and third quarters. The beverage can business is also seasonal with inventory levels generally increasing in the first half of the year to meet peak demand in the summer months in the Northern Hemisphere.

Accounts payable decreased from $2,732 at December 31, 2018 to $2,646 at December 31, 2019 and days outstanding for trade payables decreased from 107 days at December 31, 2018 to 99 days at December 31, 2019 primarily due to lower aluminum costs and lower inventory levels in the Transit Packaging segment.

INVESTING ACTIVITIES

Cash used for investing activities decreased from $3,843 in 2018 to $374 in 2019. In 2018, investing activities included $3,912 paid to acquire Signode. Additionally, in 2018, the Company had cash collections of $490 on beneficial interest in transferred receivables. The Company terminated its North American securitization facility in July 2018 and entered into a new facility which removed the deferred purchase price component but requires the Company to maintain a deposit in a restricted cash account. See Note E to the consolidated financial statements for a discussion of the Company's securitization programs.

The Company currently expects capital expenditures in 2020 to be approximately $600.

At December 31, 2019, the Company had approximately $86 of capital commitments. The Company expects to fund these commitments primarily through cash generated from operations.

FINANCING ACTIVITIES

Financing activities provided cash of $3,533 in 2018 primarily due to proceeds from borrowings to finance the Signode acquisition and used cash of $785 in 2019 primarily to pay down debt.

LIQUIDITY

As of December 31, 2019, $464 of the Company's $607 in cash and cash equivalents was located outside the U.S. The Company is not currently aware of any legal restrictions under foreign law that materially impact its access to cash held outside the U.S. The Company funds its cash needs in the U.S. through a combination of cash flows from operations, dividends from certain foreign subsidiaries, borrowings under its revolving credit facility and the acceleration of cash receipts under its receivable securitization and factoring facilities. Of the cash and cash equivalents located outside the U.S., $371 was held by subsidiaries for which earnings are considered indefinitely reinvested. If such earnings were repatriated the Company may be required to record incremental foreign taxes on the repatriated funds.

The Company's revolving credit agreements provides capacity of $1,650. As of December 31, 2019, the Company had available capacity of $1,586 under its revolving credit facilities. The Company could have borrowed this amount at December 31, 2019 and would still be in compliance with its leverage ratio covenants.

The ratio of total debt, less cash and cash equivalents, to total capitalization was 77.8% and 86.2% at December 31, 2019 and 2018. Total capitalization is defined by the Company as total debt plus total equity, less cash and cash equivalents.

The Company's debt agreements contain covenants that limit the ability of the Company and its subsidiaries to, among other things, incur additional debt, pay dividends or repurchase capital stock, make certain other restricted payments, create liens and engage in sale and leaseback transactions. These restrictions are subject to a number of exceptions, however, which allow the Company to incur additional debt, create liens or make otherwise restricted payments.

The Company’s revolving credit facilities and term loan facilities also contain a total leverage ratio covenant. The leverage ratio is calculated as total net debt divided by Consolidated EBITDA (as defined in the credit agreement). Total net debt is defined in the credit agreement as total debt less cash and cash equivalents. Consolidated EBITDA is calculated as the sum of, among other things, net income attributable to Crown Holdings, net income attributable to certain of the Company's subsidiaries, income taxes, interest expense, depreciation and amortization, and certain non-cash charges. The Company’s total net leverage ratio of 4.1 to 1.0 at December 31, 2019 was in compliance with the covenant requiring a ratio no greater than 5.75 to 1.0. The ratio is calculated at the end of each quarter using debt and cash balances as of the end of the quarter and Consolidated EBITDA for the most recent twelve months. Failure to meet the financial covenant could result in the acceleration of any outstanding amounts due under the revolving credit facilities and term loan facilities.

The Company’s current sources of liquidity includes a securitization facility with a program limit up to a maximum of $375 that expires in July 2020, a securitization facility with a program limit of $265 that expires in November 2022, and an uncommitted securitization facility with a program limit of $175 that expires in December 2020. Additional sources of the Company's liquidity include borrowings that mature as follows: its $1,650 revolving credit facilities in December 2024; its €650 ($729 at December 31, 2019) 4.0% senior notes in July 2022; its $1,000 4.50% senior notes in January 2023; its €335 ($376 million at December 31,

2019) 2.25% senior notes in February 2023; its €550 ($617 at December 31, 2019) 0.75% senior notes in February 2023; its €600 ($673 at December 31, 2019) 2.625% senior notes in September 2024; its €600 ($673 at December 31, 2019) 3.375% senior notes in May 2025; its $875 4.75% senior notes in February 2026; its €500 ($561 at December 31, 2019) 2.875% senior notes in February 2026; its $400 4.25% senior notes in September 2026; its $350 7.375% senior notes in December 2026; its $40 7.5% senior notes in December 2096; and its $45 of other indebtedness in various currencies at various dates through 2036. In addition, the Company's term loan facilities mature as follows: $40 in 2020, $40 in 2021, $80 in 2022, $80 in 2023, and $1,365 in 2024.

CONTRACTUAL OBLIGATIONS

Contractual obligations as of December 31, 2019 are summarized in the table below.

	Payments Due by Period						
	2020	2021	2022	2023	2024	2025 & after	Total
Long-term debt	$ 62	$ 44	$ 813	$ 2,076	$ 2,042	$ 2,907	$ 7,944
Interest on long-term debt	281	279	265	194	181	127	1,327
Operating leases	53	42	30	22	18	100	265
Projected pension contributions	21	52	37	69	115	—	294
Postretirement obligations	16	13	13	12	12	49	115
Purchase obligations	3,458	1,651	553	172	—	—	5,834
Total contractual cash obligations	$ 3,891	$ 2,081	$ 1,711	$ 2,545	$ 2,368	$ 3,183	$ 15,779

All amounts due in foreign currencies are translated at exchange rates as of December 31, 2019.

The Company expects to fund its obligations through a combination of cash flows from operations, borrowings under its revolving credit facilities and the acceleration of cash receipts under its receivables securitization and factoring programs.

Aggregate maturities of long-term debt for the five years subsequent to 2019 exclude unamortized discounts and debt issuance costs.

Interest on long-term debt is presented through 2025 only and represents the interest that will accrue by year based on debt outstanding and interest rates in effect as of December 31, 2019.

Projected pension contributions represent the Company's expected funding contributions for the next five years.

Postretirement obligations represent expected payments to retirees for medical and life insurance coverage for the next ten years. Pension and postretirement obligation projections require the use of numerous estimates and assumptions such as discount rates, rates of return on plan assets, compensation increases, health care cost increases, mortality and employee turnover and have therefore been provided for only five years for pension and ten years for postretirement.

Purchase obligations include commitments for raw materials and utilities at December 31, 2019. These commitments specify significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable pricing provisions; and the approximate timing of transactions.

The table above excludes $41 of liabilities for unrecognized tax benefits because the Company is unable to estimate when these amounts may be paid, if at all. See Note S to the consolidated financial statements for additional information on the Company's unrecognized tax benefits.

In order to reduce leverage and future interest payments, the Company may from time to time repurchase outstanding notes and debentures with cash or seek to refinance its existing credit facilities and other indebtedness. The Company will evaluate any such transactions in light of then existing market conditions and may determine not to pursue such transactions.

MARKET RISK

In the normal course of business the Company is subject to risk from adverse fluctuations in foreign exchange rates, interest rates and commodity prices. The Company manages these risks through a program that includes the use of derivative financial instruments, primarily swaps and forwards. Counterparties to these contracts are major financial institutions. These instruments are viewed as risk management tools, involve little complexity, and are not used for trading or speculative purposes. The extent to which the Company uses such instruments is dependent upon its access to them in the financial markets and its use of other methods, such as netting exposures for foreign exchange risk and establishing sales arrangements that permit the pass-through to customers of changes in commodity prices and foreign exchange rates, to effectively achieve its goal of risk reduction. The Company's objective in managing its exposure to market risk is to limit the impact on earnings and cash flow.

The Company manages foreign currency exposures at the operating unit level. Exposures that cannot be naturally offset within an operating unit may be hedged with derivative financial instruments where possible and cost effective in the Company's judgment. Foreign exchange contracts generally mature within twelve months.

The table below provides information in U.S. dollars as of December 31, 2019 about the Company's forward currency exchange contracts. The contracts primarily hedge anticipated transactions, unrecognized firm commitments and intercompany debt. The contracts with no amounts in the fair value column have a fair value of less than $1.

Buy/Sell	Contract amount	Contract fair value gain/(loss)	Average contractual exchange rate
Euro/Sterling	$ 583	$ (15)	1.14
Euro/U.S. dollars	385	—	0.89
Sterling/Euro	230	9	0.88
Euro/Polish zloty	151	(1)	0.23
Polish zloty/Euro	144	1	4.33
U.S. dollars/Euro	100	4	1.19
Euro/Swiss francs	93	—	0.92
Singapore dollars/U.S. dollars	83	1	1.36
Euro/Singapore dollars	78	—	0.66
U.S. dollars/Brazilian real	75	(2)	0.24
U.S. dollars/Thai baht	51	(2)	0.03
Euro/Swedish krona	42	—	0.10
Euro/Danish krone	41	—	0.13
Sterling/U.S. dollars	32	1	0.77
	$ 2,088	$ (4)	

At December 31, 2019, the Company had additional contracts with an aggregate notional value of $101 to purchase or sell other currencies, primarily Asian currencies, including the Malaysian ringgit, Indonesian rupiah, and Hong Kong dollar; European currencies, including the Hungarian florint; the South African rand; the Australian dollar; and the Canadian dollar. The aggregate fair value of these contracts was a loss of less than $1.

At December 31, 2019, the Company had cross-currency swaps with aggregate notional values of $1,075 (€947). The swaps are designated as hedges of the Company's net investment in a euro-based subsidiary and matures in 2026. The fair value of these contracts at December 31, 2019 was a net gain of $49.

The Company, from time to time, may manage its interest rate risk associated with fluctuations in variable interest rates through interest rate swaps. The use of interest rate swaps and other methods of mitigating interest rate risk may increase overall interest expense.

The table below presents principal cash flows and related interest rates by year of maturity for the Company's long-term debt obligations as of December 31, 2019. Interest rates represent the rates in effect as of December 31, 2019.

	Year of Maturity					
Debt	2020	2021	2022	2023	2024	Thereafter
Fixed rate	$ 21	$ 3	$ 732	$ 1,996	$ 678	$ 2,904
Average interest rate	6.1%	7.0%	4.0%	2.9%	2.6%	4.4%
Variable rate	$ 41	$ 41	$ 81	$ 80	$ 1,364	$ 3
Average interest rate	3.0%	3.0%	3.0%	3.0%	3.0%	2.6%

Total future payments of long-term debt obligations at December 31, 2019 include $3,805 of U.S. dollar-denominated debt, $4,133 of euro-denominated debt and $6 of debt denominated in other currencies.

The Company uses various raw materials, such as steel and aluminum in its manufacturing operations, which expose it to risk from adverse fluctuations in commodity prices. In 2019, consumption of steel and aluminum represented 20% and 34% of the Company's consolidated cost of products sold, excluding depreciation and amortization. The Company primarily manages its risk to adverse commodity price fluctuations and surcharges through contracts that pass through raw material costs to customers. The Company may, however, be unable to increase its prices to offset increases in raw material costs without suffering reductions in unit volume, revenue and operating income, and any price increases may take effect after related cost increases, reducing operating income in the near term. As of December 31, 2019, the Company had forward commodity contracts to hedge aluminum price fluctuations with a notional value of $327 and a net loss of $11. The maturities of the commodity contracts closely correlate to the anticipated purchases of those commodities.

In addition, the Company's manufacturing facilities are dependent, to varying degrees, upon the availability of water and processed energy, such as natural gas and electricity.

See Note N to the consolidated financial statements for further information on the Company's derivative financial instruments.

OFF-BALANCE SHEET ARRANGEMENTS

The Company has certain guarantees and indemnification agreements that could require the payment of cash upon the occurrence of certain events. The guarantees and agreements are further discussed under Note P to the consolidated financial statements. The Company also utilizes receivables securitization and factoring facilities and derivative financial instruments as further discussed under Note E and Note N to the consolidated financial statements.

ENVIRONMENTAL MATTERS

Compliance with the Company's Environmental Protection Policy is mandatory and the responsibility of each employee of the Company. The Company is committed to the protection of human health and the environment and is operating within the increasingly complex laws and regulations of national, state, and local environmental agencies or is taking action to achieve compliance with such laws and regulations. Environmental considerations are among the criteria by which the Company evaluates projects, products, processes and purchases.

The Company is dedicated to a long-term environmental protection program and has initiated and implemented many pollution prevention programs with an emphasis on source reduction. The Company continues to reduce the amount of metal used in the manufacture of steel and aluminum containers through "lightweighting" programs. The Company recycles nearly 100% of scrap aluminum, steel and copper used in its manufacturing processes. Many of the Company's programs for pollution prevention reduce operating costs and improve operating efficiencies.

The potential impact on the Company's operations of climate change and potential future climate change regulation in the jurisdictions in which the Company operates is highly uncertain. See the risk factor entitled "The Company is subject to costs and liabilities related to stringent environmental and health and safety standards" in Part I, Item 1A of this Annual Report.

See Note R to the consolidated financial statements for additional information on environmental matters including the Company's accrual for environmental remediation costs.

INFLATION

Certain of the Company's sales contracts contain non-metal pass-through provisions that include annual selling price adjustments based on a producer price index. In certain years the referenced index may be negative, requiring the Company to reduce its selling prices while its actual costs may have increased.

CRITICAL ACCOUNTING POLICIES

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America which require that management make numerous estimates and assumptions. Actual results could differ from those estimates and assumptions, impacting the reported results of operations and financial position of the Company. The Company's significant accounting policies are more fully described under Note A to the consolidated financial statements. Certain accounting policies, however, are considered to be critical in that (i) they are most important to the depiction of the Company's financial condition and results of operations and (ii) their application requires management's most subjective judgment in making estimates about the effect of matters that are inherently uncertain.

Asbestos Liabilities

The Company's potential liability for asbestos cases is highly uncertain due to the difficulty of forecasting many factors, including the level of future claims, the rate of receipt of claims, the jurisdiction in which claims are filed, the nature of future claims (including the seriousness of alleged disease, whether claimants allege first exposure to asbestos before or during 1964 and the alleged link to Crown Cork), the terms of settlements of other defendants with asbestos-related liabilities, bankruptcy filings of other defendants (which may result in additional claims and higher settlement demands for non-bankrupt defendants) and the effect of state asbestos legislation (including the validity and applicability of the Pennsylvania legislation to non-Pennsylvania jurisdictions, where the substantial majority of the Company's asbestos cases are filed). See Note O to the consolidated financial statements for additional information regarding the provision for asbestos-related costs.

At the end of each quarter, the Company considers whether there have been any material developments that would cause it to update its asbestos accrual calculations. Absent any significant developments in the asbestos litigation environment in general or with respect to the Company specifically, the Company updates its accrual calculations in the fourth quarter of each year. The Company estimates its liability without limitation to a specified time period and provides for the estimated amounts expected to be paid related to outstanding claims, projected future claims and legal costs.

Outstanding claims used in the accrual calculation are adjusted for factors such as claims filed in those states where the Company's liability is limited by statute, claims alleging first exposure to asbestos after 1964 which are assumed to have no value and claims which are unlikely to ever be paid and are assumed to have a reduced or nominal value based on the length of time outstanding. Projected future claims are calculated based on actual data for the most recent five years and are adjusted to account for the expectation that a percentage of these claims will never be paid. Outstanding and projected claims are multiplied by the average settlement cost of claims for the most recent five years. As claims are not submitted or settled evenly throughout the year, it is difficult to predict at any time during the year whether the number of claims or average settlement cost over the five year period ending December 31 of such year will increase compared to the prior five year period.

The five year average settlement cost per claim was $13,800 in 2017, $14,900 in 2018 and $14,400 in 2019. While the average settlement cost per claim decreased in 2019 compared to 2018, the decrease was offset in the Company's accrual calculation by an increase in projected future claim settlements.

In recent years, a higher percentage of Crown Cork's settlements have related to claims alleging serious disease (primarily mesothelioma) which are settled at higher dollar amounts. Accordingly, a higher percentage of claims projected into the future continue to relate to serious diseases and are therefore valued at higher dollar amounts. For example, in each of the years 2019, 2018 and 2017, of the projected claims related to claimants alleging first exposure to asbestos before or during 1964 and filed in states that have not enacted asbestos legislation, approximately 60% relate to claims alleging serious diseases such as mesothelioma.

Although the five year average settlement cost per claim decreased in 2019, if Crown Cork continues to settle a high percentage of claims alleging serious disease at higher dollar amounts, average settlement costs per claim are likely to increase and, if not offset by a reduction in overall claims and settlements, the Company may record additional charges in the future. A 10% change in either the average cost per claim or the number of projected claims would increase or decrease the estimated liability at December 31, 2019 by $27. A 10% increase in these two factors at the same time would increase the estimated liability at December 31, 2019 by $57. A 10% decrease in these two factors at the same time would decrease the estimated liability at December 31, 2019 by $52.

Goodwill Impairment

The Company performs a goodwill impairment review in the fourth quarter of each year or when facts and circumstances indicate goodwill may be impaired. In accordance with the accounting guidance, the Company may first perform a qualitative assessment on none, some, or all of its reporting units to determine whether further quantitative impairment testing is necessary. Factors that the Company may consider in its qualitative assessment include, but are not limited to, general economic conditions, changes in the markets in which the Company operates and changes in input costs that may affect revenue growth, gross margin percentages and cash flow trends over multiple periods.

The quantitative impairment test involves a number of assumptions and judgments, including the calculation of fair value for the Company's identified reporting units. The Company determines the estimated fair value for each reporting unit based on an average of the estimated fair values calculated using both market and income approaches. The Company uses an average of the two methods in estimating fair value because it believes they both provide an appropriate fair value for the reporting units. The Company's estimates of future cash flows include assumptions concerning future operating performance and economic conditions and may differ from actual future cash flows. Under the market approach, the Company obtains available information regarding multiples used in recent transactions, if any, involving transfers of controlling interests in the consumer and industrial packaging industries.

The Company also reviews publicly available trading multiples based on the enterprise value and revenue of companies in the consumer and industrial packaging industries whose shares are publicly traded. The appropriate multiple is applied to the respective financial results of the reporting unit to obtain an estimated fair value.

Under the income approach, fair value is calculated as the sum of the projected discounted cash flows of the reporting unit over the next five years and the terminal value at the end of those five years. The projected cash flows generally include moderate to no growth assumptions, depending on the reporting unit, unless there has recently been a material change in the business or a material change is forecasted. The discount rate used is based on the average weighted-average cost of capital of companies in the consumer and industrial packaging industries, which information is available through various sources, adjusted for specific risk premiums for each reporting unit

The Company completed its annual review for 2019 and recorded an impairment charge of $25 related to the European Aerosol and Promotional Packaging reporting unit as further described below. The fair value of all other reporting units exceeded their carrying value as of October 1, 2019. Although an impairment charge was not recorded for any of the Company's other reporting units, there can be no assurances that future goodwill impairments will not occur.

The European Aerosol and Promotional Packaging reporting unit operates in a low-growth environment with multiple competitors. In recent years, market demand for three-piece aerosol packaging has gradually declined. This decline combined with higher operating costs that have not been fully recovered through selling prices had an adverse impact on the expected future cash flows utilized in the Company's valuation. As a result, the reporting unit's fair value has declined below its carrying value. The fair value of the reporting unit was determined using a discount rate of 9.25% and an EBITDA multiple of 8.0 times. The maximum effect of weighting the Company's valuation approaches other than equally would have resulted in an additional impairment charge of $10. Assuming all other factors remain the same, a $1 change in forecasted annual Adjusted EBITDA changes the estimated fair value by $8 and an increase in the discount rate from 9.25% to 10.25% changes the estimated fair value by $2. If future cash flows are less than the Company has included in its projections, additional impairment charges may be recorded. As of December 31, 2019, the reporting unit had $68 of goodwill.

As of October 1, 2019 the estimated fair value of the Protective Packaging reporting unit, which is included in the Transit Packaging segment, was 6% higher than its carrying value using the methods described above, a discount rate of 9.25%, revenue multiples ranging from 1.4 to 1.8 times and EBITDA multiples of 8.5 to 12.6 times. The maximum effect of weighting the Company's valuation approaches other than equally would have resulted in an impairment charge of $7. Assuming all other factors remain the same, a $1 change in forecasted annual Adjusted EBITDA changes the excess of estimated fair value over carrying value by $8 and an increase in the discount rate from 9.25% to 10.25% decreases the fair value by $61. Increasing the discount rate to 10.25% would have resulted in an impairment of $2. As of December 31, 2019, the reporting unit had $454 of goodwill. In January 2020, based upon an internal reorganization, the Protective Packaging reporting unit was merged into the Industrial Solutions reporting unit, which is also included in the Transit Packaging segment.

As of October 1, 2019, the estimated fair value of the Equipment & Tools reporting unit, which is included in the Transit Packaging segment was 9% higher than its carrying value using the methods described above, including a discount rate of 12.25%, revenue multiples ranging from 2.0 to 2.4 times and EBITDA multiples of 10.0 to 10.4 times. The maximum effect of weighting the Company's valuation approaches other than equally would have not resulted in an impairment charge. Assuming all other factors remain the same, a $1 change in forecasted annual Adjusted EBITDA changes the excess of estimated fair value over carrying value by $7 and an increase in the discount rate from 12.25% to 13.25% changes the excess of the fair value over carrying value by $54. Under each of these scenarios, the reporting unit's fair value exceeded its carrying value. If Adjusted EBITDA margin decreased by 2.7% the fair value of the reporting unit would approximate carrying value. As of December 31, 2019, the reporting unit had $765 of goodwill.

Each of these reporting units operate in low-growth environments with multiple competitors, which could result in lower selling prices. While the Company believes current projections are reasonable, the reporting units' ability to maintain or grow could be negatively impacted by the above factors. To the extent future operating results were to decline causing the estimated fair value to fall below carrying value, it is possible that additional impairment charges may be recorded.

<u>Long-lived Assets Impairment</u>

The Company performs an impairment review of its long-lived assets, including definite-lived intangible assets and property, plant and equipment, when facts and circumstances indicate the carrying value may not be recoverable from its undiscounted cash flows. Any impairment loss is measured by comparing the carrying amount of the asset to its fair value. The Company's estimates of future cash flows involve assumptions concerning future operating performance, economic conditions and technological changes that may affect the future useful lives of the assets. These estimates may differ from actual cash flows or useful lives.

Tax Valuation Allowance

The Company records a valuation allowance to reduce its deferred tax assets when it is more likely than not that a portion of the tax assets will not be realized. The estimate of the amount that will not be realized requires the use of assumptions concerning the Company's future taxable income. These estimates are projected through the life of the related deferred tax assets based on assumptions that management believes are reasonable. The Company considers all sources of taxable income in estimating its valuation allowances, including taxable income in any available carry back period; the reversal of taxable temporary differences; tax-planning strategies; and taxable income expected to be generated in the future other than from reversing temporary differences. Should the Company change its estimate of the amount of deferred tax assets that it would be able to realize, an adjustment to the valuation allowance would result in an increase or decrease in tax expense in the period such a change in estimate was made.

See Note S to the consolidated financial statements for additional information on the Company's valuation allowances, which included a release of $36 in 2019.

Pension and Postretirement Benefits

Accounting for pensions and postretirement benefit plans requires the use of estimates and assumptions regarding numerous factors, including discount rates, rates of return on plan assets, compensation increases, health care cost increases, future rates of inflation, mortality and employee turnover. Actual results may differ from the Company's actuarial assumptions, which may have an impact on the amount of reported expense or liability for pensions or postretirement benefits. The Company recorded pension expense of $66, including settlement charges of $44 and a curtailment gain of $14, in 2019 and currently projects its 2020 pension expense to be $22, using foreign currency exchange rates in effect at December 31, 2019. In addition, the Company may incur additional settlement charges of approximately $30 in 2020. The Company uses the spot yield curve approach to estimate the service and interest cost components of pension and postretirement benefits expense by applying the specific spot rates along the yield curve used to determine the benefit plan obligations to relevant projected cash outflows. The expected long-term rate of return on plan assets is determined by taking into consideration expected long-term returns associated with each major asset class based on long-term historical ranges, projected future outlook of each asset class, inflation assumptions and the expected net value from active management of the assets based on actual results.

