

Annual Report 2022

Jones Lang LaSalle Incorporated

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Resilient performance and a bright future

A letter to our stakeholders

From Christian Ulbrich

President and Chief Executive Officer



It is with pride that we reflect on JLL's resilient performance through 2022 despite a year of substantial geopolitical challenges and economic volatility. Around the world, we continue to provide our clients with a comprehensive range of outstanding real estate advice and solutions, including leading-edge technology products, data analytics and sustainability services. All of which is rooted in the talent and unwavering commitment of our people – more than 100,000 colleagues united in JLL's values of teamwork, ethics and excellence.

Clients are drawn to our compelling combination of a seamlessly integrated 'One JLL' global platform and deep local market knowledge, and to our purpose of shaping the future of real estate for a better world. This assurance of quality and expertise becomes even more important during downturns and periods of uncertainty as experienced in 2022. After a bright start driven by the strong post-pandemic momentum of the previous year, the entire real estate industry increasingly felt the impact of Russia's invasion of Ukraine, lockdowns in

China, and spikes in inflation and interest rates. Transactional activity declined sharply, a downturn which has continued into the early months of 2023, while additional uncertainty created by the collapse of SVB Bank will impact the coming months. Fortunately, the longer-range outlook is far brighter, driven by the structural macro-trends that have been guiding the long-term growth of our industry.

2022 performance overview

During 2022, the combination of higher interest rates, currency headwinds and geopolitical events exerted considerable downward pressure on the global economy. Real estate markets were hit particularly hard – after a buoyant start to the year, the onset of rising interest rates acted as a sharp break on investment sales activity in the second half of the year, with leasing activity also slowing during the fourth quarter, particularly within the office sector.

Against this backdrop, JLL reported solid full-year revenue growth and resilient overall business performance laying the foundation for strong and sustained growth once economic conditions brighten. Consolidated 2022 revenue rose 11% to \$20.9 billion, with fee revenue rising 7% year-on-year to \$8.3 billion. Adjusted EBITDA for the year was \$1.2 billion, down 14% on the prior year. Adjusted diluted earnings per share were \$15.71, down by 17% compared with 2021.

Offsetting the slowdown in transactional market activity, the resilience and diversification of our platform was evident in strong fee revenue growth across our annuity businesses, especially so for Work Dynamics which recorded an impressive 15% year-on-year increase in fee revenue to \$1.9 billion. This resilient balance of transactional and annuity services across our platform positions JLL extremely well to weather economic downturns and deliver strong and profitable growth as market conditions improve. The organizational changes which we have executed in recent years will allow us to drive further efficiencies into our platform and reduce our overall cost to serve. Full

details on our 2022 performance can be found in the enclosed 10-K starting on page 8.

Our One JLL promise

Reorientation to a global segment structure reflects our commitment to offer our clients a fully integrated *One JLL service*, ensuring we bring the best of JLL to each assignment. It has been a landmark step on the *Beyond* strategic journey we embarked upon in 2017 to guide JLL's success and profitable growth through to 2025 and longer-term.

It is worth remembering the global real estate services industry we see today grew out of what remained, until late in the 20th century, a densely interwoven localised patchwork of specialist brokerages and agencies operating in different market combinations. Today, JLL has achieved seamless global alignment across our five core business segments – Capital Markets, Markets Advisory (which includes our Leasing business), Work Dynamics (dedicated to advising our corporate occupier clients), JLL Technologies and LaSalle Investment Management. The resulting ability to optimise our service delivery to exactly meet each client's needs, guaranteeing both quality and consistency, embodies our *One JLL* promise.

Real estate industry macro-trends

Back in 2017, when we set out our *Beyond* strategic vision to drive JLL's long-term success and profitable growth, we identified four prevalent macro-trends shaping and defining the future of the real estate industry – corporate real estate outsourcing, capital flows, urbanization, and technology. Soon after, we added a fifth macro-trend into our strategic planning and thinking - sustainability. Notwithstanding the pandemic and geopolitical upheavals of the early 2020s, these five trends remain of paramount and enduring significance to the whole industry – and will likely continue to do so through this decade and well beyond.

The top five real estate macro-trends



Growth in corporate outsourcing

The pandemic and accompanying changes in working practices have acted to further elevate workspace questions and strategies to the C-suite. CEOs want to know how to entice their people back into the office to foster collaboration, innovation and learning. JLL's expertise in modernizing and reinventing office environments is one of many factors bringing us to those top table discussions. Others include growing recognition of the complexity and opportunities inherent in real estate portfolios, and JLL's ability to deliver strategies that enhance productivity, retention, and efficiency. Even though the growth in corporate outsourcing of real estate services has been on a steadily rising trajectory for many years now, there is a vast untapped market still to be addressed.

Rising capital allocations to real estate

Although the near-term macroeconomic environment is temporarily stemming capital flows into real estate, the long-term appetite from investors represents a clear upward trend, attracted by the unique investment characteristics and returns from real estate investment. Substantial volumes of capital wait patiently on the side-lines for market conditions to stabilize and certainty around pricing to return. Investors will get used to living with much higher interest rates than those we have seen over the last decade. Increases in interest rates that began in the second half of 2022 will most likely lead to a trough in the market cycle in 2023, creating tremendous opportunities through the subsequent upswing in the not-too-distant future. Once predictability returns, the long-term trend of rising capital flows into real estate will surely resume.

Increasing urbanization

Even the Covid crisis could not really impact the decades-long global urbanization trend. As more people are drawn toward the world's thriving cities, it will spur further sustained growth and investment in the multifamily residential sector, as well as providing bigger and more concentrated markets for all aspects of real estate services.



Fourth Industrial Revolution

Technology and data are key components in answering many of the questions facing mankind, ranging from mundane everyday tasks to vital solutions to pressing global needs and challenges. Many major economies are facing demographic shifts that are putting their wealth creation at risk, with working age populations shrinking in proportion to the elderly and otherwise out-of-work. Despite the economic downturn that began in mid-2022, we still see very tight employment markets across most larger economies and keen competition for talent. Solving all of this will further accelerate the Fourth Industrial Revolution, the rolling transformation that technology innovation is bringing to the ways in which we live and work. Through a real estate lens, we forecast 78% of our corporate clients will be using corporate real estate technology by 2025, with 99% needing a technology partner to manage their portfolio. From JLL's perspective, equipping our people with the best technology and data to provide unrivalled insights and advice is a key goal, as is maintaining and extending our lead in 'proptech' products and data analytics.

Sustainability

With around 40% of global carbon emissions emanating from the built environment, the real estate sector has a fundamental collective responsibility to set and achieve ambitious need-moving sustainability targets. JLL is committed to playing a leading part in addressing this existential challenge – from setting aggressive sustainability targets for our own operations, through providing the best sustainability products and advice for our corporate and investor clients, to developing thought-leadership and collaboration with industry bodies. An example is our prominent ongoing partnership with the World Economic Forum on its Green Building Principles. With ESG requirements rising ever higher on our clients' priority lists, JLL will continue to advance and expand delivery of sustainability expertise and solutions – presenting a growth opportunity and a key aspect of delivering on our company's purpose. Full details of our sustainability targets and services are available in our annual Global Sustainability Report and on our sustainability web pages.

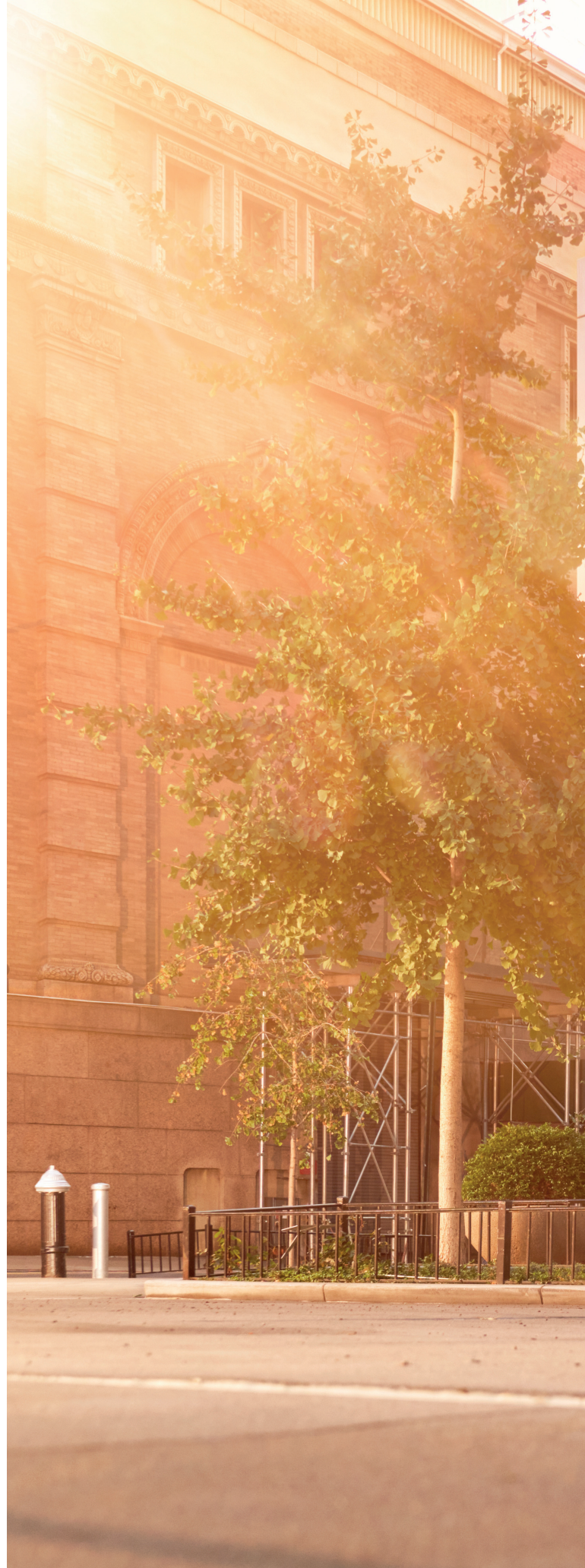
Thinking Beyond – our vision for sustained profitable growth

Grounded in these macro trends, *Beyond* is our strategic roadmap to deliver sustained profitable growth and success for all our stakeholders. Continuously refined since its conception in December 2016 and initial implementation in 2017, *Beyond* provides the framework for our complementary strategies for enhancing client service, attracting and retaining the best talent, building our brand, extending our leading edge in data and technology, and ensuring unwavering commitment to our values and ESG goals. Brought together, these five pillars – clients, people, brand, technology, and values – support our long-term strategy for growth, including the 2025 financial goals we first set out in 2017 and then updated in our November 2022 investor briefing. Importantly, despite the global real estate market downturn which began in 2022, JLL remains firmly on track to successfully deliver on those 2025 financial targets. For more detail on our *Beyond* strategic vision and financial targets, please refer to Section 1 of the enclosed 10-K, from page 8 onwards.

Our culture of excellence

I have often remarked on how JLL's culture and values are deeply engrained. Walk into any JLL office around the world and there is the same distinctive commitment to teamwork, ethics and excellence. I strongly believe that these characteristics attract similarly committed people – both as clients and colleagues. Certainly our people strategies place great emphasis on constantly developing and encouraging talent right across the business, nurturing diversity, equity and inclusion and providing fantastic career opportunities.

In February 2023, JLL was again named as one of *Fortune's Most Admired Companies* and was included on the *Bloomberg Gender-Equality Index* for the fourth successive year. In March 2023, JLL was named one of the *World's Most Ethical Companies*



by Ethisphere for the 16th consecutive year and was included on Barron's annual list of the *Most Sustainable U.S. Companies* for the fourth successive year. JLL is placed at 185 on the current *Fortune 500*.

A brighter outlook

Substantial challenges for the world have come thick and fast since the 2020s began. A global pandemic closely followed by geopolitical and economic volatility, natural disasters, and the era-defining imperatives of addressing climate change.

Nevertheless, I believe there are some strong grounds for optimism. I am sure that human ingenuity and collaboration will find the solutions the world needs, and I strongly believe in a positive outlook for the global real estate industry in general and especially for JLL. Reflective of our view of the challenges and opportunities in today's world, in November 2022 we set out our new brand positioning *SEE A BRIGHTER WAYSM*, capturing the optimism, creativity and expertise that characterize JLL.

As 2023 progresses, we predict market conditions will improve in the latter half of the year and renewed vigour will infuse the global real estate sector. JLL will be at the forefront, helping to define the bright new future of work, maximize stakeholder returns, advance sustainability and provide fascinating and rewarding careers for our people.

To all our stakeholders, on behalf of the whole JLL team, thank you for your continued interest and support. Together we are shaping the future of real estate for a better world.

Christian Ulbrich
President & CEO

April 2023



United States
Securities and Exchange Commission
Washington, D.C. 20549
Form 10-K

Annual Report Pursuant to Section 13 or 15(d) of the Securities Act of 1934

For the fiscal year ended December 31, 2022

Commission File Number 1-13145



Jones Lang LaSalle Incorporated

(Exact name of registrant as specified in its charter)

Maryland

(State or other jurisdiction of incorporation or organization)

200 East Randolph Drive Chicago, IL

(Address of principal executive offices)

Registrant's telephone number, including area code:

36-4150422

(I.R.S. Employer Identification No.)

60601

(Zip Code)

(312) 782-5800

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value \$0.01	JLL	The New York Stock Exchange

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

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth corporation (as defined in Rule 12b-2 of the Exchange Act).

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

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

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

The aggregate market value of the voting stock (common stock) held by non-affiliates of the registrant as of the close of business on June 30, 2022 was \$8,385,122,956.

The number of shares outstanding of the registrant's common stock (par value \$0.01) as of the close of business on February 22, 2023 was 47,601,931.

Portions of the Registrant's Proxy Statement for its 2023 Annual Meeting of Shareholders are incorporated by reference in Part III of this report.

JONES LANG LASALLE INCORPORATED
ANNUAL REPORT ON FORM 10-K
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PART I

ITEM 1. BUSINESS

COMPANY OVERVIEW

Jones Lang LaSalle Incorporated, incorporated in 1997, is a Maryland corporation. References to “JLL,” “the Company,” “we,” “us” and “our” refer to Jones Lang LaSalle Incorporated and include all of its consolidated subsidiaries, unless otherwise indicated or the context requires otherwise. Our common stock is listed on The New York Stock Exchange (“NYSE”) under the symbol “JLL.”

JLL is a leading professional services firm that specializes in real estate and investment management. We shape the future of real estate for a better world by using the most advanced technology to create rewarding opportunities, amazing spaces and sustainable real estate solutions for our clients, our people and our communities. JLL is a Fortune 500 company with annual revenue of \$20.9 billion, operations in over 80 countries and a global workforce of more than 103,000 as of December 31, 2022. We provide services for a broad range of clients who represent a wide variety of industries and are based in markets throughout the world. Our clients vary greatly in size and include for-profit and not-for-profit entities, public-private partnerships and governmental (“public sector”) entities. Through LaSalle Investment Management, we invest for clients on a global basis in both private assets and publicly traded real estate securities.

Our global platform and diverse service and product offerings position us to take advantage of the opportunities in a consolidating industry and to successfully navigate the dynamic and challenging markets in which we compete worldwide.

We use JLL as our principal trading name. Jones Lang LaSalle Incorporated remains our legal name. JLL is a registered trademark in the countries in which we do business, as is our logo. In addition, LaSalle Investment Management, which uses LaSalle as its principal trading name, is a wholly-owned subsidiary of Jones Lang LaSalle Incorporated. LaSalle is also a registered trademark in the countries in which we conduct business, as is our logo.



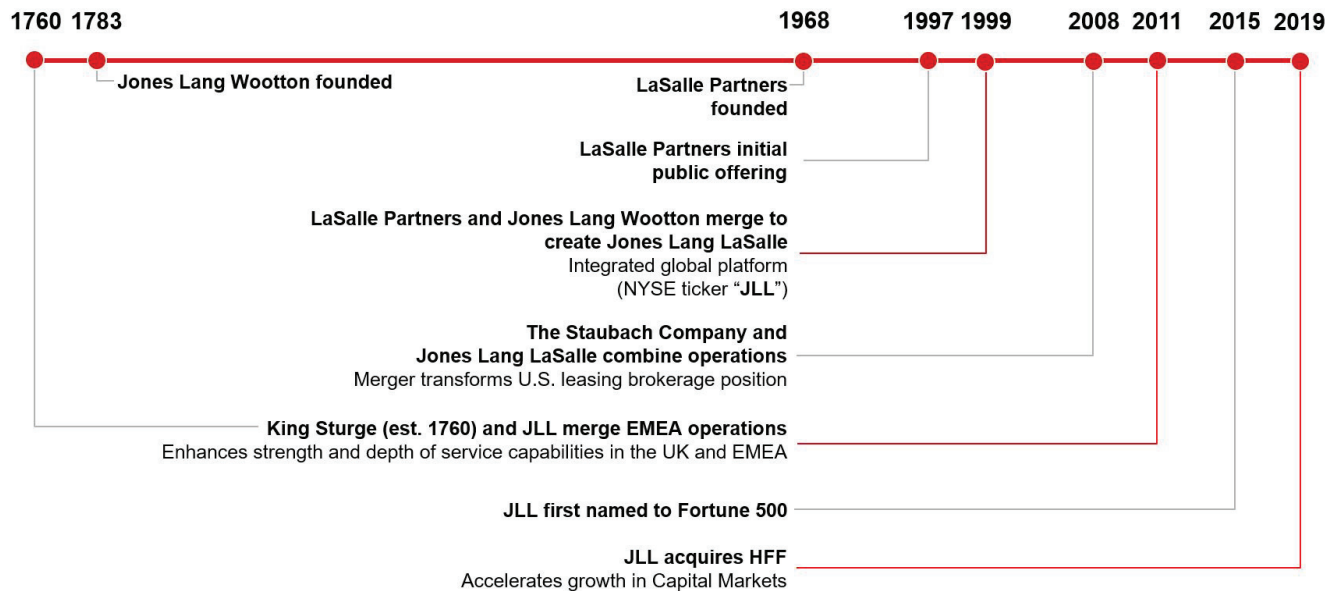
On February 28, 2022, we announced a new organizational structure that became effective on January 1, 2022. Under the new structure, we organize our operations around, and publicly report our financial results on, five global business segments: (i) Markets Advisory, (ii) Capital Markets, (iii) Work Dynamics, (iv) JLL Technologies and (v) LaSalle. Prior period results have been restated to conform with our new organizational structure. Refer to the Our Services and Business Segments section for detail on the range of real estate services we provide.

OUR HISTORY

We began to establish our network of services across the globe through the 1999 merger of the Jones Lang Wootton companies (“JLW,” founded in England in 1783) with LaSalle Partners Incorporated (“LaSalle Partners,” founded in the United States in 1968 and incorporated in 1997). We have grown our business by expanding our client base and the range of our services and products, both organically and through a series of mergers and acquisitions. Our extensive global platform and in-depth knowledge of local real estate markets enable us to serve as a single-source provider of solutions for the full spectrum of our clients’ real estate needs. These mergers and acquisitions have given us additional share and scale in key geographical markets, expanded our capabilities in certain service offerings and further broadened the global platform we make available to our clients.

For information on recent acquisitions, refer to Note 4, Business Combinations, Goodwill and Other Intangible Assets, of the Notes to the Consolidated Financial Statements, included in Item 8.

A timeline of notable milestones in our history is illustrated below.



OUR SERVICES AND BUSINESS SEGMENTS

We are driven to shape the future of real estate for a better world. We do this by addressing the needs of real estate owners, occupiers and investors, leveraging our deep real estate expertise and experience to provide clients with a full range of services on a local, regional and global scale. For detail on the range of services provided by each of the five segments outlined in the following graphic, refer to the narrative starting on page 6.

What we do



Markets Advisory

Enabling stronger decision-making with proprietary intelligence

We solve clients' complex challenges by combining global market expertise with world-class research to identify superior opportunities and inform smarter decision-making.



Work Dynamics

Shaping a better world of work

Our world-class team of workplace, facilities and portfolio experts create custom strategies to improve efficiency, optimize performance, and shape the future of work through human-centric design.



LaSalle

Leading the world of real estate investment management forward

Our trusted advisors partner with leading institutional and individual investors to embrace unseen real estate investment opportunities.



Capital Markets

Creating a world of opportunity

As a full-service global provider of capital solutions, we combine the unique knowledge of our people with cutting-edge technology to unveil insights.



JLL Technologies

Pioneering intelligent real estate

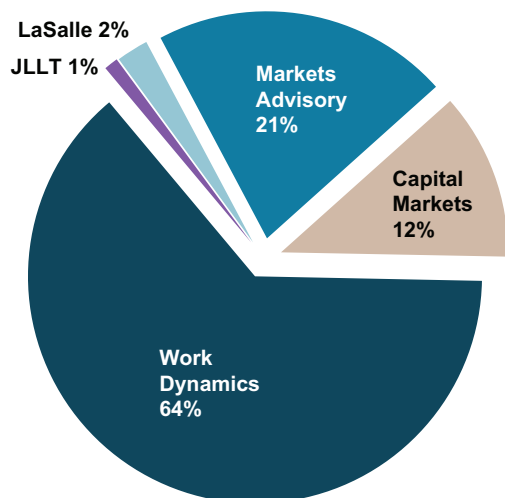
Helping organizations transform the way they acquire, manage, operate and experience space for the better through the strategic application of emerging technologies and data capture.