The U.S. plan's assumed rate of return was 7.25 % in 2019 and is 6.75% for 2020. The U.K. plan's assumed rate of return was 4.25% in 2019 and is 3.50% for 2020. A 0.25% change in the expected rates of return would change 2020 pension expense by approximately $12.

Discount rates were selected using a method that matches projected payouts from the plans to an actuarially determined yield curve based on market observable AA bond yields in the respective plan jurisdictions and currencies. In certain jurisdictions, government securities were used along with corporate bonds to develop country-specific yield curves to the extent that the underlying markets were not deemed sufficiently developed. A 0.25% change in the discount rates from those used at December 31, 2019 would change 2020 pension expense by approximately $2 and postretirement expense by less than $1. A 0.25% change in the discount rates from those used at December 31, 2019 would have changed the pension benefit obligation by approximately $145 and the postretirement benefit obligation approximately $3 as of December 31, 2019. See Note R to the consolidated financial statements for additional information on pension and postretirement benefit obligations and assumptions.

As of December 31, 2019, the Company had pre-tax unrecognized net losses in other comprehensive income of $1,808 related to its pension plans and $42 related to its other postretirement benefit plans. Unrecognized gains and losses arise each year primarily due to changes in discount rates, differences in actual plan asset returns compared to expected returns, and changes in actuarial assumptions such as mortality. For example, the unrecognized net loss in the Company's pension plans included a current year gain of $410 primarily due to actual asset returns higher than expected returns, partially offset by a loss of $357 primarily due to lower discount rates at the end of 2019 compared to 2018. Unrecognized gains and losses are accumulated in other comprehensive income and the portion in each plan that exceeds 10% of the greater of that plan's assets or projected benefit obligation is amortized to income over future periods. The Company's pension expense for the year ended December 31, 2019 included charges of $93 for the amortization of unrecognized net losses, and the Company estimates charges of $94 in 2020. Amortizable losses are being recognized over either the average expected life of inactive employees or the remaining service life of active participants depending on the status of the individual plans. The weighted average amortization periods range between 6 - 19 years. An increase of 10% in the number of years used to amortize unrecognized losses in each plan would decrease estimated charges for 2020 by $9. A decrease of 10% in the number of years would increase the estimated 2020 charge by $11.

The unrecognized net losses in the Company's postretirement benefit plans are being recognized over the average remaining service life of active participants of 10 years. The Company's postretirement benefits expense for the year ended December 31, 2019 included a loss of $3 for the amortization of unrecognized net losses, and the Company estimates losses of $4 in 2020.

RECENT ACCOUNTING GUIDANCE

In June 2016, the FASB issued new guidance on the accounting for credit losses on financial instruments. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in operating leases and off-balance-sheet credit exposures. This guidance is effective for the Company on January 1, 2020. The Company is currently evaluating the impact of adopting this standard and does not expect the guidance to have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued new guidance which aligns the accounting for implementation costs incurred in a cloud computing arrangement that is a service arrangement (i.e. hosting arrangement) with the guidance on capitalizing costs for internal use software. The Company will adopt this standard on a prospective basis on January 1, 2020 and does not expect the guidance to have a material impact on the Company's consolidated financial statements.

In December 2019, the FASB issued new guidance to simplify the accounting for income taxes by, among other things, reducing complexity in the interim-period accounting for year-to-date loss limitations and changes in tax laws. The guidance is effective for the Company on January 1, 2021. The Company does not expect the guidance to have a material impact on the consolidated financial statements.

See Note A to the consolidated financial statements for information on recently adopted accounting guidance.

FORWARD LOOKING STATEMENTS

Statements in this Annual Report, including those in “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” in the discussions of the provision for asbestos under Note O and other contingencies under Note P to the consolidated financial statements included in this Annual Report and in discussions incorporated by reference into this Annual Report (including, but not limited to, those in the section titled “Compensation Discussion and Analysis” in the Company’s Proxy Statement), which are not historical facts (including any statements concerning plans and objectives of management for future operations or economic performance, or assumptions related thereto), are “forward-looking statements,” within the meaning of the federal securities laws. In addition, the Company and its representatives may from time to time make other oral or written statements which are also “forward-looking statements.” Forward-looking statements can be identified by words, such as “believes,” “estimates,” “anticipates,” “expects” and other words of similar meaning in connection with a discussion of future operating or financial performance. These may include, among others, statements relating to (i) the Company’s plans or objectives for future operations, products or financial performance, (ii) the Company’s indebtedness and other contractual obligations, (iii) the impact of an economic downturn or growth in particular regions, (iv) anticipated uses of cash, (v) cost reduction efforts and expected savings, (vi) the Company’s policies with respect to executive compensation and (vii) the expected outcome of contingencies, including with respect to asbestos-related litigation and pension and postretirement liabilities.

These forward-looking statements are made based upon management’s expectations and beliefs concerning future events impacting the Company and, therefore, involve a number of risks and uncertainties. Management cautions that forward-looking statements are not guarantees and that actual results could differ materially from those expressed or implied in the forward-looking statements.

Important factors that could cause the actual results of operations or financial condition of the Company to differ include, but are not necessarily limited to, the ability of the Company to expand successfully in international and emerging markets; the ability of the Company to repay, refinance or restructure its short and long-term indebtedness on adequate terms and to comply with the terms of its agreements relating to debt; the impact of Brexit; the Company’s ability to generate significant cash to meet its obligations and invest in its business and to maintain appropriate debt levels; restrictions on the Company’s use of available cash under its debt agreements; changes or differences in U.S. or international economic or political conditions, such as inflation or fluctuations in interest or foreign exchange rates (and the effectiveness of any currency or interest rate hedges), tax rates, the Tax Act and other tax laws (including with respect to taxation of unrepatriated non-U.S. earnings or as a result of the depletion of net loss or foreign tax credit carryforwards); the impact of foreign trade laws and practices; the collectability of receivables; war or acts of terrorism that may disrupt the Company’s production or the supply or pricing of raw materials, including in the Company’s Middle East operations, impact the financial condition of customers or adversely affect the Company’s ability to refinance or restructure its remaining indebtedness; changes in the availability and pricing of raw materials (including aluminum can sheet, steel tinplate, energy, water, inks and coatings) and the Company’s ability to pass raw material, energy and freight price increases and surcharges through to its customers or to otherwise manage these commodity pricing risks; the Company’s ability to obtain and maintain adequate pricing for its products, including the impact on the Company’s revenue, margins and market share and the ongoing impact of price increases; energy and natural resource costs; the cost and other effects of legal and administrative cases and proceedings, settlements and investigations; the outcome of asbestos-related litigation (including the number and size of future claims and the terms of settlements, and the impact of bankruptcy filings by other companies with asbestos-related liabilities, any of which could increase Crown Cork's asbestos-related costs over time, the adequacy of reserves established for asbestos-related liabilities, Crown Cork's ability to obtain resolution without payment of asbestos-related claims by persons alleging first exposure to asbestos after 1964, and the impact of state legislation dealing with asbestos liabilities and any litigation challenging that legislation and any future state or federal legislation dealing with asbestos liabilities); the Company's ability to realize deferred tax benefits; changes in the Company's critical or other accounting policies or the assumptions underlying those policies; labor relations and workforce and social costs, including the Company's pension and postretirement obligations and other employee or retiree costs; investment performance of the Company's pension plans; costs and difficulties related to the acquisition of a business and integration of acquired businesses; the impact of any potential dispositions, acquisitions or other strategic realignments, which may impact the Company's operations, financial profile, investments or levels of indebtedness; the Company's ability to realize efficient capacity utilization and inventory levels and to innovate new designs and technologies for its products in a cost-effective manner; competitive pressures, including new product developments, industry overcapacity, or changes in competitors' pricing for products; the Company's ability to achieve high capacity utilization rates for its equipment; the Company's ability to maintain, develop and capitalize on competitive technologies for the design and manufacture of products and to withstand competitive and legal challenges to the proprietary nature of such technology; the Company's ability to protect its information technology systems from attacks or catastrophic failure; the strength of the Company's cyber-security (including with respect to human vulnerabilities associated with cyber-security risks); the Company's ability to generate sufficient production capacity; the Company's ability to improve and expand its existing product and product lines; the impact of overcapacity on the end-markets the Company serves; loss of customers, including the loss of any significant customers; changes in consumer preferences for different packaging products; the financial condition of the Company's vendors and customers; weather conditions, including their effect on demand for beverages and on crop yields for fruits and vegetables stored in food containers; the impact of natural disasters, including in emerging markets; changes in governmental regulations or enforcement practices, including with respect to environmental, health and safety matters and restrictions as to foreign investment or operation; the impact of increased governmental regulation on the Company and its products, including the regulation or restriction of the use of bisphenol-A; the impact of the Company's recent initiatives to generate additional cash, including the reduction of working capital levels and capital spending; the impact of the Company's comprehensive Board-led review of its portfolio and capital allocation/return; the ability of the Company to realize cost savings from its restructuring programs; the Company's ability to maintain adequate sources of capital and liquidity; costs and payments to certain of the Company's executive officers in connection with any termination of such executive officers or a change in control of the Company; the impact of existing and future legislation regarding refundable mandatory deposit laws in Europe for non-refillable beverage containers and the implementation of an effective return system; the impact of existing and future legislation regarding the taxation of sugar-sweetened beverages or energy drinks, the impact of new tariffs and potential limits on steel supply in the U.S. from certain foreign countries; and changes in the Company's strategic areas of focus, which may impact the Company's operations, financial profile or levels of indebtedness.

Some of the factors noted above are discussed elsewhere in this Annual Report and prior Company filings with the SEC, including within Part I, Item 1A, "Risk Factors" in this Annual Report. In addition, other factors have been or may be discussed from time to time in the Company's SEC filings.

While the Company periodically reassesses material trends and uncertainties affecting the Company's results of operations and financial condition in connection with the preparation of "Management's Discussion and Analysis of Financial Condition and Results of Operations" and certain other sections contained in the Company's quarterly, annual or other reports filed with the SEC, the Company does not intend to review or revise any particular forward-looking statement in light of future events.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information set forth within "Management's Discussion and Analysis of Financial Condition and Results of Operations" under the captions "Market Risk" and "Forward Looking Statements" in this Annual Report is incorporated herein by reference.

In July 2017, the Financial Conduct Authority (the authority that regulates LIBOR) announced it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. The U.S. Federal Reserve, in conjunction with the Alternative Reference Rate Committee has announced the replacement of U.S. dollar LIBOR rates with a new index calculated by short-term repurchase agreements backed by U.S. Treasury securities called the Secured Overnight Financing Rate (SOFR). The first publication of SOFR was released in April 2018. Whether or not SOFR attains market traction as a LIBOR replacement tool remains in question and the future of LIBOR at this time is uncertain. At December 31, 2019, the Company does have contracts that are indexed to LIBOR, including cross-currency swap contracts and certain of its term loan facilities, and continues to monitor this activity and evaluate the related risks.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Financial Statements

Financial Statement Schedule

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended). The Company's system of internal control over financial reporting is 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.

Because of the inherent limitations, a system of 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.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control - Integrated Framework (2013)*. Based on its assessment, management has concluded that, as of December 31, 2019, the Company's internal control over financial reporting was effective based on those criteria.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2019 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Crown Holdings, Inc.

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Crown Holdings, Inc. and its subsidiaries ("the Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations, of comprehensive income, of changes in shareholders' equity, and of cash flows for each of the three years in the period ended December 31, 2019, including the related notes and financial statement schedule listed in the accompanying index (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, 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, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019 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, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Changes in Accounting Principles

As discussed in Note A to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019 and the manner in which it accounts for revenues from contracts with customers in 2018.

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 matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill Impairment Assessment - European Aerosol and Promotional Packaging, Protective Packaging, and Equipment & Tools Reporting Units

As described in Notes A and G to the consolidated financial statements, the Company's consolidated goodwill balance was $4.4 billion as of December 31, 2019, and, as disclosed by management, the goodwill associated with the European Aerosol and Promotional Packaging, Protective Packaging and Equipment & Tools reporting units was $68 million, $454 million, and $765 million, respectively. The Company performs a goodwill impairment review in the fourth quarter of each year or when facts and circumstances indicate goodwill may be impaired. The Company completed its annual review for 2019 and recorded an impairment charge of $25 million related to the European Aerosol and Promotional Packaging reporting unit. The estimated fair value of the Protective Packaging and Equipment & Tools reporting units were 6%, and 9%, respectively, higher than the carrying value. Management determines the estimated fair value of the reporting unit based on an average of the estimated fair values using an income and a market approach. Management's income approach utilizes significant assumptions, including revenue and adjusted EBITDA margin growth rates and discount rate.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the European Aerosol and Promotional Packaging, Protective Packaging, and Equipment & Tools reporting units is a critical audit matter are there was significant judgment by management when developing their estimated fair values. This in turn led to a high degree of auditor judgment, subjectivity and effort in performing procedures and evaluating significant assumptions, within management's cash flow projections used in the income approach including revenue and adjusted EBITDA margin growth rates and the discount rate. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

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 management's goodwill impairment assessment, including controls over the estimation of the fair value of the reporting units. These procedures also included, among others, testing management's process for estimating the fair value of the European Aerosol and Promotional Packaging, Protective Packaging, and Equipment & Tools reporting units, testing the completeness, accuracy, and relevance of the underlying data used in the income approach, and evaluating the significant assumptions used by management, including the revenue and adjusted EBITDA margin growth rates and the discount rate. Evaluating management's assumptions related to the revenue and adjusted EBITDA margin growth rates included evaluating whether the judgments made by management were reasonable considering the current and past performance of the reporting units, the consistency with external market and industry data, and whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's fair value model and certain significant assumptions, including the discount rate.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania
February 28, 2020

We have served as the Company's auditor since 1928.

CONSOLIDATED STATEMENTS OF OPERATIONS
(in millions except per share data)

For the Years Ended December 31	2019	2018	2017
Net sales	$ 11,665	$ 11,151	$ 8,698
Cost of products sold, excluding depreciation and amortization	9,349	9,028	7,006
Depreciation and amortization	490	425	247
Selling and administrative expense	631	558	367
Provision for asbestos	—	—	3
Restructuring and other	(26)	44	51
Goodwill impairment	25	—	—
Income from operations	1,196	1,096	1,024
Loss from early extinguishments of debt	27	—	7
Other pension and postretirement	13	(25)	(53)
Interest expense	378	384	252
Interest income	(17)	(21)	(15)
Foreign exchange	9	18	4
Income before income taxes	786	740	829
Provision for income taxes	166	216	401
Equity in net earnings of affiliates	5	4	—
Net income	625	528	428
Net income attributable to noncontrolling interests	(115)	(89)	(105)
Net income attributable to Crown Holdings	$ 510	$ 439	$ 323
Earnings per common share attributable to Crown Holdings:			
Basic	$ 3.81	$ 3.28	$ 2.39
Diluted	$ 3.78	$ 3.28	$ 2.38

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in millions)

For the Years Ended December 31	2019	2018	2017
Net income	$ 625	$ 528	$ 428
Other comprehensive income / (loss), net of tax			
Foreign currency translation adjustments	150	(137)	201
Pension and other postretirement benefits	84	50	(59)
Derivatives qualifying as hedges	11	(52)	20
Total other comprehensive income / (loss)	245	(139)	162
Total comprehensive income	870	389	590
Net income attributable to noncontrolling interests	(115)	(89)	(105)
Translation adjustments attributable to noncontrolling interests	(1)	1	(3)
Derivatives qualifying as hedges attributable to noncontrolling interests	(1)	2	—
Comprehensive income attributable to Crown Holdings	$ 753	$ 303	$ 482

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED BALANCE SHEETS
(in millions, except share data)

December 31	2019	2018
Assets		
Current assets		
Cash and cash equivalents	$ 607	$ 607
Receivables, net	1,528	1,602
Inventories	1,626	1,690
Prepaid expenses and other current assets	241	180
Total current assets	4,002	4,079
Goodwill	4,430	4,442
Intangible assets	2,015	2,193
Property, plant and equipment, net	3,887	3,745
Operating lease right-of-use assets, net	204	—
Other non-current assets	967	803
Total	$ 15,505	$ 15,262
Liabilities and equity		
Current liabilities		
Short-term debt	$ 75	$ 89
Current maturities of long-term debt	62	81
Current portion of operating lease liabilities	51	—
Accounts payable	2,646	2,732
Accrued liabilities	1,065	1,011
Total current liabilities	3,899	3,913
Long-term debt, excluding current maturities	7,818	8,493
Postretirement and pension liabilities	683	683
Non-current portion of operating lease liabilities	156	—
Other non-current liabilities	857	887
Commitments and contingent liabilities (Note P)		
Equity		
Noncontrolling interests	379	349
Preferred stock, authorized: 30,000,000; none issued (Note T)	—	—
Common stock, par value: $5.00; authorized: 500,000,000 shares; issued:		
185,744,072 shares (Note T)	929	929
Additional paid-in capital	207	186
Accumulated earnings	3,959	3,449
Accumulated other comprehensive loss	(3,131)	(3,374)
Treasury stock at par value (2019 - 50,166,194 shares; 2018 - 50,570,124 shares)	(251)	(253)
Crown Holdings shareholders' equity	1,713	937
Total equity	2,092	1,286
Total	$ 15,505	$ 15,262

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

For the Years Ended December 31	2019	2018	2017
Cash flows from operating activities			
Net income	$ 625	$ 528	$ 428
Adjustments to reconcile net income to net cash provided by / (used for) operating activities:			
Depreciation and amortization	490	425	247
Restructuring and other	(26)	44	51
Goodwill impairment	25	—	—
Pension expense	66	45	13
Pension contributions	(23)	(20)	(294)
Stock-based compensation	29	27	23
Deferred income taxes	(35)	35	247
Changes in assets and liabilities:			
Receivables	60	(493)	(1,143)
Inventories	61	(201)	(65)
Accounts payable and accrued liabilities	(87)	209	253
Other, net	(22)	(28)	(11)
Net cash provided by / (used for) operating activities	1,163	571	(251)
Cash flows from investing activities			
Capital expenditures	(432)	(462)	(498)
Beneficial interest in transferred receivables	—	490	1,010
Acquisition of businesses, net of cash acquired	(11)	(3,912)	—
Foreign exchange derivatives related to acquisition	—	(25)	—
Net investment hedges	23	34	—
Proceeds from sale of property, plant and equipment	39	36	8
Other	7	(4)	(24)
Net cash (used for) / provided by investing activities	(374)	(3,843)	496
Cash flows from financing activities			
Proceeds from long-term debt	2,216	4,082	1,054
Payments of long-term debt	(2,845)	(333)	(1,137)
Net change in revolving credit facility and short-term debt	(10)	(69)	95
Finance lease payments	(15)	—	—
Debt issuance costs	(18)	(70)	(16)
Common stock issued	4	1	9
Common stock repurchased	(7)	(4)	(339)
Dividends paid to noncontrolling interests	(101)	(60)	(93)
Contribution from noncontrolling interests	6	—	—
Foreign exchange derivatives related to debt	(16)	(14)	27
Net cash (used for) / provided by financing activities	(786)	3,533	(400)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	1	(37)	14
Net change in cash, cash equivalents and restricted cash	4	224	(141)
Cash, cash equivalents and restricted cash at January 1	659	435	576
Cash, cash equivalents and restricted cash at December 31	$ 663	$ 659	$ 435

The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(in millions)

	Crown Holdings, Inc. Shareholders' Equity							
	Common Stock	Paid-in Capital	Accumulated Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Total Crown Equity	Noncontrolling Interests	Total Shareholders' Equity
Balance at January 1, 2017	$ 929	$ 446	$ 2,621	$ (3,400)	$ (230)	$ 366	$ 302	$ 668
Net income			323			323	105	428
Cumulative effect of change in accounting principle			60			60		60
Other comprehensive income				159		159	3	162
Dividends paid to noncontrolling interests						—	(93)	(93)
Contribution from noncontrolling interests						—	5	5
Restricted stock awarded		(1)			1	—		—
Stock-based compensation		23				23		23
Common stock issued		7			2	9		9
Common stock repurchased		(308)			(31)	(339)		(339)
Balance at December 31, 2017	$ 929	$ 167	$ 3,004	$ (3,241)	$ (258)	$ 601	$ 322	$ 923
Net income			439			439	89	528
Cumulative effect of change in accounting principle			6	3		9	1	10
Other comprehensive income				(136)		(136)	(3)	(139)
Dividends paid to noncontrolling interests						—	(60)	(60)
Restricted stock awarded		(5)			5	—		—
Stock-based compensation		27				27		27
Common stock issued		1				1		1
Common stock repurchased		(4)				(4)		(4)
Balance at December 31, 2018	$ 929	$ 186	$ 3,449	$ (3,374)	$ (253)	$ 937	$ 349	$ 1,286
Net income			510			510	115	625
Other comprehensive loss				243		243	2	245
Dividends paid to noncontrolling interests						—	(101)	(101)
Contribution from noncontrolling interests						—	10	10
Sale of noncontrolling interests		(3)				(3)	4	1
Restricted stock awarded		(2)			2	—		—
Stock-based compensation		29				29		29
Common stock issued		4				4		4
Common stock repurchased		(7)				(7)		(7)
Balance at December 31, 2019	$ 929	$ 207	$ 3,959	$ (3,131)	$ (251)	$ 1,713	$ 379	$ 2,092

The accompanying notes are an integral part of these consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(in millions, except share, per share, employee and statistical data)

A. Summary of Significant Accounting Policies

Business and Principles of Consolidation. The consolidated financial statements include the accounts of Crown Holdings, Inc. (the “Company”) and its consolidated subsidiary companies (where the context requires, the “Company” shall include reference to the Company and its consolidated subsidiary companies).

The Company is a worldwide leader in the design, manufacture and sale of packaging products and equipment for consumer goods and industrial products. The Company’s packaging for consumer goods include steel and aluminum cans for beverage, food, household and other consumer products, glass bottles for beverage products and metal vacuum closures and steel crowns sold through the Company's sales organization to the soft drink, food, citrus, brewing, household products, personal care and various other industries. The Company's packaging for industrial products includes steel and plastic strap consumables and equipment, paper-based protective packaging, and plastic film consumables and equipment, which are sold into the metals, food and beverage, construction, agricultural, corrugated and general industries.

The financial statements were prepared in conformity with accounting principles generally accepted in the United States of America and reflect management’s estimates and assumptions. Actual results could differ from those estimates, impacting reported results of operations and financial position. All intercompany accounts and transactions are eliminated in consolidation. In deciding which entities should be reported on a consolidated basis, the Company first determines whether the entity is a variable interest entity (“VIE”). If an entity is a VIE, the Company determines whether it is the primary beneficiary and therefore, should consolidate the VIE. If an entity is not a VIE, the Company consolidates those entities in which it has control, including certain subsidiaries that are not majority-owned. Certain of the Company’s agreements with noncontrolling interests contain provisions in which the Company would surrender certain decision-making rights upon a change in control of the Company. Accordingly, consolidation of these operations may no longer be appropriate subsequent to a change in control of the Company, as defined in the agreements. Investments in companies in which the Company does not have control, but has the ability to exercise significant influence over operating and financial policies, are accounted for by the equity method. Other investments are carried at cost.

Foreign Currency Translation. For non-U.S. subsidiaries which operate in a local currency environment, assets and liabilities are translated into U.S. dollars at year-end exchange rates. Income, expense and cash flow items are translated at average exchange rates prevailing during the year. Translation adjustments for these subsidiaries are accumulated as a separate component of accumulated other comprehensive income in equity. For non-U.S. subsidiaries that use a U.S. dollar functional currency, local currency inventories and property, plant and equipment are translated into U.S. dollars at rates prevailing when acquired; all other assets and liabilities are translated at year-end exchange rates. Inventories charged to cost of sales and depreciation are remeasured at historical rates; all other income and expense items are translated at average exchange rates prevailing during the year. Gains and losses which result from remeasurement are included in earnings.

Revenue Recognition. On January 1, 2018, the Company adopted new accounting guidance which outlined a single comprehensive model to use in accounting for revenue arising from contracts with customers and superseded previous revenue recognition guidance. Under previous guidance, the Company generally recognized revenue from product sales when the goods were shipped and title and risk of loss passed to the customer. Under the new guidance, revenues are recognized when control of the promised product is transferred to customers.

The majority of the Company’s revenues from metal packaging products are derived from multi-year requirement contracts with leading manufacturers and marketers of packaged consumer products for can sets, comprising a can and an end. As requirement contracts do not typically include fixed volumes, customers often purchase products pursuant to purchase orders or other communications which are short-term in nature. The can and the end are considered separate performance obligations because they are distinct and separately identifiable. Revenues from the Company's transit packaging segment are generally derived from individual purchase orders which may include multiple goods and services which are separate performance obligations because they are distinct and separately identifiable.

The Company manufactures certain products that have no alternative use to the Company once they are printed or manufactured to customer specifications. If the Company has an enforceable right to payment for custom products at all times in the manufacturing process, revenue is recognized over time. In each of the Company’s geographic markets, revenue from beverage cans is primarily recognized over time using the units produced output method as beverage cans are generally printed for a specific customer in a continuous production process. The timing of revenue recognition for the Company’s other products, including beverage ends and three-piece products, which includes food cans and ends and aerosol cans and ends, may vary as these products may be printed or customized depending upon customer preferences which can vary by geographic market. Revenue that is recognized over time for the Company's three-piece products and equipment business is generally recognized using the cost-to-cost input method as these products involve an intermediary step that results in customized work-in-process inventory. For products that follow a point in time model, revenue is generally recognized when title and risk of loss transfer.

Revenue is measured as the amount of consideration the Company expects to receive in exchange for transferring goods or providing services. Standalone selling prices for each performance obligation are generally stated in the contract. When the Company offers variable consideration in the form of volume rebates to customers, it estimates the most likely amount of revenue to which it is expected to be entitled and includes the estimate in the transaction price, limited to the amount which is probable will not result in reversal of cumulative revenue recognized when the variable consideration is resolved. When the Company offers customers options to purchase additional product at discounted prices, judgment is required to determine if the discounted prices represent material rights. If so, the transaction price allocated to the discount is based on its relative standalone price and is recognized upon purchase of the additional product. Customer payment terms are typically less than one year and as such, the Company has applied the practical expedient to exclude consideration of significant financing components from the determination of transaction price.

Taxes collected from customers and remitted to governmental authorities are excluded from net sales. Shipping and handling fees and costs from product sales are reported as cost of products sold and are accrued when the Company recognizes revenue over time before the shipping and handling activities occur. Costs to obtain a contract are generally immaterial but the Company has elected the practical expedient to expense these costs as incurred if the duration of the contract is one year or less.

Unbilled receivables are recorded for revenue recognized over time when the Company has determined that control has passed to the customer but the customer has not yet been invoiced because the Company does not have present right to payment. The Company generally has a present right to payment when title of product transfers. Unbilled receivables are included in receivables in the Consolidated Balance Sheet with a corresponding decrease to inventory.

Contract assets are recorded for revenue recognized over time when the Company has determined that control for a performance obligation has passed to the customer, but the right to invoice the customer is contingent upon the completion of the performance obligations included in the contract. Contract assets are classified as current as they are expected to be invoiced within one year and may not exceed their net realizable value.

Contract liabilities are established if the Company must defer the recognition of a portion of consideration received because it has to satisfy a future obligation. Contract liabilities are classified as current or noncurrent based on when the Company expects to recognize revenue.

Stock-Based Compensation. For awards with a service or market condition, compensation expense is recognized over the vesting period on a straight-line basis using the grant date fair value of the award and the estimated number of awards that are expected to vest. For awards with a performance condition, the Company assesses the probability of vesting at each reporting period and adjust compensation cost based on its probability assessment. The Company's plans provide for stock awards which may include accelerated vesting upon retirement, disability, or death of eligible employees. The Company considers a stock-based award to be vested when the service period is no longer contingent on the employee providing future service. Accordingly, the related compensation cost is recognized immediately for awards granted to retirement-eligible individuals, or over the period from the grant date to the date that retirement eligibility is achieved if less than the stated vesting period.

Cash, Cash Equivalents and Restricted Cash. Cash equivalents represent investments with maturities of three months or less from the time of purchase and are carried at cost, which approximates fair value because of the short maturity of those instruments. Outstanding checks in excess of funds on deposit are included in accounts payable. The Company generally classifies any cash that is legally restricted as to withdrawal or usage as restricted cash.

Accounts Receivable and Allowance for Doubtful Accounts. Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is the best estimate of the amount of probable credit losses in existing accounts receivable. The allowance is determined based on a review of individual accounts for collectability, generally focusing on those accounts that are past due or experiencing financial difficulties. The current year expense to adjust the allowance for doubtful accounts is recorded within selling and administrative expense in the Consolidated Statements of Operations.

Inventory Valuation. Inventories are stated at the lower of cost or market, with cost principally determined under the first-in, first-out ("FIFO") or average cost method.

Property, Plant and Equipment. Property, plant and equipment ("PP&E") is carried at cost less accumulated depreciation and includes expenditures for new facilities and equipment and those costs which substantially increase the useful lives or capacity of existing PP&E. Cost of constructed assets includes capitalized interest incurred during the construction and development period.

Maintenance and repairs, including labor and material costs for planned major maintenance such as annual production line overhauls, are expensed as incurred. When PP&E is retired or otherwise disposed, the net carrying amount is eliminated with any gain or loss on disposition recognized in earnings at that time.

Depreciation is provided on a straight-line basis over the estimated useful lives of the assets described below (in years). The Company periodically reviews the estimated useful lives of its PP&E and, where appropriate, changes are made prospectively.

Land improvements	25
Buildings and building improvements	25 – 40
Machinery and equipment	3 – 18

Goodwill and Intangible Assets. Assets and liabilities of acquired businesses are recorded under the acquisition method of accounting at their estimated fair values at the dates of acquisition. Goodwill represents costs in excess of fair values assigned to the underlying identifiable net assets of acquired businesses. Goodwill is carried at cost and reviewed for impairment annually in the fourth quarter of each year or when facts and circumstances indicate goodwill may be impaired. Goodwill was allocated to the reporting units at the time of each acquisition based on the relative fair values of the reporting units. In assessing goodwill for impairment, the Company may first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Further quantitative assessment may then be required. The quantitative assessment involves a number of assumptions and judgments, including the calculation of fair value for the Company's identified reporting units. The Company determines the estimated fair value of each reporting unit based on an average of the estimated fair values using an income and a market approach. The income approach utilizes significant assumptions, including revenue and Adjusted EBITDA margin growth rates and discount rate. If the carrying value of a reporting unit exceeds its fair value, any impairment loss is measured by comparing the carrying value of the reporting unit to its fair value, not to exceed the carrying amount of goodwill.

Definite-lived intangible assets are carried at cost less accumulated amortization. Definite-lived intangibles are amortized on a straight-line basis over their estimated useful lives described below (in years). Definite-lived intangible assets are tested for impairment when facts and circumstances indicate the carrying value may not be recoverable from their undiscounted cash flows. If impaired, the assets are written down to fair value based on either discounted cash flows or appraised values.

Customer relationships	11 - 18
Trade names	8 - 27
Technology	6 - 8
Long-term supply contracts	15
Patents	8

Impairment or Disposal of Long-Lived Assets. In the event that facts and circumstances indicate that the carrying value of long-lived assets, primarily PP&E and certain identifiable intangible assets with finite lives, may be impaired, the Company performs a recoverability evaluation. If the evaluation indicates that the carrying value of an asset is not recoverable from its undiscounted cash flows, an impairment loss is measured by comparing the carrying value of the asset to its fair value, based on discounted cash flows. Long-lived assets classified as held for sale are presented in the balance sheet at the lower of their carrying value or fair value less cost to sell.

Leases. The Company has operating and finance leases for land and buildings related to certain manufacturing facilities, warehouses and corporate offices, vehicle fleets and certain office and manufacturing equipment. Leases with an initial term of 12 months or less are not recorded on the balance sheet. The Company's lease terms include options to extend the lease when it is reasonably certain that the Company will exercise the option. Variable lease payment amounts that cannot be determined at commencement of the lease, such as increases in index rates, are not included in the measurement of the lease liabilities and corresponding right-of-use assets and are recognized in the period those payments are incurred. The Company separates lease and non-lease components of lease arrangements and allocates contract consideration based on standalone selling prices. Variable consideration is allocated to the lease and non-lease components to which the variable payments specifically relates. The discount rate implicit within the Company's leases is often not determinable and therefore the Company generally uses its incremental borrowing rate based on the information available at the commencement date of the lease in determining the present value of the lease payments. The incremental borrowing rate is determined based on lease term and the currency in which lease payments are made. The Company's leases do not contain any material residual value guarantees or material restrictive covenants.

Taxes on Income. The provision for income taxes is determined using the asset and liability approach. Deferred taxes represent the future expected tax consequences of differences between the financial reporting and tax bases of assets and liabilities based upon enacted tax rates and laws. The Tax Act created a requirement that certain intangible income of foreign subsidiaries must be included currently in the gross income of the U.S. shareholder. The Company has made an accounting policy election to treat taxes due on future U.S. inclusions in taxable income related to this intangible income as a current period expense when incurred.

Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. Investment tax credits are accounted for using the deferral method. Income tax-related interest and penalties are reported as income tax expense.

Derivatives and Hedging. All outstanding derivative financial instruments are recognized in the balance sheet at their fair values. The impact on earnings from recognizing the fair values of these instruments depends on their intended use, their hedge designation and their effectiveness in offsetting changes in the fair values of the exposures they are hedging. Changes in the fair values of instruments designated to reduce or eliminate adverse fluctuations in the fair values of recognized assets and liabilities are reported currently in earnings along with changes in the fair values of the hedged items. Changes in the effective portions of the fair values of instruments used to reduce or eliminate adverse fluctuations in cash flows of anticipated or forecasted transactions are reported in equity as a component of accumulated other comprehensive income. Amounts in accumulated other comprehensive income are reclassified to earnings when the related hedged items impact earnings or the anticipated transactions are no longer probable. Changes in the fair values of derivative instruments that are not designated as hedges or do not qualify for hedge accounting treatment are reported currently in earnings. Amounts reported in earnings are classified consistent with the item being hedged.

The effectiveness of derivative instruments in reducing risks associated with the hedged exposures is assessed at inception and on an ongoing basis. Time value, a component of an instrument's fair value, is excluded in assessing effectiveness for fair value hedges, except hedges of firm commitments, and included for cash flow hedges.

Hedge accounting is discontinued prospectively when (i) the instrument is no longer effective in offsetting changes in fair value or cash flows of the underlying hedged item, (ii) the instrument expires, is sold, terminated or exercised, or (iii) designating the instrument as a hedge is no longer appropriate.

The Company formally documents all relationships between its hedging instruments and hedged items at inception, including its risk management objective and strategy for establishing various hedge relationships. Cash flows from hedging instruments are classified in the Consolidated Statements of Cash Flows consistent with the items being hedged.

Treasury Stock. Treasury stock is reported at par value. The excess of fair value over par value is first charged to paid-in capital, if any, and then to retained earnings.

Research and Development. Research, development and engineering costs of $55 in 2019, $51 in 2018, and $39 in 2017 were expensed as incurred and reported in selling and administrative expense in the Consolidated Statements of Operations. Substantially all engineering and development costs are related to developing new products or designing significant improvements to existing products or processes. Costs primarily include employee salaries and benefits and facility costs.

Reclassifications. Certain reclassifications of prior years' data have been made to conform to the current year presentation.

Recent Accounting and Reporting Pronouncements.

Recently Adopted Accounting Standards

In February 2016, the FASB issued new guidance on lease accounting. Under the new guidance, lease classification criteria and income statement recognition are similar to previous guidance; however, all leases with a term longer than one year are recorded on the balance sheet through a right-of-use asset and a corresponding lease liability. The Company adopted the standard on a modified retrospective basis on January 1, 2019. In addition, the Company elected the package of practical expedients, which allowed the Company to carry forward its historical assessments of whether contracts are or contain leases, lease classification and initial direct costs. Adoption of this standard resulted in the recording of operating right-of-use assets and corresponding operating lease liabilities of approximately $220. Finance leases were already recorded on the balance sheet under the previous guidance in current and long-term maturities of long-term debt. Upon adoption of this standard $5 was reclassified to accrued liabilities and $24 was reclassified to other non-current liabilities. The Company reclassified prior period amounts to conform to the current year presentation. See Note B for further information on the Company's lease arrangements.

In February 2018, the FASB issued new accounting guidance to permit the reclassification from accumulated other comprehensive earnings to retained earnings of stranded tax effects resulting from the Tax Act. The Company adopted the guidance on January 1, 2019 and elected not to reclassify stranded tax effects resulting from the Tax Act.

Recently Issued Accounting Standards

In June 2016, the FASB issued new guidance on the accounting for credit losses on financial instruments. The new standard introduces an approach, based on expected losses, to estimate credit losses on certain types of financial instruments. The new approach to estimating credit losses (referred to as the current expected credit losses model) applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in operating leases and off-balance-sheet credit exposures. This guidance is effective for the Company on January 1, 2020. The Company is currently evaluating the impact of adopting this standard and does not expect the guidance to have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued new guidance which aligns the accounting for implementation costs incurred in a cloud computing arrangement that is a service arrangement (i.e. hosting arrangement) with the guidance on capitalizing costs for internal use software. The Company will adopt this standard on a prospective basis on January 1, 2020 and does not expect the guidance to have a material impact on the Company's consolidated financial statements.

In December 2019, the FASB issued new guidance to simplify the accounting for income taxes by, among other things, reducing complexity in the interim-period accounting for year-to-date loss limitations and changes in tax laws. The guidance is effective for the Company on January 1, 2021. The Company does not expect the guidance to have a material impact on the consolidated financial statements.

B. Leases

The Company adopted new guidance on lease accounting on January 1, 2019 on a modified retrospective basis, as discussed in Note A. Total operating lease expense under the previous guidance was $50 for each of the years ended December 31, 2018 and 2017.

The components of lease expense for the year ended December 31, 2019 were as follows:

	2019
Operating lease costs:	
Operating lease cost	$ 49
Short-term lease cost	4
Total operating lease costs	$ 53
Finance lease cost:	
Amortization of right-of-use assets	$ 1
Total finance lease costs	$ 1

Variable operating lease costs were $3 for the year ended December 31, 2019. Interest on finance lease liabilities was less than $1 for the year ended December 31, 2019.

Supplemental cash flow information related to leases was as follows:

	2019
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	$ 51
Financing cash flows from finance leases	15
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	$ 33

Operating cash flows from finance leases were less than $1 for the year ended December 31, 2019.

Supplemental balance sheet information related to leases was as follows:

	2019
Operating leases:	
Operating lease right-of-use assets	$ 204
Current portion of operating lease liabilities	$ 51
Non-current portion of operating lease liabilities	156
Total operating lease liabilities	$ 207
Finance leases:	
Property, plant and equipment	$ 27
Accumulated depreciation	(1)
Property, plant and equipment, net	$ 26
Accrued liabilities	$ 2
Other non-current liabilities	11
Total finance lease liabilities	$ 13
Weighted average remaining lease term:	
Operating leases	9.5
Finance leases	7.0
Weighted average discount rate:	
Operating leases	4.2%
Finance leases	4.1%

Maturities of lease liabilities as of December 31, 2019 were as follows:

	Operating Leases	Finance Leases
2020	$ 53	$ 3
2021	42	2
2022	30	2
2023	22	2
2024	18	2
Thereafter	100	4
Total lease payments	265	15
Less imputed interest	(58)	(2)
Total	$ 207	$ 13

Maturities of lease liabilities as of December 31, 2018 were as follows:

	Operating Leases	Finance Leases
2019	$ 54	$ 5
2020	42	5
2021	34	5
2022	26	4
2023	21	4
Thereafter	117	6
Total lease payments	$ 294	$ 29

At December 31, 2019, the Company does not have material lease commitments that have not commenced.

C. Acquisition of Signode

On April 3, 2018, the Company completed its acquisition of Signode, a leading global provider of transit packaging systems and solutions, thereby broadening and diversifying its customer base and product offerings. The Company paid a purchase price of $3.9 billion.

The following unaudited supplemental pro forma data presents consolidated information as if the acquisition had been completed on January 1, 2017. These amounts were calculated after adjusting Signode's results to reflect interest expense incurred on the debt to finance the acquisition, additional depreciation and amortization that would have been charged assuming the fair value of property, plant and equipment and intangible assets had been applied from January 1, 2017 and related transaction costs. These adjustments also include an additional charge of $32 in the year ended December 31, 2017 for the fair value adjustment for inventory acquired.

	Unaudited pro forma data for the year-ended December 31,	
	2018	2017
Pro forma net sales	$ 11,739	$ 10,930
Pro forma net income attributable to Crown Holdings	442	234

The pro forma data should not be considered indicative of the results that would have occurred if the acquisition and related financing had been consummated on the assumed completion dates, nor are they indicative of future results.

D. Cash, Cash Equivalents, and Restricted Cash

Cash, cash equivalents, and restricted cash included in the Company's Consolidated Balance Sheets and Statement of Cash Flows were as follows:

	2019	2018
Cash and cash equivalents	$ 607	$ 607
Restricted cash included in prepaid expenses and other current assets	50	45
Restricted cash included in other non-current assets	6	7
Total restricted cash	56	52
Total cash, cash equivalents and restricted cash	$ 663	$ 659

Amounts included in restricted cash primarily represent amounts required to be segregated by certain of the Company's receivables securitization agreements.

E. Receivables

	2019	2018
Accounts receivable	$ 1,162	$ 1,303
Less: allowance for doubtful accounts	(62)	(65)
Net trade receivables	1,100	1,238
Unbilled receivables	226	181
Miscellaneous receivables	202	183
	$ 1,528	$ 1,602

The Company uses receivables securitization and factoring facilities in the normal course of business as part of managing its cash flows. The Company accounts for transfers under its securitization facilities as sales because the Company sells full title and ownership in the underlying receivables and has met the criteria for control of the receivables to be considered transferred.

The Company accounts for its factoring arrangements as either sales or secured borrowing based on whether it has transferred control over the factored receivables. The Company's continuing involvement in factored receivables accounted for as sales is limited to servicing the receivables. The Company receives adequate compensation for servicing the receivables and no servicing asset or liability is recorded.

At December 31, amounts securitized or factored were as follows:

	2019	2018
Accounted for as secured borrowings	$ 14	$ 9
Accounted for as sales	1,318	1,097

In July 2018, the Company terminated its $200 North American securitization facility, which included a deferred purchase price component, and entered into a new securitization facility to sell, on a revolving basis, certain trade accounts receivable balances up to a maximum of $375. The new facility, which matures in 2020, removed the deferred purchase price component but requires the Company to maintain a deposit in a restricted cash account. The Company received net proceeds of $106 from the termination of the securitization facility and resale of receivables under the new agreement. These proceeds are included in the beneficial interest in securitized receivables line in the Company's Consolidated Statement of Cash Flows.

The Company recorded expenses related to securitization and factoring facilities of $23 in 2019, $21 in 2018, and $15 in 2017 as interest expense.

F. Inventories

	2019	2018
Raw materials and supplies	$ 905	$ 937
Work in process	151	144
Finished goods	570	609
	$ 1,626	$ 1,690

G. Goodwill

Changes in the carrying amount of goodwill by reportable segment for the years ended December 31, 2019 and 2018 was as follows:

	Americas Beverage	European Beverage	European Food	Transit Packaging	Non-reportable segments	Total
Balance at January 1, 2018	$ 844	$ 564	$ 1,355	$ —	$ 283	$ 3,046
Goodwill acquired	—	—	—	1,552	—	1,552
Foreign currency translation	(2)	(33)	(64)	(46)	(11)	(156)
Balance at December 31, 2018	842	531	1,291	1,506	272	4,442
Goodwill acquired	—	—	—	8	—	8
Goodwill impairment	—	—	—	—	(25)	(25)
Foreign currency translation	23	3	(22)	(5)	6	5
Balance at December 31, 2019	$ 865	$ 534	$ 1,269	$ 1,509	$ 253	$ 4,430

In 2019, the goodwill impairment included in non-reportable segments related to the European Aerosols and Promotional Packaging reporting unit. In recent years market demand for three-piece aerosol packaging has gradually declined. This decline combined with higher operating costs that have not been fully recovered in selling prices has had an adverse impact on the expected future cash flows utilized in the Company's valuation. As a result, the reporting unit's fair value declined below its carrying value.

The carrying amount of goodwill at December 31, 2019 was net of the following accumulated impairments:

	Americas Beverage	European Beverage	European Food	Transit Packaging	Non-reportable Segments	Total
Accumulated impairments balance at December 31, 2019	$ 29	$ 73	$ 724	$ —	$ 175	$ 1,001

H. Intangible Assets

Gross carrying amounts and accumulated amortization of finite-lived intangible assets by major class were as follows:

	December 31, 2019			December 31, 2018		
	Gross	Accumulated amortization	Net	Gross	Accumulated amortization	Net
Customer relationships	$ 1,621	$ (331)	$ 1,290	$ 1,615	$ (206)	$ 1,409
Trade names	541	(40)	501	547	(17)	530
Technology	158	(41)	117	160	(18)	142
Long term supply contracts	150	(48)	102	143	(37)	106
Patents	14	(9)	5	14	(8)	6
	$ 2,484	$ (469)	$ 2,015	$ 2,479	$ (286)	$ 2,193

Amortization expense for the years ended December 31, 2019, 2018, and 2017 was $186, $148 and $39.

Annual amortization expense for each of the years from 2020 - 2023 is estimated to be $167 and 2024 is estimated to be $159.

I. Property, Plant and Equipment

	2019	2018
Buildings and improvements	$ 1,402	$ 1,352
Machinery and equipment	5,836	5,562
Land and improvements	298	280
Construction in progress	276	323
	7,812	7,517
Less: accumulated depreciation and amortization	(3,925)	(3,772)
	$ 3,887	$ 3,745

J. Other Non-Current Assets

	2019	2018
Pension benefits	$ 491	$ 360
Deferred taxes	278	272
Fair value of derivatives	54	20
Investments	20	19
Debt issuance costs	15	15
Other	109	117
	$ 967	$ 803

K. Accrued Liabilities

	2019	2018
Salaries and employee benefits	$ 205	$ 210
Accrued taxes, other than on income	139	124
Accrued interest	82	83
Income taxes	67	47
Fair value of derivatives	44	52
Asbestos liabilities	25	25
Restructuring	17	21
Other	486	449
	$ 1,065	$ 1,011

L. Restructuring and Other

The Company recorded restructuring and other items as follows:

	2019	2018	2017
Asset impairments and sales	$ (7)	$ (5)	$ 12
Restructuring	22	25	18
Transaction costs	—	26	2
Other (income) / costs	(41)	(2)	19
	$ (26)	$ 44	$ 51

In 2019, asset impairments and sales included gains of $13 related to asset sales partially offset by a charge of $6 related to a fire at a production facility in Asia.

Restructuring costs in 2019 included charges of $18 of termination benefits related to headcount reductions across the Company's divisions, including $14 related to headcount reductions in the Company's European and Transit Packaging divisions.

Other (income) / costs of $41 in 2019 included gains of $50 arising from favorable court rulings related to the recovery of indirect taxes paid in prior years by certain of the Company's Brazilian subsidiaries and a charge of $7 related to the settlement of a litigation matter related to Signode that arose prior to its acquisition by the Company in 2018.