We offer our real estate services locally, regionally and globally to real estate owners, occupiers, investors and developers for a variety of property types, including (ordered alphabetically):

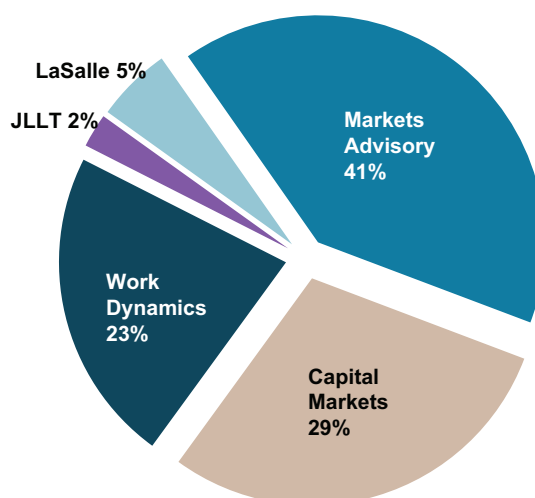
- Critical Environments and Data Centers
- Cultural Facilities
- Educational Facilities
- Government Facilities
- Healthcare and Laboratory Facilities
- Hotels and Hospitality Facilities
- Industrial and Warehouse
- Infrastructure Projects
- Logistics (Sort & Fulfillment)
- Military Housing
- Office (including Flex Space)
- Residential (Individual and Multifamily)
- Retail and Shopping Malls
- Sports Facilities
- Transportation Centers

The following reflects our revenue and fee revenue by segment for the year ended December 31, 2022:

Revenue by Segment - \$20.9B



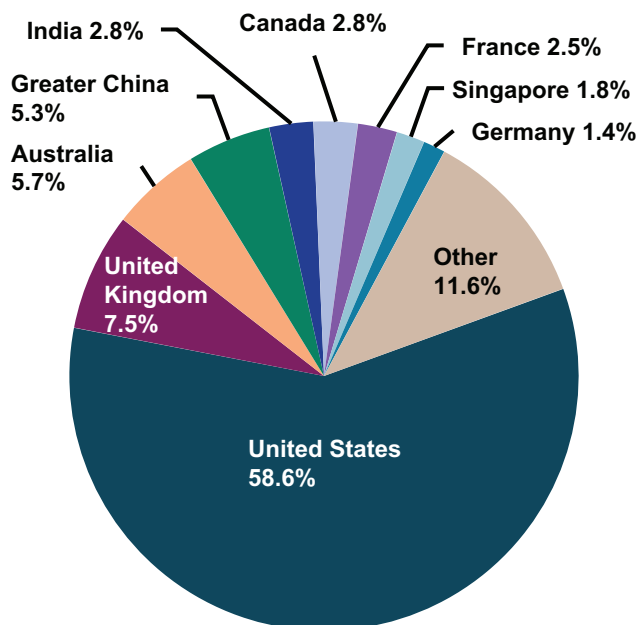
Fee Revenue by Segment - \$8.3B



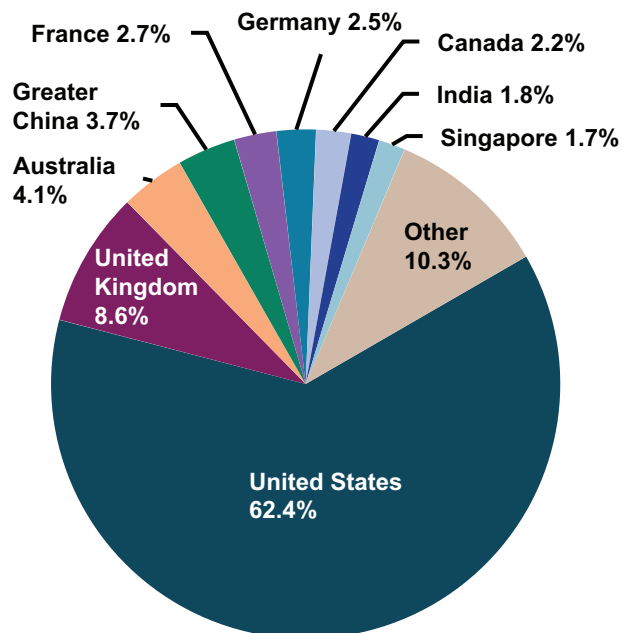
To calculate fee revenue, we exclude (i) net non-cash mortgage servicing rights and mortgage banking derivative activity and (ii) gross contract costs associated with client-dedicated labor, and third-party vendors and subcontractors. Refer to Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations for additional discussion of fee revenue, a non-GAAP measure, and reconciliation from the most comparable U.S. GAAP measure, Revenue.

Our revenue was \$20.9 billion and fee revenue was \$8.3 billion for 2022, earned geographically as follows:

Revenue by Country



Fee Revenue by Country



Note: Greater China is defined as China, Hong Kong, Macau and Taiwan.

Our five segments, and the services we provide within them, include:

1. Markets Advisory

Markets Advisory offers local expertise across the globe covering a comprehensive range of services across asset types. We aggregate such services into three categories: Leasing, Property Management, and Advisory, Consulting and Other.

Leasing

Agency Leasing executes marketing and leasing programs on behalf of property owners (including investors, developers, property-owning companies and public entities), including product positioning, target tenant identification and competitor analysis through to securing tenants and negotiating leases with terms that reflect our clients' best interests. In 2022, we completed approximately 18,200 agency leasing transactions representing 380 million square feet of space.

Tenant Representation establishes strategic alliances with occupier clients to define space requirements, identify suitable alternatives, recommend appropriate occupancy solutions, and negotiate lease and ownership terms with landlords. Our involvement helps our clients reduce real estate costs, minimize occupancy risk, improve occupancy control and flexibility, and create more productive office environments. In 2022, we completed approximately 24,400 tenant representation transactions representing 650 million square feet of space.

Our agency leasing and tenant representation advisory anchors to the workplace of the future and helps owners and occupiers realize their sustainability commitments and goals. Both our agency leasing and tenant representation fees are typically based on a percentage of the value of the lease revenue commitment for executed leases, although in some cases they are based on a monetary amount per square foot leased.

Property Management

Property Management provides services to real estate owners for office, industrial and logistics, retail, multi-housing and specialty properties. We typically provide property management services through local teams, which are generally on-site for office and multi-housing properties, supported by regional supervisory teams and central resources in such areas as technology, training, environmental services, accounting, marketing, lease administration and human resources. We leverage our market share and buying power to deliver superior service and value to our clients, and our extended delivery team increasingly uses new technology and digital capabilities we deploy at the property. This allows clients to drive value, optimize operations, gain insights and elevate the tenant experience. Our work with clients also includes advisory, tenancy management and services focused strategically on reducing energy usage and carbon impact.

As of December 31, 2022, we provided property management services for properties totaling approximately 3.0 billion square feet.

We are generally compensated by either directly agreeing to a fixed fee, a cost plus fee model, or based upon a percentage of cash collections we make on behalf of our clients, or based on square footage managed; in some cases, management agreements provide for incentive compensation relating to operating expense reductions, gross revenue or occupancy objectives, or tenant satisfaction levels. Consistent with industry norms, management contract terms typically range from one to three years, although some contracts can be terminated at will at any time following a short notice period, usually 30 to 120 days.

Advisory, Consulting and Other

Advisory and Consulting provides clients with specialized, value-add real estate consulting services in such areas as occupier portfolio strategy, workplace solutions, location advisory, mergers and acquisitions advisory, asset management, development advisory and master planning activities.

We typically negotiate compensation for Advisory and Consulting based on developed work plans that vary based on the scope and complexity of projects.

2. Capital Markets

Capital Markets is a full-service global provider of capital solutions creating a world of opportunity for investors and owners of real estate. As a leading provider of commercial property sales, debt and valuation advisory services, we combine the unique knowledge of our people with the power of collective insight and technology made possible by our fully integrated capital markets platform. Our broad array of services include (ordered alphabetically):

- Debt advisory
- Equity advisory (funds and placement, M&A and corporate advisory)
- Investment sales and advisory
- Loan sales
- Loan servicing
- Valuation advisory

Investment Sales, Debt/Equity Advisory and Other

We provide brokerage and other services for real estate transactions, such as sales or loan originations and refinancing. M&A and corporate advisory services include sourcing capital, both equity and debt, and other traditional investment banking services designed to assist investor and corporate clients to maximize the value of their real estate interests. To meet client demands for selling and acquiring real estate assets domestically and internationally, our Capital Markets teams combine local market knowledge with our access to global capital sources to provide superior execution in raising capital for real estate transactions. By originating, developing and introducing innovative new financial products and strategies, Capital Markets is integral to the business development efforts of our other businesses. Most of our revenues are in the form of fees, derived from the value of transactions we complete or securities we place. In certain circumstances, we receive retainer fees for portfolio advisory or consulting services. For the year ended December 31, 2022, we provided capital markets services for approximately \$286 billion of client transactions.

Valuation Advisory

Our Valuation Advisory professionals provide several services, including valuation, secured lending advisory, transaction support, data and analytics, development advisory, asset and infrastructure advisory, business valuation, property tax advisory, and restructuring. We usually negotiate compensation for Valuation Advisory services based on the scale and complexity of each assignment, and our fees typically relate in part to the value of the underlying assets.

Loan Servicing

In the U.S., we are a commercial multifamily lender and loan servicer approved by Freddie Mac, Fannie Mae and Housing and Urban Development/Ginnie Mae (the "Agencies"). In addition, we are one of only 24 Fannie Mae Delegated Underwriting and Servicing ("DUS") lenders. We service substantially all the loans we originate and sell to the Agencies, and service loans we did not originate but subsequently acquire the rights to service. We obtain a periodic fee for each loan we service based on a proportion of the cash collections. As of December 31, 2022, we serviced a loan portfolio of approximately \$134 billion.

3. Work Dynamics

Workplace Management ("WPM")

As a strategic partner of clients with a multinational footprint, Work Dynamics offers a single, cohesive service-delivery team focused on three key value levers: (i) making informed, data-driven decisions and digital transformation, (ii) achieving operational excellence through improved productivity and financial performance, and (iii) attracting and retaining key talent through an enhanced user experience.

WPM provides comprehensive facility management services globally to corporations and institutions that outsource the management of the real estate they occupy, typically those with large multi-market portfolios of over one million square feet. Our WPM offering leverages tech-enabled solutions and focuses on the work, worker and workplace to help clients manage costs, achieve sustainability goals, improve workplace service delivery and enhance end-user experience and performance.

Our globally-integrated delivery team includes our own personnel as well as third-party vendors and subcontractors who meet clients' needs by providing consistent service delivery worldwide and a single point of contact for their real estate service needs.

WPM solutions offered to clients range from mobile engineering at a single location to a full-service outsourcing, where we execute day-to-day operations management of client site locations, delivered through a globally integrated platform with standardized processes. Facilities under management cover all real estate asset classes, including corporate headquarters, distribution facilities, hospitals, research & development facilities, data centers and industrial complexes. As of December 31, 2022, WPM managed approximately 1.6 billion square feet of real estate for our clients.

WPM contracts are generally structured on a principal basis (a fixed fee, guaranteed maximum, or reimbursement-based pricing model) but may also be on an agency basis. Typically, our structures include a direct or indirect reimbursement for costs of client-dedicated personnel and third-party vendors and subcontractors in addition to a base fee and performance-based fees. Performance-based fees result from achieving quantitative and qualitative performance measures and/or target scores on recurring client satisfaction surveys. WPM agreements are typically three to seven years in duration and, although most contracts can be terminated at will by the client upon a short notice period (usually 30 to 60 days), a transition period of six to twelve-months is more common in our industry. We typically experience a high renewal rate, with most clients renewing their contracts at least once; many of our largest contracts have been in place for more than a decade.

Project Management

Project Management provides consulting, design, management and build services to tenants of leased space, owners in self-occupied buildings and owners of real estate investments, leveraging technology to drive outstanding service delivery. We also provide services to public-sector clients, notably military and government entities, and educational institutions, primarily in the U.S. and to a growing extent in other countries. We bring a "life cycle" perspective to our clients, from consulting and capital management through design, construction and occupancy via our JLL brand, while we also provide fit-out, refurbishment and design services under the Tétris brand, predominantly in Europe.

Our Project Management business is generally compensated on the basis of negotiated fees as well as reimbursement of costs when we are principal to a contract (or client). Individual projects are generally completed in less than one year, but client contracts may extend multiple years in duration and govern a number of discrete projects.



Portfolio Services

Through the suite of services our Work Dynamics business provides to clients via our "One JLL" approach, we gain deep knowledge and extensive data about their corporate real estate footprints, business strategies and organizational priorities. This knowledge enables our consulting practice to effectively advise clients on how to optimize their workplace strategies and occupancy planning to improve utilization and ultimately enhance the productivity and well-being of those who use the space. More broadly, this advice may extend to our clients' portfolio strategies, including location advisory, transaction management, lease administration, technology implementation and optimization, and options to add and integrate flexible space solutions. Our fee structures vary and are based on the point-in-time or over-time nature of services and deliverables provided to our clients.

4. JLL Technologies

JLL Technologies leverages its comprehensive technology portfolio of software platforms, apps, hardware and technology services, as well as innovations from venture-backed companies, to help organizations maximize their real estate experience.

Services and Software Solutions

We offer professional services including program and project management, implementation and support, managed services, and advisory/consulting services. We recognize the associated revenue at the time our performance obligation is satisfied, sometimes over the course of multiple years.

In addition, our cloud-based software solutions enable higher-quality insight and decision-making through improved data and analytics, creating opportunities to improve clients' financial performance. These solutions are typically sold via subscription offerings and we recognize revenue over time, commensurate with the length and terms of the contract. Examples include:

- **Building Engines**, a comprehensive system that unites the technology and applications used to manage a building with simplified upstream and downstream user interactions;
- **Corrigo**, a mobile and desktop-integrated product that enables facility managers to efficiently manage work orders, centralize repairs and maintenance, and automate tasks, all on a scalable level; and
- **Hank**, a technology which uses machine learning and artificial intelligence to optimize building energy efficiency, maintenance costs and tenant comfort, facilitating improved property operating income.

An additional product offering is JLL Marketplace, which enables one-stop shopping for facility product needs and supports ordering, billing and order tracking. We generate revenue by taking a share from gross market value of all goods and services sold via this platform.

JLL Spark - Investments in PropTech

We incubate and drive property technology (proptech) innovation across the real estate spectrum, supporting the development of an array of products and data analytics tools. One way we achieve this goal is through strategic investments in proptech funds and early to mid-stage proptech companies, including through our JLL Spark Global Ventures Funds.

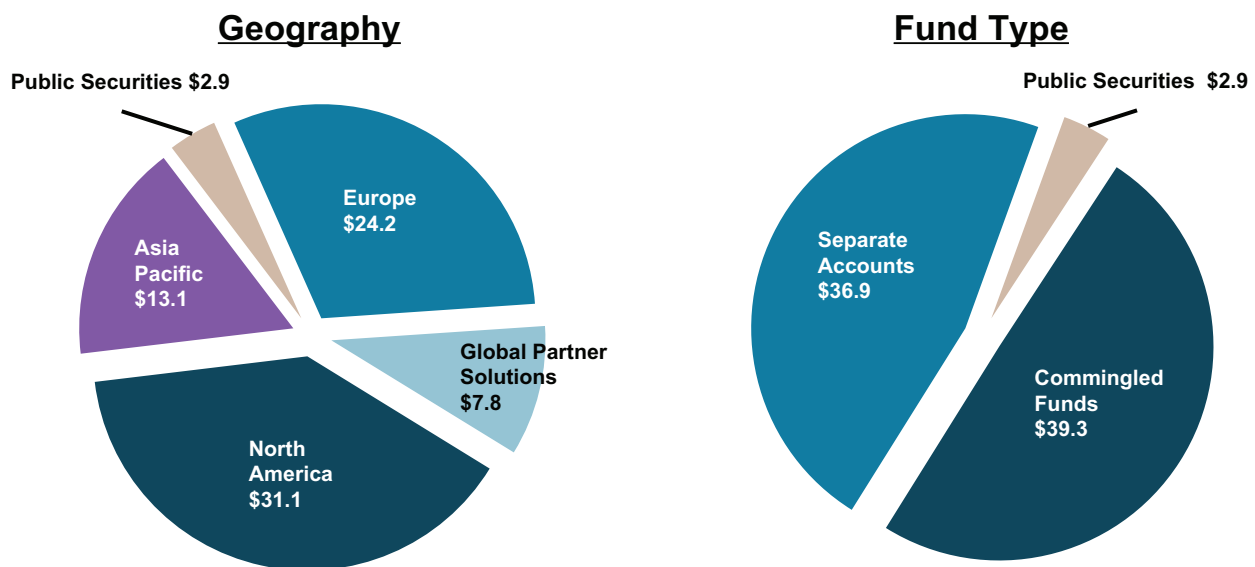
We generally report these investments at fair value and include fair value adjustments in our Consolidated Statements of Comprehensive Income within Equity earnings. As of December 31, 2022, the fair value of such investments was \$480.4 million. Equity earnings for 2022 were \$46.6 million.

5. LaSalle

LaSalle is a global, real estate investment management firm that invests institutional and individual capital in real estate assets and securities with a strategic priority to meet client objectives and deliver superior risk-adjusted returns over market cycles.

LaSalle launched its first institutional investment fund in 1979, making us one of the most experienced real estate focused investment managers in the industry. We have invested, on behalf of our clients and ourselves, in real estate assets located in 28 countries around the globe, as well as in public real estate companies traded on all major stock exchanges. LaSalle provides clients with a broad range of real estate investment products and services, designed to meet the differing strategic, asset allocation, risk/return and liquidity requirements of our clients. The range of investment solutions are offered either through commingled or single investor strategies and include private and public equity investments and real estate debt strategies structured as private or public open-ended funds or private closed-end funds (commingled funds), separate accounts, joint ventures, or co-investments.

LaSalle's assets under management ("AUM") of \$79.1 billion, as of December 31, 2022, by geographic distribution and fund type is detailed in the following graphics (\$ in billions).



We believe our ability to co-invest alongside our clients' funds aligns our interests and will continue to be an important differentiating factor in maintaining and improving our investment performance and attracting new capital to manage. As of December 31, 2022, we had a total of \$366.5 million of co-investments, alongside our clients, in real estate ventures included in total AUM.

LaSalle is compensated for investment management services for private equity investments based on capital committed, capital deployed and managed (advisory fees), with additional fees tied to investment performance above specific hurdles (incentive fees). In some cases, LaSalle also receives fees tied to acquisitions, financings, and dispositions (transaction fees). Separate account advisory agreements generally have specific terms with "at will" termination provisions and include fee arrangements calculated on the mark to market value of the assets, plus, in some cases, incentive fees.

Our investment funds have various life spans, typically ranging between five and nine years, but in some cases are open ended. In 2022, our open-ended funds grew nearly 20% and represented approximately 35% of AUM as of December 31, 2022.

ORGANIZATIONAL PURPOSE

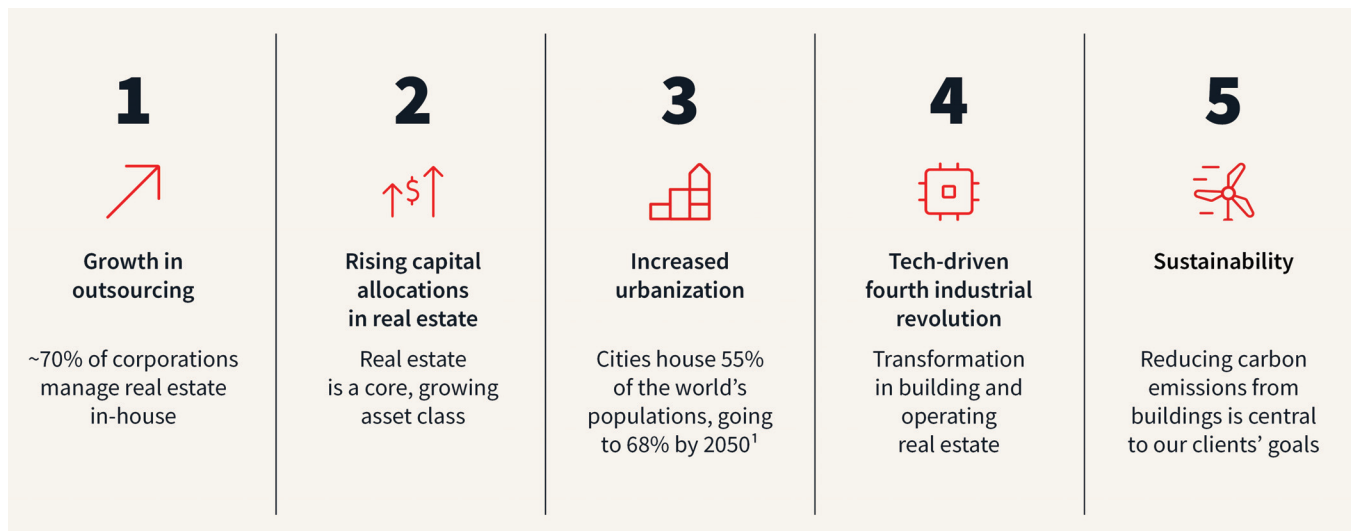
JLL’s organizational purpose is to shape the future of real estate for a better world. Staying true to this purpose in all that we do enables us to fully align with the best interests and ambitions of our clients and all our stakeholders. It exemplifies our commitment to the highest standards of environmental, social and corporate governance ("ESG"), and to a more sustainable, diverse and inclusive future.

We shape the future of real estate for a better world

This core organizational purpose is fully aligned with, and supported by, our corporate values of teamwork, ethics and excellence. Ultimate responsibility for promoting awareness and ensuring adherence to our values and purpose across the enterprise is held by the JLL Global Executive Board ("GEB") and is endorsed by our Board of Directors. Our purpose guides our strategic growth vision and informs our response to the long-term macro trends which maintain prevalence in the real estate industry at all points in the economic cycle, remaining relevant during and since the COVID-19 pandemic and through the global economic downturn which began in early 2022. These trends and our strategic framework are summarized below.

INDUSTRY TRENDS

Informing our long-term growth strategy, we have identified five macro trends we see as major guiding influences on the continued expansion and evolution of the real estate sector. Each of these trends has a multi-year lifespan, and while the COVID-19 pandemic and subsequent economic volatility have acted to slow some and accelerate others, we expect all five trends to maintain their long-term trajectory and relevance over the next decade. These macro trends are:



¹ Prospects Report - United Nations Department of Economics and Social Affairs, May 2018.

Growth in corporate outsourcing

While corporate outsourcing of real estate services still represents the minority of the total commercial-built real estate worldwide, the steady long-term trend towards outsourcing which began in the early 1990s, originally with U.S.-based corporations, is now a global trend. By focusing their own resources on core competencies and partnering with dedicated service providers like JLL to manage real estate strategy and activities, organizations are better positioned to advance their goals of financial and operational performance, talent attraction, customer experience, employee productivity and environmental sustainability.

In corporate boardrooms around the world, the pandemic has significantly enhanced the growing focus on reimagining workplaces and concepts for the future of work. These are areas in which JLL holds deep expertise and sector-leading specialist experience and resources. Across different industries we are positioned to provide highly adaptive and relevant solutions that promote organizational culture and prioritize health and well-being, flexible working models and technology enablement. At present, we are already seeing further growth in the strong and sustained trend for organizations to outsource real estate services while increasingly seeking strategic advice on reimagining their workspaces and workstyles to reinforce culture, attract talent and drive performance.

Rising investment allocations and globalization of capital flows to real estate

In the years following the 2008 Global Financial Crisis, as investors reappraised investment allocations and priorities, real estate emerged out of its previous "alternative investment" classification to become a major defined asset class of its own. This began a sustained long-term trend of rising investment allocations to the real estate sector. While significant global and market events such as the initial onset of the pandemic in 2020 and economic downturn of 2022 have significant near-term impacts on real estate investment transaction volumes, the deeply engrained long-term trend has quickly and strongly reasserted itself in recent history. As we move into 2023, there remains a substantial amount of capital seeking the right opportunities to access real estate's attractive returns and distinctive investment characteristics. Following a period of repricing, we anticipate significant upswing in transaction volumes and reestablishment of the long-term trend in capital flows into real estate.

Complementing this, we anticipate increased capital flows across borders and between continents creating new opportunities for advisors and investment managers equipped to source and facilitate these capital flows and execute cross-border transactions. Our real estate investment expertise, linking seamlessly across the world's major markets, is ideally placed to support our clients' investment ambitions.

Urbanization

While urban life and the long-term global trend of migration into the world's major cities was thrown into flux by the initial onset of the pandemic, its foundations are deep and a dynamic future is already taking discernible shape. Cities continue to provide the concentrations of culture, diversity, opportunity, facilities and creative expression to attract strong inflows of ambitious and aspirational people. While work patterns and preferences will continue to rapidly evolve, driven in part by new possibilities created by technology and the widespread adoption of flexible working, cities will thrive as they deliver on people's lifestyle and economic ambitions, characterized by vibrant and reimagined office, cultural, retail and residential profiles.

In October 2022, the World Bank's latest Urban Development update predicted that 70% of people worldwide will live in cities by 2050, up from 56% as of the report date. With that growth will come increasing demand for all forms of real estate services and advice. JLL has a well-established global research series - the City Momentum Index - exploring this and associated trends in more depth, including related dynamics in the way the world's 130 emerging and established markets are growing, adapting and evolving.

Fourth Industrial Revolution

The World Economic Forum defines the Fourth Industrial Revolution as the wave of change being driven through advances in technology, data and artificial intelligence. The real estate industry is affected in many ways including, for example, (1) the transition to flexible and hybrid office working models, (2) new data-driven understanding of how all forms of real estate can be more efficient, sustainable and productive, (3) the rise of experiential and online retail, (4) new asset management technologies, and (5) the growth of the logistics sector.

While there is currently no single technology disruptor positioned to dominate the real estate industry, there are thousands of start-ups, applications and concepts vying to transform the marketplace, collectively known as proptech. The challenge to innovate and maximize the current and future benefits of proptech is constant. At the heart of our Beyond strategy (discussed below), supported by major ongoing investments and innovations, we continue to accelerate progress toward our goal of becoming the widely-recognized leading user of technology and data in real estate.

Sustainability

Addressing and managing climate change and the finite nature of global resources are defining issues for our time. According to the International Energy Agency, real estate and the built environment account for nearly 40% of total global direct and indirect CO₂ emissions. At the same time, stakeholders are demanding greater focus on ESG from businesses and organizations in all areas of society. These and other factors, including heightened awareness of the importance of promoting health and well-being, coalesce into strong rising demand for sustainability services and advice across the real estate industry. JLL has identified meeting this demand as a major growth opportunity and priority, aligning with our purpose to shape the future of real estate for a better world.

Refer to our annual Global Sustainability Report, available on our website, for further information.

STRATEGIC FRAMEWORK

Our GEB has set out the Beyond strategic vision and framework to deliver long-term sustainable and profitable global growth. This framework comprises broad strategic priorities grouped into five pillars – Clients, Brand, Technology, People & Values, and Sustainability – which collectively support and drive our ambitious long-term growth trajectory.

Beyond: Our Strategic Vision for Long-Term Sustainable and Profitable Growth

Beyond strategy pillars



Clients

Since initiating our Beyond strategic plan in 2017, we successfully completed a multi-year transformation program building fully integrated global organizational structures across our business lines and functions. As a result, we are now even better positioned to provide seamless and highly consistent services to our clients across the world, as well as smoothly and rapidly deploy innovations, best practices and new technologies.

We continue to enhance our comprehensive service offering to create real value for our clients. Guided by our Beyond strategy, we are making continued investments in advanced client relationship management processes and tools, ensuring we can quickly assemble the best multidisciplinary teams and expertise tailored to meet each client's requirements.

Our “One JLL” philosophy formalizes how our teams engage with each other and enables us to deliver the best capabilities to our clients. Under “One JLL” our teams go to market together, which allows us to seamlessly serve clients across business lines and geographies. The unique culture that is created under “One JLL” helps us attract and retain talent. This talent, combined with our integrated full-service platform, creates an agile global business that operates as “One JLL.”

Brand

Our extensive biannual global client surveys (which we call Client Voice) and ongoing monitoring of net promoter scores repeatedly demonstrate JLL’s status as trusted adviser and strategic business partner. Clients turn to us for solutions and insights to optimize their real estate strategies and support their operational needs and growth strategies. Our industry leading research capabilities and data analytics equip JLL's people to enable clients to SEE A BRIGHTER WAY.

We continue to strengthen and expand awareness of our brand beyond the traditional real estate sector, with a focused goal in our Beyond strategic vision to reach more CEOs and other senior decision makers. Supporting this goal, we are an active strategic partner of the World Economic Forum, playing a key role in its Real Estate and Investment industry groups and its Alliance of CEO Climate Leaders among other areas of engagement. In February 2022, Fortune magazine again named JLL as one of the World’s Most Admired Companies and in April 2022 Ethisphere named JLL as one of the World's Most Ethical Companies for the 15th consecutive year, while in December 2022 the Drucker Institute listed JLL as one of the top 50 best managed companies in America (refer to the Distinguishing Attributes and Competitive Differentiators section below for additional awards and recognition during the past year).

Technology

JLL embraces technology to deliver value for our clients, people and shareholders. Technology is core to our growth strategy as reflected in our significant investments in JLL Technologies. With a comprehensive portfolio of purpose-built solutions, unparalleled industry expertise and leading-edge, venture-backed companies, JLL Technologies enables organizations to achieve exceptional building performance, accelerate the path to net zero and optimize spaces for the future of work.

JLL Technologies is a global leader in proptech, expanding and refining our technology capabilities to deliver significant competitive advantages and value for our company and our clients, across all business lines. The technology and data solutions we provide include multiple cloud-based software products that generate value for occupiers and investors by leveraging data and analytics to improve the quality of decision-making, deliver unique insights and reduce operating costs.

Additionally, we continue to be committed to the JLL Spark Global Ventures Funds, the offerings of which are further discussed in Our Services and Business Segments. Visit our websites at www.jll.com and www.jllt.com to see the full portfolio of technology services.

The substantial platform technology investments we made in the early phases of our Beyond journey are benefiting all areas within our enterprise by improving efficiency of our producers, increasing margins, growing market share of our existing businesses and enabling entry into adjacent markets with new business models.

People & Values

People are at the heart of our business. We are dedicated to helping our people SEE A BRIGHTER WAY by enabling them to explore new opportunities, build expertise, create long-term careers, and draw inspiration through working with talented colleagues and clients. Our commitment to promoting and achieving true diversity and inclusion is exemplified by achieving 25% female representation amongst our top 100 leaders.

In the world's major markets across most industries, declining working age populations and long-term economic growth continue to drive competition for talent, resulting in highly fluid and competitive recruitment markets. A successful enterprise-wide coordinated talent strategy is central to our Beyond vision and delivery. This strategy ensures JLL is positioned as an employer of choice for top talent, achieving and sustaining a diverse, inclusive and collaborative culture that strongly appeals to our people and our clients alike.

Our people are committed to the core values of teamwork, ethics and excellence. These values are the foundation of our organization. Clients, employees, business partners and potential recruits are strongly attracted to these values and to our commitments to exemplary standards for ESG, including ambitious goals and regular transparent reporting.

Sustainability

With the built environment responsible for around 40% of carbon emissions according to the International Energy Agency, the real estate industry must play a central role in enabling companies, communities and cities to deliver their net zero goals. More broadly, ESG is now a major priority for our investor and occupier clients who are looking to reduce investment risk and increase their resilience in the face of global social and environmental challenges. JLL has established comprehensive global capabilities delivering sustainability advice and solutions to clients around the world and advocating ambitious target setting and delivery to ensure the real estate industry plays its part in achieving a sustainable global future for all.

In September 2020, we signed the World Green Building Council's Net Zero Carbon Buildings Commitment, pledging to achieve net zero carbon emissions from JLL-occupied buildings by 2030. Building on this pledge, in October 2021, the SBTi certified our commitment to reach net zero greenhouse gas emissions across our value chain by 2040. This made JLL one of the first global companies to be recognized for aligning its net zero commitments with climate science. Within this overall target, JLL has committed to:

1. A near-term target to reduce absolute scope 1, 2 and 3 emissions by 51% by 2030 from a 2018 base year
2. A long-term target to reduce absolute scope 1, 2 and 3 emissions by 95% by 2040 from a 2018 base year

Launched in 2021 and updated in 2022, JLL has collaborated with the World Economic Forum in establishing [10 Green Building Principles](#) to guide real estate investors and corporate occupiers on implementing and achieving their net zero targets across their portfolios, demonstrating our commitment and leadership to sustainability within our industry.

We further discuss our issue areas of focus in the next section, Sustaining Our Enterprise: A Business Model That Considers All Aspects of Stakeholder Value.

Growth

Our Beyond priorities for Clients, Brand, Technology, People & Values and Sustainability combine to provide an integrated strategic vision and platform for growth. This vision is supported by our commitment to enhance productivity, optimize sustainable and profitable long-term growth, and create value for all of our stakeholders. It embraces our opportunity to play a leading role in understanding and guiding the future of work, workplaces and cities, while enabling clients and communities to deliver on their sustainability targets and ambitions. It recognizes and leverages the vital part continuing innovations in data and technology will play, ensuring JLL has the products and data-driven insights to lead this wave of change.

Our growth strategy and strategic vision places a central focus on diversity, equity and inclusion, ensuring we attract and retain a truly diverse, inclusive and talented global workforce, committed to inspiring each other and delivering outstanding results for our clients.

SUSTAINING OUR ENTERPRISE: A BUSINESS MODEL THAT CONSIDERS ALL ASPECTS OF STAKEHOLDER VALUE

As referenced above, the built environment is estimated to account for over one-third of global final energy consumption and nearly 40% of total direct and indirect CO₂ emissions, meaning JLL can have a significant impact through the work we do with our clients, as well as in our workplaces and communities.

Our Global Sustainability Program

Our sustainability program focuses on three issue areas that directly align to our purpose and JLL's corporate strategy. Each area is supported by targets and delivered by global business lines and corporate functions.

- **Climate action for sustainable real estate:** We take urgent climate action that accelerates the transition to net zero, enhances performance, mitigates risks and helps shape a better world.
- **Healthy spaces for all people:** We create safe and healthy spaces that promote productivity, well-being and sustainability.
- **Inclusive places for thriving communities:** We provide fair and inclusive places that create positive social impact and equal opportunities.



Four principles underpin our program and demonstrate how we will deliver a positive impact for our stakeholders and lead our sector on sustainability.

1. **Being a responsible business:** Being a responsible business is central to our values and everything we do. Leading by example gives us the credibility to talk to our clients and advance industry action on sustainability.
2. **Harnessing the power of our people:** We harness the power of our people and equip them with the skills and tools to inspire positive change and create a better world of work where people can thrive.
3. **Driving change through client solutions:** We drive change through client solutions to maximize impact, collaborating to transform and transition toward more sustainable outcomes.
4. **Advocating for a better real estate sector:** We advocate for a better real estate sector by driving demand for sustainability, demonstrating thought leadership and engaging the industry, governments and society on the issues that matter most.

We undertake a periodic assessment of our sustainability issues to ensure that our program and targets address the key impacts of our business and what matters most to our stakeholders. Through this process of market evaluation and direct stakeholder input, we identify the most important ESG issues that inform our evaluation of additional opportunities for impact beyond our already ambitious net zero commitment, which are detailed below.

- | | | |
|------------------------------------|-------------------------|---------------------------|
| ● Adaptation and resilience | ● Employee well-being | ● Healthy buildings |
| ● Corporate culture and reputation | ● Energy and climate | ● Responsible procurement |
| ● Diversity, Equity and Inclusion | ● Ethics and compliance | ● Sustainable buildings |

Our approach and performance in relation to these issues, including progress against targets, will be covered in detail in our annual ESG Report, due for publication in the second quarter of 2023, available on our website.

Creating Sustainable Value for Clients, Shareholders and Employees

We have designed our business model to (i) create value for all our stakeholders, (ii) establish high-quality relationships with the suppliers we engage and the communities in which we operate and (iii) respond to macroeconomic trends impacting the real estate sector.

We strive to create a healthy and dynamic balance between activities that will produce short-term value and returns for our stakeholders through effective management of current transactions and business activities, and investments in people (such as new hires), acquisitions, technologies and systems designed to produce sustainable returns over the long term.

Through industry-leading strategies, tools and technologies, we are positioned to help clients achieve their sustainability goals. Increasingly, our clients require innovative and consistent sustainability solutions across all geographies in which they operate. In response to this demand, we have expanded our focus on energy and sustainability capabilities to provide a broader complement of globally scalable, consistent and profitable services.

We have a designated team of energy and sustainability product management professionals who are responsible for developing industry-leading sustainability and decarbonization products that create differentiated value for our clients, deliver accelerated revenue growth and margin expansion for JLL, and help make the global real estate industry more sustainable. This group, working in conjunction with our business lines, geographical leaders and operations teams, develops and enhances our client offerings and is responsible for scaling up our services in the sustainability space and driving global consistency and best practices.

Our expertise addresses the entire life cycle of a building from its design and planning, through construction, occupation, management, refurbishment and sale. Our professionals offer advice on how sustainability considerations can be embedded at each of these stages to maximize value for our clients. We support our clients' data management and greenhouse gas reporting requirements whether for frameworks such as GRESB, WELL and LEED or for waste, water and utility information.

Our commitment to technological innovation extends to our sustainability service offering for our clients. We utilize a number of technology platforms, both in-house and externally sourced, to help deliver our clients' sustainability objectives. Our Canopy platform is used to manage the ever-increasing volume of sustainability data on behalf of our clients. This reflects our commitment to investing in technology, data and information management platforms. By deploying flexible technology solutions, we measured, managed and improved environmental impacts for thousands of buildings in 2022. In 2023, we will continue investments to simplify, streamline and enhance our tech capabilities.

Our sustainability program is aligned with our purpose and corporate strategy to create long-term value for our stakeholders, including shareholders, clients, employees and communities. Through this, we help our clients manage their real estate more effectively and efficiently, promote employment and create value for our shareholders and employees.

COMPETITION

We operate across a wide variety of highly competitive business lines within the commercial real estate industry globally. Our significant growth over the last decade, and our ability to take advantage of the substantial consolidation which has taken place in our industry, have made us one of the largest commercial real estate services and investment management providers on a global basis.

Since we provide a broad range of commercial real estate and investment management services across many geographies, we face significant competition at international, regional and local levels. We also face competition from companies who may not traditionally be considered real estate service providers, including institutional lenders, insurance companies, investment banking firms, investment managers, accounting firms, technology firms, software-as-a-service companies, firms providing co-working space, firms providing outsourcing services of various types (including technology, food service and building products) and companies that self-perform their real estate services with in-house capabilities.

DISTINGUISHING ATTRIBUTES AND COMPETITIVE DIFFERENTIATORS

We deliver exceptional strategic, fully-integrated services, best practices and innovative solutions for real estate owners, occupiers, investors and developers worldwide through an integrated global platform. We invest in technology and data capabilities that enable our people to be more productive and provide clients the best insights. These characteristics among others distinguish us from our competitors, drive service excellence and customer loyalty, and demonstrate our commitment to a sustainable future.

While we face formidable competition in individual markets, the following are key attributes differentiating JLL for clients seeking real estate and investment management services across the globe.

Client Relationship Management

Our client-driven focus enables us to develop, sustain and grow long-term client relationships that generate repeat business and create recurring revenue opportunities. Our clients are the center of our business model, and we enable superior service delivery through ongoing investments in the people, processes and tools that support client relationship management. Our client experience management platform allows us to gather, understand and act on our clients' feedback

Our goal is to provide a holistic understanding of our clients' needs across our business, drive a customized experience and identify a single point of contact at JLL to be accountable for all the activities we undertake for each client. We achieve superior client service through best practices in client relationship management, seeking and acting on regular client feedback, and recognizing each client's own specific definition of excellence. We also invest in developing the highest caliber talent dedicated to managing our client relationships through an employee compensation and evaluation system aligned with our global career framework and designed to reward client relationship building, teamwork and quality performance.

Globally Integrated Business Model & "One JLL"

Through the combination of a wide range of high-quality, complementary services we deliver at consistently high service levels globally, we develop and implement real estate strategies that meet the increasingly complex and far-reaching needs of our clients. With operations spanning the globe, our in-depth knowledge of local and regional markets and "One JLL" approach - leveraging the ability and connectivity of our people - can provide services which address the entire life cycle of real estate around the world. "One JLL" enables cross-selling opportunities across geographies and service offerings that we expect will continue to develop new revenue sources and growth.

Technology Leadership

Technology is transforming commercial real estate and CRE technology strategy is top of mind for our clients. We are focused on curating an industry-leading technology portfolio to tech-enable JLL and our clients by innovating and building technology solutions internally as well as by partnering with, investing in, or selectively acquiring market leading proptech companies. Our unique technology strategy empowers our clients and creates material differentiation for our company while leading the transformation of our industry. Some examples of this include:

- A proprietary technology solution that drives higher productivity for our leasing brokers within Markets Advisory
- A proprietary technology platform that generates leads and insights for advisors in our Capital Markets business and helps us identify and win new business
- Corrigo, one of our software offerings, helps improve client outcomes and drive cost efficiency for our Work Dynamics business

In addition, through our JLL Technologies business, we offer a comprehensive set of products - including Building Engines, Corrigo, Hank - and services for Investor and Occupier clients.

Our globally-coordinated investments in research, technology, data and analytics, people, quality control and innovation provide a foundation for us to develop, share and continually evaluate best practices across our global organization. Our investments are focused on both platform and client-facing technology. Further, we will continue to develop and deploy technology to support our marketing and client development activities and to make our products and services increasingly accessible.

Brand

The combined strength of our JLL and LaSalle brands represents a significant advantage when we pursue new business opportunities and is also a major motivator for talented people to join our global brand. Large corporations, institutional investors and occupiers of real estate recognize our ability to create value reliably in changing market conditions, based on (i) evidence provided by brand perception surveys we have commissioned, (ii) extensive coverage we receive in top-tier business publications, (iii) awards we receive in real estate, sustainability, innovation, data/technology and ethics, as well as (iv) our significant, long-standing client relationships. Our reputation derives from our deep industry knowledge, excellence in service delivery, integrity, and our global provision of high-quality, professional real estate and investment management services.

We believe in uncompromising integrity and the highest ethical conduct, where our Board of Directors and senior management lead by example. We are proud of the global reputation we have earned and are determined to protect and enhance it. The integrity our brand represents is one of our most valuable assets and a strong differentiator for JLL.

We unveiled our global brand idea SEE A BRIGHTER WAY in November 2022 which embodies our commitment to bring optimism, innovative ideas and unmatched intelligence in everything we do for our clients.

Employee Engagement

Our people are united by our purpose to shape the future of real estate for a better world. Our purpose combined with our strategic focus on People, Technology and Workspaces positions us for exciting business growth. Embedded in everything we do are our values: Teamwork, Ethics and Excellence. Driving the best people experience is imperative, enabling our employees to continue to grow with JLL while also feeling part of an inclusive and collaborative culture.

Our goal-setting framework uses three categories of goals (clients, growth and people) that align our people's efforts with enterprise-wide strategy throughout all levels of the organization and builds focus and attention on our priorities. Ongoing employee feedback is important to the continued improvement of our organization and to harness this valuable feedback, we conduct an all employee survey regularly, measuring key aspects such as engagement, leadership, inclusiveness and well-being.

Financial Strength

Our broad geographic reach and the range of our global service offerings diversify the sources of our revenue, reducing overall volatility in operating a real estate services business. This further differentiates JLL from firms with more limited service offerings or that are only local/regional and must rely on fewer markets or services.

Confidence in the financial strength of long-term service providers is important to our clients, who require this when they select real estate service providers. We focus on maintaining financial performance metrics, particularly our leverage and debt service coverage ratios, that support investment-grade financial ratings. We continue our long history of investment grade credit ratings from Moody's Investors Service, Inc. ("Moody's") and Standard & Poor's Ratings Services ("S&P"). Our issuer and senior unsecured ratings as of December 31, 2022 are Baa1 from Moody's and BBB+ from S&P. Accordingly, our ability to present a strong financial condition may distinguish us as we compete for business.

We have ample capacity to fund our business. A key source of liquidity is our unsecured credit facility (the "Facility") provided by an international syndicate of banks, which as of December 31, 2022 had a maximum borrowing capacity of \$3.35 billion and a maturity date in April 2026.

Focus on Sustainability

Leading on sustainability is fundamental to both our purpose and our long-term growth strategy with a strong correlation to the success of our business. Being a responsible corporate citizen is the right thing to do and is what our clients and employees expect from us.

As part of our commitment to sustainability, in 2018 we announced our support of the Taskforce on Climate-related Financial Disclosures ("TCFD"). Starting in 2019, we began a phased approach to evaluate (with subsequent refinements) the potential risks and opportunities to our business resulting from climate change in alignment with the TCFD recommendations.

Our first phase report in 2019 considered climate impacts on our business from a qualitative perspective, while our second phase report in 2020 assessed the physical effects of climate change on some of our most prominent office locations. The findings were published in JLL's Global Sustainability Report for each respective year. In 2022 we published the findings of a quantitative assessment of climate opportunities and risks to our business in a standalone report.

Our 2022 ESG Report provides a summary of the potential risks and opportunities to our business identified through this analysis, as well as information on our management approach, metrics and targets aligned to the recommendations of the TCFD. The report also provides information on our management approach and performance against the three issue areas that underpin our sustainability program, and additional ESG impacts identified through our sustainability materiality review.

Industry-Leading Research and Data Capabilities

We invest in and rely on comprehensive research to support and guide the development of real estate and investment strategy for our clients. With approximately 550 research professionals who gather data and cover market and economic conditions around the world, we are a leading adviser within the commercial real estate industry. Research plays a key role in keeping colleagues throughout the organization and our clients attuned to important trends and changing conditions in world markets. We continue to devise and invest in new approaches through data science techniques and other technology to make our research, services and property offerings more readily available to our people and clients.

We believe our investments in research, technology, data science and analytics, people and thought leadership position JLL as a leading innovator in our industry. Our research initiatives investigate emerging trends to help us anticipate future conditions and shape new services to benefit our clients, which in turn help us secure and maintain profitable long-term relationships with the clients we target: the world's leading real estate owners, occupiers, investors and developers.