In 2018, the Company recorded asset impairment charges of $13 to write down the carrying value of fixed assets related to the announced closure of two beverage can plants in the Company's Asia Pacific segment. The Company announced plans to close the plants in response to economic conditions in China. Asset impairment and sales also includes gains on asset sales related to prior restructuring actions.

Restructuring costs in 2018 included $5 for termination benefits related to the closure of two beverage can plants in the Company's Asia Pacific segment discussed above, $12 of termination benefits related to other actions to reduce manufacturing capacity and headcount and other exit costs of $8 related to prior and current year restructuring actions.

In 2017, asset impairments and sales included a charge of $19 to write down the carrying value of fixed assets related to the closure of beverage can plants in China and the U.S., a promotional packaging facility in Europe and a food can facility in Peru. Asset impairments and sales also included a benefit of $5 due to the expiration of an environmental indemnification related to the sale of certain operations in the Company's European Promotional Packaging business in 2015. Additionally, the Company recorded restructuring charges of $18 for termination benefits related to the plant closures listed above.

Transaction costs in 2018 and 2017 relate to the acquisition of Signode as described in Note B.

In 2017, other costs included a charge of $19 due to the settlement of a litigation matter related to Mivisa that arose prior to its acquisition by the Company in 2014. In 2018, the Company recorded a benefit of $6 due to the favorable settlement of this matter.

Restructuring charges by segment were as follows:

	2019	2018	2017
Americas Beverage	$ 1	$ 4	$ 3
European Beverage	—	1	—
European Food	4	4	4
Asia Pacific	3	5	3
Transit Packaging	6	3	—
Non-reportable segments	5	5	8
Corporate	3	3	—
	$ 22	$ 25	$ 18

Restructuring charges by type were as follows:

	2019	2018	2017
Termination benefits	$ 18	$ 17	$ 15
Other exit costs	4	8	3
	$ 22	$ 25	$ 18

At December 31, 2019, the Company had a restructuring accrual of $17, primarily related to the closure of the beverage can plants in China discussed above, and actions to reduce manufacturing capacity and headcount in its European businesses. The Company expects to pay these amounts over the next twelve months. The Company continues to review its supply and demand profile and long-term plans in its businesses, and it is possible that the Company may record additional restructuring charges in the future.

M. Debt

	2019 Principal outstanding	2019 Carrying amount	2018 Principal outstanding	2018 Carrying amount
Short-term debt	$ 75	$ 75	$ 89	$ 89
Long-term debt				
Senior secured borrowings:				
Term loan facilities				
U.S. dollar at LIBOR plus 1.5% due 2024	1,100	1,094	815	810
U.S. dollar at LIBOR plus 2.00% due 2025	—	—	887	864
Euro at EURIBOR plus 1.5% due 2024[1]	505	504	301	301
Euro at EURIBOR plus 2.375% due 2025[2]	—	—	855	846
Senior notes and debentures:				
€650 at 4.0% due 2022	729	725	745	740
U. S. dollar at 4.50% due 2023	1,000	995	1,000	993
€335 at 2.25% due 2023	376	372	384	380
€550 at 0.75% due 2023	617	610	—	—
€600 at 2.625% due 2024	673	668	688	682
€600 at 3.375% due 2025	673	667	688	681
U.S. dollar at 4.25% due 2026	400	395	400	394
U.S. dollar at 4.75% due 2026	875	863	875	863
U.S. dollar at 7.375% due 2026	350	348	350	348
€500 at 2.875% due 2026	561	554	573	566
U.S. dollar at 7.50% due 2096	40	40	40	40
Other indebtedness in various currencies:				
Fixed rate with rates in 2019 from 4.0% to 7.5% due through 2036	39	39	62	62
Variable rate with average rates in 2019 from 2.6% to 4.3% due through 2025	6	6	4	4
Total long-term debt	7,944	7,880	8,667	8,574
Less: current maturities	(62)	(62)	(81)	(81)
Total long-term debt, less current maturities	$ 7,882	$ 7,818	$ 8,586	$ 8,493

(1) €450 and €263 at December 31, 2019 and 2018
(2) €746 at December 31, 2018

The estimated fair value of the Company’s long-term borrowings, using a market approach incorporating level 2 inputs such as quoted market prices for the same or similar issues, was $8,410 at December 31, 2019 and $8,735 at December 31, 2018.

The revolving credit facilities include provisions for letters of credit up to $310 that reduce the amount of borrowing capacity otherwise available. At December 31, 2019, the Company’s available borrowing capacity under the credit facilities was $1,586, equal to the facilities’ aggregate capacity of $1,650 less $64 of outstanding letters of credit. The interest rate on the facilities can vary from LIBOR or EURIBOR, with a floor of zero, plus a margin of up to 1.55%, depending on the facility, based on the Company's leverage ratio. The revolving credit facilities and term loan facilities contain restrictions on the ability of the Company to, among other things, incur additional debt, pay dividends, repurchase capital stock and make certain restricted payments and requires the Company to maintain a leverage ratio of no greater than 5.75 times at December 31, 2019. The Company was in compliance with all covenants as of December 31, 2019.

The weighted average interest rates were as follows:

	2019	2018	2017
Short-term debt	2.6%	1.0%	1.4%
Revolving credit facilities	3.8%	3.2%	3.3%

Aggregate maturities of long-term debt, excluding unamortized discounts and debt issuance costs, for the five years subsequent to 2019 are $62, $44, $813, $2,076 and $2,042. Cash payments for interest during 2019, 2018 and 2017 were $362, $334 and $225.

2019 Activity

In October 2019, the Company issued €550 ($617 at December 31, 2019) principal amount 0.75% senior unsecured notes due 2023. The notes were issued at par by Crown European Holdings, S.A., a subsidiary of the Company, and are unconditionally guaranteed by the company and certain of its subsidiaries. In December 2019, the Company borrowed $1,100 Term A Loans and €450 ($505 at December 31, 2019) of Term Euro Loans, and used the proceeds, together with the proceeds from the issuance of the €550 senior notes, cash on hand and borrowings under the Revolving Credit Facilities to refinance in full the U.S. dollar Term A and Euro Term A loan facilities due in 2022 and the U.S. dollar Term B and Euro Term B loan facilities due in 2025.

N. Derivative and Other Financial Instruments

Fair Value Measurements

Under U.S. GAAP a framework exists for measuring fair value, providing a three-tier hierarchy of pricing inputs used to report assets and liabilities that are adjusted to fair value. Level 1 includes inputs such as quoted prices which are available in active markets for identical assets or liabilities as of the reporting date. Level 2 includes inputs other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the reporting date. Level 3 includes unobservable pricing inputs that are not corroborated by market data or other objective sources. The Company has no items valued using Level 3 inputs other than certain pension plan assets.

The Company utilizes market data or assumptions that market participants would use in pricing the asset or liability. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of assets and liabilities measured at fair value and their placement within the fair value hierarchy.

The Company applies a market approach to value its commodity price hedge contracts. Prices from observable markets are used to develop the fair value of these financial instruments and they are reported under Level 2. The Company uses an income approach to value its foreign exchange forward contracts. These contracts are valued using a discounted cash flow model that calculates the present value of future cash flows under the terms of the contracts using market information as of the reporting date, such as foreign exchange spot and forward rates, and are reported under Level 2 of the fair value hierarchy.

Fair value disclosures for financial assets and liabilities that were accounted for at fair value on a recurring basis are provided later in this note. In addition, see Note M for fair value disclosures related to debt.

Derivative Financial Instruments

In the normal course of business the Company is subject to risk from adverse fluctuations in currency exchange rates, interest rates and commodity prices. The Company manages these risks through a program that includes the use of derivative financial instruments, primarily swaps and forwards. Counterparties to these contracts are major financial institutions. The Company is exposed to credit loss in the event of nonperformance by these counterparties. The Company does not use derivative instruments for trading or speculative purposes.

The Company's objective in managing exposure to market risk is to limit the impact on earnings and cash flow. The extent to which the Company uses such instruments is dependent upon its access to these contracts in the financial markets and its success using other methods, such as netting exposures in the same currencies to mitigate foreign exchange risk and using sales agreements that permit the pass-through of commodity price and foreign exchange rate risk to customers.

For derivative financial instruments accounted for in hedging relationships, the Company formally designates and documents, at inception, the financial instrument as a hedge of a specific underlying exposure, the risk management objective and the manner in which effectiveness will be assessed. The Company formally assesses, both at inception and at least quarterly thereafter, whether the hedging relationships are effective in offsetting changes in fair value or cash flows of the related underlying exposures. When a hedge no longer qualifies for hedge accounting, the change in fair value from the date of the last effectiveness test is recognized in earnings. Any gain or loss which has accumulated in other comprehensive income at the date of the last effectiveness test is reclassified into earnings at the same time as the underlying exposure.

Cash Flow Hedges

The Company designates certain derivative financial instruments as cash flow hedges. No components of the hedging instruments are excluded from the assessment of hedge effectiveness. Changes in fair value of outstanding derivatives accounted for as cash flow hedges are recorded in accumulated other comprehensive income until earnings are impacted by the hedged transaction. Classification of the gain or loss in the Consolidated Statements of Operations upon release from accumulated other comprehensive income is the same as that of the underlying exposure. Contracts outstanding at December 31, 2019 mature between one and twenty-seven months.

When the Company discontinues hedge accounting because it is no longer probable that an anticipated transaction will occur in the originally specified period, changes to fair value accumulated in other comprehensive income are recognized immediately in earnings.

The Company uses commodity forwards to hedge anticipated purchases of various commodities, including aluminum, fuel oil and natural gas and these exposures are hedged by a central treasury unit.

The Company also designates certain foreign exchange contracts as cash flow hedges of anticipated foreign currency denominated sales or purchases. The Company manages these risks at the operating unit level. Often, foreign currency risk is hedged together with the related commodity price risk.

In June 2019, the Company entered into interest rate swaps to convert $200 of its U.S. dollar term loan facility from floating-rate to a fixed-rate of 1.82%. These interest rate swaps mature in June 2021.

The following tables set forth financial information about the impact on accumulated other comprehensive income ("AOCI") and earnings from changes in fair value related to derivative instruments designated as cash flow hedges.

	Amount of gain/(loss) recognized in AOCI	
Derivatives designated as cash flow hedges	2019	2018
Foreign exchange	$ (8)	$ (3)
Interest rate	(1)	—
Commodities	(13)	(32)
	$ (22)	$ (35)

	Amount of gain/(loss) reclassified from AOCI into income		
Derivatives designated as cash flow hedges	2019	2018	Affected line item in the Statement of Operations
Foreign exchange	$ (4)	$ (11)	Net sales
Commodities	14	(5)	Net sales
Foreign exchange	(1)	6	Cost of products sold
Commodities	(52)	31	Cost of products sold
	(43)	21	Income before taxes
	11	(6)	Provision for income taxes
	$ (32)	$ 15	Net Income

For the year ended December 31, 2020, a net loss of $9 ($7, net of tax) is expected to be reclassified to earnings. No amounts were reclassified during the years ended December 31, 2019 and 2018 in connection with anticipated transactions that were no longer considered probable.

Fair Value Hedges and Contracts Not Designated as Hedges

The Company designates certain derivative financial instruments as fair value hedges of recognized foreign-denominated assets and liabilities, generally trade accounts receivable and payable and unrecognized firm commitments. The notional values and maturity dates of the derivative instruments coincide with those of the hedged items. Changes in fair value of the derivative financial instruments, excluding time value, are offset by changes in fair value of the related hedged items.

Certain derivative financial instruments, including foreign exchange contracts related to intercompany debt, were not designated or did not qualify for hedge accounting; however, they are effective economic hedges as the changes in their fair value, except for time value, are offset by changes from re-measurement of the related hedged items. The Company's primary use of these derivative instruments is to offset the earnings impact that fluctuations in foreign exchange rates have on certain monetary assets and liabilities denominated in nonfunctional currencies. Changes in fair value of these derivative instruments are immediately recognized in earnings as foreign exchange adjustments.

The impact on earnings from foreign exchange contracts designated as fair value hedges was a gain of $1 for the year ended December 31, 2019 and a loss of $2 for the year ended December 31, 2018. These adjustments were reported within foreign exchange in the Consolidated Statements of Operations and were offset by changes in the fair values of the related hedged items.

The following table sets forth the impact on earnings from derivatives not designated as hedges.

	Pre-tax amount of gain/(loss) recognized in earnings		
Derivatives not designated as hedges	2019	2018	Affected line item in the Statement of Operations
Foreign exchange	$ (3)	$ 4	Net sales
Foreign exchange	3	(6)	Cost of products sold
Foreign exchange	(26)	(26)	Foreign exchange
	$ (26)	$ (28)	

Net Investment Hedges

The Company designates certain debt and derivative instruments as net investment hedges to manage foreign currency risk relating to net investments in subsidiaries denominated in foreign currencies.

For the years ended December 31, 2019 and 2018, the Company recorded gains of $27 ($27, net of tax) and $47 ($43, net of tax) in other comprehensive income for certain debt instruments that are designated as hedges of its net investment in a euro-based subsidiary. As of December 31, 2019, cumulative losses of $32 ($9, net of tax) were recognized in accumulated other comprehensive income related to these net investment hedges and the carrying amount of the hedged net investment was approximately €1,207 ($1,354 at December 31, 2019).

In November 2018, the Company entered into a series of cross-currency swaps with an aggregate notional value of $875 (€768). The swaps are designated as hedges of the Company's net investment in a euro-based subsidiary. Under the cross-currency contracts, the Company will receive semi-annual fixed U.S. dollar payments at a rate of 4.75% of the U.S. notional value and pay 1.84% on the euro notional value.

In May 2019, the Company entered into a cross-currency swap with an aggregate notional value of $200 (€179). The swap is designated as a hedge of the Company's net investment in a euro-based subsidiary. Under the cross-currency contract, the Company receives quarterly variable U.S. dollar payments at a rate of LIBOR plus a floating rate spread on the dollar notional value and pays EURIBOR plus a floating rate spread on the euro notional value.

Gains or losses on net investment hedges remain in accumulated other comprehensive income until disposal of the underlying assets.

The following tables set forth financial information about the impact on other comprehensive income ("OCI") from changes in the fair value of derivative instruments designated as net investment hedges.

Derivatives designated as net investment hedges	Amount of gain/(loss) recognized in OCI 2019	2018
Foreign exchange	$ 26	$ 11

Gains and losses representing components excluded from the assessment of effectiveness on derivatives designated as net investment hedges are recognized in accumulated other comprehensive income.

Fair Values of Derivative Financial Instruments

The following table sets forth the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis.

	Balance Sheet classification	December 31, 2019	December 31, 2018	Balance Sheet classification	December 31, 2019	December 31, 2018
Derivatives designated as hedging instruments						
Foreign exchange contracts cash flow	Other current assets	$ 10	$ 6	Accrued liabilities	$ 15	$ 5
	Other non-current assets	1	3	Other non-current liabilities	1	1
Foreign exchange contracts fair value	Other current assets	1	1	Accrued liabilities	3	1
Commodities contracts cash flow	Other current assets	11	16	Accrued liabilities	21	42
	Other non-current assets	—	2	Other non-current liabilities	—	6
Interest rate contracts cash flow	Other non-current assets	—	—	Other non-current liabilities	1	—
Net investment hedge	Other non-current assets	51	15	Other non-current liabilities	2	—
		$ 74	$ 43		$ 43	$ 55
Derivatives not designated as hedging instruments						
Foreign exchange contracts	Other current assets	$ 7	$ 4	Accrued liabilities	$ 5	$ 4
	Other non-current assets	2	—	Other non-current liabilities	1	—
		$ 9	$ 4		$ 6	$ 4
Total derivatives		$ 83	$ 47		$ 49	$ 59

Fair Value Hedge Carrying Amounts

Line item in the Balance Sheet in which the hedged item is included	Carrying amount of the hedged assets/(liabilities) December 31, 2019	December 31, 2018
Receivables, net	12	15
Accrued liabilities	(83)	(13)

As of December 31, 2019 and 2018, the cumulative amounts of fair value hedging adjustments included in the carrying amount of the hedge assets and liabilities were losses of $2 and less than $1.

Offsetting of Derivative Assets and Liabilities

Certain derivative financial instruments are subject to agreements with counterparties similar to master netting arrangements and are eligible for offset. The Company has made an accounting policy election not to offset the fair values of these instruments. In the table below, the aggregate fair values of the Company's derivative assets and liabilities are presented on both a gross and net basis, where appropriate.

	Gross amounts recognized in the Balance Sheet	Gross amounts not offset in the Balance Sheet	Net amount
Balance at December 31, 2019			
Derivative assets	$ 83	$ 16	$ 67
Derivative liabilities	49	16	33
Balance at December 31, 2018			
Derivative assets	$ 47	$ 19	$ 28
Derivative liabilities	59	19	40

Notional Values of Outstanding Derivative Instruments

The aggregate U.S. dollar-equivalent notional values of outstanding derivative instruments in the Consolidated Balance Sheets were:

	December 31, 2019	December 31, 2018
Derivatives designated as cash flow hedges:		
Foreign exchange	$ 1,030	$ 820
Commodities	334	428
Interest rate	200	—
Derivatives designated as fair value hedges:		
Foreign exchange	142	74
Derivatives designated as net investment hedges:		
Foreign exchange	1,075	875
Derivatives not designated as hedges:		
Foreign exchange	1,017	796

O. Asbestos-Related Liabilities

Crown Cork & Seal Company, Inc. ("Crown Cork") is one of many defendants in a substantial number of lawsuits filed throughout the United States by persons alleging bodily injury as a result of exposure to asbestos. These claims arose from the insulation operations of a U.S. company, the majority of whose stock Crown Cork purchased in 1963. Approximately ninety days after the stock purchase, this U.S. company sold its insulation assets and was later merged into Crown Cork.

Prior to 1998, amounts paid to asbestos claimants were covered by a fund made available to Crown Cork under a 1985 settlement with carriers insuring Crown Cork through 1976, when Crown Cork became self-insured. The fund was depleted in 1998 and the Company has no remaining coverage for asbestos-related costs.

The states of Alabama, Arizona, Arkansas, Florida, Georgia, Idaho, Indiana, Iowa, Kansas, Michigan, Mississippi, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, West Virginia, Wisconsin and Wyoming enacted legislation that limits asbestos-related liabilities under state law of companies such as Crown Cork that allegedly incurred these liabilities because they are successors by corporate merger to companies that had been involved with asbestos. The legislation, which applies to future and, with the exception of Arkansas, Georgia, South Carolina, South Dakota, West Virginia and Wyoming, pending claims at the time of enactment, caps asbestos-related liabilities at the fair market value of the predecessor's total gross assets adjusted for inflation. Crown Cork has paid significantly more for asbestos-related claims than the total value of its predecessor's assets adjusted for inflation. Crown Cork has integrated the legislation into its claims defense strategy. The Company cautions, however, that the legislation may be challenged and there can be no assurance regarding the ultimate effect of the legislation on Crown Cork.

In June 2003, the State of Texas enacted legislation that limits the asbestos-related liabilities in Texas courts of companies such as Crown Cork that allegedly incurred these liabilities because they are successors by corporate merger to companies that had been involved with asbestos. The Texas legislation, which applies to future and pending claims, caps asbestos-related liabilities at the total gross value of the predecessor's assets adjusted for inflation. Crown Cork has paid significantly more for asbestos-related claims than the total adjusted value of its predecessor's assets.

In October 2010, the Texas Supreme Court reversed a lower court decision, Barbara Robinson v. Crown Cork & Seal Company, Inc., No. 14-04-00658-CV, Fourteenth Court of Appeals, Texas, which had upheld the dismissal of an asbestos-related case against Crown Cork. The Texas Supreme Court held that the Texas legislation was unconstitutional under the Texas Constitution when applied to asbestos-related claims pending against Crown Cork when the legislation was enacted in June of 2003. The Company believes that the decision of the Texas Supreme Court is limited to retroactive application of the Texas legislation to asbestos-related cases that were pending against Crown Cork in Texas on June 11, 2003 and therefore, in its accrual, continues to assign no value to claims filed after June 11, 2003.

In December 2001, the Commonwealth of Pennsylvania enacted legislation that limits the asbestos-related liabilities of Pennsylvania corporations that are successors by corporate merger to companies involved with asbestos. The legislation limits the successor's liability for asbestos to the acquired company's asset value adjusted for inflation. Crown Cork has paid significantly more for asbestos-related claims than the acquired company's adjusted asset value. In November 2004, the legislation was amended to address a Pennsylvania Supreme Court decision (Ieropoli v. AC&S Corporation, et. al., No. 117 EM 2002) which held that the statute violated the Pennsylvania Constitution due to retroactive application. The Company cautions that the limitations of the statute, as amended, are subject to litigation and may not be upheld.

The Company further cautions that an adverse ruling in any litigation relating to the constitutionality or applicability to Crown Cork of one or more statutes that limits the asbestos-related liability of alleged defendants like Crown Cork could have a material impact on the Company.

The Company's approximate claims activity for the years ended 2019, 2018 and 2017 was as follows:

	2019	2018	2017
Beginning claims	56,000	55,500	55,500
New claims	2,000	2,000	2,500
Settlements or dismissals	(2,000)	(1,500)	(2,500)
Ending claims	56,000	56,000	55,500

The Company's cash payments during the years ended 2019, 2018, and 2017 were as follows:

	2019	2018	2017
Asbestos-related payments	$ 22	$ 21	$ 30
Settled claims payments (included in asbestos-related payments above)	17	15	24

In the fourth quarter of each year, the Company performs an analysis of outstanding claims and categorizes by year of exposure and state filed. As of December 31, 2019 and December 31, 2018, the Company's outstanding claims were:

	2019	2018
Claimants alleging first exposure after 1964	16,500	16,500
Claimants alleging first exposure before or during 1964 filed in:		
Texas	13,000	13,000
Pennsylvania	1,500	1,500
Other states that have enacted asbestos legislation	6,000	6,000
Other states	19,000	19,000
Total claims outstanding	56,000	56,000

The outstanding claims in each period exclude approximately 19,000 inactive claims. Due to the passage of time, the Company considers it unlikely that the plaintiffs in these cases will pursue further action against the Company. The exclusion of these inactive claims had no effect on the calculation of the Company's accrual as the claims were filed in states, as described above, where the Company's liability is limited by statute.

With respect to claimants alleging first exposure to asbestos before or during 1964, the Company does not include in its accrual any amounts for settlements in states where the Company's liability is limited by statute except for certain pending claims in Texas as described earlier.

With respect to post-1964 claims, regardless of the existence of asbestos legislation, the Company does not include in its accrual any amounts for settlement of these claims because of increased difficulty of establishing identification of relevant insulation products as the cause of injury. Given its settlement experience with post-1964 claims, the Company does not believe that an adverse ruling in the Texas or Pennsylvania asbestos litigation cases, or in any other state that has enacted asbestos legislation, would have a material impact on the Company with respect to such claims.

As of December 31, the percentage of outstanding claims related to claimants alleging serious diseases (primarily mesothelioma and other malignancies) were as follows:

	2019	2018	2017
Total claims	22%	22%	22%
Pre-1964 claims in states without asbestos legislation	41%	41%	41%

Crown Cork has entered into arrangements with plaintiffs' counsel in certain jurisdictions with respect to claims which are not yet filed, or asserted, against it. However, Crown Cork expects claims under these arrangements to be filed or asserted against Crown Cork in the future. The projected value of these claims is included in the Company's estimated liability as of December 31, 2019.

Approximately 81% of the claims outstanding at the end of 2019 were filed by plaintiffs who do not claim a specific amount of damages or claim a minimum amount as established by court rules relating to jurisdiction; approximately 16% were filed by plaintiffs who claim damages of less than $5; approximately 3% were filed by plaintiffs who claim damages from $5 to less than $100 (34% of whom claim damages less than $25) and 13 claims were filed by plaintiffs who claim damages in excess of $100.