Awards

We won numerous awards and recognitions through January 2023 that reflect the quality of the services we provide to our clients, the integrity of our people and our desirability as a place to work. As examples, we were named:

- A member of the Bloomberg Gender-Equality Index, for the fourth consecutive year
- An Energy Star Sustained Excellence Award recipient, by the U.S. Environmental Protection Agency, for the eleventh consecutive year
- One of America's Most Responsible Companies by *Newsweek*, for the fourth consecutive year
- A recipient of the Global Outsourcing 100 by the International Association of Outsourcing Professionals (IAOP), for the second consecutive year
- One of the World's Most Ethical Companies by the Ethisphere Institute, every year since 2008
- One of the World's Most Admired Companies by *Fortune Magazine*, for the seventh consecutive year
- A recipient of Procter & Gamble's (P&G) first-ever Supplier Sustainability Award, recognizing external business partners who play a pivotal role in protecting the planet
- To the Human Rights Campaign Foundation's Corporate Equality Index, a benchmarking survey on corporate policies and practices related to LGBTQ workplace equality, with a perfect score, for the eighth consecutive year
- One of America's Best Employers for Diversity by *Forbes*, every year since 2019
- One of the Best Places to Work for Disability Inclusion by the Disability Equality Index, for the fourth consecutive year
- A member of Seramount's Inclusion Index, recognizing our dedication and progress to creating an inclusive workplace
- One of America's 100 Most Sustainable Companies by Barron's, for the third consecutive year
- To the Wall Street Journal's Management Top 250 ranking, for the third consecutive year
- Best Compliance and Ethics Program by Corporate Secretary Magazine

INTEGRATED REPORTING

JLL was one of the first U.S. listed companies to participate in the International Integrated Reporting Council ("IIRC"), and we continue to support the general principles set forth by the <IR> Framework, which are designed to promote communications and integrated thinking about how an organization's strategy, governance, and financial and non-financial performance lead to the creation of value over the short, medium and long term.

Components of Our Integrated Reporting. This Annual Report on Form 10-K focuses on our business strategy and our financial performance, including an attempt to illustrate how being a sustainable enterprise is integral to our success. Our citizenship and sustainability efforts for ourselves and our clients are reflected primarily in our annual Global Sustainability Report, available on our website. Our governance and remuneration practices are reported primarily in the Proxy Statement for our Annual Meeting of Shareholders. The mechanisms we use to make our clients comfortable with respect to our transparency and fair dealing are summarized in our Ethics Everywhere Annual Report. The behaviors and standards we expect of our employees and of the suppliers we engage for our own company and on behalf of clients are presented in our Code of Business Ethics and our Vendor Code of Conduct. We publish details of our ethics program and ethics statistics in our Ethics Everywhere Annual Report to increase transparency and understanding of the types of concerns and issues raised through our reporting channels.

Responsibility for Integrated Reporting. Our Finance, Legal and Sustainability functions are primarily responsible for the integrity of our integrated reporting efforts, collaborating in the preparation and presentation of this report and engaging our organization's leadership.

SEASONALITY

Historically, we have reported a relatively smaller revenue and profit in the first quarter with both measures increasing during each of the following three quarters. This is a result of a general focus in the real estate industry on completing or documenting transactions by calendar year end and the fact that certain expenses are constant throughout the year. Our seasonality excludes the recognition of investment-generated performance fees and realized and unrealized investment equity earnings and losses. Specifically, in our LaSalle business, we recognize incentives fees when assets are sold or as a result of valuation increases in the portfolio, the timing of which may not be predictable or recurring. In addition, investment equity gains and losses are primarily dependent on underlying valuations, and the direction and magnitude of changes to such valuations are not predictable. Non-variable operating expenses, which we treat as expenses when incurred during the year, are relatively constant on a quarterly basis. Other factors may affect seasonality. For example, in 2020 and 2021, macroeconomic conditions influenced by the COVID-19 pandemic impacted the historical seasonality of our revenue and profits. In the second half of 2022, we experienced disruption to our historical seasonality trends due to rising interest rates and widespread economic uncertainty.

HUMAN CAPITAL

The following table details our global headcount for reimbursable and non-reimbursable employees.

(in thousands)	December 31, 2022	December 31, 2021
Professional non-reimbursable employees	57.9	53.7
Directly reimbursable employees	45.4	44.5
Total employees	103.3	98.2

Directly reimbursable employees have costs which are fully reimbursed by clients, primarily in our Work Dynamics business. Specifically, reimbursable employees include many of our WPM and Property Management professionals, inclusive of our building maintenance employees.

Our employees do not report being members of any labor unions, with the exception of approximately 3,400 property maintenance employees in the United States, over 75% of whom are reimbursable. As of both December 31, 2022 and December 31, 2021, approximately 65% of our employees were based in countries other than the United States.

Diversity, Equity and Inclusion (DEI)

At JLL, diversity, equity, and inclusion are core to our purpose of shaping the future of real estate for a better world. Our vision is for a culture where differences are valued, people feel that they belong, and authenticity thrives across the communities where we live and work. We have embarked on a strategic DEI journey that includes focusing on our workforce, workplace and marketplace. We have enhanced our commitment to DEI by revamping our strategy and strategically focusing on talent, culture and clients. Some examples of our actions and progress include:

- Continued growth of diversity efforts
 - 36% of our global workforce is female
 - 83% of our independent board members are female and/or an ethnic minority
 - Three of our largest eight countries are led by female CEOs
 - In 2021, signed the Commercial Real Estate Women (CREW) Pledge for Action to support the advancement of women in real estate
 - Published our fifth Gender Pay Gap report and third Ethnicity Pay Gap report in the United Kingdom
- Supported Business Resource Groups to provide supportive and safe platforms to navigate career development and facilitate networking
- Continued the rollout of programs to break down financial barriers for underrepresented populations entering the real estate industry, including a college loan repayment program and an investment fund for entry-level compensation to supplement the industry's traditionally commission-based salary models
- Continued recognition of our commitment to diversity; refer to the Distinguishing Attributes and Competitive Differentiators section above for awards and recognition during the past year

Training and Development

Using extensive internal and external research, we have a set of core capabilities that define our leadership behaviors to drive our near and long-term success. Those capabilities are the foundation for our employee talent assessments, succession planning and other talent processes. Our employees can self-assess and be assessed against these capabilities to participate in our award-winning development platform, Real Leadership, which was launched in 2019.

Real Leadership is an end-to-end platform that helps our employees grow their leadership skills from frontline to executive. It has served over 10,000 employees worldwide with 10 different programs including partnerships with Harvard, Stanford, Cambridge University, IMD Business School and many other prestigious partners.

As our business has evolved, so too have our broader learning and development platform and products. We continue to upskill our workforce on future-focused skills, ensuring our employees worldwide have the development they need, whether for technical or professional development, leveraging our JLL Virtual Learning library. Nearly 90,000 employees annually have been able to learn, in seven different languages, through our virtual, on-demand offerings about topics such as, but not limited to, sustainability, technology and the future of work. Our learning platforms have resulted in over 2 million learning assets consumed to accelerate the development of our employees.

Well-being

Launched in 2020, and refreshed in 2022, our well-being framework consists of four pillars: physical, mental, financial and inclusion. Through our well-being sites, employees across the globe can leverage helpful resources, presented live and virtually, on such topics as mental health, financial education and resources for caregivers.

Health and Safety

Health and safety is at the forefront of JLL's operations. With over 700 health and safety professionals, we are committed to creating an environment that unequivocally protects our employees, clients and supply partners.

To effectively manage health and safety, our program is aligned to the principles of the internationally recognized health and safety management standard ISO 45001. We implement global health and safety standards that ensure we apply a consistent approach to harm prevention and operate assurance programs to ensure legal compliance.

We recognize that successful health and safety programs are built on proactive individual and collective safe behaviors. Through our health and safety vision, "One team S.A.F.E.R together," we create a stronger culture of health and safety, underpinned by our S.A.F.E.R. behaviors: S – Speak about safety; A – Act safely; F – Focus on safety standards; E – Engage in safety initiatives; R – Recognize safe performance.

Through our safety vision and our awareness and education programs, like Global Safety Week, the strength of our program is realized in the low accident rates for the year 2022, compared with the U.S. Occupational Safety and Health Administration ("OSHA") industry average accident rates for our industry (NAICS Code 531: Real Estate).

- *Lost Time Incident Rate* was 0.23 (OSHA industry average was 0.70): 12-month average of OSHA recordable illness and injuries per 100 JLL employees that resulted in days away from work.
- *Total Recordable Incident Rate* was 0.49 (OSHA industry average was 1.8): 12-month average of OSHA recordable illness and injuries per 100 JLL employees.
- *Days Away, Restricted Duty and Transfer* was 0.27 (OSHA industry average was 1.00): 12-month average of OSHA recordable illness and injuries per 100 full-time employees that resulted in days away from work or restricted duties.
- There were zero JLL employee workplace fatalities reported in 2022.

Since 2012, we have benchmarked the strength of our safety culture against data from other companies using the U.K. Health and Safety Laboratory's Safety Climate Survey Tool. Our global survey received over 11,500 responses in 2022 and showed our culture continued to be in the 95th percentile when compared against the all-industry scores and exceeded the 2021 highest average scores for Real Estate & Facilities Management organizations. While this score sets a high internal benchmark, our goal is to improve our culture and improve our scores year on year.

Since JLL's first WELL certification in 2017, we continue to be committed to providing healthy workplaces for our people and have enrolled additional assets in the WELL program. By the end of 2022, JLL had a total of five Platinum Certified

Offices and one Gold Certified Office. JLL's WELL at Scale (formerly WELL Portfolio) program covers 4.3 million square feet, impacting more than 35,000 employees in over 270 offices worldwide. WELL at Scale made it possible to evaluate the performance in a trusted and unbiased manner against a science-based methodology and create a roadmap for continuous improvement. WELL at Scale is applied globally and makes well-being features available to all office employees.

INTELLECTUAL PROPERTY

We regard our technology and other intellectual property, including our brands, as a critical part of our business.

We hold various trademarks, trade dress and trade names and rely on a combination of patent, copyright, trademark, service mark and trade secret laws, as well as contractual restrictions to establish and protect our proprietary rights. We own numerous domain names, have registered numerous trademarks, and have filed applications for the registration of a number of our other trademarks and service marks in the United States and in foreign countries. We hold the "Jones Lang LaSalle," "JLL," "LaSalle Investment Management" and "LaSalle" trademarks and the related logos to conduct the material aspects of our business globally. We own the rights to use the ".jll" and ".lasalle" top level domain names.

Although we believe our intellectual property plays a role in maintaining our competitive position in a number of the markets we serve, we do not believe we would be materially adversely affected by the expiration or termination of our trademarks or trade names or the loss of any of our other intellectual property rights other than the "JLL," "Jones Lang LaSalle," "LaSalle," and "LaSalle Investment Management" names, and our Design (Three Circles) mark that is also trademarked. Our trademark registrations have to be renewed every ten years, which we expect to continue to renew, as necessary. Based on our most recent trademark registrations, the JLL mark would expire in 2024 and the Design (Three Circles) mark would expire in 2031. Our LaSalle and LaSalle Investment Management marks will expire in 2026.

In addition to our trademarks and trade names, we also have proprietary technologies for the provision of complex services and analysis. We also have a number of pending patent applications in the U.S. to further enable us to provide high levels of client service and operational excellence. We will continue to file additional patent applications on new inventions, as appropriate, demonstrating our commitment to technology and innovation.

CORPORATE GOVERNANCE; CODE OF BUSINESS ETHICS; CORPORATE SUSTAINABILITY AND RELATED MATTERS

We are committed to the values of effective corporate governance, operating our business to the highest ethical standards and conducting ourselves in an environmentally and socially responsible manner. We believe these values promote the best long-term performance of JLL for the benefit of our shareholders, clients, staff and other constituencies.

Corporate Governance. We believe our policies and practices reflect corporate governance initiatives that comply with the listing requirements of the NYSE, the corporate governance requirements of the Sarbanes-Oxley Act of 2002, U.S. Securities and Exchange Commission ("SEC") regulations, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the General Corporation Law of the State of Maryland, where we are incorporated.

Our Board of Directors ("the Board") regularly reviews corporate governance developments and modifies our Bylaws, Guidelines and Committee Charters accordingly. As a result, we have adopted the following corporate governance policies and approaches considered to be best practices in corporate governance.

- Annual elections of all members of our Board
- Annual "say on pay" votes by shareholders with respect to executive compensation
- Right of shareholders owning 30% of the outstanding shares of our Common stock to call a special meeting of shareholders for any purpose
- Majority voting in Director elections
- Separation of Chairman and CEO roles, with the Chairman serving as Lead Independent Director
- Required approval by the Nominating, Governance and Sustainability Committee of any related-party transactions
- Executive session among the Non-Executive Directors at each in-person meeting
- Annual self-assessment by the Board and each of its Committees

Code of Ethics. In 2022, we launched an updated version of our Code of Ethics which sets forth the ethics principles that guide our operations globally and applies to all employees of JLL and the members of our Board. The Code of Ethics is the cornerstone of our Ethics Everywhere Program, by which we establish the operating framework to communicate, monitor and enhance our ethical culture and maintain compliance with our Code. We are proud of, and are determined to protect and enhance, the global reputation we have established. As we operate in a service industry, the integrity our brand represents is one of our most valuable assets. Since 2008 we have continuously held Ethics Inside™ certification from the Ethisphere Institute, a leading organization dedicated to best practices in ethics, compliance, corporate governance and citizenship. As previously noted, we have been named to Ethisphere Institute's list of the World's Most Ethical Companies™ every year since 2008 and, in 2022, we received an award for "Best Compliance and Ethics Program" by Corporate Secretary magazine.

Our Whistleblower and Non-Retaliation Policy and our Human Rights Policy also support our values and our commitment to ethical business practices. We support the principles of the United Nations Global Compact and the United Nations Principles of Responsible Investing. We are also a member of the Partnering Against Corruption Initiative sponsored by the World Economic Forum.

Vendor Code of Conduct. We expect each of our vendors, meaning any firm or individual providing a product or service to us, or indirectly to our clients as a contractor or subcontractor, will share and embrace the letter and spirit of our commitment to integrity. While vendors are independent entities, their business practices may significantly reflect upon us, our reputation and our brand. Accordingly, we expect all vendors to adhere to the JLL Vendor Code of Conduct, which we publish in multiple languages on our website. We continue to evaluate and implement new ways to monitor the quality and integrity of our supply chain. This includes developing means to efficiently survey and compare responses about the ethical environment and riskiness of current and potential suppliers we engage both for our own company and on behalf of clients.

Corporate ESG. We encourage and promote the principles of sustainability everywhere we operate, seeking to improve the communities and environment in which our people work and live. We design our corporate policies to reflect the highest standards of corporate governance and transparency, and we hold ourselves responsible for our social, environmental and economic performance. We seek to incorporate sustainability practices and principles into our client investments and asset management. These priorities guide the interactions we have with our shareholders, clients, employees, regulators and vendors, as well as with all others with whom we come into contact. We recognize both the risks and opportunities presented by climate change and seek to address these impacts in and beyond our business.

We also work to foster an environment which values the richness of our differences and reflects the diverse world in which we live and work. By cultivating a dynamic mix of people and ideas, we enrich our performance, the communities in which we operate, and the lives of our employees. We seek to recruit a diverse workforce, develop and promote exceptional talent from diverse backgrounds, and embrace the varied experiences of all our employees.

Corporate Political Activities. Our general approach is to not take positions as an organization on social or political issues or on political campaigns. Accordingly, we do not permit contributions in JLL's name for political activities. From time to time, we may comment on proposed legislation or regulations that directly affect our business interests and therefore the interests of our shareholders. We may also belong to industry trade associations that do become involved in attempts to influence legislation in the interests of the industry generally.

COMPANY WEBSITE AND AVAILABLE INFORMATION

JLL's website address is www.jll.com. We use our website as a channel of distribution for company, financial and other information. Our website also includes information about our corporate governance. We intend to post on our website any amendment or waiver of the Code of Business Ethics with respect to a member of our Board or any of the executive officers named in our proxy statement.

On the Investor Relations page on our website, we make available our Annual Report on Form 10-K, our Proxy Statement on Schedule 14A, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"). The SEC maintains www.sec.gov, containing annual, quarterly and current reports, proxy statements and other information we file electronically with the SEC.

ITEM 1A. RISK FACTORS

In addition to other information set forth in this report, you should carefully consider the following risks that based upon current knowledge, information and assumptions could materially adversely affect our business, financial condition and results of operations. Some of these risks and uncertainties could affect particular segments or geographies, while others could affect all of our businesses. Although each risk is discussed separately, many are interrelated.

These risk factors do not identify all risks we face; our operations could also be affected by factors not presently known to us or that we currently consider to be not significant to our operations. Our business is also subject to general risks and uncertainties which broadly affect all companies.

Categorization of Enterprise Risks. This section reflects our current views, as of the issuance of this report, concerning the most significant risks we believe our business faces, both in the short and long term. For purposes of the following analysis and discussion, we group the risks we face according to five principal categories:

- Operational Risk Factors
- Strategic Risk Factors
- Legal, Compliance and Regulatory Risk Factors
- Financial Risk Factors
- General Risk Factors

Although risks we identify may fit the criteria of more than one category, we chose the category we view as primary. We do not present the risks below in their order of significance, the relative likelihood we will experience a loss, or the magnitude of any such loss. Certain of these risks also may give rise to business opportunities for us, but our discussion of risk factors in Item 1A is limited to the adverse effects the risks may have on our business.

Operational Risk Factors

Operational risk relates to risks arising from systems, processes, people and external events that affect the operation of our businesses. It includes information management and data protection and security, including cyber security; supply chain and business disruption, including health and safety; and other risks, including human resources and reputation.

INSUFFICIENT ORGANIZATIONAL AGILITY ACROSS OUR STRATEGY, STRUCTURE, PROCESSES, PEOPLE AND TECHNOLOGY MAY IMPACT OUR COMPANY’S SUCCESS.

Our business is evolving at a rapid pace. Our organizational agility underpins our ability to mitigate many other risks, minimize impacts from adverse events, and capitalize upon opportunities when presented. The sheer size of our company - with over 103,000 employees across more than 80 countries - makes change-management and responsiveness challenging. Any global change is a complex undertaking as we are required to comply with the numerous and often contradictory local regulatory environments while achieving the objective of the change.

Lack of responsiveness in a timely fashion could result in negative financial impact and reputational damage.

WE MAY NOT BE ABLE TO RETAIN OUR SENIOR MANAGEMENT, ATTRACT AND RETAIN QUALIFIED AND EXPERIENCED EMPLOYEES, AND DELIVER ON OUR DIVERSITY, EQUITY AND INCLUSION STRATEGY.

We depend, in large part, on the members of our senior management team who possess extensive knowledge and a deep understanding of our business and strategy, as well as the colleagues who are critical to developing and retaining client relationships. Our success depends on the continued availability of skilled personnel with industry experience and knowledge, and our ability to recruit, attract and retain senior management and other key employees, including through the implementation of diversity, equity and inclusion initiatives, and the succession of senior management. We are working to advance culture change through the continued implementation of diversity, equity and inclusion (“DEI”) initiatives throughout our organization. If we do not (or are perceived not to) successfully implement these initiatives, our ability to recruit, attract and retain talent may be adversely impacted and shifts in perspective and expectations about social issues and priorities surrounding DEI may occur at a faster pace than we are capable of managing effectively. The possibility that we are unable to identify, attract and retain sufficient talent in key positions, may prevent us from achieving our strategic vision, disrupt our business, impact revenues, increase costs, damage staff morale, and affect the quality and continuity of client service. A lack of ready-now or future successors for key roles also may negatively impact our business in a variety of ways.

There is a further risk of losing talent (and intellectual property and client contacts) to competitors, particularly in the context of increased use of social media networks and transparency of employment information. There is also the risk of losing top producers who provide meaningful margin contribution. These risks increase as we continue to grow as an organization and increase the number of staff, which has expanded significantly over the past decade. We and our competitors use equity incentives and bonuses to help attract, retain and incentivize key personnel. As competition is significant for the services of such personnel, the expense of incentives and bonuses may increase and we may be unable to attract or retain such personnel to the same extent we have in the past.

The challenge to find and retain sufficiently trained staff is world-wide and, as a result, increases the risk of performance for clients. In the current competitive labor market, labor and recruitment costs are rising and are expected to increase further. Corporate payrolls are likely to increase as greater competition for labor and social pressure to raise salaries in line with productivity growth cause even greater wage inflation. Regional and national labor policies are difficult to predict and the indirect implications of changes to them are difficult to assess.

OUR RELIANCE ON THIRD PARTIES COULD EXPOSE US TO INCREASED ECONOMIC AND REPUTATIONAL HARM.

We rely on third parties, and in some cases subcontractors, to perform activities on behalf of our organization to improve quality, increase efficiencies, reduce costs and lower operational risks across our business and support functions. We continue to use a Vendor Code of Conduct, which is published in multiple languages on our website, intended to communicate to our vendors the standards of conduct we expect them to uphold. Our contracts with vendors also generally impose a contractual obligation to comply with our Vendor Code. In addition, we leverage technology at an increasing rate to help us better screen vendors, with the aim of gaining a deeper understanding of the risks posed to our business by potential and existing vendors. If our third parties do not have the proper safeguards and controls in place, or if appropriate oversight cannot be provided, or if they fail to comply with service level agreements or regulatory or legal requirements in a high quality and timely manner, we could be exposed to increased operational, regulatory, financial or reputational risks. In addition, these third parties face their own technology, operating, business and economic risks, and any significant failures by them, including the improper use or disclosure of our confidential client, employee or company information, could cause damage to our reputation and harm to our business.

OUR HEALTH, SAFETY, SECURITY AND ENVIRONMENT PROGRAM, POLICIES, AND PROCEDURES (INCLUDING THOSE OF OUR CONTRACTORS AND SUBCONTRACTORS) MAY NOT BE ADEQUATE.

Health, safety and security is a prominent part of our Beyond strategy, which is why we have taken steps to implement what we believe are strong operational health and safety controls. Our goal is to ensure those we work and interact with are unharmed by our operations. We have a multi-disciplinary safety management structure, with executive sponsorship, aimed at managing existing and emerging health and safety risks, and achieving continuous improvement.

However, despite significant investments in our safety platform, management systems and vendor due diligence program, if our health and safety policies, procedures, and programs are not adequate, or if our employees or contractors do not receive or complete adequate training or comply with our policies and procedures, we may be exposed to significant consequences including serious injury or loss of life, which could have a material impact on our financial performance and reputation. In addition, our contractors and their subcontractors are highly integrated into many aspects of our operations and therefore are involved in a significant proportion of the safety incidents we experience. Additional efforts are necessary to ensure our vendors are aware of our high health and safety expectations and consistently comply with our policies and procedures.

WE FACE BUSINESS DISRUPTION AND RELATED RISKS RESULTING FROM HEALTH EPIDEMICS, INCLUDING THE COVID-19 PANDEMIC.

Health epidemics that affect the general conduct of business in one or more urban areas (including as the result of travel restrictions and the inability to conduct face-to-face meetings) have occurred in the past, for example from influenza or COVID-19, and may occur in the future from other types of outbreak. Such instances can adversely affect the volume of business transactions, real estate markets and the cost of operating real estate or providing real estate services.

At present, efforts to contain and mitigate the COVID-19 pandemic are still occurring in many countries where we operate. For example, during 2022, China had various COVID-19 related restrictions in place. New COVID-19 variants could continue to emerge which may result in continued significant spikes in the number of local, regional, and global cases, and uncertainties as to mitigations that local, state, and federal governments will impose, including closures, travel restrictions, vaccine and testing mandates, among other requirements.

DISRUPTIONS IN COMPUTER SYSTEMS, OR PRIVACY BREACHES OR CYBERSECURITY ISSUES, COULD IMPACT OUR ABILITY TO SERVICE OUR CUSTOMERS AND ADVERSELY AFFECT OUR BUSINESS, DAMAGE OUR REPUTATION AND EXPOSE US TO FINANCIAL RISK.

Our business is highly dependent on our ability to collect, use, store and manage organizational and client data. If any of our information and data management systems do not operate properly or are disabled, we could suffer a disruption of our businesses, liability to clients, loss of client or other sensitive data, loss of employee data, regulatory intervention, breach of confidentiality or other contract provisions, or reputational damage. These systems may fail to operate properly or become disabled as a result of events wholly or partially beyond our control, including disruptions of electrical or communications services, as well as disruptions caused by natural disasters, political instability, terrorist attacks, sabotage, computer viruses, deliberate attempts to disrupt our computer systems through "hacking," "phishing," or other forms of both deliberate or unintentional cyber-attack, or our inability to occupy one or more of our office locations. As we outsource significant portions of our information technology functions to third-party providers, such as cloud computing, we bear the risk of having somewhat less direct control over the manner and quality of performance.

Cyber threats are proliferating and advancing their ability to identify and exploit vulnerabilities, requiring continuous evaluation and improvements to our security architecture and cyber defenses. The risk of cyber threats also extends to suppliers and vendors we engage on a principal basis to perform various services. We also face increased cybersecurity risk as we deploy additional mobile and cloud technologies. We are continuously hardening our infrastructure built on these technologies, monitoring for threats, and evaluating our capability to respond to any incidents to minimize any impact to our systems, data, or business operations.

We have experienced various types of cyber-attack incidents which to-date have been contained and not material to us. As the result of such incidents, we continue to implement new controls, governance, technical protections and other procedures. We may incur substantial costs and suffer other negative consequences such as liability, reputational harm and significant remediation costs and experience material harm to our business and financial results if we, or vendors or suppliers we engage on behalf of our clients, fall victim to other successful cyber-attacks.

In addition, we collect personally identifiable information ("PII") and other data as part of our business processes and activities. This data is subject to a variety of U.S. and foreign laws and regulations, including oversight by various regulatory or other governmental bodies. The European Union General Data Protection Regulation, for example, imposes stringent data protection requirements and provides significant penalties for noncompliance. Any inability, or perceived inability, to adequately address data privacy and data protection concerns, even if unfounded, or comply with applicable laws, regulations, policies, industry standards, contractual obligations, or other legal obligations (including at newly acquired companies) could result in additional cost and liability to us or company officials, damage our reputation, inhibit sales, and otherwise adversely affect our business.

CONCENTRATIONS OF BUSINESS WITH CORPORATE AND INVESTOR CLIENTS CAUSE INCREASED CREDIT RISK AND GREATER IMPACT FROM THE LOSS OF CERTAIN CLIENTS AND INCREASED RISKS FROM HIGHER LIMITATIONS OF LIABILITY IN CONTRACTS.

Having increasingly large and concentrated clients can lead to greater or more concentrated risks of loss if, among other possibilities, such a client (i) experiences its own financial problems, which can lead to larger individual credit risks; (ii) becomes bankrupt or insolvent, which can lead to our failure to be paid for services we have previously provided or funds we have previously advanced; (iii) decides to reduce its operations or its real estate facilities; (iv) makes a change in its real estate strategy, such as no longer outsourcing its real estate operations; (v) decides to change its providers of real estate services; or (vi) merges with another corporation or otherwise undergoes a change of control, which may result in new management taking over with a different real estate philosophy or in different relationships with other real estate providers. In the case of LaSalle, concentration of investor clients can also lead to fewer sources of investment capital, which can negatively affect assets under management in case a higher-volume client withdraws its funds or does not re-invest them. This is also the case within LaSalle's businesses which are dependent on the continued ability and willingness of certain brokerage firms to attract investment funds from their clients.

In addition, competitive conditions, particularly in connection with increasingly large clients, may require us to compromise on certain contract terms with respect to the payment of fees, the extent of risk transfer, or acting as principal rather than agent in connection with supplier relationships, liability limitations, credit terms and other contractual terms, or in connection with disputes or potential litigation. Where competitive pressures result in higher levels of potential liability under our contracts, the cost of operational errors and other activities for which we have indemnified our clients will be greater and may not be fully insured.

WE ARE EXPOSED TO LEGAL AND REPUTATIONAL RISKS ARISING FROM BREACH OF FIDUCIARY OBLIGATIONS CLAIMS PURSUANT TO CLIENT CONTRACTS.

In certain cases, we are subject to fiduciary obligations to our clients, which may result in a higher level of legal obligation compared to basic contractual obligations. These relate to, among other matters, the decisions we make on behalf of a client with respect to managing assets on its behalf, purchasing products or services from third parties or other divisions within our Company, or handling substantial amounts of client funds in connection with managing their properties or complicated and high-profile transactions. We face legal and reputational risks in the event we do not perform, or are perceived to have not performed, under those contracts or in accordance with those obligations, or in the event we are negligent in the handling of client funds or in the way in which we have delivered our professional services. The increased potential for the fraudulent diversion of funds from a "hacking" or "phishing" attack exacerbates these risks.

The precautions we take to prevent these types of occurrences, which represent a significant commitment of corporate resources, may nevertheless be ineffective in certain cases. Any increased or unexpected costs or unanticipated delays in connection with the performance of these engagements, including delays caused by factors outside our control, could have an adverse effect on profit margins.

WE ARE SUBJECT TO ACTUAL OR PERCEIVED CORPORATE CONFLICTS OF INTEREST CLAIMS.

Corporate conflicts of interest arise in the context of the services we provide as a company to our different clients. Personal conflicts of interest on the part of our employees are separately considered as issues within the context of our Code of Ethics. Our failure or inability to identify, disclose and resolve potential conflicts of interest in a significant situation could have a material adverse effect. In addition, it is possible that in some jurisdictions, regulations could be changed to limit our ability to act for certain parties where potential conflicts may exist even with informed consent, which could limit our market share in those markets. There can be no assurance potential conflicts of interest will not adversely affect us.

After reductions in the market values of the underlying properties, firms engaged in the business of providing valuations are inherently subject to a higher risk of claims with respect to conflicts of interest based on the circumstances of valuations they previously issued. Regardless of the ultimate merits of these claims, the allegations themselves can cause reputational damage and can be expensive to defend in terms of counsel fees and otherwise.

Strategic Risk Factors

Strategic risk relates to JLL's future business plans and strategies, including the risks associated with: the global macro-environment in which we operate; mergers and acquisitions and restructuring activities; intellectual property; and other risks, including the demand for our services, competitive threats, technology and innovation, and public policy.

WE MAY NOT ADEQUATELY ADAPT TO DISRUPTIVE TECHNOLOGIES, INNOVATION AND COMPETITION.

Mobile technologies and online collaboration tools are transforming how business gets done. Information technology has entered a "big data" era. Within the real estate services industry, managing big data is a critical competitive differentiator and we risk being surpassed if our peers leverage big data more effectively. If we are unable to provide services that address clients' needs as well as compete with our competitors' services, or to align our pricing, licensing and delivery models with client preferences, we could lose clients and/or fail to attract new clients, which could cause us to lose revenue and market share.

IF WE FAIL TO PROTECT OUR INTELLECTUAL PROPERTY ADEQUATELY OR INFRINGE UPON THIRD-PARTY INTELLECTUAL PROPERTY RIGHTS, OUR BUSINESS COULD BE MATERIALLY IMPACTED.

Our business depends, in part, on our ability to identify and protect proprietary information and other intellectual property such as our service marks, domain names, client lists and information, business methods and technology innovations, and platforms we may create or acquire. Existing laws of some countries in which we provide or intend to provide services, or the extent to which their laws are actually enforced, may offer only limited protections of our intellectual property rights. We rely on a combination of trade secrets, confidentiality policies, non-disclosure and other contractual arrangements, and on patent, copyright and trademark laws to protect our intellectual property rights. In particular, we hold various trademarks and trade names, including our principal trade names, "JLL" and "LaSalle." If either of our registered trade names were to expire or terminate, our competitive position in certain markets could be materially and adversely affected. Our inability to detect unauthorized use (for example, by current or former employees) or take appropriate or timely steps to enforce our intellectual property rights may have an adverse effect on our business.

We cannot be sure the intellectual property we may use in the course of operating our business or the services we offer to clients do not infringe on the rights of third parties. However, we do obtain representations and warranties, as well as indemnities, from the licensors in order to mitigate this risk. We may have infringement claims asserted against us or against our clients. These claims may harm our reputation, cost us money and prevent us from offering some services.

POLITICAL AND ECONOMIC INSTABILITY COULD ADVERSELY AFFECT OUR BUSINESS.

Global events could affect our business. These include the possibility of protectionist economic policies of the United States or foreign governments, the escalation of terrorist attacks and their increasing unpredictability, health epidemics and changing immigration policies of the United States or foreign governments.

We provide services in over 80 countries with varying degrees of political and economic stability and transparency. For example, certain emerging as well as mature countries in which we operate have experienced serious political and economic instability, such as the current geopolitical conflict involving Russia and Ukraine, that will likely continue to arise from time to time. In recent years there have been significant political changes in several countries where we have significant operations, resulting in changes to financial, tax, tariffs, healthcare, governance, immigration and other laws that may directly affect our business and continue to evolve.

REAL ESTATE SERVICES AND INVESTMENT MANAGEMENT MARKETS ARE HIGHLY COMPETITIVE, WHICH COULD MAKE IT DIFFICULT FOR US TO MAINTAIN OUR MARKET SHARE, GROWTH RATE AND PROFITABILITY.

We face significant competition from other real estate service providers, institutional lenders, insurance companies, investment banking firms, investment managers, accounting firms, technology firms, consulting firms, co-locating providers, temporary space providers and firms providing outsourcing of various types (including technology and building products), any of which may be a global, regional or local firm, and from firms that self-perform their real estate services with in-house capabilities.

Many of our competitors are local or regional firms, which may be substantially smaller in size than us but hold a larger share of a specific local market. Some of our competitors have expanded the services they offer in an attempt to gain additional business. Some may be providing outsourced facility management services to sell clients products that we do not offer. In some sectors of our business, particularly Work Dynamics, some of our competitors may have greater financial, technical and marketing resources, larger customer bases, and more established relationships with their customers and suppliers than we have. Larger or better-capitalized competitors in those sectors may be able to respond faster to the need for technological change, price their services more aggressively, compete more effectively for skilled professionals, finance acquisitions more easily, develop innovative products more effectively, and generally compete more aggressively for market share. This can also lead to increasing commoditization of the services we provide and increasing downward pressure on the fees we can charge.

New competitors, or alliances among competitors that increase their ability to service clients, could emerge and gain market share, develop a lower cost structure, adopt more aggressive pricing policies, aggressively recruit our people at above-market compensation, develop a descriptive technology that captures market share, or provide services that gain greater market acceptance than the services we offer. Some of these may come from non-traditional sources, such as information aggregators or digital technology firms. To respond to increased competition and pricing pressure, we may have to lower our prices, loosen contractual terms (such as liability limitations), develop our own innovative approaches to mining data and using information, develop our own disruptive technologies, or increase compensation, which may have an adverse effect on our revenue and profit margins. We may also need to become increasingly productive and efficient in the way we deliver services, or with respect to the cost structure supporting our businesses, which may in turn require more innovative uses of technology as well as data gathering and data mining.

Our industry has continued to consolidate, and there is an inherent risk competitive firms may be more successful than we are at growing through merger and acquisition activity. While we have successfully grown organically and through a series of acquisitions, sourcing and completing acquisitions are complex and sensitive activities. Considering the continuing need to provide clients with more comprehensive services on a more productive and cost-efficient basis, we expect acquisition opportunities to continue to emerge. However, there is no assurance we will be able to continue our acquisition activity in the future at the same pace as we have in the past, particularly as we weigh acquisition opportunities against other potential uses of capital for technology and other investments in systems and human resources, as well as returning capital to shareholders.

We are also dependent on long-term client relationships and revenue received for services under various service agreements. In this competitive market, if we are unable to maintain these relationships or are otherwise unable to retain existing clients and develop new clients, our business, results of operations and/or financial condition may be materially adversely affected. Weaknesses in the markets in which they themselves compete may lead to additional pricing pressure from clients as they themselves came under financial pressure.

THE SEASONALITY IN PARTS OF OUR BUSINESS EXPOSES US TO RISKS.

In parts of our business, our revenue and profits have historically grown progressively by quarter throughout the year mostly due to completing or documenting transactions by fiscal year-end and the fact that certain of our expenses are constant through the year. Historically, we have reported a relatively smaller profit in the first quarter and then increasingly larger profits during each of the following three quarters, excluding the recognition of investment-generated performance fees and co-investment equity gains or losses, each of which can vary from period to period.

The seasonality of these parts of our business makes it difficult to determine during the course of the year whether planned results will be achieved, and thus to budget, and to adjust to changes in expectations. In addition, negative economic or other conditions that arise at a time when they impact performance in the fourth quarter, such as the particular timing of when larger transactions close or changes in the value of the U.S. dollar against other currencies occur, may have a more pronounced impact than if they occurred earlier in the year. To the extent we are not able to identify and adjust for changes in expectations, or we are confronted with negative conditions that disproportionately impact the fourth quarter of a calendar year, we could experience a material adverse effect on our financial performance.

Growth in our property management and integrated facilities management businesses and other services related to the growth of outsourcing of corporate real estate services has, to an extent, lessened the seasonality in our revenue and profits during the past several years.

WE ARE SUBJECT TO RISKS INHERENT IN MAKING ACQUISITIONS AND ENTERING INTO JOINT VENTURES.

Historically, a significant component of our growth has been generated by acquisitions. Any future growth through acquisitions will depend in part on the continued availability of suitable acquisitions at favorable prices and with advantageous terms and conditions, which may not be available to us.

Acquisitions subject us to several significant risks, any of which may prevent us from realizing the anticipated benefits or synergies of the acquisition. The integration of companies is a complex and time-consuming process that could significantly disrupt the businesses of JLL and the acquired company such as: diversion of management attention, failure to identify certain liabilities and issues during the due diligence process, and the inability to retain personnel and clients of the acquired business.

To a much lesser degree, we have occasionally entered into joint ventures to conduct certain businesses or enter new geographies, and we will consider doing so in appropriate situations in the future. Joint ventures have many of the same risk characteristics as acquisitions, particularly with respect to the due diligence and ongoing relationship with joint venture partners, given each partner has inherently less control in a joint venture and will be subject to the authority and economics of the particular structure that is negotiated. Accordingly, we may not have the authority to direct the management and policies of the joint venture. If a joint venture participant acts contrary to our interests, it could harm our brand, business, results of operations and financial condition.

WE ARE SUBJECT TO RISKS INHERENT TO INVESTMENT (INCLUDING CO-INVESTMENT) AND REAL ESTATE INVESTMENT BANKING ACTIVITIES.

An important part of our business strategy includes investing in (i) real estate, both individually and along with our investment management clients, and (ii) proptech funds and early-stage proptech companies. As of December 31, 2022, we have unfunded commitment obligations of up to \$349.1 million to fund future investments across our investment strategies. To remain competitive with well-capitalized financial services firms, we also may make merchant banking investments for which we may use our capital to acquire properties before the related investment management funds have been established or investment commitments have been received from third-party clients.

Certain service lines we operate have the acquisition, development, management and sale of real estate and proptech investments as part of their strategy. Investing in any of these types of situations exposes us to several risks.

Investing for the above reasons poses the following risks:

- We may lose some or all the capital we invest if the investments underperform.
 - For real estate investments, underperformance may result from many factors outside of our control, including the general reduction in asset values within a particular geography or asset class.
 - For proptech investments, the concepts and strategic plans underpinning the value of the fund or entity may not be realized or could be poorly executed. In addition, the fund or entity may be negatively impacted by risks they are exposed to (some of which we are also exposed to and are discussed elsewhere in this Item).
- We will have fluctuations in earnings and cash flow as we recognize gains or losses, and receive cash upon the disposition of investments, the timing of which may be geared toward the benefit of our clients.

- We hold many of our investments in subsidiaries with limited liability; however, in certain circumstances, it is possible this limited exposure may be expanded in the future based on, among other things, changes in applicable laws. To the extent this occurs, our liability could exceed the amount we have invested.
- We make investments in many countries, and this presents tax, political/legislative, currency, and other risks as described elsewhere in this Item.

In certain situations, we raise funds from outside investors where we are the sponsor of real estate investments, developments, or projects. To the extent we return less than the investors' original investments because the investments, developments, or projects have underperformed relative to expectations, the investors could attempt to recoup the full amount of their investments under securities law theories such as lack of adequate disclosure when funds were initially raised. Sponsoring funds into which retail investors can invest, such as the investment funds sponsored by LaSalle, may increase this risk.

Legal, Compliance and Regulatory Risk Factors

Legal and compliance risk relates to risks arising from the government and regulatory environment and action, and legal proceedings and compliance with integrity policies and procedures. Government and regulatory risks include the risk that government or regulatory actions will impose additional cost on us or cause us to have to change our business models or practices.

COMPLIANCE WITH MULTIPLE AND POTENTIALLY CONFLICTING LAWS AND REGULATIONS AND DEALING WITH CHANGES IN LEGAL AND REGULATORY REQUIREMENTS MAY BE DIFFICULT, BURDENSOME AND/OR EXPENSIVE.

We face a broad range of legal and regulatory environments in the countries in which we do business and identifying and complying with these regulations is complex. We may not be successful in complying with regulations in all situations and could, therefore, be subject to regulatory actions and fines for non-compliance.

Changes in legal and regulatory requirements can impact our ability to engage in business in certain jurisdictions or increase the cost of doing so. The legal requirements of U.S. statutes may also conflict with local legal requirements in a particular country. Avoiding regulatory pitfalls as a result of conflicting laws will continue to be a key focus as non-U.S. statutory law and court decisions create more ambiguity. The jurisdictional reach of laws may be unclear as well, such as when laws in one country purport to regulate the behavior of our subsidiaries or affiliates operating in another country. We are also seeing increasing levels of labor regulation in emerging markets, such as China, which affect many of our businesses.

Our global operations must comply with all applicable anti-corruption laws, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. These anti-corruption laws generally prohibit companies and their intermediaries from making improper payments or providing anything of value to improperly influence government officials or private individuals for the purpose of obtaining or retaining a business advantage. Such prohibitions exist regardless of whether those practices are legal or culturally expected in a particular jurisdiction. Our compliance program may not prevent violations of such laws, which could result in criminal or civil sanctions and have an adverse effect on our reputation, business and results of operations and financial condition.

U.S. laws and regulations govern the provision of products and services to, and of other trade-related activities involving, certain targeted countries and parties. As a result, we have had longstanding policies and procedures to restrict or prohibit sales of our services into countries subject to embargoes and sanctions, or to countries designated as state sponsors of terrorism, such as Iran. In conjunction with such policies, we have also implemented certain procedures to evaluate whether existing or potential clients appear on the "Specially Designated Nationals and Blocked Persons List" maintained by OFAC.

Changes in governments or majority political parties may result in significant changes in enforcement priorities with respect to employment, health and safety, tax, securities disclosure and other regulations, which, in turn, could negatively affect our business.

WE ARE SUBJECT TO COMPLEX AND EVOLVING LICENSING AND REGULATORY REQUIREMENTS.

Several of our business operations are subject to requirements in various jurisdictions to maintain licenses and comply with particular regulations. If we fail to maintain our licenses or conduct regulated activities without a license or in contravention of applicable regulations, we may be required to pay fines, return commissions or investment capital from investors or may have a given license suspended or revoked. Our acquisition activity increases these risks, because we must successfully transfer licenses of acquired entities and their staff, as appropriate. Licensing requirements may also preclude us from engaging in certain types of transactions or change the way in which we conduct business or the cost of doing so. In addition, because the size and scope of real estate sales transactions, the number of countries in which we operate or invest, and the areas we offer services have increased significantly during the past several years, both the difficulty of ensuring compliance with the numerous licensing regimes and the possible loss resulting from noncompliance, have increased.

With respect to our status as an approved lender for Fannie Mae, Freddie Mac and as a HUD-approved originator and issuer of Ginnie Mae securities (collectively the “Agencies”), we are required to comply with various eligibility criteria established by the Agencies, such as minimum net worth, operational liquidity and collateral requirements. In addition, we are required to originate and service loans in accordance with the applicable program requirements and guidelines established from time to time by the Agencies. Failure to comply with any of these program requirements may result in the termination or withdrawal of our approval to sell loans to the Agencies and service their loans.

The regulatory environment facing the investment management industry is also complex, principally in terms of marketing products and services and screening and advising clients. Countries are expanding the criteria requiring registration of investment advisors and funds, whether based in their country or not, and expanding the rules applicable to those that are registered, all to provide more protection to investors located within their countries. In some cases, rules from different countries are applicable to more than one of our investment advisory businesses and can conflict with those of their home countries. Although we believe we have adequate processes, policies and controls in place to address the new requirements, these additional registrations and increasingly complex rules increase the possibility violations may occur.

Laws and regulations applicable to our business, both in the United States and in other countries, may change in ways that materially increase the costs of compliance. Particularly in emerging markets, there can be relatively less transparency around the standards and conditions under which licenses are granted, maintained, or renewed. It also may be difficult to defend against the arbitrary revocation of a license in a jurisdiction where the rule of law is less well developed.

As a licensed real estate service provider and advisor in various jurisdictions, we and our licensed employees may be subject to various due diligence, disclosure, standard-of-care, anti-money laundering and other obligations in the jurisdictions in which we operate. Failure to fulfill these obligations could subject us to litigation from parties who purchased, sold, or leased properties we brokered or managed, or who invested in our funds. We could become subject to claims by participants in real estate sales or other services claiming we did not fulfill our obligations as a service provider or broker. This may include claims with respect to conflicts of interest where we are acting, or are perceived to be acting, for two or more clients with potentially contrary interests.

WE FACE RISKS RELATING TO ENVIRONMENTAL AND CLIMATE MATTERS.

We may face liability with respect to environmental issues occurring at properties we manage or occupy, or in which we invest. We may face costs or liabilities under these laws as a result of our role as an on-site property manager or a manager of construction projects. Our risks for such liabilities may increase as we expand our services to include more industrial and/or manufacturing facilities than has been the case in the past, or with respect to our co-investments in real estate as discussed above.