As of December 31, 2019, the Company's accrual for pending and future asbestos-related claims and related legal costs was $273, including $232 for unasserted claims. The Company determines its accrual without limitation to a specified time period. It is reasonably possible that the actual loss could be in excess of the Company's accrual. However, the Company is unable to estimate the reasonably possible loss in excess of its accrual due to uncertainty in the following assumptions that underlie the Company's accrual and the possibility of losses in excess of such accrual: the amount of damages sought by the claimant, the Company and claimant's willingness to negotiate a settlement, the terms of settlements of other defendants with asbestos-related liabilities, the bankruptcy filings of other defendants (which may result in additional claims and higher settlements for non-bankrupt defendants), the nature of pending and future claims (including the seriousness of alleged disease, whether claimants allege first exposure to asbestos before or during 1964 and the claimant's ability to demonstrate the alleged link to Crown Cork), the volatility of the litigation environment, the defense strategies available to the Company, the level of future claims, the rate of receipt of claims, the jurisdiction in which claims are filed, and the effect of state asbestos legislation (including the validity and applicability of the Pennsylvania legislation to non-Pennsylvania jurisdictions, where the substantial majority of the Company's asbestos cases are filed).

P. Commitments and Contingent Liabilities

The Company, along with others in most cases, has been identified by the EPA or a comparable state environmental agency as a Potentially Responsible Party ("PRP") at a number of sites and has recorded aggregate accruals of $8 for its share of estimated future remediation costs at these sites. The Company has been identified as having either directly or indirectly disposed of commercial or industrial waste at the sites subject to the accrual, and where appropriate and supported by available information, generally has agreed to be responsible for a percentage of future remediation costs based on an estimated volume of materials disposed in proportion to the total materials disposed at each site. The Company has not had monetary sanctions imposed nor has the Company been notified of any potential monetary sanctions at any of the sites.

The Company has also recorded aggregate accruals of $7 for remediation activities at various worldwide locations that are owned by the Company and for which the Company is not a member of a PRP group. Although the Company believes its accruals are adequate to cover its portion of future remediation costs, there can be no assurance that the ultimate payments will not exceed the amount of the Company's accruals and will not have a material effect on its results of operations, financial position and cash flow. Any possible loss or range of potential loss that may be incurred in excess of the recorded accruals cannot be estimated.

In March 2015, the Bundeskartellamt, or German Federal Cartel Office ("FCO"), conducted unannounced inspections of the premises of several metal packaging manufacturers, including a German subsidiary of the Company. The local court order authorizing the inspection cited FCO suspicions of anti-competitive agreements in the German market for the supply of metal packaging products. The Company conducted an internal investigation into the matter and discovered instances of inappropriate conduct by certain employees of German subsidiaries of the Company. The Company cooperated with the FCO and submitted a leniency application with the FCO which disclosed the findings of its internal investigation to date. In April 2018, the FCO discontinued its national investigation and referred the matter to the European Commission (the "Commission"). Following the referral, Commission officials conducted unannounced inspections of the premises of several metal packaging manufacturers, including Company subsidiaries in Germany, France and the United Kingdom.

The Commission's investigation is ongoing and, to date, the Commission has not officially charged the Company or any of its subsidiaries with violations of competition law. The Company is cooperating with the Commission and submitted a leniency application with the Commission with respect to the findings of the investigation in Germany referenced above. This application may lead to the reduction of possible future penalties. At this stage of the investigation the Company believes that a loss is probable but is unable to predict the ultimate outcome of the Commission's investigation and is unable to estimate the loss or possible range of losses that could be incurred, and has therefore not recorded a charge in connection with the actions by the Commission. If the Commission finds that the Company or any of its subsidiaries violated competition law, fines levied by the Commission could be material to the Company's operating results and cash flows for the periods in which they are resolved or become reasonably estimable.

In March 2017, U.S. Customs and Border Protection ("CBP") at the Port of Milwaukee issued a penalty notification alleging that certain of the Company's subsidiaries intentionally misclassified the importation of certain goods into the U.S. during the period 2004-2009. CBP initially assessed a penalty of $18 and subsequently mitigated to $6. The Company has acknowledged to CBP that the goods were misclassified and has paid all related duties. The Company has asserted that the misclassification was unintentional and disputes the penalty assessment. At the present time, based on the information available, the Company does not believe that a loss for the alleged intentional misclassification is probable. There can be no assurance the Company will be successful in contesting the assessed penalty.

The Company and its subsidiaries are also subject to various other lawsuits and claims with respect to labor, environmental, securities, vendor and other matters arising out of the Company's normal course of business. While the impact on future financial results is not subject to reasonable estimation because considerable uncertainty exists, management believes that the ultimate liabilities resulting from such lawsuits and claims will not materially affect the Company's consolidated earnings, financial position or cash flow. The Company has various commitments to purchase materials, supplies and utilities as part of the ordinary conduct of business.

The Company's basic raw materials for its products are steel and aluminum, both of which are purchased from multiple sources. The Company is subject to fluctuations in the cost of these raw materials and has periodically adjusted its selling prices to reflect these movements. There can be no assurance, however, that the Company will be able to fully recover any increases or fluctuations in raw material costs from its customers. The Company also has commitments for standby letters of credit and for purchases of capital assets.

At December 31, 2019, the Company was party to certain indemnification agreements covering environmental remediation, lease payments and other potential costs associated with properties sold or businesses divested. The Company accrues for costs related to these items when it is probable that a liability has been incurred and the amount can be reasonably estimated.

Q. Other Non-Current Liabilities

	2019	2018
Deferred taxes	$ 405	$ 399
Asbestos liabilities	248	270
Postemployment benefits	36	22
Income taxes payable	25	26
Environmental	12	12
Fair value of derivatives	5	7
Finance lease liabilities	11	24
Other	115	127
	$ 857	$ 887

Income taxes payable includes unrecognized tax benefits as discussed in Note S.

R. Pension and Other Postretirement Benefits

Pensions. The Company sponsors various pension plans covering certain U.S. and non-U.S. employees, and participates in certain multi-employer pension plans. The benefits under the Company plans are based primarily on years of service and either the employees' remuneration near retirement or a fixed dollar multiple.

A measurement date of December 31 was used for all plans presented below.

The components of pension expense were as follows:

U.S. Plans	2019	2018	2017
Service cost	$ 15	$ 17	$ 14
Interest cost	50	47	50
Expected return on plan assets	(70)	(85)	(83)
Amortization of actuarial loss	55	51	52
Amortization of prior service cost	1	1	1
Net periodic cost	$ 51	$ 31	$ 34

Non-U.S. Plans	2019	2018	2017
Service cost	$ 15	$ 26	$ 22
Interest cost	71	75	75
Expected return on plan assets	(138)	(159)	(146)
Settlements	44	38	—
Curtailments	(14)	—	(3)
Amortization of actuarial loss	38	45	42
Amortization of prior service credit	(1)	(11)	(11)
Net periodic cost / (benefit)	$ 15	$ 14	$ (21)

The settlement charges in 2019 and 2018 arose from the payment of lump sum buy-outs to settle certain pension obligations using plan assets. The Company may incur additional settlement charges in 2020. The curtailment gain in 2019 was to recognize prior service credits that were previously recorded in accumulated other comprehensive income in connection with the closure of a non-U.S. defined benefit pension plan.

Additional pension expense of $5 was recognized in each of 2019, 2018 and 2017 for multi-employer plans.

The projected benefit obligations, accumulated benefit obligations, plan assets and funded status of the Company's U.S. and non-U.S. plans were as follows:

	U.S. Plans		Non-U.S. Plans	
	2019	2018	2019	2018
Projected Benefit Obligations				
Benefit obligations at January 1	$ 1,371	$ 1,499	$ 3,102	$ 3,507
Service cost	15	17	15	26
Interest cost	50	47	71	75
Plan participants' contributions	—	—	2	4
Amendments	(1)	—	—	—
Settlements	—	—	(152)	(121)
Curtailments	—	—	(18)	—
Actuarial loss	133	(83)	242	(199)
Acquisitions	—	—	—	148
Benefits paid	(128)	(109)	(152)	(150)
Foreign currency translation	—	—	110	(188)
Benefit obligations at December 31	$ 1,440	$ 1,371	$ 3,220	$ 3,102
Plan Assets				
Fair value of plan assets at January 1	$ 1,012	$ 1,220	$ 3,264	$ 3,665
Actual return on plan assets	244	(102)	373	(39)
Employer contributions	3	3	19	16
Plan participants' contributions	—	—	2	4
Settlements	—	—	(152)	(121)
Acquisitions	—	—	—	90
Benefits paid	(128)	(109)	(152)	(150)
Foreign currency translation	—	—	126	(201)
Fair value of plan assets at December 31	$ 1,131	$ 1,012	$ 3,480	$ 3,264
Funded status	$ (309)	$ (359)	$ 260	$ 162
Accumulated benefit obligations at December 31	$ 1,397	$ 1,327	$ 3,182	$ 3,009

Information for pension plans with accumulated benefit obligations in excess of plan assets was as follows:

U.S. Plans	2019	2018
Projected benefit obligations	$ 1,440	$ 1,371
Accumulated benefit obligations	1,397	1,327
Fair value of plan assets	1,131	1,012

Non-U.S. Plans	2019	2018
Projected benefit obligations	$ 399	$ 363
Accumulated benefit obligations	383	329
Fair value of plan assets	187	167

The Company's investment strategy in its U.S. plan is designed to generate returns that are consistent with providing benefits to plan participants within the risk tolerance of the plan. Asset allocation is the primary determinant of return levels and investment risk exposure. The assets of the plan are broadly diversified in terms of securities and security types in order to limit the potential of large losses from any one security.

The strategic ranges for asset allocation in the U.S. plans are as follows:

U.S. equities	39%	to	49%
International equities	12%	to	18%
Fixed income	16%	to	26%
Balanced funds	7%	to	13%
Real estate	7%	to	13%

The Company's investment strategy in its U.K. plan, the largest non-U.S. plan, is designed to achieve a funding level of 100% within the next 7 years by targeting an expected return of 1.8% annually in excess of the expected growth in the liabilities. The Company seeks to achieve this return with a risk level commensurate with a 5% chance of the funding level falling between 4% and 7% in any one year. The strategic ranges for asset allocation in the U.K. plan are as follows:

Investment grade credit	30%	to	90%
Equities	0%	to	30%
Hedge funds	0%	to	10%
Real estate	0%	to	5%
Alternative credit	0%	to	20%
Other	0%	to	20%

Pension assets are classified into three levels. Level 1 asset values are derived from quoted prices which are available in active markets as of the report date. Level 2 asset values are derived from other than quoted prices in active markets included in Level 1, which are either directly or indirectly observable as of the report date. Level 3 asset values are derived from unobservable pricing inputs that are not corroborated by market data or other objective sources.

Level 1 Investments

Equity securities are valued at the latest quoted prices taken from the primary exchange on which the security trades. Mutual funds are valued at the net asset value (NAV) of shares held at year-end.

Level 2 Investments

Fixed income securities, including government issued debt, corporate debt, asset-backed and structured debt securities are valued using the latest bid prices or valuations based on a matrix system (which considers such factors as benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers and other reference data including market research publications). Derivatives, which consist mainly of interest rate swaps, are valued using a discounted cash flow pricing model based on observable market data.

Level 3 Investments

Hedge funds and private equity funds are valued at the NAV at year-end. The values assigned to private equity funds are based upon assessments of each underlying investment, incorporating valuations that consider the evaluation of financing and sale transactions with third parties, expected cash flows and market-based information, including comparable transactions, and performance multiples among other factors. Real estate investments are based on third party appraisals.

Investments Measured Using NAV per Share Practical Expedient

Investments measured using NAV per share as a practical expedient include investment funds that invest in global equity, emerging markets and fixed income. The global equity funds invest in equity securities of various market sectors including industrial materials, consumer discretionary goods and services, financial infrastructure, technology, and health care. The emerging markets funds invest in equity markets within financial services, consumer goods and services, energy, and technology.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair value. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in different fair value measurements at the reporting date.

The Company's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of the fair value of assets and their placement within the fair value hierarchy. The levels assigned to the defined benefit plan assets as of December 31, 2019 and 2018 are summarized in the tables below:

	2019		
	U.S. plan assets	Non-U.S. plan assets	Total
Level 1			
Cash and cash equivalents	$ 23	$ 190	$ 213
Global large cap equity	—	7	7
U.S. large cap equity	155	4	159
U.S. mid/small cap equity	218	27	245
Mutual funds – global equity	144	—	144
Mutual funds – U.S. equity	206	—	206
Mutual funds – fixed income	67	—	67
	813	228	1,041
Level 2			
Government issued debt securities	—	260	260
Corporate debt securities	52	332	384
Asset backed securities	—	2	2
Structured debt	—	811	811
Insurance contracts	—	105	105
Derivatives	—	194	194
Investment funds – fixed income	—	373	373
Investment funds – global equity	—	297	297
Investment funds – emerging markets	—	33	33
	52	2,407	2,459
Level 3			
Investment funds – real estate	96	220	316
Hedge funds	—	43	43
Private equity	5	70	75
Real estate – direct	21	9	30
	122	342	464
Total assets in fair value hierarchy	987	2,977	3,964
Investments measured at NAV Practical Expedient (a)			
Investment funds – fixed income	102	91	193
Investment funds – global equity	18	78	96
Investment funds – emerging markets	23	—	23
Hedge funds	—	328	328
	143	497	640
Total investments at fair value	$ 1,130	$ 3,474	$ 4,604

	2018		
	U.S. plan assets	Non-U.S. plan assets	Total
Level 1			
Cash and cash equivalents	$ 34	$ 225	$ 259
Global large cap equity	—	27	27
U.S. large cap equity	66	3	69
U.S. mid/small cap equity	182	16	198
Mutual funds – global equity	133	—	133
Mutual funds – U.S. equity	188	—	188
Mutual funds – fixed income	104	—	104
	707	271	978
Level 2			
Government issued debt securities	—	341	341
Corporate debt securities	49	212	261
Asset backed securities	—	2	2
Structured debt	—	699	699
Insurance contracts	—	105	105
Derivatives	—	103	103
Investment funds – fixed income	—	411	411
Investment funds – global equity	—	268	268
	49	2,141	2,190
Level 3			
Investment funds – real estate	94	196	290
Hedge funds	—	113	113
Private equity	9	94	103
Real estate – direct	20	7	27
	123	410	533
Total assets in fair value hierarchy	879	2,822	3,701
Investments measured at NAV Practical Expedient (a)			
Investment funds – fixed income	98	112	210
Investment funds – global equity	14	43	57
Investment funds – emerging markets	20	—	20
Hedge funds	—	282	282
	132	437	569
Total investments at fair value	$ 1,011	$ 3,259	$ 4,270

(a) In accordance with ASU No. 2015-07, certain investments that are measured at fair value using the NAV per share practical expedient have not been classified in the fair value hierarchy.

Accrued income excluded from the tables above was as follows:

	2019	2018
U.S. plan assets	$ 1	$ 1
Non-U.S. plan assets	6	5

Plan assets include $244 and $140 of the Company’s common stock at December 31, 2019 and 2018.

The following tables reconcile the beginning and ending balances of plan assets measured using significant unobservable inputs (Level 3).

	Hedge funds	Private equity	Real estate	Total
Balance at January 1, 2018	$ 189	$ 147	$ 182	$ 518
Foreign currency translation	(11)	(8)	(5)	(24)
Asset returns – assets held at reporting date	(18)	(11)	(9)	(38)
Asset returns – assets sold during the period	20	28	15	63
Purchases, sales and settlements, net	(67)	(53)	70	(50)
Asset transfers during the period	—	—	64	64
Balance at December 31, 2018	113	103	317	533
Foreign currency translation	4	4	8	16
Asset returns – assets held at reporting date	(6)	(22)	25	(3)
Asset returns – assets sold during the period	7	17	6	30
Purchases, sales and settlements, net	(75)	(27)	(10)	(112)
Balance at December 31, 2019	$ 43	$ 75	$ 346	$ 464

The following table presents additional information about the pension plan assets valued using net asset value as a practical expedient:

	Fair Value	Redemption Frequency	Redemption Notice Period
Balance at December 31, 2019			
Investment funds – fixed income	$ 193	Semi-monthly	1 - 5 days
Investment funds – global equity	96	Monthly	1 - 15 days
Investment funds – emerging markets	23	Daily	30 days
Hedge funds	328	Monthly	1 - 30 days
Balance at December 31, 2018			
Investment funds – fixed income	$ 210	Semi-monthly	1 day
Investment funds – global equity	57	Monthly	1 - 15 days
Investment funds – emerging markets	20	Daily	30 days
Hedge funds	282	Monthly	1 - 45 days

The pension plan assets valued using net asset value as a practical expedient do not have any unfunded commitments.

Pension assets and liabilities included in the Consolidated Balance Sheets were:

	2019	2018
Non-current assets	$ 491	$ 360
Current liabilities	13	14
Non-current liabilities	533	549

The Company's current liability at December 31, 2019, represents the expected required payments to be made for unfunded plans over the next twelve months. Total estimated 2020 employer contributions are $21 for the Company's pension plans.

Changes in the net loss and prior service cost (credit) for the Company's pension plans were:

	2019		2018		2017	
	Net loss	Prior service	Net loss	Prior service	Net loss	Prior service
Balance at January 1	$ 1,962	$ (6)	$ 2,057	$ (16)	$ 2,032	$ (32)
Reclassification to net periodic benefit cost	(137)	14	(134)	10	(95)	14
Current year gain (loss)	(53)	—	103	—	21	—
Amendments	—	—	—	—	—	4
Foreign currency translation	36	—	(64)	—	99	(2)
Balance at December 31	$ 1,808	$ 8	$ 1,962	$ (6)	$ 2,057	$ (16)

The estimated portions of the net losses and net prior service that are expected to be recognized as components of net periodic benefit cost / (credit) in 2020 are $94 and $(1).

Expected future benefit payments as of December 31, 2019 are:

	U.S. plans	Non-U.S. plans
2020	$ 104	$ 161
2021	96	164
2022	98	165
2023	100	168
2024	99	166
2025 - 2029	448	837

The weighted average actuarial assumptions used to calculate the benefit obligations at December 31 were:

U.S. Plans	2019	2018	2017
Discount rate	3.2%	4.3%	3.7%
Compensation increase	4.7%	4.5%	4.7%

Non-U.S. Plans	2019	2018	2017
Discount rate	2.1%	2.9%	2.5%
Compensation increase	3.0%	3.2%	3.2%

The weighted average actuarial assumptions used to calculate pension expense for each year were:

U.S. Plans	2019	2018	2017
Discount rate - service cost	4.7%	3.9%	4.7%
Discount rate - interest cost	3.9%	3.2%	3.4%
Compensation increase	4.5%	4.7%	4.6%
Long-term rate of return	7.3%	7.3%	7.5%

Non-U.S. Plans	2019	2018	2017
Discount rate - service cost	3.0%	2.6%	2.8%
Discount rate - interest cost	2.7%	2.2%	2.3%
Compensation increase	3.2%	3.2%	3.3%
Long-term rate of return	4.3%	4.4%	4.5%

The expected long-term rate of return on plan assets is determined by taking into consideration expected long-term returns associated with each major asset class based on long-term historical ranges, inflation assumptions and the expected net value from active management of the assets based on actual results.

Other Postretirement Benefit Plans. The Company sponsors unfunded plans to provide health care and life insurance benefits to certain pensioners and survivors. Generally, the medical plans pay a stated percentage of medical expenses reduced by deductibles and other coverages. Life insurance benefits are generally provided by insurance contracts. The Company reserves the right, subject to existing agreements, to change, modify or discontinue the plans. A measurement date of December 31 was used for the plans presented below.

The components of net postretirement benefits cost were as follows:

Other Postretirement Benefits	2019	2018	2017
Service cost	$ 1	$ 4	$ —
Interest cost	6	6	6
Amortization of prior service credit	(34)	(37)	(40)
Amortization of actuarial loss	3	4	4
Net periodic benefit credit	$ (24)	$ (23)	$ (30)

Changes in the benefit obligations were:

	2019	2018
Benefit obligations at January 1	$ 147	$ 168
Service cost	1	4
Interest cost	6	6
Amendments	6	—
Actuarial (gain) loss	14	(15)
Benefits paid	(13)	(13)
Foreign currency translation	3	(3)
Benefit obligations at December 31	$ 164	$ 147

Changes in the net loss and prior service credit for the Company's postretirement benefit plans were:

	2019		2018		2017	
	Net loss	Prior service	Net loss	Prior service	Net loss	Prior service
Balance at January 1	$ 31	$ (105)	$ 49	$ (142)	$ 49	$ (182)
Reclassification to net periodic benefit cost	(3)	34	(4)	37	(4)	40
Current year gain (loss)	14	—	(14)	—	4	—
Amendments	—	(1)	—	—	—	—
Balance at December 31	$ 42	$ (72)	$ 31	$ (105)	$ 49	$ (142)

The estimated portions of the net losses and prior service credits that are expected to be recognized as components of net periodic benefit cost/(credit) in 2020 are $4 and $(25).

Expected future benefit payments are as follows:

	Benefit Payments
2020	$ 16
2021	13
2022	13
2023	12
2024	12
2025 - 2029	49

The assumed health care cost trend rates at December 31, 2019 were as follows:

Health care cost trend rate assumed for 2019	5.3%
Rate that the cost trend rate gradually declines to	4.0%
Year that the rate reaches the rate it is assumed to remain	2035

A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	One percentage point	
	Increase	Decrease
Effect on total service and interest cost	$ 1	$ 1
Effect on postretirement benefit obligation	$ 6	$ 6

Weighted average discount rates used to calculate the benefit obligations at the end of each year and the cost for each year are presented below.

	2019	2018	2017
Benefit obligations	3.5%	4.5%	3.8%
Service cost	4.8%	4.9%	5.0%
Interest cost	4.2%	4.1%	3.5%

Defined Contribution Benefit Plans. The Company also sponsors defined contribution benefit plans in certain jurisdictions including the U.S. and the U.K. In 2019, the Company recognized expense of $11 related to these plans.

S. Income Taxes

The components of income before income taxes were as follows:

	2019	2018	2017
U.S.	$ (3)	$ 21	$ 10
Foreign	789	719	819
	$ 786	$ 740	$ 829

The provision for income taxes consisted of the following:

	2019	2018	2017
Current tax:			
U.S. federal	$ (1)	$ (2)	$ —
State and foreign	202	183	154
	$ 201	$ 181	$ 154
Deferred tax:			
U.S. federal	$ 16	$ 31	$ 217
State and foreign	(51)	4	30
	(35)	35	247
Total	$ 166	$ 216	$ 401

The provision for income taxes differs from the amount of income tax determined by applying the U.S. statutory federal income tax rate to pre-tax income as a result of the following items:

	2019	2018	2017
U.S. statutory rate at 21%, 21% and 35%	$ 166	$ 155	$ 290
Tax on foreign income	7	30	(126)
U.S. taxes on foreign income, net of credits	15	24	45
Valuation allowance changes	(33)	(1)	9
Tax contingencies	19	(2)	6
Tax law changes	(11)	4	174
Other items, net	3	6	3
Income tax provision	$ 166	$ 216	$ 401

The Company benefits from certain incentives in Brazil which allow it to pay reduced income taxes. The incentives expire at various dates beginning in December 2022. These incentives increased net income attributable to the Company by $17 in 2019 and $14 in both 2018 and 2017.

The Company paid taxes of $173, $177 and $154 in 2019, 2018 and 2017.

In 2019, the Company recorded an income tax benefit of $36 related to a deferred tax valuation allowance release resulting from an internal reorganization. Additionally, the Company recorded a charge of $15 related to the settlement of a pre-acquisition tax contingency that arose from a transaction that occurred prior to its acquisition of Signode. The Company also recorded a benefit of $9 arising from tax law changes in India.