The impact of climate change presents a significant risk. Damage to assets caused by extreme weather events linked to climate change is becoming more evident, highlighting the fragility of global infrastructure. We also anticipate the potential effects of climate change will increasingly impact our own operations and those of client properties we manage, especially when they are in coastal cities and may impair asset valuations.

We anticipate the potential effects of climate change will increasingly impact the decisions and analysis we make with respect to investments in the properties we manage, as well as those we consider for acquisition or disposition on behalf of clients, since climate change considerations can impact the relative desirability of locations and the cost of operating and insuring properties. Future legislation could require specific performance levels for building operations resulting in non-

compliant buildings becoming obsolete. This could materially affect investments in properties we have made on behalf of clients, including those in which we may have co-invested. Climate change considerations will likely also increasingly be part of the consulting work we do for clients to the extent it is relevant to the decisions our clients are seeking to make.

Around the world, many countries are enacting stricter regulations to protect the environment and preserve their natural resources. In Europe, the EU's Environmental Liability Directive establishes a comprehensive liability standard, but individual EU countries may have stricter regulations. The risks may not be limited to fines and the costs of remediation. In Brazil, employees risk jail sentences as well as fines in connection with pollution incidents. In September 2020, China announced a commitment to be carbon neutral by 2060. This follows environmental protection laws passed in 2014 designed to limit contaminated water, air and soil linked to economic growth and public health. New environmental legislation and regulations may require us to make material changes to our operations, which could adversely affect operating results. Furthermore, the perspectives of shareholders, employees and other stakeholders regarding these standards may affect our business activities and increase disclosure requirements, which may increase our costs.

Financial Risk Factors

Financial risk relates to our ability to meet financial obligations and mitigate exposure to broad market risks, including volatility in foreign currency exchange rates and interest rates; credit risk; and liquidity risk, including risk related to our credit ratings and our availability and cost of funding.

VOLATILITY IN TRANSACTIONAL-BASED REVENUE MAY IMPACT OUR PROFITABILITY.

We have product offerings, such as leasing and capital markets activities including investment sales and debt advisory, that generate fees based on the timing, size and pricing of closed transactions, and these fees may significantly contribute to our earnings and to changes in earnings from one quarter or year to the next. Volatility in this component of our earnings is inevitable due to the nature of these businesses and the amount of the fees we will recognize in future quarters is inherently unpredictable.

In addition, LaSalle's portfolio is of sufficient size to periodically generate large incentive fees and equity earnings (losses) that significantly influence our earnings and the changes in earnings from one year to the next. Volatility in this component of our earnings is also inevitable due to the nature of this aspect of our business, and the amount of incentive fees or equity earnings or losses we may recognize in future quarters is inherently unpredictable as it relates to client needs, the market and other dynamics in effect at the time.

CURRENCY RESTRICTIONS, EXCHANGE RATE FLUCTUATIONS, AND INFLATIONARY PRESSURES MAY MATERIALLY IMPACT OUR FINANCIAL RESULTS.

We produce positive cash flows in various countries and currencies that can be most effectively used to fund operations in other countries or to repay our indebtedness, which is currently primarily denominated in U.S. dollars and euros. We face restrictions in certain countries that limit or prevent the transfer of funds to other countries or the exchange of the local currency to other currencies. We also face risks associated with fluctuations in currency exchange rates that may lead to a decline in the value of the funds earned in certain jurisdictions.

Although we operate globally, we report our results in U.S. dollars, and thus our reported results are impacted by the strengthening or weakening of currencies against the U.S. dollar. Our revenue from outside of the United States approximated 41% of our total revenue for 2022. In addition to the potential negative impact on reported earnings, fluctuations in currencies relative to the U.S. dollar may make it more difficult to perform period-to-period comparisons of the reported results of operations.

We are authorized to use currency-hedging instruments, including foreign currency forward contracts, purchased currency options and borrowings in foreign currency. There can be no assurance hedging will be economically effective. We do not use hedging instruments for speculative purposes.

As currency forward and option contracts are generally conducted off-exchange or over-the-counter ("OTC"), many of the safeguards accorded to participants on organized exchanges, such as the performance guarantee of an exchange clearing house, are generally unavailable in connection with OTC transactions. In addition, there can be no guarantee the counterparty will fulfill its obligations under the contractual agreement, especially in the event of a bankruptcy or insolvency of the counterparty, which would effectively leave us unhedged.

We are subject to inflationary pressures on employee wages, salaries, and the cost of various goods and services including energy costs that we procure which can materially impact our financial results. In addition, while we attempt to mitigate the impact of inflation in our client agreements, some client agreements may be entered into on a fixed or guaranteed maximum price basis where our ability to make price adjustments to take into account inflation may be limited.

DOWNGRADES IN OUR CREDIT RATINGS COULD INCREASE OUR BORROWING COSTS OR REDUCE OUR ACCESS TO FUNDING SOURCES IN THE CREDIT AND CAPITAL MARKETS.

We are currently assigned corporate credit ratings from Moody's and S&P based on their evaluation of our creditworthiness. As of the date of this filing, our debt ratings remain investment grade, but there can be no assurance we will not be downgraded or that any of our ratings will remain investment grade in the future. If our credit ratings are downgraded or other negative action is taken, we could be required, among other things, to pay additional interest on certain of our senior notes. Credit rating reductions by one or more rating agencies could also adversely affect our access to funding sources, the cost and other terms of obtaining funding as well as our overall financial condition, operating results and cash flow.

ADVERSE DEVELOPMENTS IN THE CREDIT MARKETS MAY IMPACT OUR ABILITY TO OBTAIN NEW CREDIT COMMITMENTS ON FAVORABLE TERMS AND INCREASE OUR EXPOSURE TO FINANCIAL RISKS OF COUNTERPARTIES WITH WHOM WE CONDUCT BUSINESS.

Disruptions and dynamic changes in the financial markets, may increase the counterparty risk to us from a financial standpoint, including with respect to:

- Obtaining new credit commitments from lenders
- Refinancing credit commitments or loans that have terminated or matured according to their terms, including funds sponsored by LaSalle which use leverage in the ordinary course of their investment activities
- Placing insurance
- Engaging in hedging transactions
- Maintaining cash deposits or other investments, both our own and those we hold for the benefit of clients, which are generally much larger than the maximum amount of government-sponsored deposit insurance in effect for a particular account

In addition, certain of LaSalle's sponsored funds act as a lender to real estate owners with the risk of default by the borrower and the potential for the LaSalle fund to take ownership of those assets. Defaults by borrowers can also have a negative impact on investment performance.

General Risk Factors

OUR BUSINESS IS SUBJECT TO GENERAL ECONOMIC CONDITIONS AND REAL ESTATE MARKET CONDITIONS AS WELL AS SUPPLY-CHAIN PRESSURES.

The success of our business is significantly related to general economic conditions. Further, our business and financial conditions correlate strongly to local, national and regional economic and political conditions or, at least, the perceptions of and confidence in those conditions.

We have previously experienced and expect in the future that we will be negatively impacted by periods of economic slowdown or recession and corresponding declines in the demand for real estate and related services. The global economic crisis during the 2007-2009 period was extraordinary for its worldwide scope, severity and impact on major financial institutions, as well as for the extent of governmental stimulus and regulatory responses. Since then, many of our markets have been affected generally by various economic uncertainties, among them: continued significant market volatility and volatility in energy costs, including oil and commodity prices; the developing effects of climate change and severe weather;

and the continued uncertainty on the direction of global tax policy. Recently, we have seen increased supply-chain pressures which may impact our ability to deliver goods and services to our clients and increase the resultant costs in doing so. In 2022, we observed an increased potential for a global economic slowdown or recession, partly driven by increasing interest rates to tackle inflation, which presents an increased risk to our performance.

It is inherently difficult for us to predict how these types of significant global forces will affect our business in the future and whether we will continue to be able to generate revenue growth to the same extent as we have in the past.

Negative economic conditions and declines in demand for real estate and related services in several markets or in significant markets could have a material adverse effect on our performance driven by (i) a decline in acquisition and disposition activity, (ii) a decline in real estate values and performance, leasing activity and rental rates, (iii) a decline in value of real estate securities, (iv) the cyclical nature in the real estate markets and lag in recovery relative to broader markets, or (v) the effect of changes in non-real estate markets.

OUR REPUTATION AND BRAND ARE IMPORTANT COMPANY ASSETS, IF WE FAIL TO PROTECT THEM, OUR BUSINESS MAY BE NEGATIVELY IMPACTED.

The value and premium status of our brand is one of our most important assets. An inherent risk in maintaining our brand is that we may fail to successfully differentiate the scope and quality of our service and product offerings from those of our competitors, or that we may fail to sufficiently innovate or develop improved products or services that will be attractive to our clients.

The rapid dissemination and increasing transparency of information, particularly for public companies, increases the risks to our business that could result from negative media or announcements about ethics lapses or other operational problems, which could lead clients to terminate or reduce their relationships with us. As such, any negative media, allegations or litigation against us, irrespective of the final outcome, could potentially harm our professional reputation and damage our business. We are also subject to misappropriation of one of the names or trademarks we own by third parties that do not have the right to use them so they can benefit from the goodwill we have built up in our intellectual property; further, our efforts to police usage of our intellectual property may not be successful in all situations.

WE MUST CONTINUE TO MAINTAIN SATISFACTORY INTERNAL FINANCIAL REPORTING CONTROLS AND PROCEDURES.

If we are not able to continue to operate successfully under the requirements of Section 404 of the United States Sarbanes-Oxley Act of 2002, or if there is a failure of one or more controls over financial reporting due to fraud, improper execution or the failure of such controls to adjust adequately as our business evolves, then our reputation, financial results and the market price of our stock could suffer. We may be exposed to potential risks from this legislation, which requires companies to evaluate the effectiveness of their internal controls, and such internal control over financial reporting is subject to audit by their independent registered public accounting firm on an annual basis. We have evaluated our internal control over financial reporting as required for purposes of this Annual Report on Form 10-K for the year ended December 31, 2022. Our management concluded our internal control over financial reporting was effective as of December 31, 2022. Our independent registered public accounting firm has issued an unqualified opinion on the effectiveness of our internal control over financial reporting. However, there can be no assurance we will continue to receive an unqualified opinion in future years, particularly since standards continue to evolve and are not necessarily being applied consistently from one independent registered public accounting firm to another. If we identify one or more material weaknesses in our internal control over financial reporting in the future that we cannot remediate in a timely fashion, we may be unable to receive an unqualified opinion at some time in the future from our independent registered public accounting firm.

EXPOSURE TO ADDITIONAL TAX LIABILITIES STEMMING FROM OUR GLOBAL OPERATIONS AND CHANGES IN TAX LEGISLATION, REGULATION AND TAX RATES COULD ADVERSELY AFFECT OUR FINANCIAL RESULTS.

We face a variety of risks of increased future taxation on our earnings as a corporate taxpayer in the countries in which we have operations. Moving funds between countries can produce adverse tax consequences. In addition, as our operations are global, we face challenges in effectively gaining a tax benefit for costs incurred in one country that benefit our operations in other countries.

Changes in tax legislation or tax rates may occur in one or more jurisdictions in which we operate that may materially impact the cost of operating our business. Recent legislative changes in the United States include the 2017 Tax Cuts and Jobs Act and the 2022 Inflation Reduction Act, which have introduced limitations on business-related deductions and increased taxation of foreign earnings in the U.S., and a corporate minimum tax, all of which could increase our future tax expense.

In addition, the potential exists for significant legislative policy change in the taxation of multinational corporations, as has recently been the subject of the “Pillar One” and “Pillar Two” initiatives of the Organization for Economic Co-operation and Development, the European Union Anti-Tax Avoidance Directives, and legislation inspired or required by those initiatives. It is also possible that some governments will make significant changes to their tax policies in response to factors such as budgetary needs, feedback from the business community and the public view on applicable tax planning activities. Further, interpretations of existing tax law in various countries may change due to the regulatory and examination policies of the tax authorities and the decisions of courts.

We face such risks both in our own business and in the investment funds LaSalle operates. Adverse or unanticipated tax consequences to the funds can negatively impact fund performance, incentive fees and the value of co-investments we have made. We are uncertain as to the ultimate results of these potential changes or what their effects will be on our business.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal corporate holding company headquarters are located at 200 East Randolph Drive, Chicago, Illinois, where we currently occupy over 165,000 square feet of office space under a lease that expires in May 2032. Our regional headquarters for our Americas, EMEA and Asia Pacific businesses are located in Chicago, London and Singapore, respectively. We have 328 corporate offices worldwide located in most major cities and metropolitan areas as follows: 132 offices in 9 countries in the Americas (including 111 in the United States), 119 offices in 26 countries in EMEA, and 77 offices in 15 countries in Asia Pacific. In addition, we have on-site property and facility management offices, generally located within properties we manage, provided to us without cost.

ITEM 3. LEGAL PROCEEDINGS

We have contingent liabilities from various pending claims and litigation matters arising in the ordinary course of business, some of which involve claims for damages that are substantial in amount. Many of these matters are covered by insurance (including insurance provided through a wholly-owned captive insurance company), although they may nevertheless be subject to large deductibles or retentions, and the amounts being claimed may exceed the available insurance. Although the ultimate liability for these matters cannot be determined, based upon information currently available, we believe the ultimate resolution of such claims and litigation will not have a material adverse effect on our financial position, results of operations, or liquidity.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Our common stock is listed for trading on the NYSE under the symbol "JLL." As of February 14, 2023, there were over 450 shareholders of record of our common stock and more than 93,000 additional street name holders whose shares were held of record by banks, brokers and other financial institutions.

Share Repurchases

In February 2022, our Board of Directors authorized \$1.5 billion for share repurchases, an addition to the \$256.8 million remaining as of December 31, 2021 from previous authorizations. During the year ended December 31, 2022, we repurchased approximately 2,923,000 shares for \$601.2 million, compared with approximately 1,452,000 shares repurchased for \$343.3 million in 2021.

We made no share repurchases under our repurchase program during the three months ended December 31, 2022. As of December 31, 2022, \$1,155.6 million remained authorized for repurchases.

Dividends

We did not declare or pay any dividends in 2022 or 2021. Any future decision to declare and pay dividends remains subject to the discretion of our Board of Directors.

Transfer Agent

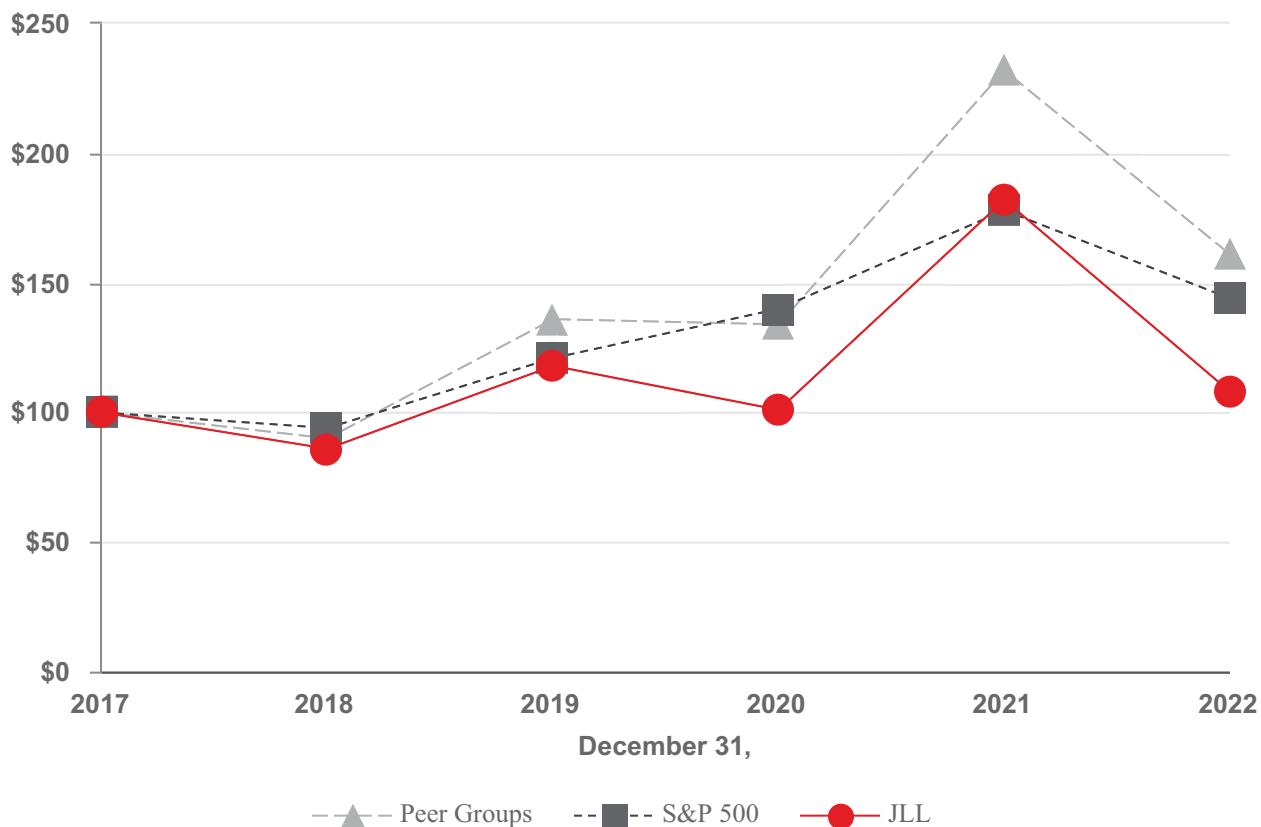
Computershare
P.O. Box 505000
Louisville, KY 40233

Equity Compensation Plan Information

For information regarding our equity compensation plans, including both shareholder approved plans and plans not approved by shareholders, see Part III, Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Shareholder Matters.

Comparison of Cumulative Total Shareholder Return

The following graph compares the cumulative 5-year total return to shareholders of JLL's common stock relative to the cumulative total returns of the S&P 500 Index, and a customized peer group comprising: 1) CBRE Group Inc. (CBRE), a global commercial real estate services company publicly traded in the U.S., 2) Cushman & Wakefield plc (CWK), a global commercial real estate services company publicly traded in the U.S., 3) Colliers International Group Inc. (CIGI), a global commercial real estate services company, traded in the U.S., and 4) Savills plc (SVS.L), a real estate services company traded on the London Stock Exchange. With the exception of Cushman & Wakefield, the following graph assumes the value of the investment in JLL's common stock, the S&P 500 Index, and the peer group (including reinvestment of dividends) was \$100 on December 31, 2017. For Cushman & Wakefield, the \$100 is assumed to be invested on August 2, 2018, the date of their initial public offering.



	December 31,					
	2017	2018	2019	2020	2021	2022
JLL	\$ 100	\$ 86	\$ 118	\$ 101	\$ 182	\$ 108
S&P 500	100	94	121	140	178	144
Peer Group	100	90	136	134	232	161

ITEM 6. [Reserved]

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

The following discussion and analysis contains certain forward-looking statements generally identified by the words: anticipates, believes, estimates, expects, forecasts, plans, intends and other similar expressions. Such forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results, performance, achievements, plans, and objectives to be materially different from any future results, performance, achievements, plans, and objectives expressed or implied by such forward-looking statements. See the Cautionary Note Regarding Forward-Looking Statements after Part IV, Item 15. Exhibits and Financial Statement Schedules.

We present our Management's Discussion and Analysis in the following sections:

- (1) A summary of our critical accounting policies and estimates;
- (2) Certain items affecting the comparability of results;
- (3) Certain market and other risks we face;
- (4) The results of our operations, first on a consolidated basis and then for each of our business segments; and
- (5) Liquidity and capital resources.

SUMMARY OF CRITICAL ACCOUNTING POLICIES AND ESTIMATES

An understanding of our accounting policies is necessary for a complete analysis of our results, financial position, liquidity and trends. The preparation of our financial statements requires management to make certain critical accounting estimates and judgments that impact (i) the stated amount of assets and liabilities, (ii) disclosure of contingent assets and liabilities as of the date of the financial statements and (iii) the reported amounts of revenue and expenses during the reporting periods. These accounting estimates are based on management's judgment. We consider them to be critical because of their significance to the financial statements and the possibility future events may differ from current judgments, or that the use of different assumptions could result in materially different estimates. We review these estimates on a periodic basis to ensure reasonableness. Although actual amounts may differ from such estimated amounts, we believe such differences are not likely to be material. For additional detail regarding our critical accounting policies and estimates discussed below, see Note 2, Summary of Significant Accounting Policies, of the Notes to Consolidated Financial Statements, included in Item 8.

Revenue Recognition

We earn revenue from the following services (segments are bolded).

- **Markets Advisory**
 - Leasing
 - Property Management
 - Advisory, Consulting and Other
- **Capital Markets**
 - Investment Sales, Debt/Equity Advisory and Other
 - Loan Servicing
 - Valuation Advisory
- **Work Dynamics**
 - Workplace Management
 - Project Management
 - Portfolio Services and Other
- **JLL Technologies**
- **LaSalle**

Our services are generally earned and billed in the form of transaction commissions, advisory and management fees, and incentive fees. Some of the contractual terms related to the services we provide, and thus the revenue we recognize, can be complex and so requires us to make judgments about our performance obligations and the timing and extent of revenue to recognize. In addition, a significant portion of our revenue represents the reimbursement of costs we incur on behalf of clients.

Goodwill and Other Intangible Assets

Consistent with the services nature of the businesses we have acquired, the largest asset on the Consolidated Balance Sheets is goodwill. We do not amortize goodwill; instead, we evaluate goodwill for impairment at least annually, or as events or changes in circumstances indicate the carrying value may be impaired. In conjunction with our new organizational structure described more fully in Note 3, Business Segments, of the Notes to Consolidated Financial Statements, included in Item 8, we reassessed our reporting units as of January 1, 2022, and reassigned goodwill to reflect our new segment structure using a relative fair value allocation approach.

In addition, we may record intangible assets as a result of acquisitions, which are primarily composed of customer relationships, management contracts and customer backlog, and are amortized on a straight-line basis over their estimated useful lives. We generally use the income approach to determine fair value, which requires management to make significant estimates and assumptions. These estimates and assumptions primarily include discount rates, terminal growth rates, forecasts of revenue, operating income and capital expenditures. The discount rates reflect the risk factors, from the perspective of a market participant, associated with forecasts of cash flows. In addition, we establish an intangible upon closing on the sale of a mortgage loan we originated, concurrent with the retention of its servicing rights and amortize the intangible over the estimated period net servicing income is projected to be received.

Although we believe our intangible asset estimates of fair value are reasonable, actual financial results could differ from those estimates due to the inherent uncertainty involved in making such estimates. Changes in assumptions concerning future financial results or other underlying assumptions could have a significant impact on the determination of the fair value of the identified intangible assets acquired. Judgment is also required in determining the useful life of a finite-lived intangible asset. We evaluate our identified intangibles for impairment at least annually, or as events or changes in circumstances indicate the carrying value may be impaired.

Investments

Substantially all of our investments are grouped within one of the following two categories.

First, we invest in certain real estate ventures that primarily own and operate commercial real estate, historically through co-investments in funds that LaSalle establishes in the ordinary course of business for its clients. These investments include non-controlling ownership interests generally ranging from less than 1% to 10% of the respective ventures. We account for these investments at fair value or under the equity method of accounting.

Second, JLL Technologies invests in proptech funds and early to mid-stage companies to improve our strategic position within the real estate technology landscape, including investments through the JLL Spark Global Ventures Funds. Generally, we account for these investments at fair value.

Where applicable, we estimate fair value of our investments using the net asset value ("NAV") per share (or its equivalent) our investees provide. Critical inputs to NAV estimates include valuations of the underlying real estate assets and borrowings, which incorporate investment-specific assumptions such as discount rates, capitalization rates, rental and expense growth rates, and asset-specific market borrowing rates. In circumstances where the NAV provided by the investee has a reporting date different than ours or when the NAV is not calculated consistent with U.S. GAAP measurement principles, we adjust the NAV accordingly.

For JLL Technologies investments in proptech companies, we primarily estimate the fair value based on the per-share pricing. Subsequent funding rounds or changes in the companies' business strategy/outlook are indicators of a change in fair value.

For all investments reported at fair value, our investment is increased or decreased each reporting period by the difference between the fair value of the investment and the carrying value as of the balance sheet date. We reflect these fair value adjustments as gains or losses on the Consolidated Statements of Comprehensive Income within Equity earnings.

Income Taxes

We account for income taxes under the asset and liability method. We recognize deferred tax assets and liabilities for the expected future tax consequences attributable to (i) differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases and (ii) operating loss and tax credit carryforwards. We measure deferred tax assets and liabilities using the enacted tax rates expected to apply to taxable income in the years in

which we expect those temporary differences to be recovered or settled. We recognize into income the effect on deferred tax assets and liabilities of a change in tax rates in the period including the enactment date.

Because of the global and cross-border nature of our business, our corporate tax position is complex. We generally provide for taxes in each tax jurisdiction in which we operate based on local tax regulations and rules. Such taxes are provided on pre-tax earnings and include the provision for taxes on substantively all differences between financial statement amounts and amounts used in tax returns, excluding certain non-deductible items and permanent differences.

Our global effective tax rate is sensitive to the complexity of our operations as well as to changes in the mix of our geographic profitability. Local statutory tax rates range from 0% to 38.1% in the countries in which we have significant operations. We evaluate our estimated effective tax rate on a quarterly basis to reflect forecast changes in our geographic mix of income and legislative actions on statutory tax rates.

We provide for the effects of income taxes on interim financial statements based on our estimate of the effective tax rate for the full year. Our effective tax rate was 20.2%, 21.6% and 20.2% for the year ended December 31, 2022, 2021, and 2020, respectively.

Very low tax rate jurisdictions (those with effective national and local combined tax rates of 25% or lower) providing the most significant contributions to our effective tax rate include: Hong Kong (16.5%), Singapore (17%), and the United Kingdom (19%).

Based on our historical experience and future business plans, we do not expect to repatriate our foreign source earnings to the U.S. As of December 31, 2022, we have therefore not provided for withholding tax, dividend distribution tax, capital gains taxes, or other taxes which could arise upon such distribution. We believe our policy of permanently reinvesting earnings of foreign subsidiaries does not significantly impact our liquidity.

We have established valuation allowances against deferred tax assets where expected future taxable income does not support their realization on a more-likely-than-not basis. We formally assess the likelihood of being able to utilize current tax losses in the future on a country-by-country basis, commensurate with the determination of each quarter's income tax provision. We establish or increase valuation allowances upon specific indications the carrying value of a tax asset may not be recoverable. Alternatively, we reduce valuation allowances upon (i) specific indications the carrying value of the related tax asset is more-likely-than-not recoverable or (ii) the implementation of tax planning strategies which allow an asset we previously determined to be not realizable to be viewed as realizable.

The table below summarizes certain information regarding the gross deferred tax assets and valuation allowance.

(in millions)	December 31,	
	2022	2021
Gross deferred tax assets	\$ 737.1	708.6
Valuation allowance	120.8	128.8

The increase in gross deferred tax assets in 2022 was primarily the result of an increase in the U.K. net operating loss and interest deduction carryovers. The decrease in valuation reserves was primarily the result of U.S capital loss carryover utilization.

We evaluate our segment operating performance before tax, and do not consider it meaningful to allocate tax by segment. Estimations and judgments relevant to the determination of tax expense, assets, and liabilities require analysis of the tax environment and the future profitability, for tax purposes, of local statutory legal entities rather than business segments. Our statutory legal entity structure generally does not mirror the way we organize, manage, and report our business operations. For example, the same legal entity may include Capital Markets, Work Dynamics and Markets Advisory businesses in a particular country.

As of December 31, 2022, the amount of unrecognized tax benefits was \$75.1 million. We believe it is reasonably possible that matters for which we have recorded \$46.2 million of unrecognized tax benefits as of December 31, 2022, will be resolved during 2023. The recognition of tax benefits, and other changes to the amounts of our unrecognized tax benefits, may occur as the result of ongoing operations, the outcomes of audits or other examinations by tax authorities, or the passing of statutes of limitations. We do not expect changes to our unrecognized tax benefits to have a significant impact on net

income, the financial position, or the cash flows of JLL. We do not believe we have material tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility.

NEW ACCOUNTING STANDARDS

Refer to Note 2, Summary of Significant Accounting Policies of the Notes to Consolidated Financial Statements, included in Item 8.

ITEMS AFFECTING COMPARABILITY

Macroeconomic Conditions

Our results of operations and the variability of these results are significantly influenced by (i) macroeconomic trends, (ii) the geopolitical environment, (iii) the global and regional real estate markets and (iv) the financial and credit markets. These macroeconomic and other conditions have had, and we expect will continue to have, a significant impact on the variability of our results of operations. In 2020 and early 2021, macroeconomic conditions influenced by the COVID-19 pandemic more notably impacted our operations compared with the current year.

Acquisitions and Dispositions

The timing of acquisitions may impact the comparability of our results on a year-over-year basis. Our results include incremental revenues and expenses following the completion date of an acquisition. Relating to dispositions, comparable results will include the revenues and expenses of recent dispositions and results may also include gains (losses) on the disposition. In addition, there is generally an initial adverse impact on net income from an acquisition as a result of pre-acquisition due diligence expenditures, transaction/deal costs and post-acquisition integration costs, such as fees from third-party advisors engaged to assist with onboarding and process alignment, retention and severance expense, early lease termination costs, and other integration expenses. For dispositions, we may also incur such incremental costs during the disposition process and these costs could have an adverse impact on net income.

Equity Earnings and Incentive Fees

Equity earnings may vary substantially from period to period for a variety of reasons, including as a result of (i) valuation increases (decreases) on investments reported at fair value, (ii) gains (losses) on asset dispositions and (iii) impairment charges. The timing of recognition of these items may impact comparability between quarters, in any one year, or compared to a prior year.

LaSalle, our investment management business, is in part compensated through incentive fees where performance of underlying funds' investments exceeds agreed-to return hurdles. Depending upon performance, disposition activity and the contractual timing of measurement periods with clients, these fees can be significant and may vary substantially from period to period.

The comparability of these items can be seen in Note 3, Business Segments, of the Notes to Consolidated Financial Statements, included in Item 8, and is discussed further in Segment Operating Results included herein.

Foreign Currency

We conduct business using a variety of currencies, but we report our results in U.S. dollars. As a result, the volatility of currencies against the U.S. dollar may positively or negatively impact our results. This volatility can make it more difficult to perform period-to-period comparisons of the reported U.S. dollar results of operations because such results may indicate a rate of growth or decline that might not have been consistent with the real underlying rate of growth or decline in the local operations. Consequently, we provide information about the impact of foreign currencies in the period-to-period comparisons of the reported results of operations in our discussion and analysis of financial condition in the Results of Operations section below.

Transaction-Based Revenue

Transaction-based fees, which are impacted by the size and timing of our clients' transactions, from real estate investment banking, capital markets activities and other services within our segments, increase the variability of the revenue we earn. The timing and the magnitude of these fees can vary significantly from year to year and quarter to quarter, and from region to region.

MARKET RISKS

Market Risk

The principal market risks we face due to the risk of loss arising from adverse changes in market rates and prices are:

- Interest rates on our unsecured credit facility (the "Facility"); and
- Foreign exchange risks.

In the normal course of business, we manage these risks through a variety of strategies, including hedging transactions using various derivative financial instruments such as foreign currency forward contracts. We enter into derivative instruments that are short-term in duration with high credit-quality counterparties and diversify our positions across such counterparties in order to reduce our exposure to credit losses. We do not enter into derivative transactions for trading or speculative purposes.

Interest Rates

We centrally manage our debt, considering investment opportunities and risks, tax consequences, and overall financing strategies. Our overall interest rate risk management objectives are to limit the impact of interest rate changes on earnings and cash flows and to lower our overall borrowing costs. We are primarily exposed to interest rate risk on our Facility, which had a borrowing capacity of \$3.35 billion as of December 31, 2022. The Facility consists of revolving credit available for working capital, investments, capital expenditures and acquisitions. We had \$1,213.8 million of outstanding borrowings under the Facility as of December 31, 2022. The Facility bears a variable rate of interest that fluctuates based on market rates.

Our €350.0 million face value of Euro Notes is split between €175.0 million due in June 2027 and €175.0 million due in June 2029, bearing interest at an annual rate of 1.96% and 2.21%, respectively. The issuance of the Euro Notes at fixed interest rates has helped to limit our exposure to future movements in interest rates.

We assess interest rate sensitivity to estimate the potential effect of rising interest rates on our variable rate debt. If interest rates were 50 basis points higher during 2022, Interest expense, net of interest income, would have been \$6.7 million higher.

Foreign Exchange

Foreign exchange risk is the risk we will incur economic losses due to adverse changes in foreign currency exchange rates. Our revenue from outside of the U.S. approximated 41% and 42% of our total revenue for 2022 and 2021, respectively, as outlined in the table below. Operating in international markets means we are exposed to movements in foreign exchange rates, most significantly the British pound and the euro.

We mitigate our foreign currency exchange risk principally by (i) establishing local operations in the markets we serve and (ii) invoicing customers in the same currency as the source of the costs. The impact of translating expenses incurred in foreign currencies into U.S. dollars reduces the impact of translating revenue earned in foreign currencies into U.S. dollars. In addition, British pound and Singapore dollar expenses incurred as a result of our regional headquarters being located in London and Singapore, respectively, act as ongoing partial operational hedges against our translation exposures to those currencies.

We enter into forward foreign currency exchange contracts to manage currency risks associated with intercompany loan balances. Generally, the maturity of these contracts is less than 60 days. As of December 31, 2022, we had forward exchange contracts in effect with a gross notional value of \$1.81 billion (\$1.02 billion on a net basis). This corresponding net carrying gain is generally offset by a carrying loss in associated intercompany loans.

Although we operate globally, we report our results in U.S. dollars. As a result, the strengthening or weakening of the U.S. dollar in relation to currencies we are exposed to may positively or negatively impact our reported results. The following table sets forth the revenue derived from our most significant currencies.

(\$ in millions)	Year Ended December 31,			
	2022	% of Total	2021	% of Total
United States dollar	\$ 12,375.9	59.3 %	\$ 11,283.1	58.3 %
British pound	1,575.6	7.6	1,626.6	8.4
Euro	1,535.6	7.4	1,393.3	7.2
Australian dollar	1,183.0	5.7	1,118.7	5.8
Canadian dollar	593.8	2.8	508.3	2.6
Indian rupee	591.0	2.8	508.2	2.6
Hong Kong dollar	532.3	2.6	545.6	2.8
Chinese yuan	506.0	2.4	539.1	2.8
Singapore dollar	368.4	1.8	327.4	1.7
Japanese yen	233.8	1.1	256.8	1.3
Other currencies	1,366.7	6.5	1,259.9	6.5
Total revenue	\$ 20,862.1	100.0 %	\$ 19,367.0	100.0 %

Had British pound-to-U.S. dollar exchange rates been 10% higher throughout the course of 2022, we estimate our reported operating income would have increased by \$10.1 million. Had euro-to-U.S. dollar exchange rates been 10% higher throughout the course of 2022, we estimate our reported operating income would have increased by \$6.1 million. These hypothetical calculations estimate the impact of translating results into U.S. dollars and do not include an estimate of the impact a 10% increase in the U.S. dollar against other currencies would have on our foreign operations.

Seasonality

Historically, we have reported a relatively smaller revenue and profit in the first quarter with both measures increasing during each of the following three quarters. This is a result of a general focus in the real estate industry on completing or documenting transactions by calendar year end and the fact that certain expenses are constant throughout the year. Our seasonality excludes the recognition of investment-generated performance fees and realized and unrealized investment equity earnings and losses. Specifically, we recognize incentives fees when assets are sold or as a result of valuation increases in the portfolio, the timing of which may not be predictable or recurring. In addition, investment equity gains and losses are primarily dependent on underlying valuations, and the direction and magnitude of changes to such valuations are not predictable. Non-variable operating expenses, which we treat as expenses when incurred during the year, are relatively constant on a quarterly basis. Other factors may affect seasonality. For example, in 2020 and 2021, macroeconomic conditions influenced by the COVID-19 pandemic impacted the historical seasonality of our revenue and profits. In the second half of 2022, we experienced disruption to our historical seasonality trends due to rising interest rates and widespread economic uncertainty.

Inflation

Our operating expenses fluctuate with our revenue and general economic conditions, including inflation. The impacts of inflation, including wage inflation, have become more noticeable in our 2022 results when compared to prior years.

RESULTS OF OPERATIONS

In conjunction with our change in reporting segments, effective January 1, 2022, comparable period information has been recast to conform with current presentation.

Definitions

- Assets under management data for LaSalle is reported on a one-quarter lag.
- "n.m.": not meaningful, represented by a percentage change of greater than 1,000% favorable or unfavorable.
- "MENA": Middle East and North Africa. "Greater China": China, Hong Kong, Macau and Taiwan.

Year Ended December 31, 2022 compared with Year Ended December 31, 2021

(\$ in millions)	Year Ended December 31,		Change in		% Change in Local Currency
	2022	2021	U.S. dollars		
Markets Advisory	\$ 4,415.5	4,188.7	226.8	5 %	8 %
Capital Markets	2,488.2	2,620.5	(132.3)	(5)	(1)
Work Dynamics	13,268.5	11,891.5	1,377.0	12	15
JLL Technologies	213.9	166.2	47.7	29	30
LaSalle	476.0	500.1	(24.1)	(5)	1
Revenue	\$ 20,862.1	19,367.0	1,495.1	8 %	11 %
Gross contract costs	(12,549.1)	(11,290.2)	(1,258.9)	11	15
Net non-cash MSR and mortgage banking derivative activity	(11.0)	(59.3)	48.3	(81)	(81)
Fee revenue	\$ 8,302.0	8,017.5	284.5	4 %	7 %
<i>Markets Advisory</i>	<i>3,360.2</i>	<i>3,201.7</i>	<i>158.5</i>	<i>5</i>	<i>8</i>
<i>Capital Markets</i>	<i>2,430.2</i>	<i>2,513.2</i>	<i>(83.0)</i>	<i>(3)</i>	<i>—</i>
<i>Work Dynamics</i>	<i>1,864.7</i>	<i>1,692.2</i>	<i>172.5</i>	<i>10</i>	<i>15</i>
<i>JLL Technologies</i>	<i>200.2</i>	<i>137.2</i>	<i>63.0</i>	<i>46</i>	<i>47</i>
<i>LaSalle</i>	<i>446.7</i>	<i>473.2</i>	<i>(26.5)</i>	<i>(6)</i>	<i>1</i>
Compensation and benefits, excluding gross contract costs	\$ 5,893.8	5,649.9	243.9	4 %	8 %
Operating, administrative and other expenses, excluding gross contract costs	1,218.2	1,081.2	137.0	13	17
Depreciation and amortization	228.1	217.5	10.6	5	8
Restructuring and acquisition charges	104.8	84.7	20.1	24	28
Total fee-based operating expenses	7,444.9	7,033.3	411.6	6	10
Gross contract costs	12,549.1	11,290.2	1,258.9	11	15
Total operating expenses	\$ 19,994.0	18,323.5	1,670.5	9 %	13 %
Operating income	\$ 868.1	1,043.5	(175.4)	(17)%	(15)%
Equity earnings	\$ 51.0	209.4	(158.4)	(76)%	(76)%
Adjusted EBITDA	\$ 1,247.3	1,496.5	(249.2)	(17)%	(14)%

Non-GAAP Financial Measures

Management uses certain non-GAAP financial measures to develop budgets and forecasts, measure and reward performance against those budgets and forecasts, and enhance comparability to prior periods. These measures are believed to be useful to investors and other external stakeholders as supplemental measures of core operating performance and include the following.

- (i) Fee revenue and Fee-based operating expenses;
- (ii) Adjusted EBITDA attributable to common shareholders ("Adjusted EBITDA") and Adjusted EBITDA margin; and
- (iii) Percentage changes against prior periods, presented on a local currency basis.

However, non-GAAP financial measures should not be considered alternatives to measures determined in accordance with U.S. GAAP. Any measure that eliminates components of a company's capital structure, cost of operations or investments, or other results has limitations as a performance measure. In light of these limitations, management also considers U.S. GAAP financial measures and does not rely solely on non-GAAP financial measures. Because our non-GAAP financial measures are not calculated in accordance with U.S. GAAP, they may not be comparable to similarly titled measures used by other companies.

Adjustments to U.S. GAAP Financial Measures Used to Calculate non-GAAP Financial Measures

Gross contract costs represent certain costs associated with client-dedicated employees and third-party vendors and subcontractors and are directly or indirectly reimbursed through the fees we receive. These costs are presented on a gross basis in Operating expenses with the equal amount of corresponding fees in Revenue. Excluding gross contract costs from both Fee revenue and Fee-based operating expenses more accurately reflects how we manage our expense base and operating margins and also enables a more consistent performance assessment across a portfolio of contracts with varying payment terms and structures.

Net non-cash MSR and mortgage banking derivative activity consists of the balances presented within Revenue composed of (i) derivative gains/losses resulting from mortgage banking loan commitment and warehousing activity and (ii) gains recognized from the retention of MSR upon origination and sale of mortgage loans, offset by (iii) amortization of MSR intangible assets over the period that net servicing income is projected to be received. Non-cash derivative gains/losses resulting from mortgage banking loan commitment and warehousing activity are calculated as the estimated fair value of loan commitments and subsequent changes thereof, primarily represented by the estimated net cash flows associated with future servicing rights. MSR gains and corresponding MSR intangible assets are calculated as the present value of estimated net cash flows over the estimated mortgage servicing periods. The above activity is reported entirely within Revenue of the Capital Markets segment. Excluding net non-cash MSR and mortgage banking derivative activity reflects how we manage and evaluate performance because the excluded activity is non-cash in nature.

Restructuring and acquisition charges primarily consist of (i) severance and employment-related charges, including those related to external service providers, incurred in conjunction with a structural business shift, which can be represented by a notable change in headcount, change in leadership or transformation of business processes, (ii) acquisition, transaction and integration-related charges, including non-cash fair value adjustments to assets and liabilities recorded in purchase accounting such as earn-out liabilities and intangible assets and (iii) lease exit charges. Such activity is excluded as the amounts are generally either non-cash in nature or the anticipated benefits from the expenditures would not likely be fully realized until future periods. Restructuring and acquisition charges are excluded from segment operating results and therefore not a line item in the segments' reconciliation to Adjusted EBITDA.

Gain/loss on disposition reflects the gain or loss recognized on the sale or disposition of businesses. Given the low frequency of business disposals by the company historically, the gain or loss directly associated with such activity is excluded as it is not considered indicative of core operating performance. In 2022, the \$7.5 million net loss from the second quarter included \$10.5 million of loss related to the disposition of our Russia business, partially offset by a \$3.0 million gain related to a disposition within JLL Technologies. In 2021, \$12.0 million of the activity related to a business disposition within JLL Technologies and \$0.4 million related to a sold business within Markets Advisory. In 2020, the \$4.8 million gain related to the sale of a property management business in Markets Advisory.

Interest on Employee Loans, Net reflects interest accrued on employee loans less the amount of accrued interest forgiven. Certain employees (predominantly in our Leasing and Capital Markets businesses) receive cash payments structured as loans, with interest. Employees earn forgiveness of the loan based on performance, generally calculated as a percentage of revenue production, annually. Such forgiven amounts are reflected in Compensation and benefits expense. Given the interest accrued on these employee loans and subsequent forgiveness are non-cash and the amounts perfectly offset over the life of the loan, the activity is not indicative of core operating performance and is excluded from non-GAAP measures.

Reconciliation of Non-GAAP Financial Measures

Below are the reconciliations of (i) Revenue to fee revenue and (ii) Operating expenses to fee-based operating expenses.

(in millions)	Year Ended December 31,		
	2022	2021	
Revenue	\$	20,862.1	19,367.0
Adjustments:			
Gross contract costs		(12,549.1)	(11,290.2)
Net non-cash MSR and mortgage banking derivative activity		(11.0)	(59.3)
Fee revenue	\$	8,302.0	8,017.5
Operating expenses	\$	19,994.0	18,323.5
Less: Gross contract costs		(12,549.1)	(11,290.2)
Fee-based operating expenses	\$	7,444.9	7,033.3
Operating income	\$	868.1	1,043.5

Below is (i) a reconciliation of Net income attributable to common shareholders to EBITDA and Adjusted EBITDA, (ii) the Net income margin attributable to common shareholders (measured on Revenue), and (iii) the Adjusted EBITDA margin (measured on fee-revenue and presented on a local currency basis).

(\$ in millions)	Year Ended December 31,		
	2022	2021	
Net income attributable to common shareholders	\$	654.5	961.6
Add:			
Interest expense, net of interest income		75.2	40.1
Provision for income taxes		200.8	264.3
Depreciation and amortization⁽¹⁾		225.2	217.5
EBITDA	\$	1,155.7	1,483.5
Adjustments:			
Restructuring and acquisition charges		104.8	84.7
Net loss (gain) on disposition		7.5	(12.4)
Net non-cash MSR and mortgage banking derivative activity		(11.0)	(59.3)
Interest on employee loans, net		(9.7)	—
Adjusted EBITDA	\$	1,247.3	1,496.5
Net income margin attributable to common shareholders		3.1 %	5.0 %
Adjusted EBITDA margin		15.0 %	18.7 %

(1) This adjustment excludes the noncontrolling interest portion of amortization of acquisition-related intangibles which is not attributable to common shareholders.