The Tax Act resulted in significant changes from previous tax law, including reduction of the U.S. corporate tax rate from 35% to 21%, a one-time tax imposed on the unremitted earnings of other non-U.S. subsidiaries (the "transition tax") and a limitation on the tax deduction for interest expense, net of interest income, to 30% of a U.S. corporations adjusted taxable income. As a result of the tax rate reduction, the Company recorded a provisional reduction in net deferred tax assets of $103 as of December 31, 2017 and a corresponding deferred income tax charge. Additionally, as of December 31, 2017, the Company recorded a provisional obligation of $82 for the transition tax, recorded a charge of $25 for the related usage of foreign tax credits and reversed $11 of deferred tax liabilities related to cumulative undistributed foreign earnings. The Company finalized the impact of the Tax Act in 2018 and recorded a net benefit of $2 to adjust its provisional amounts.

In 2018, the Company recorded a charge of $24 related to local taxes on the distributions of foreign earnings, which were previously asserted to be indefinitely reinvested. As of December 31, 2019 the Company has not provided deferred taxes on approximately $1,300 of earnings in certain non-U.S. subsidiaries because such earnings are indefinitely reinvested in its international operations. Upon distribution of such earnings in the form of dividends or otherwise, the Company may be subject to incremental foreign tax. It is not practicable to estimate the amount of foreign tax that might be payable.

The components of deferred taxes at December 31 are:

	2019		2018	
	Assets	Liabilities	Assets	Liabilities
Tax carryforwards	$ 512	$ —	$ 531	$ —
Postretirement and postemployment benefits	40	—	39	—
Pensions	176	124	193	106
Property, plant and equipment	23	174	20	177
Intangible assets	—	401	—	431
Asbestos	66	—	71	—
Accruals and other	88	90	88	73
Right of use assets	—	30	—	—
Lease liabilities	30	—	—	—
Valuation allowances	(243)	—	(282)	—
Total	$ 692	$ 819	$ 660	$ 787

Tax carryforwards expire as follows:

Year	Amount
2020	$ 27
2021	22
2022	82
2023	11
2024	14
Thereafter	211
Unlimited	145

Tax carryforwards expiring in 2022 include $72 of U.S. federal foreign tax credits which based on current projections the Company believes it will utilize before expiration. Tax carryforwards expiring after 2024 include $141 of U.S. state tax loss carryforwards and $53 of Luxembourg tax loss carryforwards. The unlimited category includes $36 related to U.S. disallowed business interest carryforwards and $64 of French tax loss carryforwards.

Realization of any portion of the Company's deferred tax assets is dependent upon the availability of taxable income in the relevant jurisdictions. The Company considers all sources of taxable income, including (i) taxable income in any available carry back period, (ii) the reversal of taxable temporary differences, (iii) tax-planning strategies, and (iv) taxable income expected to be generated in the future other than from reversing temporary differences. The Company also considers whether there have been cumulative losses in recent years. The Company records a valuation allowance when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

The Company's valuation allowances at December 31, 2019 includes $205 primarily related to the portion of U.S. state tax loss carryforwards that the Company does not believe are more likely than not to be utilized prior to their expiration. The Company's ability to utilize state tax loss carryforwards is impacted by several factors including taxable income, expiration dates, limitations imposed by certain states on the amount of loss carryforwards that can be used in a given year to offset taxable income and whether the state permits the Company to file a combined return.

Management's estimate of the appropriate valuation allowance in any jurisdiction involves a number of assumptions and judgments, including the amount and timing of future taxable income. Should future results differ from management's estimates, it is possible there could be future adjustments to the valuation allowances that would result in an increase or decrease in tax expense in the period such changes in estimates are made.

A reconciliation of unrecognized tax benefits follows:

	2019	2018	2017
Balance at January 1	$ 37	$ 29	$ 27
Additions related to acquisitions	—	13	—
Additions for prior year tax positions	20	1	6
Reductions to prior period tax positions	—	—	(2)
Lapse of statute of limitations	(1)	(3)	—
Settlements	(15)	(2)	(4)
Foreign currency translation	—	(1)	2
Balance at December 31	$ 41	$ 37	$ 29

The Company's unrecognized tax benefits include potential liabilities related to transfer pricing, foreign withholding taxes, and non-deductibility of expenses and exclude $2 of interest and penalties as of December 31, 2019.

The total interest and penalties recorded in income tax expense was less than $1 in 2019, 2018 and 2017. As of December 31, 2019, unrecognized tax benefits of $41, if recognized, would affect the Company's effective tax rate.

The Company's unrecognized tax benefits are not expected to increase over the next twelve months and are expected to decrease as open tax years lapse or claims are settled. The Company is unable to estimate a range of reasonably possible changes in its unrecognized tax benefits in the next twelve months as it is unable to predict when, or if, the tax authorities will commence their audits, the time needed for the audits, and the audit findings that will require settlement with the applicable tax authorities, if any.

The tax years that remained subject to examination by major tax jurisdictions as of December 31, 2019 were, 2010 and subsequent years for Germany; 2013 and subsequent years for India; 2015 and subsequent years for the Brazil, Canada, Italy, Mexico and Spain; and 2016 and subsequent years for the U.K. and the U.S.; 2017 and subsequent years for France. In addition, tax authorities in certain jurisdictions, including France and the U.S., may examine earlier years when tax carryforwards that were generated in those years are subsequently utilized.

T. Capital Stock

A summary of common share activity for the years ended December 31 follows (in shares):

	2019	2018	2017
Common shares outstanding at January 1	135,173,948	134,275,609	139,840,228
Shares repurchased	(106,388)	(92,167)	(6,157,010)
Shares issued upon exercise of employee stock options	70,000	—	299,050
Restricted stock issued to employees, net of forfeitures	416,695	958,672	269,025
Shares issued to non-employee directors	23,623	31,834	24,316
Common shares outstanding at December 31	135,577,878	135,173,948	134,275,609

The Board of Directors has the authority to issue, at any time or from time to time, up to 30 million shares of preferred stock and has authority to fix the designations, number and voting rights, preferences, privileges, limitations, restrictions, conversion rights and other special or relative rights, if any, of any class or series of any class of preferred stock that may be desired, provided the shares of any such class or series of preferred stock shall not be entitled to more than one vote per share when voting as a class with holders of the Company's common stock.

The Company’s ability to pay dividends and repurchase its common stock is limited by certain restrictions in its debt agreements. These restrictions are subject to a number of exceptions, however, allowing the Company to make otherwise restricted payments.

U. Accumulated Other Comprehensive Loss Attributable to Crown Holdings

The following table provides information about the changes in each component of accumulated other comprehensive income for the years ended December 31, 2019 and 2018.

	Defined benefit plans	Foreign currency translation	Gains and losses on cash flow hedges	Total
Balance at January 1, 2018	$ (1,583)	$ (1,681)	$ 23	$ (3,241)
Cumulative effect of change in accounting principle			3	3
Other comprehensive loss before reclassifications	(20)	(136)	(35)	(191)
Amounts reclassified from accumulated other comprehensive income	70	—	(15)	55
Other comprehensive income / (loss)	50	(136)	(47)	(133)
Balance at December 31, 2018	(1,533)	(1,817)	(24)	(3,374)
Other comprehensive income / (loss) before reclassifications	10	149	(22)	137
Amounts reclassified from accumulated other comprehensive income	74	—	32	106
Other comprehensive income	84	149	10	243
Balance at December 31, 2019	$ (1,449)	$ (1,668)	$ (14)	$ (3,131)

See Note N and Note R for further details of amounts reclassified from accumulated other comprehensive income related to cash flow hedges and defined benefit plans.

V. Revenue

For the years ended December 31, 2019 and 2018, the Company recognized revenue as follows:

	2019	2018
Revenue recognized over time	$ 5,724	$ 5,765
Revenue recognized at a point in time	5,941	5,386
Total revenue	$ 11,665	$ 11,151

See Note Y for further disaggregation of the Company's revenue.

The Company has applied the practical expedient to exclude disclosure of remaining performance obligations as its binding orders typically have a term of one year or less.

Contract Assets and Contract Liabilities

Contract assets are typically recognized for work in process related to the Company's three-piece printed products. The Company's equipment business may record contract assets or contract liabilities depending on the timing of satisfaction of performance obligations and receipt of consideration from the customer. These equipment contracts, including payment terms, are typically less than one year in duration.

Contract assets and liabilities are reported in a net position on a contract-by-contract basis. Net contract assets were as follows:

	December 31, 2019	December 31, 2018
Contract assets included in prepaid and other current assets	$ 30	$ 16
Contract liabilities included in accrued liabilities	(5)	(3)
Contract liabilities included in other non-current liabilities	—	(5)
Net contract asset	$ 25	$ 8

For the year ended December 31, 2019, the Company satisfied performance obligations related to contract assets recorded by the Company's equipment business at December 31, 2018. The Company also recorded new contract assets related to work in process for the Company's equipment business and European food business.

For the year ended December 31, 2019, the Company recognized revenue of $3 related to contract liabilities at December 31, 2018 for performance obligations satisfied during the period.

W. Stock-Based Compensation

The Company's shareholder-approved stock-based incentive compensation plans provide for the granting of awards in the form of stock options, deferred stock, restricted stock or stock appreciation rights ("SARs"). The awards may be subject to the achievement of certain performance goals as determined by the Compensation Committee designated by the Company's Board of Directors. There have been no awards of SARs. At December 31, 2019, there were 2.6 million authorized shares available for future awards.

Restricted and Deferred Stock

Annually, the Company awards shares of restricted stock to certain senior executives in the form of time-vested restricted stock and performance-based shares. The time-vested restricted stock vests ratably over three years.

The performance-based share awards are subject to either a market condition or a performance condition. For awards subject to a market condition, the metric is the Company's Total Shareholder Return ("TSR"), which includes share price appreciation and dividends paid, during the three-year term of the award measured against the TSR of a peer group of companies. For awards subject to a performance condition, the metric is the Company's average return on invested capital over the three-year term.

The performance-based shares cliff vest at the end of three years. The number of performance-based shares that will ultimately vest is based on the level of performance achieved, ranging between 0% and 200% of the shares originally awarded, and is settled in shares of common stock. Participants who terminate employment because of disability, death or, subject to Company approval, retirement, receive accelerated vesting of their time-vested awards to the date of termination. However, restrictions lapse on performance-based awards, if at all, on the original vesting date.

The Company also issues shares of time-vesting restricted stock to U.S. employees and deferred stock to non-U.S. employees which vest ratably over three to five years.

A summary of restricted and deferred stock activity follows:

	Number of shares
Non-vested shares outstanding at January 1, 2019	2,142,743
Awarded:	
Time-vesting	406,145
Performance-based	202,876
Released:	
Time-vesting	(387,628)
Performance-based	—
Forfeitures:	
Time-vesting	(132,275)
Performance-based	(129,207)
Non-vested shares outstanding at December 31, 2019	2,102,654

The average grant-date fair value of restricted stock awarded in 2019, 2018 and 2017 follows:

	2019	2018	2017
Time-vested	$ 56.06	$ 44.48	$ 55.55
Performance-based	46.08	57.24	51.90

The fair values of the performance-based awards that include a market condition were calculated using a Monte Carlo valuation model and the following weighted average assumptions:

	2019	2018	2017
Risk-free interest rate	2.5%	2.0%	1.4%
Expected term (years)	3	3	3
Expected stock price volatility	21.4%	19.9%	21.1%

At December 31, 2019, unrecognized compensation cost related to outstanding restricted and deferred stock was $67. The weighted average period over which the expense is expected to be recognized is 2.7 years. The aggregate market value of the shares released on the vesting dates was $26 in 2019.

X. Earnings Per Share

The following table summarizes basic and diluted earnings per share ("EPS"). Basic EPS excludes all potentially dilutive securities and is computed by dividing net income attributable to Crown Holdings by the weighted average number of common shares outstanding during the period. Diluted EPS includes the effect of stock options and restricted stock as calculated under the treasury stock method.

	2019	2018	2017
Net income attributable to Crown Holdings	$ 510	$ 439	$ 323
Weighted average shares outstanding (in millions):			
Basic	133.89	133.64	135.29
Add: dilutive stock options and restricted stock	0.99	0.24	0.32
Diluted	134.88	133.88	135.61
Basic EPS	$ 3.81	$ 3.28	$ 2.39
Diluted EPS	$ 3.78	$ 3.28	$ 2.38
Contingently issuable shares excluded from the computation of diluted earnings per share because the effect would have been anti-dilutive	0.8	0.9	—

Y. Segment Information

The Company's business is generally organized by product line and geography within four divisions: Americas, Europe, Asia Pacific and Transit Packaging. Within the Americas and European divisions, the Company has determined that it has the following reportable segments: Americas Beverage within the Americas, and European Beverage and European Food within Europe. The Company's Asia Pacific and Transit Packaging Divisions are reportable segments.

Non-reportable segments include the Company's aerosol can businesses in North America and Europe, the Company's food can business in North America, the Company's promotional packaging business in Europe and the Company's tooling and equipment operations in the U.S. and United Kingdom.

The Company evaluates performance and allocates resources based on segment income. Segment income, which is not a defined term under GAAP, is defined by the Company as income from operations adjusted to exclude intangibles amortization charges, provisions for asbestos and restructuring and other, the impact of fair value adjustments related to inventory acquired in an acquisition and the timing impact of hedge ineffectiveness. Segment income should not be considered in isolation or as a substitute for net income data prepared in accordance with GAAP and may not be comparable to calculations of similarly titled measures by other companies.

The tables below present information about operating segments for the three years ended December 31, 2019, 2018 and 2017:

2019	External sales	Inter-segment sales	Segment assets	Depreciation	Capital expenditures	Segment income
Americas Beverage	$ 3,369	$ 12	$ 3,577	$ 88	$ 167	$ 534
European Beverage	1,497	2	1,782	54	82	190
European Food	1,887	81	2,742	36	34	205
Asia Pacific	1,290	—	1,604	52	65	194
Transit Packaging	2,274	9	4,157	57	27	290
Total reportable segments	10,317	104	13,862	287	375	$ 1,413
Non-reportable segments	1,348	143	1,106	18	31	
Corporate and unallocated items	—	—	537	4	26	
Total	$ 11,665	$ 247	$ 15,505	$ 309	$ 432	

2018	External sales	Inter-segment sales	Segment assets	Depreciation	Capital expenditures	Segment income
Americas Beverage	$ 3,282	$ 53	$ 3,388	$ 84	$ 111	$ 454
European Beverage	1,489	1	1,705	38	121	193
European Food	1,982	69	2,792	39	17	257
Asia Pacific	1,316	—	1,558	48	130	186
Transit Packaging	1,800	5	4,415	43	24	255
Total reportable segments	9,869	128	13,858	252	403	$ 1,345
Non-reportable segments	1,282	142	1,066	18	27	
Corporate and unallocated items	—	—	338	7	32	
Total	$ 11,151	$ 270	$ 15,262	$ 277	$ 462	

2017	External sales	Inter-segment sales	Segment assets	Depreciation	Capital expenditures	Segment income
Americas Beverage	$ 2,928	$ 34	$ 3,253	$ 75	$ 167	$ 470
European Beverage	1,457	2	1,631	35	109	235
European Food	1,935	70	2,964	35	45	264
Asia Pacific	1,177	—	1,355	42	123	168
Total reportable segments	7,497	106	9,203	187	444	$ 1,137
Non-reportable segments	1,201	116	1,039	17	27	
Corporate and unallocated items	—	—	421	4	27	
Total	$ 8,698	$ 222	$ 10,663	$ 208	$ 498	

Intersegment sales primarily include sales of ends and components used to manufacture cans, such as printed and coated metal, as well as parts and equipment used in the manufacturing process.

Corporate and unallocated items include corporate and division administrative costs, technology costs, and unallocated items such as stock-based compensation.

A reconciliation of segment income of reportable segments to income before income taxes for the three years ended December 31, 2019, 2018 and 2017 follows:

	2019	2018	2017
Segment income of reportable segments	$ 1,413	$ 1,345	$ 1,137
Segment income of non-reportable segments	126	122	123
Corporate and unallocated items	(158)	(139)	(143)
Provision for asbestos	—	—	(3)
Restructuring and other	26	(44)	(51)
Goodwill impairment	(25)	—	—
Amortization of intangibles	(186)	(148)	(39)
Loss from early extinguishments of debt	(27)	—	(7)
Fair value adjustment to inventory	—	(40)	—
Other pension and postretirement	(13)	25	53
Interest expense	(378)	(384)	(252)
Interest income	17	21	15
Foreign exchange	(9)	(18)	(4)
Income before income taxes	$ 786	$ 740	$ 829

For the three years ended December 31, 2019, 2018 and 2017, intercompany profit of $6, $7 and $8 was eliminated within segment income of non-reportable segments.

For the three years ended December 31, 2019, 2018 and 2017, no one customer accounted for more than 10% of the Company's consolidated net sales.

Sales by major product were:

	2019	2018	2017
Metal beverage cans and ends	$ 5,588	$ 5,551	$ 5,085
Metal food cans and ends	2,435	2,452	2,331
Transit packaging	2,274	1,800	—
Other metal packaging	887	884	887
Other products	481	464	395
Consolidated net sales	$ 11,665	$ 11,151	$ 8,698

The following table provides sales and long-lived asset information for the major countries in which the Company operates. Long-lived assets includes property, plant and equipment.

	Net Sales			Long-Lived Assets	
	2019	2018	2017	2019	2018
United States	$ 3,407	$ 3,018	$ 1,931	$ 722	$ 694
Mexico	834	763	699	438	434
Brazil	714	732	652	393	350
United Kingdom	641	685	600	136	139
Spain	682	666	649	337	346
Other	5,387	5,287	4,167	1,861	1,782
Consolidated total	$ 11,665	$ 11,151	$ 8,698	$ 3,887	$ 3,745

Z. Condensed Combining Financial Information

Crown Cork & Seal Company, Inc. (Issuer), a wholly owned subsidiary, has $350 principal amount of 7.375% senior notes due 2026 and $40 principal amount of 7.5% senior notes due 2096 outstanding that are fully and unconditionally guaranteed by Crown Holdings, Inc. (Parent). No other subsidiary guarantees the debt. The following condensed combining financial statements:

- Statements of Comprehensive Income and Cash Flows for the years ended December 31, 2019, 2018, 2017, and
- Balance Sheets as of December 31, 2019 and December 31, 2018

are presented on the following pages to comply with the Company's requirements under Rule 3-10 of Regulation S-X.

CONDENSED COMBINING STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2019
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Net sales			$ 11,665		$ 11,665
Cost of products sold, excluding depreciation and amortization			9,349		9,349
Depreciation and amortization			490		490
Selling and administrative expense		$ 3	628		631
Restructuring and other			(26)		(26)
Goodwill impairment			25		25
Income from operations	—	(3)	1,199	—	1,196
Loss from early extinguishments of debt			27		27
Other pension and postretirement		7	6		13
Net interest expense		73	288		361
Foreign exchange			9		9
Income/(loss) before income taxes	—	(83)	869	—	786
Provision for / (benefit from) income taxes		(12)	178		166
Equity in net earnings of affiliates	$ 510	509	5	$ (1,019)	5
Net income	510	438	696	(1,019)	625
Net income attributable to noncontrolling interests			(115)		(115)
Net income attributable to Crown Holdings	$ 510	$ 438	$ 581	$ (1,019)	$ 510
Total comprehensive income	$ 753	$ 647	$ 941	$ (1,471)	$ 870
Comprehensive income attributable to noncontrolling interests			(117)		(117)
Comprehensive income attributable to Crown Holdings	$ 753	$ 647	$ 824	$ (1,471)	$ 753

CONDENSED COMBINING STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2018
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Net sales			$ 11,151		$ 11,151
Cost of products sold, excluding depreciation and amortization			9,028		9,028
Depreciation and amortization			425		425
Selling and administrative expense		$ 3	555		558
Restructuring and other	$ 9		35		44
Income from operations	(9)	(3)	1,108	—	1,096
Other pension and postretirement		7	(32)		(25)
Net interest expense		74	289		363
Foreign exchange			18		18
Income/(loss) before income taxes	(9)	(84)	833	—	740
Provision for / (benefit from) income taxes	(2)	7	211		216
Equity in net earnings of affiliates	446	456	4	$ (902)	4
Net income	439	365	626	(902)	528
Net income attributable to noncontrolling interests			(89)		(89)
Net income attributable to Crown Holdings	$ 439	$ 365	$ 537	$ (902)	$ 439
Total comprehensive income	$ 303	$ 259	$ 487	$ (660)	$ 389
Comprehensive income attributable to noncontrolling interests			(86)		(86)
Comprehensive income attributable to Crown Holdings	$ 303	$ 259	$ 401	$ (660)	$ 303

CONDENSED COMBINING STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2017
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Net sales			$ 8,698		$ 8,698
Cost of products sold, excluding depreciation and amortization			7,006		7,006
Depreciation and amortization			247		247
Selling and administrative expense		$ 2	365		367
Provision for asbestos		3			3
Restructuring and other		(1)	52		51
Income from operations	—	(4)	1,028	—	1,024
Loss from early extinguishments of debt			7		7
Other pension and postretirement		7	(60)		(53)
Net interest expense		91	146		237
Foreign exchange			4		4
Income/(loss) before income taxes	—	(102)	931	—	829
Provision for / (benefit from) income taxes		194	207		401
Equity in net earnings of affiliates	$ 323	531		$ (854)	—
Net income	323	235	724	(854)	428
Net income attributable to noncontrolling interests			(105)		(105)
Net income attributable to Crown Holdings	$ 323	$ 235	$ 619	$ (854)	$ 323
Total comprehensive income	$ 482	$ 275	$ 886	$ (1,053)	590
Comprehensive income attributable to noncontrolling interests			(108)		(108)
Comprehensive income attributable to Crown Holdings	$ 482	$ 275	$ 778	$ (1,053)	$ 482

CONDENSED COMBINING BALANCE SHEET

As of December 31, 2019
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Assets					
Current assets					
Cash and cash equivalents			$ 607		$ 607
Receivables, net		$ 11	1,517		1,528
Inventories			1,626		1,626
Prepaid expenses and other current assets			241		241
Total current assets	—	11	3,991	—	4,002
Intercompany debt receivables			3,538	$ (3,538)	—
Investments	$ 4,209	4,439		(8,648)	—
Goodwill			4,430		4,430
Intangible assets			2,015		2,015
Property, plant and equipment, net			3,887		3,887
Operating lease right-of-use assets, net			204		204
Other non-current assets		129	838		967
Total	$ 4,209	$ 4,579	$ 18,903	$ (12,186)	$ 15,505
Liabilities and equity					
Current liabilities					
Short-term debt			$ 75		$ 75
Current maturities of long-term debt			62		62
Current portion of operating lease liabilities			51		51
Accounts payable			2,646		2,646
Accrued liabilities	$ 24	$ 33	1,008		1,065
Total current liabilities	24	33	3,842	—	3,899
Long-term debt, excluding current maturities		388	7,430		7,818
Long-term intercompany debt	2,472	1,066		$ (3,538)	—
Non-current portion of operating lease liabilities			156		156
Postretirement and pension liabilities			683		683
Other non-current liabilities		311	546		857
Commitments and contingent liabilities					
Noncontrolling interests			379		379
Crown Holdings shareholders’ equity	1,713	2,781	5,867	(8,648)	1,713
Total equity	1,713	2,781	6,246	(8,648)	2,092
Total	$ 4,209	$ 4,579	$ 18,903	$ (12,186)	$ 15,505

CONDENSED COMBINING BALANCE SHEET

As of December 31, 2018
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Assets					
Current assets					
Cash and cash equivalents			$ 607		$ 607
Receivables, net		$ 9	1,593		1,602
Inventories			1,690		1,690
Prepaid expenses and other current assets	$ 1	1	178		180
Total current assets	1	10	4,068	—	4,079
Intercompany debt receivables			3,561	$ (3,561)	—
Investments	3,458	3,764		(7,222)	—
Goodwill			4,442		4,442
Intangible assets			2,193		2,193
Property, plant and equipment, net			3,745		3,745
Other non-current assets		156	647		803
Total	$ 3,459	$ 3,930	$ 18,656	$ (10,783)	$ 15,262
Liabilities and equity					
Current liabilities					
Short-term debt			$ 89		$ 89
Current maturities of long-term debt			81		81
Accounts payable			2,732		2,732
Accrued liabilities	$ 14	$ 30	967		1,011
Total current liabilities	14	30	3,869	—	3,913
Long-term debt, excluding current maturities		388	8,105		8,493
Long-term intercompany debt	2,508	1,053		$ (3,561)	—
Postretirement and pension liabilities			683		683
Other non-current liabilities		325	562		887
Commitments and contingent liabilities					
Noncontrolling interests			349		349
Crown Holdings shareholders' equity	937	2,134	5,088	(7,222)	937
Total equity	937	2,134	5,437	(7,222)	1,286
Total	$ 3,459	$ 3,930	$ 18,656	$ (10,783)	$ 15,262

CONDENSED COMBINING STATEMENT OF CASH FLOWS

For the year ended December 31, 2019
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Net cash provided by/(used for) operating activities	$ 39	$ (13)	$ 1,180	$ (43)	$ 1,163
Cash flows from investing activities					
Capital expenditures			(432)		(432)
Acquisition of businesses, net of cash acquired			(11)		(11)
Net investment hedges			23		23
Proceeds from sale of property, plant and equipment			39		39
Other			7		7
Net cash provided by/(used for) investing activities	—	—	(374)	—	(374)
Cash flows from financing activities					
Proceeds from long-term debt			2,216		2,216
Payments of long-term debt			(2,845)		(2,845)
Net change in revolving credit facility and short-term debt			(10)		(10)
Net change in long-term intercompany balances	(36)	13	23		—
Payments of finance leases			(15)		(15)
Debt issuance costs			(18)		(18)
Common stock issued	4				4
Common stock repurchased	(7)				(7)
Dividends paid			(43)	43	—
Dividend paid to noncontrolling interests			(101)		(101)
Contribution from noncontrolling interests			6		6
Foreign exchange derivatives related to debt			(16)		(16)
Net cash provided by/(used for) financing activities	(39)	13	(803)	43	(786)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash			1		1
Net change in cash, cash equivalents, and restricted cash	—	—	4	—	4
Cash, cash equivalents, and restricted cash at January 1			659		659
Cash, cash equivalents, and restricted cash at December 31	$ —	$ —	$ 663	$ —	$ 663

CONDENSED COMBINING STATEMENT OF CASH FLOWS

For the year ended December 31, 2018
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Net cash provided by/(used for) operating activities	$ (8)	$ (74)	$ 692	$ (39)	$ 571
Cash flows from investing activities					
Capital expenditures			(462)		(462)
Beneficial interest in transferred receivables			490		490
Acquisition of businesses, net of cash acquired			(3,912)		(3,912)
Proceeds from sale of property, plant and equipment			36		36
Foreign exchange derivatives related to acquisitions			(25)		(25)
Net investment hedge settlements			34		34
Other			(4)		(4)
Net cash provided by/(used for) investing activities	—	—	(3,843)	—	(3,843)
Cash flows from financing activities					
Proceeds from long-term debt			4,082		4,082
Payments of long-term debt			(333)		(333)
Net change in revolving credit facility and short-term debt			(69)		(69)
Net change in long-term intercompany balances	11	74	(85)		—
Debt issuance costs			(70)		(70)
Common stock issued	1				1
Common stock repurchased	(4)				(4)
Dividends paid			(39)	39	—
Dividend paid to noncontrolling interests			(60)		(60)
Foreign exchange derivatives related to debt			(14)		(14)
Net cash provided by/(used for) financing activities	8	74	3,412	39	3,533
Effect of exchange rate changes on cash, cash equivalents, and restricted cash			(37)		(37)
Net change in cash, cash equivalents, and restricted cash	—	—	224	—	224
Cash, cash equivalents, and restricted cash at January 1			435		435
Cash, cash equivalents, and restricted cash at December 31	$ —	$ —	$ 659	$ —	$ 659

CONDENSED COMBINING STATEMENT OF CASH FLOWS

For the year ended December 31, 2017
(in millions)

	Parent	Issuer	Non-Guarantors	Eliminations	Total Company
Net cash provided by/(used for) operating activities	$ 7	$ (58)	$ (162)	$ (38)	$ (251)
Cash flows from investing activities					
Capital expenditures			(498)		(498)
Beneficial interest in transferred receivables			1,010		1,010
Proceeds from sale of property, plant and equipment			8		8
Intercompany investing activities	235			(235)	—
Other			(24)		(24)
Net cash provided by/(used for) investing activities	235	—	496	(235)	496
Cash flows from financing activities					
Proceeds from long-term debt			1,054		1,054
Payments of long-term debt		(5)	(1,132)		(1,137)
Net change in revolving credit facility and short-term debt			95		95
Net change in long-term intercompany balances	88	63	(151)		—
Debt issuance costs			(16)		(16)
Common stock issued	9				9
Common stock repurchased	(339)				(339)
Dividends paid			(273)	273	—
Dividend paid to noncontrolling interests			(93)		(93)
Foreign exchange derivatives related to debt			27		27
Net cash provided by/(used for) financing activities	(242)	58	(489)	273	(400)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash			14		14
Net change in cash, cash equivalents, and restricted cash	—	—	(141)	—	(141)
Cash, cash equivalents, and restricted cash at January 1			576		576
Cash, cash equivalents, and restricted cash at December 31	$ —	$ —	$ 435	$ —	$ 435

Crown Americas, LLC, Crown Americas Capital Corp. II, Crown Americas Capital Corp. III and Crown Americas Capital Corp. V (collectively, the Issuers), wholly owned subsidiaries of the Company, have outstanding $1,000 principal amount of 4.5% senior notes due 2023, $400 principal amount of 4.25% senior notes due 2026, and $875 principal amount of 4.75% senior notes due 2026 which are fully and unconditionally guaranteed by Crown Holdings, Inc. (Parent) and substantially all subsidiaries in the United States. The guarantors are wholly owned by the Company and the guarantees are made on a joint and several basis. The following condensed combining financial statements:

- Statements of Comprehensive Income and Cash Flows for the years ended December 31, 2018, 2018, 2016, and
- Balance Sheets as of December 31, 2019 and December 31, 2018

are presented on the following pages to comply with the Company's requirements under Rule 3-10 of Regulation S-X.

CONDENSED COMBINING STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2019
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Net sales			$ 3,766	$ 8,358	$ (459)	$ 11,665
Cost of products sold, excluding depreciation and amortization			3,147	6,661	(459)	9,349
Depreciation and amortization			141	349		490
Selling and administrative expense		$ 10	264	357		631
Restructuring and other			14	(40)		(26)
Goodwill impairment				25		25
Income from operations	—	(10)	200	1,006	—	1,196
Loss from early extinguishments of debt		19		8		27
Other pension and postretirement			11	2		13
Net interest expense		77	124	160		361
Technology royalty			(42)	42		—
Foreign exchange		(34)	1	8	34	9
Income/(loss) before income taxes	—	(72)	106	786	(34)	786
Provision for / (benefit from) income taxes		(17)	59	132	(8)	166
Equity in net earnings of affiliates	$ 510	206	358	2	(1,071)	5
Net income	510	151	405	656	(1,097)	625
Net income attributable to noncontrolling interests				(115)		(115)
Net income attributable to Crown Holdings	$ 510	$ 151	$ 405	$ 541	$ (1,097)	$ 510
Total comprehensive income	$ 753	$ 199	$ 614	$ 827	$ (1,523)	$ 870
Comprehensive income attributable to noncontrolling interests				(117)		(117)
Comprehensive income attributable to Crown Holdings	$ 753	$ 199	$ 614	$ 710	$ (1,523)	$ 753

CONDENSED COMBINING STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2018
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Net sales			$ 3,426	$ 8,212	$ (487)	$ 11,151
Cost of products sold, excluding depreciation and amortization			2,932	6,583	(487)	9,028
Depreciation and amortization			117	308		425
Selling and administrative expense		$ 11	216	331		558
Restructuring and other	$ 9		11	24		44
Income from operations	(9)	(11)	150	966	—	1,096
Other pension and postretirement			(14)	(11)		(25)
Net interest expense		91	113	159		363
Technology royalty			(45)	45		—
Foreign exchange		(16)		19	15	18
Income/(loss) before income taxes	(9)	(86)	96	754	(15)	740
Provision for / (benefit from) income taxes	(2)	(20)	53	188	(3)	216
Equity in net earnings of affiliates	446	191	311	1	(945)	4
Net income	439	125	354	567	(957)	528
Net income attributable to noncontrolling interests				(89)		(89)
Net income attributable to Crown Holdings	$ 439	$ 125	$ 354	$ 478	$ (957)	$ 439
Total comprehensive income	$ 303	$ 62	$ 248	$ 479	$ (703)	$ 389
Comprehensive income attributable to noncontrolling interests				(86)		(86)
Comprehensive income attributable to Crown Holdings	$ 303	$ 62	$ 248	$ 393	$ (703)	$ 303

CONDENSED COMBINING STATEMENT OF COMPREHENSIVE INCOME

For the year ended December 31, 2017
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Net sales			$ 2,286	$ 6,797	$ (385)	$ 8,698
Cost of products sold, excluding depreciation and amortization			1,960	5,431	(385)	7,006
Depreciation and amortization			40	207		247
Selling and administrative expense		$ 10	134	223		367
Provision for asbestos			3			3
Restructuring and other		2	11	38		51
Income from operations		(12)	138	898	—	1,024
Loss from early extinguishments of debt		6		1		7
Other pension and postretirement			(13)	(40)		(53)
Net interest expense		65	95	77		237
Technology royalty			(42)	42		—
Foreign exchange		90	(2)	6	(90)	4
Income/(loss) before income taxes		(173)	100	812	90	829
Provision for / (benefit from) income taxes		(66)	271	164	32	401
Equity in net earnings of affiliates	$ 323	194	406		(923)	—
Net income	323	87	235	648	(865)	428
Net income attributable to noncontrolling interests				(105)		(105)
Net income attributable to Crown Holdings	$ 323	$ 87	$ 235	$ 543	$ (865)	$ 323
Total comprehensive income	$ 482	$ 115	$ 275	$ 854	$ (1,136)	$ 590
Comprehensive income attributable to noncontrolling interests				(108)		(108)
Comprehensive income attributable to Crown Holdings	$ 482	$ 115	$ 275	$ 746	$ (1,136)	$ 482

Crown Holdings, Inc.

CONDENSED COMBINING BALANCE SHEET

As of December 31, 2019
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Assets						
Current assets						
Cash and cash equivalents		$ 133	$ 5	$ 469		$ 607
Receivables, net		11	140	1,377		1,528
Intercompany receivables			48	23	$ (71)	—
Inventories			443	1,183		1,626
Prepaid expenses and other current assets		2	19	220		241
Total current assets	—	146	655	3,272	(71)	4,002
Intercompany debt receivables		3,080	3,352	245	(6,677)	—
Investments	$ 4,209	2,850	1,495		(8,554)	—
Goodwill			1,186	3,244		4,430
Intangible assets			832	1,183		2,015
Property, plant and equipment, net		1	725	3,161		3,887
Operating lease right-of-use assets, net		3	64	137		204
Other non-current assets		62	148	757		967
Total	$ 4,209	$ 6,142	$ 8,457	$ 11,999	$ (15,302)	$ 15,505
Liabilities and equity						
Current liabilities						
Short-term debt				$ 75		$ 75
Current maturities of long-term debt		$ 27		35		62
Current portion of operating lease liabilities			$ 19	32		51
Accounts payable			682	1,964		2,646
Accrued liabilities	$ 24	49	134	858		1,065
Intercompany payables			23	48	$ (71)	—
Total current liabilities	24	76	858	3,012	(71)	3,899
Long-term debt, excluding current maturities		3,313	388	4,117		7,818
Long-term intercompany debt	2,472	996	3,082	127	(6,677)	—
Non-current portion of operating lease liabilities		3	48	105		156
Postretirement and pension liabilities			386	297		683
Other non-current liabilities			303	554		857
Commitments and contingent liabilities						
Noncontrolling interests				379		379
Crown Holdings shareholders' equity	1,713	1,754	3,392	3,408	(8,554)	1,713
Total equity	1,713	1,754	3,392	3,787	(8,554)	2,092
Total	$ 4,209	$ 6,142	$ 8,457	$ 11,999	$ (15,302)	$ 15,505

CONDENSED COMBINING BALANCE SHEET

As of December 31, 2018
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Assets						
Current assets						
Cash and cash equivalents		$ 117	$ 19	$ 471		$ 607
Receivables, net		4	182	1,416		1,602
Intercompany receivables			33	13	$ (46)	—
Inventories			485	1,205		1,690
Prepaid expenses and other current assets	$ 1	1	17	161		180
Total current assets	1	122	736	3,266	(46)	4,079
Intercompany debt receivables		2,577	3,449	12	(6,038)	—
Investments	3,458	2,657	1,248		(7,363)	—
Goodwill			1,178	3,264		4,442
Intangible assets			901	1,292		2,193
Property, plant and equipment, net		1	693	3,051		3,745
Other non-current assets		29	192	582		803
Total	$ 3,459	$ 5,386	$ 8,397	$ 11,467	$ (13,447)	$ 15,262
Liabilities and equity						
Current liabilities						
Short-term debt				$ 89		$ 89
Current maturities of long-term debt		$ 37		44		81
Accounts payable			$ 725	2,007		2,732
Accrued liabilities	$ 14	49	144	804		1,011
Intercompany payables			13	33	$ (46)	—
Total current liabilities	14	86	882	2,977	(46)	3,913
Long-term debt, excluding current maturities		2,999	1,274	4,220		8,493
Long-term intercompany debt	2,508	746	2,700	84	(6,038)	—
Postretirement and pension liabilities			432	251		683
Other non-current liabilities			332	555		887
Commitments and contingent liabilities						
Noncontrolling interests				349		349
Crown Holdings shareholders' equity	937	1,555	2,777	3,031	(7,363)	937
Total equity	937	1,555	2,777	3,380	(7,363)	1,286
Total	$ 3,459	$ 5,386	$ 8,397	$ 11,467	$ (13,447)	$ 15,262

CONDENSED COMBINING STATEMENT OF CASH FLOWS

For the year ended December 31, 2019
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Net provided by/(used for) operating activities	$ 39	$ (29)	$ 281	$ 975	$ (103)	$ 1,163
Cash flows from investing activities						
Capital expenditures			(97)	(335)		(432)
Acquisition of businesses, net of cash acquired			(11)			(11)
Net investment hedges		23				23
Proceeds from sale of property, plant and equipment			8	31		39
Intercompany investing activities			226		(226)	—
Other				7		7
Net cash provided by/(used for) investing activities	—	23	126	(297)	(226)	(374)
Cash flows from financing activities						
Proceeds from long-term debt		1,100		1,116		2,216
Payments of long-term debt		(815)	(887)	(1,143)		(2,845)
Net change in revolving credit facility and short-term debt				(10)		(10)
Net change in long-term intercompany balances	(36)	(253)	479	(190)		—
Payments of finance leases			(13)	(2)		(15)
Debt issuance costs		(10)		(8)		(18)
Common stock issued	4					4
Common stock repurchased	(7)					(7)
Dividends paid				(329)	329	—
Dividends paid to noncontrolling interests				(101)		(101)
Contribution from noncontrolling interests				6		6
Foreign exchange derivatives related to debt				(16)		(16)
Net cash provided by/(used for) financing activities	(39)	22	(421)	(677)	329	(786)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash				1		1
Net change in cash, cash equivalents, and restricted cash	—	16	(14)	2	—	4
Cash, cash equivalents, and restricted cash at January 1	—	117	19	523	—	659
Cash, cash equivalents, and restricted cash at December 31	$ —	$ 133	$ 5	$ 525	$ —	$ 663

CONDENSED COMBINING STATEMENT OF CASH FLOWS

For the year ended December 31, 2018
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Net provided by/(used for) operating activities	$ (8)	$ (44)	$ 180	$ 532	$ (89)	$ 571
Cash flows from investing activities						
Capital expenditures			(60)	(402)		(462)
Beneficial interest in transferred receivables				490		490
Acquisition of businesses, net of cash acquired				(3,912)		(3,912)
Proceeds from sale of property, plant and equipment			9	27		36
Intercompany investing activities		(100)			100	—
Foreign exchange derivatives related to acquisition				(25)		(25)
Net investment hedge settlements		34				34
Other				(4)		(4)
Net cash provided by/(used for) investing activities	—	(66)	(51)	(3,826)	100	(3,843)
Cash flows from financing activities						
Proceeds from long-term debt		975	1,150	1,957		4,082
Payments of long-term debt		(25)	(265)	(43)		(333)
Net change in revolving credit facility and short-term debt				(69)		(69)
Net change in long-term intercompany balances	11	(719)	(998)	1,706		—
Debt issuance costs		(40)		(30)		(70)
Common stock issued	1					1
Common stock repurchased	(4)					(4)
Capital contribution				100	(100)	—
Dividends paid				(89)	89	—
Dividends paid to noncontrolling interests				(60)		(60)
Foreign exchange derivatives related to debt				(14)		(14)
Net cash provided by/(used for) financing activities	8	191	(113)	3,458	(11)	3,533
Effect of exchange rate changes on cash, cash equivalents, and restricted cash				(37)		(37)
Net change in cash, cash equivalents, and restricted cash	—	81	16	127	—	224
Cash, cash equivalents, and restricted cash at January 1	—	36	3	396	—	435
Cash, cash equivalents, and restricted cash at December 31	$ —	$ 117	$ 19	$ 523	$ —	$ 659

CONDENSED COMBINING STATEMENT OF CASH FLOWS

For the year ended December 31, 2017
(in millions)

	Parent	Issuer	Guarantors	Non-Guarantors	Eliminations	Total Company
Net provided by/(used for) operating activities	$ 7	$ (30)	$ 83	$ (211)	$ (100)	$ (251)
Cash flows from investing activities						
Capital expenditures			(102)	(396)		(498)
Beneficial interest in transferred receivables				1,010		1,010
Proceeds from sale of property, plant and equipment			1	7		8
Intercompany investing activities	235		300		(535)	—
Other			(20)	(4)		(24)
Net cash provided by/(used for) investing activities	235	—	179	617	(535)	496
Cash flows from financing activities						
Proceeds from long-term debt		750	9	295		1,054
Payments of long-term debt		(1,015)	(7)	(115)		(1,137)
Net change in revolving credit facility and short-term debt				95		95
Net change in long-term intercompany balances	88	263	(261)	(90)		—
Debt issuance costs		(15)		(1)		(16)
Common stock issued	9					9
Common stock repurchased	(339)					(339)
Dividends paid				(635)	635	—
Dividends paid to noncontrolling interests				(93)		(93)
Foreign exchange derivatives related to debt				27		27
Net cash provided by/(used for) financing activities	(242)	(17)	(259)	(517)	635	(400)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash				14		14
Net change in cash, cash equivalents, and restricted cash	—	(47)	3	(97)	—	(141)
Cash, cash equivalents, and restricted cash at January 1		83		493		576
Cash, cash equivalents, and restricted cash at December 31	$ —	$ 36	$ 3	$ 396	$ —	$ 435

Quarterly Data (unaudited)

(in millions)	2019				2018			
	First (1)	Second (2)	Third (3)	Fourth (4)	First (5)	Second (6)	Third (7)	Fourth (8)
Net sales	$ 2,755	$ 3,035	$ 3,084	$ 2,791	$ 2,197	$ 3,046	$ 3,174	$ 2,734
Gross profit *	423	495	508	400	324	467	517	390
Income from operations	262	383	352	199	221	292	365	218
Net income (loss) attributable to Crown Holdings	103	137	183	87	90	132	164	53
Earnings per average common share:								
Basic	$ 0.77	$ 1.02	$ 1.37	$ 0.65	$ 0.67	$ 0.99	$ 1.23	$ 0.40
Diluted	0.77	1.02	1.36	0.64	0.67	0.99	1.23	0.40
Average common shares outstanding:								
Basic	133.8	133.9	133.9	134.0	133.5	133.6	133.7	133.7
Diluted	134.4	134.8	135.0	135.2	133.8	133.8	133.8	134.1

* The Company defines gross profit as net sales less cost of products sold and depreciation and amortization.

Notes:

(1) Includes pre-tax charges of $4 for restructuring and other and $6 from early extinguishment of debt and a pension plan curtailment gain of $14.

(2) Includes pre-tax gains of $45 for restructuring and other, and charges of $31 for a pension plan settlement and $15 to settle a tax contingency.

(3) Includes pre-tax charges of $6 for pension plan settlements.

(4) Includes pre-tax charges of $25 for a goodwill impairment, $15 for restructuring and other and $7 for pension plan settlements. Also, includes income tax benefits of $37 primarily related to a deferred tax valuation allowance release.

(5) Includes pre-tax charges of $13 for restructuring and other and $24 for acquisition costs.

(6) Includes pre-tax charges of $40 for fair value adjustment to inventory and $16 for restructuring and other.

(7) Includes a pre-tax benefit of $1 for restructuring and other and income tax charges of $28 related to taxes on distributions of foreign earnings.

(8) Includes pre-tax charges of $16 for restructuring and other and $42 for pension plan settlements.

SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS AND RESERVES
(In millions)

COLUMN A	COLUMN B	COLUMN C Additions		COLUMN D	COLUMN E	COLUMN F
Description	Balance at beginning of period	Charged to costs and expense	Charged to other accounts	Acquisitions	Deductions – write-offs	Balance at end of period
For the year ended December 31, 2019						
Allowances deducted from assets to which they apply:						
Trade accounts receivable	$ 65	$ 4	$ —	$ 1	$ (8)	$ 62
Deferred tax assets	282	(33)	5	—	(11)	243
For the year ended December 31, 2018						
Allowances deducted from assets to which they apply:						
Trade accounts receivable	71	(6)	(4)	7	(3)	65
Deferred tax assets	228	(1)	(7)	76	(14)	282
For the year ended December 31, 2017						
Allowances deducted from assets to which they apply:						
Trade accounts receivable	76	—	6	—	(11)	71
Deferred tax assets	225	9	—	—	(6)	228

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

As of the end of the period covered by this Annual Report on Form 10-K, management, including the Company's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of its disclosure controls and procedures. Based upon that evaluation and as of the end of the period for which this report is made, the Company's Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective to ensure that information to be disclosed in reports that the Company files and submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and terms of the Securities and Exchange Commission, and to ensure that information required to be disclosed in the reports that the Company files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosure.

The Company's report on internal control over financial reporting is included in Part II, Item 8 of this Annual Report on Form 10-K.

There has been no change in internal control over financial reporting that occurred during the quarter ended December 31, 2019 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item is set forth in the Company's Proxy Statement within the sections entitled "Election of Directors," "Section 16(a) Beneficial Ownership Reporting Compliance" and "Corporate Governance" and is incorporated herein by reference.

The following table sets forth certain information concerning the principal executive officers of the Company, including their ages and positions.

Name	Age	Title	Year Assumed Present Title
Timothy J. Donahue	57	President and Chief Executive Officer	2016
Gerard H. Gifford	64	Executive Vice President and Chief Operating Officer	2017
Djalma Novaes, Jr.	59	President – Americas Division	2015
Didier Sourisseau	54	President – European Division	2017
Hock Huat Goh	65	President – Asia Pacific Division	2018
Robert H. Bourque, Jr.	49	President – Transit Packaging Division	2018
Thomas A. Kelly	60	Senior Vice President and Chief Financial Officer	2013
David A. Beaver	44	Vice President and Corporate Controller	2015

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is set forth in the Company's Proxy Statement within the sections entitled "Executive Compensation," "Compensation Discussion and Analysis" and "Corporate Governance" and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Certain information required by this Item is set forth in the Company's Proxy Statement within the sections entitled "Proxy Statement – Meeting, April 23, 2020" and "Common Stock Ownership of Certain Beneficial Owners, Directors and Executive Officers" and is incorporated herein by reference.

The following table provides information as of December 31, 2019 with respect to shares of the Company's Common Stock that may be issued under its equity compensation plans:

	Equity Compensation Plan Information		
Plan category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available For Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected In Column (a)) (c)
Equity compensation plans approved by security holders	630,736	—	3,436,265
Equity compensation plans not approved by security holders			
Total	630,736	—	3,436,265

(1) Includes the 2013 Stock-Based Incentive Compensation Plan.

(2) Includes 630,736 shares of deferred stock awarded from the 2013 Stock-Based Incentive Compensation Plan during each year from 2013 through 2019. The shares are time-vesting and will be issued up to four years from their grant date. The weighted-average exercise price in the table does not include these shares.

(3) Includes 3,240,254, 747,384 and 79,363 shares available for issuance at December 31, 2019 under the 2013 Stock Based Incentive Compensation Plan, the Company's Employee Stock Purchase Plan and the Stock Compensation Plan for Non-Employee Directors.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item is set forth in the Company's Proxy Statement within the sections entitled "Election of Directors," "Corporate Governance" and "Executive Compensation" and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is set forth in the Company's Proxy Statement within the sections entitled "Principal Accounting Fees and Services" and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

a) The following documents are filed as part of this report:

(1) All Financial Statements (see Part II, Item 8)

Management’s Report on Internal Control Over Financial Reporting

Report of Independent Registered Public Accounting Firm

Consolidated Statements of Operations for the years ended December 31, 2019, 2018 and 2017

Consolidated Statements of Comprehensive Income for the years ended December 31, 2019, 2018 and 2017

Consolidated Balance Sheets as of December 31, 2019 and 2018

Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018 and 2017

Consolidated Statements of Shareholders' Equity for the years ended December 31, 2019, 2018 and 2017

Notes to Consolidated Financial Statements

Supplementary Information

(2) Financial Statement Schedules:

Schedule II – Valuation and Qualifying Accounts and Reserves for the years ended December 31, 2019, 2018 and 2017

All other schedules have been omitted because they are not applicable or the required information is included in the Consolidated Financial Statements.

(3) Exhibits

3.a Articles of Incorporation of Crown Holdings, Inc., as amended (incorporated by reference to Exhibit 3.a of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2004 (File No. 000-50189)).

3.b Amended and Restated By-Laws of Crown Holdings, Inc. (incorporated by reference to Exhibit 3.ii of the Registrant's Current Report on Form 8-K dated January 29, 2016 (File No. 000-50189)).

4.a Specimen certificate of Registrant’s Common Stock (incorporated by reference to Exhibit 4.a of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 1995 (File No. 1-2227)).

4.b Indenture, dated December 17, 1996, among Crown Cork & Seal Company, Inc., Crown Cork & Seal Finance PLC, Crown Cork & Seal Finance S.A. and the Bank of New York, as trustee (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K dated December 17, 1996 (File No. 1-2227)).

4.c Form of the Registrant's 7-3/8% Debentures Due 2026 (incorporated by reference to Exhibit 99.1 of the Registrant's Current Report on Form 8-K dated December 17, 1996 (File No. 1-2227)).

4.d Officers' Certificate for 7-3/8% Debentures Due 2026 (incorporated by reference to Exhibit 99.6 of the Registrant's Current Report on Form 8-K dated December 17, 1996 (File No. 1-2227)).

4.e Form of the Registrant's 7-1/2% Debentures Due 2096 (incorporated by reference to Exhibit 99.2 of the Registrant's Current Report on Form 8-K dated December 17, 1996 (File No. 1-2227)).

4.f Officers' Certificate for 7-1/2% Debentures Due 2096 (incorporated by reference to Exhibit 99.7 of the Registrant's Current Report on From 8-K dated December 17, 1996 (File No. 1-2227)).

4.g Terms Agreement, dated December 12, 1996 (incorporated by reference to Exhibit 1.1 of the Registrant's Current Report on Form 8-K dated December 17, 1996 (File No. 1-2227)).

4.h Form of Bearer Security Depositary Agreement (incorporated by reference to Exhibit 4.2 of the Registrant's Registration Statement on Form S-3, dated November 26, 1996, amended December 5 and 10, 1996 (File No. 333-16869)).

4.i Supplemental Indenture to Indenture dated December 17, 1996, dated as of February 25, 2003, between Crown Cork & Seal Company, Inc., as Issuer and Guarantor, Crown Cork & Seal Finance PLC, as Issuer, Crown Cork & Seal Finance S.A., as Issuer, Crown Holdings, Inc., as Additional Guarantor and Bank One Trust Company, N.A., as Trustee (incorporated by reference to Exhibit 4.5 of the Registrant’s Current Report on Form 8-K dated February 26, 2003 (File No. 000-50189)).

4.j Indenture, dated as of January 9, 2013, by and among Crown Americas LLC and Crown Americas Capital Corp. IV, as Issuers, the Guarantors named therein and The Bank of New York Mellon Trust Company, N.A., as Trustee, relating to the 4 1/2% Senior Notes due 2023 (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K dated January 9, 2013 (File No. 000-50189)).

4.k Form of 4 ½% Senior Notes due 2023 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K Dated January 15, 2013 (File No. 000-50189)).

4.l Credit Agreement, dated as of December 19, 2013, among Crown Americas LLC, as U.S. Borrower, Crown European Holdings SA, as European Borrower, CROWN Metal Packaging Canada LP, as Canadian Borrower, the Subsidiary Borrowers named therein, the Company, Crown International Holdings, Inc. and Crown Cork & Seal Company, Inc., as Parent Guarantors, Deutsche Bank AG New York Branch, as Administrative Agent, Deutsche Bank AG London Branch, a U.K. Administrative Agent, Deutsche Bank AG Canada Branch, as Canadian Administrative Agent, and various Lending Institutions (incorporated by reference to Exhibit 4 of the Registrant’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 (File No. 000-50189)).

4.m First Amendment to Credit Agreement, among Crown Americas LLC, as U.S. Borrower, Crown European Holdings SA, as European Borrower, CROWN Metal Packaging Canada LP, as Canadian Borrower, the Subsidiary Borrowers named therein, Crown Holdings, Inc., Crown International Holdings, Inc. and Crown Cork & Seal Company, Inc., as Parent Guarantors, Deutsche Bank AG New York Branch, as Administrative Agent, Deutsche Bank AG London Branch, a U.K. Administrative Agent, Deutsche Bank AG Canada Branch, as Canadian Administrative Agent, and various Lending Institutions referred to therein (incorporated by reference to Exhibit 4.1 of the Registrants Quarterly Report on Form 10-Q for the quarter ended September 30, 2014 (File No. 000-50189)).

4.n Indenture, dated as of July 8, 2014, by and among Crown European Holdings S.A., as Issuer, the Guarantors named therein, U.S. Bank National Association, as Trustee, and the other parties thereto, relating to the €650 million 4% Senior Notes due 2022 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K dated July 11, 2014 (File No. 000-50189)).

4.o Form of 4% Senior Notes due 2022 (included in Exhibit 4.p).

4.p Incremental Amendment No. 1, among Crown Americas LLC, as U.S. Borrower, Deutsche Bank AG New York Branch, as administrative agent for the Term A Lenders, TD Bank, N.A., The Bank of Nova Scotia and The Bank of Tokyo-Mitsubishi UFJ, Ltd., to that certain Credit Agreement, dated as of December 19, 2013, as amended (incorporated by reference to Exhibit 4.u of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2014 (File No. 000-50189)).

4.q Incremental Amendment No. 2, among Crown Americas LLC, as U.S. Borrower, Deutsche Bank AG New York Branch, as administrative agent for certain Term Lenders, and the Term Loan B Lenders party thereto, to that certain Credit Agreement, dated as of December 19, 2013, as amended (incorporated by reference to Exhibit 4.v of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2014 (File No. 000-50189)).

4.r Incremental Amendment No. 3, among Crown Americas LLC, as U.S. Borrower, Deutsche Bank AG New York Branch, as administrative agent for certain Term Lenders, and the Term Loan A Lenders party thereto, to that certain Credit Agreement, dated as of December 19, 2013, as amended ((incorporated by reference to Exhibit 4.v of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2015 (File No. 000-50189)).

4.s Indenture, dated as of September 15, 2016, by and among Crown European Holdings, S.A., as Issuer, the Guarantors named therein, U.S.. Bank National Association, as Trustee, and the other parties thereto, relating to the €600 million 2.625% Senior Notes due 2024 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K dated September 19, 2016 (File No. 000-50189)).

4.t Indenture, dated as of September 15, 2016, by and among Crown Americas LLC and Crown Americas Capital Corp. V, as Issuers, the Guarantors named therein and U.S. Bank National Association, as Trustee, relating to the $400 million 4.250% Senior Notes due 2026 (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K dated September 19, 2016 (File No. 000-50189)).

4.u Second Amendment, dated September 19, 2016, to Credit Agreement, among Crown Americas LLC, as U.S. Borrower, Crown European Holdings SA, as European Borrower, CROWN Metal Packaging Canada LP, as Canadian Borrower, the Subsidiary Borrowers named therein, the Company, Crown International Holdings, Inc. and Crown Cork & Seal Company, Inc., as Parent Guarantors, Deutsche Bank AG New York Branch, as Administrative Agent, Deutsche Bank AG London Branch, as U.K. Administrative Agent, Deutsche Bank AG Canada Branch, as Canadian Administrative Agent, and various Lending Institutions referred to therein (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K dated September 23, 2016 (File No. 000-50189)).

4.v Indenture, dated as of May 5, 2015, among Crown European Holdings S.A., the Guarantors (as defined therein), U.S. Bank National Association, as trustee, Elavon Financial Services Limited, UK Branch, as paying agent, and Elavon Financial Services Limited, as registrar and transfer agent (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q dated July 30, 2015 (File No. 000-50189)).

4.w Amended & Restated Credit Agreement, dated April 7, 2017, by and among Crown Americas LLC, Crown European Holdings S.A., Crown Metal Packaging Canada LP, each of the Subsidiary Borrowers from time to time party thereto, Crown Holdings, Inc., Crown Cork & Seal Company, Inc., Crown International Holdings, Inc., each other Credit Party from time to time party thereto, Deutsche Bank AG Canada Branch, Deutsche Bank AG London Branch, Deutsche Bank AG New York Branch, and various Lenders referred to therein (incorporated by reference to Exhibit 4 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 (File No. 000-50189)).

4.x First Amendment to Amended and Restated Credit Agreement, dated as of December 28, 2017, among Crown Americas LLC, Crown European Holdings S.A., Crown Metal Packaging Canada LP, each of the Subsidiary Borrowers party thereto, Crown Holdings, Inc., Crown Cork & Seal Company, Inc. and Crown International Holdings, Inc., each other Credit Party from time to time party thereto, Deutsche Bank AG New York Branch, Deutsche Bank AG, London Branch, Deutsche Bank AG, Canada Branch, and various Lenders referred to therein (incorporated by reference to Exhibit 4 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 000-50189)).

4.y Incremental Amendment No. 1, dated as of January 29, 2018, among Crown Americas LLC, Crown European Holdings S.A., Crown Metal Packaging Canada LP, each of the Subsidiary Borrowers party thereto, Crown Holdings, Inc., Crown Cork & Seal Company, Inc. and Crown International Holdings, Inc., each other Credit Party from time to time party thereto, Deutsche Bank AG New York Branch, Deutsche Bank AG, London Branch, Deutsche Bank AG, Canada Branch, and various Lenders referred to therein (incorporated by reference to Exhibit 4.1 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017).

4.z Indenture, dated as of January 26, 2018, by and among Crown European Holdings S.A., as Issuer, the Guarantors named therein, U.S. Bank National Association, as Trustee, and the other parties thereto, relating to the €335 million 2.250% Senior Notes due 2023 and the €500 million 2.875% Senior Notes due 2026 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K dated February 1, 2018 (File No. 000-50189)).

4.aa Indenture, dated as of January 26, 2018, by and among Crown Americas LLC and Crown Americas Capital Corp. VI, as Issuers, the Guarantors named therein and U.S. Bank National Association, as Trustee, relating to the $875 million 4.750% Senior Notes due 2026 (incorporated by reference to Exhibit 4.2 of the Registrant's Current Report on Form 8-K dated February 1, 2018 (File No. 000-50189)).

4.bb Registration Rights Agreement, dated as of January 26, 2018, by and among Crown Holdings, Inc., Crown Americas LLC and Crown Americas Capital Corp. VI, Citigroup Global Markets Inc., as representative of the initial purchasers, and the Guarantors (as defined therein), relating to the $875 million 4.750% Senior Notes due 2026 (incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K dated February 1, 2018 (File No. 000-50189)).

4.cc Second Amendment to Amended and Restated Credit Agreement, First Amendment to the U.S. Guarantee Agreement and First Amendment to U.S. Indemnity, Subrogation and Contribution Agreement, dated as of March 23, 2018, among Crown Americas LLC, Crown European Holdings S.A., Crown Metal Packaging Canada LP, each of the Subsidiary Borrowers from time to time party thereto, Crown Holdings, Inc., Crown Cork & Seal Company, Inc. and Crown International Holdings, Inc., each other Credit Party from time to time party thereto, Deutsche Bank AG New York Branch, Deutsche Bank AG, London Branch, Deutsche Bank AG, Canada Branch, and various Lenders referred to therein (incorporated by reference to Exhibit 4.cc of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018).

4.dd Incremental Amendment No. 2 and Third Amendment to Amended and Restated Credit Agreement, dated as of December 13, 2019, among Crown Americas LLC, Crown European Holdings S.A., Crown Metal Packaging Canada LP, each of the Subsidiary Borrowers from time to time party thereto, Crown Holdings, Inc., Crown Cork & Seal Company, Inc., and Crown International Holdings, Inc., each other Credit Party from time to time party thereto, Deutsche Bank AG New York Branch, Deutsche Bank AG London Branch, Deutsche Bank AG, Canada Branch, and the various Lenders referred to therein (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K/A dated February 28, 2020 (File No. 000-50189)).

4.ee Indenture, dated as of October 31, 2019, by and among Crown European Holdings S.A., as Issuer, the Guarantors named therein, U.S. Bank National Association, as Trustee, and the other parties thereto, relating to the €550 million 0.750% Senior Notes due 2023 (incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K dated November 4, 2019 (File No. 000-50189)).

4.ff Description of the Registrant's Securities.

4.gg Other long-term agreements of the Registrant are not filed pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K, and the Registrant agrees to furnish copies of such agreements to the Securities and Exchange Commission upon its requests.

10.a Employment Contracts:

(1) Employment Agreement, dated December 30, 2015, between Crown Holdings, Inc. and Timothy J. Donahue (incorporated by reference to Exhibit 10.1 of the Registrant’s Current Report on Form 8-K dated January 5, 2016 (File No. 000-50189)).

(2) First amendment to the employment contract, effective June 1, 2012, between Crown Holdings, Inc. and Gerard Gifford, dated as of July 24, 2013 (incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 (File No 000-50189)).

(3) Executive Employment Agreement, effective June 1, 2012, between Crown Holdings, Inc. and Gerard Gifford (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 (File No 000-50189)).

(4) Employment contract between Crown Holdings, Inc. and Thomas A. Kelly, dated July 24, 2013 (incorporated by reference to Exhibit 10 of the Registrant’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 (File No. 000-50189)).

(5) Employment contract between Crown Holdings, Inc. and Djalma Novaes Jr., dated February 26, 2015 (incorporated by reference to Exhibit 10.c(11) of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2014 (File No. 000-50189)).

(6) Executive Employment Agreement, effective May 1, 2016, between Crown Holdings, Inc. and Robert Bourque, Jr. (incorporated by reference to Exhibit 10.2 of the Registrant’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 000-50189)).

(7) Employment contract between Crown Holdings, Inc. and Didier Sourisseau, effective April 1, 2017 (incorporated by reference to Exhibit 10.a of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017) (File No. 000-50189)).31, 2008 (File No. 000-50189)).

10.b Crown Holdings, Inc. Economic Profit Incentive Plan, effective as of January 1, 2018 (incorporated by reference to Exhibit 10.b of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 000-50189).

10.c Crown Holdings, Inc. Senior Executive Retirement Plan, as amended and restated as of January 1, 2008 (incorporated by reference to Exhibit 10.l of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2007 (File No. 000-50189)).

10.d Senior Executive Retirement Agreements:

(1) Senior Executive Retirement Agreement between Crown Holdings, Inc. and Timothy J. Donahue, dated May 3, 2007 (incorporated by reference to Exhibit 10.4(e) of the Registrant’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2007 (File No. 000-50189)).

(2) Senior Executive Retirement Agreement, effective June 1, 2012, between Crown Holdings, Inc. and Gerard Gifford (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 (File No 000-50189)).

(3) Amendment No. 1 to the Senior Executive Retirement Agreement, effective June 1, 2012, between Crown Holdings, Inc. and Gerard Gifford dated December 28, 2012 (incorporated by reference to Exhibit 10.m(7) of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2012 (File No. 1-50189)).

(4) Senior Executive Retirement Agreement, effective July 24, 2013, between Crown Holdings, Inc. and Thomas A. Kelly (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013 (File No 000-50189)).

(5) Senior Executive Retirement Agreement between Crown Holdings, Inc. and Djalma Novaes Jr., dated February 26, 2015 (incorporated by reference to Exhibit 10.f(9) of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2014 (File No. 000-50189)).

(6) Senior Executive Retirement Agreement, effective May 1, 2016, between Crown Holdings, Inc. and Robert Bourque, Jr. (incorporated by reference to Exhibit 10.3 of the Registrant’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 000-50189)).

(7) Amendment No. 2 to the Senior Executive Retirement Agreement, effective as of May 17, 2016, between Crown Holdings, Inc. and Gerard Gifford (incorporated by reference to Exhibit 10.1 of the Registrant’s Current Report on Form 8-K dated May 18, 2016 (File No. 000-50189)).

(8) Senior Executive Retirement Agreement between Crown Holdings, Inc. and Didier Sourisseau, effective April 1, 2017 (incorporated by reference to Exhibit 10.b of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017) (File No. 000-50189)).

(9) Amended and Restated Senior Executive Retirement Agreement, effective as of June 1, 2017, between Crown Holdings, Inc. and Gerard Gifford (incorporated by reference to Exhibit 10.c of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017) (File No. 000-50189)).

10.e Form of Agreement for Restricted Stock Awards under Crown Holdings, Inc. 2006 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.dd of the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2006 (File No. 000-50189)).

10.f Crown Holdings, Inc. 2004 Stock-Based Incentive Compensation Plan, dated as of April 22, 2004 (incorporated by reference to the Registrant’s Definitive Proxy Statement on Schedule 14A, filed with the Securities and Exchange Commission on March 19, 2004 (File No. 000-50189)).

10.g Amendment No. 1, effective December 14, 2006, to the Crown Holdings, Inc. 2004 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.ff of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2006 (File No. 000-50189)).

10.h Form of Agreement for Non-Qualified Stock Option Awards under Crown Holdings, Inc. 2004 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.6 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004 (File No. 000-51089)).

10.i Crown Holdings, Inc. Deferred Compensation Plan for Directors, as Amended and Restated, effective January 1, 2008 (incorporated by reference to Exhibit 10.w of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2008 (File No. 000-50189)).

10.j Crown Holdings, Inc. Stock Compensation Plan for Non-Employee Directors, dated as of April 22, 2004 (incorporated by reference to the Registrant's Definitive Proxy Statement on Schedule 14A, filed with the Securities and Exchange Commission on March 19, 2004 (File No. 000-50189)).

10.k Amendment No. 1, effective April 1, 2005, to the Crown Holdings, Inc. Stock Compensation Plan for Non-Employee Directors, dated as of April 22, 2004 (incorporated by reference to Exhibit 10 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005 (File No. 000-50189)).

10.l Crown Holdings, Inc. 2006 Stock-Based Incentive Compensation Plan (incorporated by reference to the Registrant's Definitive Proxy Statement on Schedule 14A, filed with the Securities and Exchange Commission on March 24, 2006 (File No. 000-50189)).

10.m Amendment No. 1, effective December 14, 2006, to the Crown Holdings, Inc. 2006 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.pp of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2006 (File No. 000-50189)).

10.n Amendment No. 2, effective July 28, 2010, to the Crown Holdings, Inc. 2006 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 (File No. 000-50189)).

10.o Form of Agreement for Non-Qualified Stock Option Awards under Crown Holdings, Inc. 2006 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2007 (File No. 000-50189)).

10.p Crown Holdings, Inc. 2013 Stock-Based Incentive Compensation Plan (incorporated by reference to the Registrant's Definitive Proxy Statement on Schedule 14A, filed with the Securities and Exchange Commission on March 18, 2013 (File No. 000-50189)).

10.q Form of Agreement for Restricted Stock Awards under Crown Holdings, Inc. 2013 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013 (File No. 000-50189)).

10.r Form of Agreement for Deferred Stock Awards under Crown Holdings, Inc. 2013 Stock-Based Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013 (File No. 000-50189)).

10.s Crown Cork & Seal Company, Inc. Restoration Plan, dated July 28, 2010 (incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 (File No. 000-50189)).

10.t Amendment No. 1, effective July 1, 2011, to the Crown Cork & Seal Company, Inc. Restoration Plan (incorporated by reference to Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 (File No. 000-50189)).

Exhibits 10.c through 10.t are management contracts or compensatory plans or arrangements required to be filed as exhibits pursuant to Item 14(c) of this Report.

21 Subsidiaries of Registrant.

23	Consent of Independent Registered Public Accounting Firm.
31.1	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, executed by Timothy J. Donahue, President and Chief Executive Officer of Crown Holdings, Inc. and Thomas A. Kelly, Senior Vice President and Chief Financial Officer of Crown Holdings, Inc.
101	The following financial information from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018 formatted in Inline XBRL (eXtensible Business Reporting Language): (i) Consolidated Statements of Operations for the twelve months ended December 31, 2018, 2017 and 2016, (ii) Consolidated Statements of Comprehensive Income for the twelve months ended December 31, 2018, 2017 and 2016; (iii) Consolidated Balance Sheets as of December 31, 2018 and December 31, 2017, (iv) Consolidated Statements of Cash Flows for the twelve months ended December 31, 2018, 2017 and 2016, (v) Consolidated Statements of Changes in Shareholders' Equity for the twelve months ended December 31, 2018, 2017 and 2016 and (vi) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File - the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded with the XBRL document.

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.

Crown Holdings, Inc.
Registrant

By: /s/ David A. Beaver
David A. Beaver
Vice President and Corporate Controller

Date: February 28, 2020

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy J. Donahue, Thomas A. Kelly and William T. Gallagher, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities to sign any and all amendments to the Annual Report on Form 10-K for the Company's 2019 fiscal year, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their respective substitutes, may lawfully do or cause to be done by virtue hereof.

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 date indicated above.

SIGNATURE	TITLE
/s/ Timothy J. Donahue Timothy J. Donahue	Director, President and Chief Executive Officer
/s/ Thomas A. Kelly Thomas A. Kelly	Senior Vice President and Chief Financial Officer
/s/ David A. Beaver David A. Beaver	Vice President and Corporate Controller

DIRECTORS

/s/ John W. Conway John W. Conway, Chairman of the Board	/s/ James H. Miller James H. Miller
/s/ Richard H. Fearon Richard H. Fearon	/s/ Josef M. Müller Josef M. Müller
/s/ Andrea J. Funk Andrea J. Funk	/s/ B. Craig Owens B. Craig Owens
/s/ Stephen J. Hagge Stephen J. Hagge	/s/ Caesar F. Sweitzer Caesar F. Sweitzer
/s/ Rose Lee Rose Lee	/s/ Jim L. Turner Jim L. Turner
William G. Little	/s/ William S. Urkiel William S. Urkiel
/s/ Hans J. Löliger Hans J. Löliger	

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Please visit our website **www.crowncork.com**
to read more of our story and obtain additional information.

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