In discussing our operating results, we report Adjusted EBITDA margins and refer to percentage changes in local currency, unless otherwise noted. Amounts presented on a local currency basis are calculated by translating the current period results of our foreign operations to U.S. dollars using the foreign currency exchange rates from the comparative period. We believe this methodology provides a framework for assessing performance and operations excluding the effect of foreign currency fluctuations.

The following table reflects the reconciliation to local currency amounts for consolidated (i) Revenue, (ii) Fee revenue, (iii) Operating income and (iv) Adjusted EBITDA.

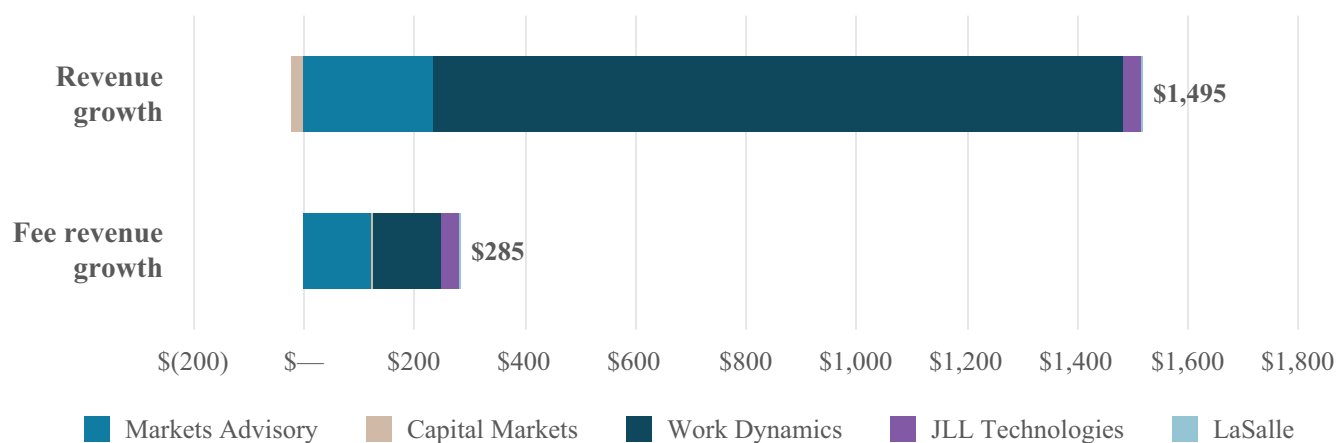
(\$ in millions)	Year Ended December 31,	
	2022	% Change
Revenue:		
At current period exchange rates	\$ 20,862.1	8 %
Impact of change in exchange rates	708.4	n/a
At comparative period exchange rates	\$ 21,570.5	11 %
Fee revenue:		
At current period exchange rates	\$ 8,302.0	4 %
Impact of change in exchange rates	282.6	n/a
At comparative period exchange rates	\$ 8,584.6	7 %
Operating income:		
At current period exchange rates	\$ 868.1	(17)%
Impact of change in exchange rates	14.9	n/a
At comparative period exchange rates	\$ 883.0	(15)%
Adjusted EBITDA:		
At current period exchange rates	\$ 1,247.3	(17)%
Impact of change in exchange rates	38.0	n/a
At comparative period exchange rates	\$ 1,285.3	(14)%

Revenue

Revenue and fee revenue increased 11% and 7%, respectively compared with 2021, as outstanding performance in the first half of 2022 across JLL more than offset headwinds experienced in the second half of the year. These results reflect double-digit growth in Work Dynamics each quarter of 2022 as well as strong contributions during the first half of 2022 from Leasing, within Markets Advisory, and Capital Markets. More specifically, resilient annuity-based businesses delivered solid fee revenue growth as Workplace Management, within Work Dynamics, grew 18%; Property Management, within Markets Advisory, grew 9%; and LaSalle advisory fees grew 17%. In contrast, transaction-based businesses, notably Investment Sales and Debt Advisory within Capital Markets as well as Leasing within Markets Advisory, experienced challenges from uncertainty in interest rates and degrading economic sentiment, beginning in the third quarter and continuing through the close of 2022.

LaSalle's decrease in revenue, compared with 2021, was driven by lower incentive fees, which more than offset the double-digit advisory fee growth. Dry powder for future deployment remains strong as LaSalle continues to raise capital and redemption requests have not been significant.

The following highlights the proportion of consolidated top-line growth on a local currency basis, compared with 2021, by business line segment (\$ in millions). Refer to segment operating results for further detail.



Operating Expenses

Operating expenses increased 13% to \$20.0 billion in 2022 while fee-based operating expenses were \$7.4 billion in 2022, up 10% from prior year. The higher expenses were primarily attributable to Markets Advisory, which represented 38% of the increase in fee-based operating expenses on a local currency basis, Work Dynamics represented 31%, Capital Markets represented 14%, JLL Technologies 12% and LaSalle 1%. Refer to segment operating results for additional detail.

In addition to the segment drivers, a net increase in Restructuring and acquisition charges in 2022 contributed to higher operating expenses in 2022 versus 2021; refer to the following table and commentary below for additional detail.

(in millions)	Year ended December 31,	
	2022	2021
Severance and other employment-related charges	\$ 44.5	14.3
Restructuring, pre-acquisition and post-acquisition charges	63.6	67.8
Fair value adjustments that resulted in a net (decrease) increase to earn-out liabilities from prior-period acquisition activity	(3.3)	2.6
Total restructuring and acquisition charges	\$ 104.8	84.7

The increase in severance and other employment-related charges, compared with 2021, reflected notable cost mitigation actions taken across the globe in late 2022.

Interest Expense

Interest expense, net of interest income, for 2022 was \$75.2 million, compared to \$40.1 million in 2021. The change was driven by a higher effective interest rate on our credit facilities and a year-over-year increase in the average outstanding borrowings. The average outstanding borrowings under our credit facilities increased to \$1,399.1 million, with an average effective interest rate of 2.9%, in 2022, from \$432.0 million, with an average effective interest rate of 0.9%, during 2021.

Equity Earnings

Equity earnings were \$51.0 million in 2022, down from \$209.4 million in 2021.

Net valuation increases related to JLL Technologies' investments drove \$46.6 million of equity earnings this year, compared with \$140.7 million in 2021. Refer to the JLL Technologies segment discussion for additional detail.

LaSalle equity earnings were down \$62.3 million. Refer to the LaSalle segment discussion for additional detail.

Income Taxes

The provision for income taxes was \$200.8 million and \$264.3 million for the years ended December 31, 2022 and 2021, respectively, representing effective tax rates ("ETR") of 20.2% and 21.6%, respectively. Refer to the Income Tax discussion in the Summary of Critical Accounting Policies and Estimates and Note 8, Income Taxes, of the Notes to Consolidated Financial Statements, included in Item 8, for a further discussion of our effective tax rate.

Net Income and Adjusted EBITDA

Net income attributable to common shareholders was \$654.5 million for the year, or \$13.27 per diluted common share, compared with \$961.6 million for 2021, or \$18.47 per diluted common share. Adjusted EBITDA decreased 14% from the prior year to \$1,247.3 million in 2022. Net income margin attributable to common shareholders was 3.1% in 2022, down from 5.0% in the prior year. Adjusted EBITDA margin, calculated on a fee revenue basis, was 15.0% in both USD and local currency for 2022, compared with 18.7% in 2021. The margin contraction was primarily attributable to (i) the \$158.4 million decrease in equity earnings, which comprised over 50% of the margin decline, (ii) higher fixed compensation expense, reflecting increased headcount and wage inflation over the trailing twelve months, and (iii) incremental T&E and marketing expenses, and (iv) additional investments in technology. In addition, the consolidated margin, and all segment margins, reflected comparatively lower annual incentive compensation accruals this year due to business performance.

Segment Operating Results

Effective January 1, 2022, we manage and report our operations as five business segments: Markets Advisory, Capital Markets, Work Dynamics, JLL Technologies, and LaSalle.

Markets Advisory offers a wide range of real estate services, including agency leasing and tenant representation, property management, and advisory and consulting services. Our Capital Markets service offerings include investment sales, equity and debt advisory, loan servicing, and valuations. Our Work Dynamics business provides a broad suite of integrated services to occupiers of real estate, including facility and project management, as well as portfolio and other services. We consider "Property Management" to be services provided to non-occupying property investors and "Workplace Management" to be services provided to owner-occupiers. Our JLL Technologies segment offers software products, solutions and services, while LaSalle provides investment management services on a global basis to institutional investors and high-net-worth individuals.

For segment reporting, (i) gross contract costs and (ii) net non-cash MSR and mortgage banking derivative activity are both excluded from revenue in determining Fee revenue. Gross contract costs are excluded from operating expenses in determining Fee-based operating expenses. In addition, our measure of segment results also excludes Restructuring and acquisition charges.

Markets Advisory

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2022	2021	U.S. dollars		in Local Currency
Revenue	\$ 4,415.5	4,188.7	226.8	5 %	8 %
Gross contract costs	(1,055.3)	(987.0)	(68.3)	7	10
Fee revenue	\$ 3,360.2	3,201.7	158.5	5 %	8 %
Leasing	2,736.7	2,598.5	138.2	5	7
Property Management	500.2	478.7	21.5	4	9
Advisory, Consulting and Other	123.3	124.5	(1.2)	(1)	5
Compensation and benefits, excluding gross contract costs	2,433.7	2,299.6	134.1	6	8
Operating, administrative and other expenses, excluding gross contract costs	405.0	361.7	43.3	12	16
Depreciation and amortization	73.5	69.4	4.1	6	9
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	2,912.2	2,730.7	181.5	7	9
Gross contract costs	1,055.3	987.0	68.3	7	10
Segment operating expenses	\$ 3,967.5	3,717.7	249.8	7%	10%
Equity (losses) earnings	\$ (0.3)	0.7	(1.0)	(143)%	(138)%
Adjusted EBITDA	\$ 527.5	546.5	(19.0)	(3)%	1 %

The increases in Markets Advisory revenue and fee revenue were primarily due to Leasing, where growth over a record 2021 reflected an outstanding first half of 2022 which more than offset economic challenges impacting transaction-based revenue during the second half of the year. Leasing performance was driven by an increase in average deal size across all major asset classes, particularly in office and industrial. This driver was partially offset by the impact of tight supply, notably in the industrial sector, which had lower transaction volume in 2022. Geographically, the year-over-year increase was led by the U.S. (which contributed 71% of the growth in Leasing fee revenue on a local currency basis), Canada (11%) and Germany (9%), partially offset by Greater China, which continued to experience significant pandemic-related restrictions. The uptick in Property Management fee revenue was largely attributable to the U.S. and Canada, primarily from organic contributions.

The increases in segment operating expenses and segment fee-based operating expenses in 2022 were driven primarily by revenue-related expense growth and higher fixed compensation expense, including the impact of additional headcount and wage inflation over the trailing twelve months. In addition, expense growth was also attributable to increased T&E and marketing expenses and additional investments in technology.

Adjusted EBITDA margin for the year, calculated on a fee revenue basis, was 15.7% in USD (16.0% in local currency) in 2022, compared with 17.1% in 2021. The margin contraction was primarily due to the expense drivers noted above, partially offset by higher revenue.

Capital Markets

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2022	2021	U.S. dollars		in Local Currency
Revenue	\$ 2,488.2	2,620.5	(132.3)	(5)%	(1)%
Gross contract costs	(47.0)	(48.0)	1.0	(2)	7
Net non-cash MSR and mortgage banking derivative activity	(11.0)	(59.3)	48.3	(81)	(81)
Fee revenue	\$ 2,430.2	2,513.2	(83.0)	(3)%	— %
<i>Investment Sales, Debt/Equity Advisory and Other</i>	1,906.7	2,013.2	(106.5)	(5)	(2)
<i>Valuation Advisory</i>	365.6	359.8	5.8	2	9
<i>Loan Servicing</i>	157.9	140.2	17.7	13	13
Compensation and benefits, excluding gross contract costs	1,727.1	1,767.6	(40.5)	(2)	1
Operating, administrative and other expenses, excluding gross contract costs	263.2	204.2	59.0	29	35
Depreciation and amortization	61.6	63.1	(1.5)	(2)	—
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	2,051.9	2,034.9	17.0	1	5
Gross contract costs	47.0	48.0	(1.0)	(2)	7
Segment operating expenses	\$ 2,098.9	2,082.9	16.0	1 %	5 %
Equity earnings	\$ 3.1	4.9	(1.8)	(37)%	(33)%
Adjusted EBITDA	\$ 444.0	543.2	(99.2)	(18)%	(16)%

On a local currency basis, higher revenues from Loan Servicing and Valuation Advisory were offset by lower Investment Sales and Debt Advisory fees, as rising interest rates and economic uncertainty adversely impacted market transaction volumes and elongated the deal-cycle time. This driver was particularly impactful on the second half of 2022, where favorable trends from the first half of 2022 reversed in the third and fourth quarters. Globally, fourth-quarter market volumes for investment sales were down 58% in USD (56% in local currency) and full-year global market volumes fell 19% in USD (15% in local currency) according to JLL Research. The top-line increase in Loan Servicing reflected growth of the servicing portfolio in 2022, particularly from loans originated under the Fannie Mae DUS program.

The increases in segment operating expenses and segment fee-based operating expenses in 2022 were driven primarily by (i) an increase in T&E, marketing and additional technology-related expenses, (ii) incremental fixed compensation, due to headcount growth and wage inflation over the trailing twelve months, and (iii) higher commission expense, attributable to changes in the variable compensation structures in the U.S. (partially offset by reductions to annual incentive compensation expense). In addition, 2021 included a \$13.8 million non-cash reduction (benefit) to loan loss credit reserves, versus \$2.0 million of net increases (expense) to the reserves this year.

Adjusted EBITDA margin for the year, calculated on a fee-revenue basis, was 18.3% in USD (18.2% in local currency) in 2022, compared with 21.6% in 2021. The margin contraction was primarily due to the expense drivers noted above.

Work Dynamics

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2022	2021	U.S. dollars		in Local Currency
Revenue	\$ 13,268.5	11,891.5	1,377.0	12 %	15 %
Gross contract costs	(11,403.8)	(10,199.3)	(1,204.5)	12	16
Fee Revenue	\$ 1,864.7	1,692.2	172.5	10%	15%
<i>Workplace Management</i>	752.8	654.9	97.9	15	18
<i>Project Management</i>	850.7	774.2	76.5	10	15
<i>Portfolio Services and Other</i>	261.2	263.1	(1.9)	(1)	3
Compensation and benefits, excluding gross contract costs	1,202.3	1,103.4	98.9	9	14
Operating, administrative and other expenses, excluding gross contract costs	432.9	406.8	26.1	6	12
Depreciation and amortization	71.1	66.2	4.9	7	13
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	1,706.3	1,576.4	129.9	8	13
Gross contract costs	11,403.8	10,199.3	1,204.5	12	16
Segment operating expenses	\$ 13,110.1	11,775.7	1,334.4	11 %	15 %
Equity earnings	\$ 1.2	0.4	0.8	200 %	266 %
Adjusted EBITDA	\$ 230.1	182.4	47.7	26 %	24 %

The Work Dynamics revenue and fee revenue increases, compared with 2021, were driven by double-digit growth in Workplace Management and Project Management, which were broad-based across geographies. New client wins and the expansion of existing global mandates drove the growth in Workplace Management, most notably in the United States. Project Management experienced continued momentum from the return-to-office movement that, together with fewer pandemic-driven restrictions, contributed to higher project demand this year.

The increases in segment operating expenses and segment fee-based operating expenses in 2022 were largely attributable to (i) additional investments in technology, (ii) incremental T&E and marketing expenses, and (iii) higher fixed compensation expense to support business growth, including additional headcount and wage inflation over the trailing twelve months.

Adjusted EBITDA margin for the year, calculated on a fee-revenue basis, was 12.3% in USD (11.6% in local currency) in 2022, compared with 10.8% in 2021. The margin expansion was attributable to the fee revenue growth described above, the impact of cost management strategies executed throughout the year, and the net impact of the expense drivers noted above.

JLL Technologies

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2022	2021	U.S. dollars		in Local Currency
Revenue	\$ 213.9	166.2	47.7	29 %	30 %
Gross contract costs	(13.7)	(29.0)	15.3	(53)	(53)
Fee revenue	\$ 200.2	137.2	63.0	46 %	47 %
Compensation and benefits, excluding gross contract costs ⁽¹⁾	240.3	169.2	71.1	42	44
Operating, administrative and other expenses, excluding gross contract costs	57.4	55.4	2.0	4	4
Depreciation and amortization	15.4	10.5	4.9	47	48
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	313.1	235.1	78.0	33	35
Gross contract costs	13.7	29.0	(15.3)	(53)	(53)
Segment operating expenses	\$ 326.8	264.1	62.7	24%	25%
Equity earnings	\$ 46.6	140.7	(94.1)	(67)%	(67)%
Adjusted EBITDA	\$ (50.9)	53.4	(104.3)	(195)%	(199)%

(1) Included in Compensation and benefits expenses for JLL Technologies is carried interest expense related to qualifying equity earnings of the segment. For the years ended December 31, 2022 and 2021, carried interest expense was \$16.6 million and \$12.6 million, respectively.

JLL Technologies top-line growth included \$32.3 million from acquisitions closed in late 2021. Organic fee revenue increased 23% for the year, driven by new customers as well as growth from existing customers in software and solutions offerings.

Equity earnings in 2021 were primarily attributable to valuation increases to JLL Technologies' investments in early to mid-stage proptech companies as well as proptech funds, primarily reflecting subsequent financing rounds at increased per-share values. Lower equity earnings in 2022 were due to more modest valuation increases, compared with 2021, coupled with more notable impairments/valuation declines.

The increases in segment operating expenses and segment fee-based operating expenses in 2022 were largely driven by (i) incremental compensation related to businesses acquired in late 2021 and (ii) the ramp up of operations for current and future growth, including T&E and marketing expenses as well as additional headcount and wage inflation over the trailing twelve months.

Adjusted EBITDA margin for the year, calculated on a fee-revenue basis, was negative 25.4% in USD (negative 26.1% in local currency) in 2022, compared with 38.9% in 2021. The change in equity earnings, net of carried interest, drove more than 75% of the net margin contraction. The remaining margin decline was primarily attributable to the expense drivers noted above, partially offset by higher fee revenue.

LaSalle

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2022	2021	U.S. dollars		in Local Currency
Revenue	\$ 476.0	500.1	(24.1)	(5)%	1 %
Gross contract costs	(29.3)	(26.9)	(2.4)	9	9
Fee revenue	\$ 446.7	473.2	(26.5)	(6)%	1 %
<i>Advisory fees</i>	380.3	345.7	34.6	10	17
<i>Transaction fees and other</i>	39.8	33.6	6.2	18	27
<i>Incentive fees</i>	26.6	93.9	(67.3)	(72)	(69)
Compensation and benefits, excluding gross contract costs	290.4	310.1	(19.7)	(6)	—
Operating, administrative and other expenses, excluding gross contract costs	59.7	53.1	6.6	12	20
Depreciation and amortization	6.5	8.3	(1.8)	(22)	(18)
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	356.6	371.5	(14.9)	(4)	3
Gross contract costs	29.3	26.9	2.4	9	9
Segment operating expenses	\$ 385.9	398.4	(12.5)	(3)%	3 %
Equity earnings	\$ 0.4	62.7	(62.3)	(99)%	(99)%
Adjusted EBITDA	\$ 96.6	171.0	(74.4)	(44)%	(40)%

Continued momentum in advisory fees more than offset lower incentive fees to drive slight top-line growth for LaSalle on a local currency basis. The advisory fee growth in 2022 was concentrated in core open-end funds, driven by strong capital raising and increases in the fair value of assets under management (“AUM”) over the trailing twelve months. Lower incentive fees for the year reflected muted transaction activity given economic uncertainty and lower valuation gains in a U.S. fund, following an exceptional 2021.

The current year's equity earnings included valuation declines in the co-investment portfolio during latter 2022 coupled with \$13.7 million of equity losses due to negative share price movement for a co-investment in a LaSalle-managed publicly-traded REIT in Japan. Prior-year equity earnings were substantially driven by valuation increases on underlying real estate investments within LaSalle's co-investment portfolio, as estimated fair values recovered from pandemic-era lows in 2020.

The decreases in segment operating expenses and segment fee-based operating expenses, compared with 2021, were primarily driven by lower incentive compensation related to the decline in incentive fees, partially offset by incremental T&E expense and higher fixed compensation expense, including wage inflation over the trailing twelve months.

Adjusted EBITDA margin, calculated on a fee revenue basis, was 21.6% in USD (21.4% in local currency) for 2022, compared with 36.1% in 2021. The decline in margin was substantially driven by lower equity earnings and incentive fees. These drivers were partially offset by higher advisory fees and continued scale of the advisory fee platform.

As of December 31, 2022, LaSalle had \$79.1 billion of AUM, an increase of 3% in USD (15% in local currency) from \$76.6 billion as of December 31, 2021. The net increase in AUM during the year resulted from (i) \$12.2 billion of acquisitions and (ii) \$7.2 billion of net valuation increases, partially offset by (iii) \$9.2 billion of foreign currency decreases and (iv) \$7.7 billion of dispositions and withdrawals.

Year Ended December 31, 2021 compared with Year Ended December 31, 2020

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2021	2020	U.S. dollars		in Local Currency
Markets Advisory	\$ 4,188.7	3,187.0	1,001.7	31 %	30 %
Capital Markets	2,620.5	1,763.5	857.0	49	47
Work Dynamics	11,891.5	11,061.5	830.0	8	6
JLL Technologies	166.2	156.1	10.1	6	6
LaSalle	500.1	421.8	78.3	19	17
Revenue	\$ 19,367.0	16,589.9	2,777.1	17 %	15 %
Gross contract costs	(11,290.2)	(10,464.4)	(825.8)	8	6
Net non-cash MSR and mortgage banking derivative activity	(59.3)	(66.6)	7.3	(11)	(11)
Fee revenue	\$ 8,017.5	6,058.9	1,958.6	32 %	31 %
<i>Markets Advisory</i>	<i>3,201.7</i>	<i>2,297.5</i>	<i>904.2</i>	<i>39</i>	<i>38</i>
<i>Capital Markets</i>	<i>2,513.2</i>	<i>1,654.1</i>	<i>859.1</i>	<i>52</i>	<i>50</i>
<i>Work Dynamics</i>	<i>1,692.2</i>	<i>1,586.8</i>	<i>105.4</i>	<i>7</i>	<i>5</i>
<i>JLL Technologies</i>	<i>137.2</i>	<i>119.8</i>	<i>17.4</i>	<i>15</i>	<i>14</i>
<i>LaSalle</i>	<i>473.2</i>	<i>400.7</i>	<i>72.5</i>	<i>18</i>	<i>17</i>
Compensation and benefits, excluding gross contract costs	\$ 5,649.9	4,207.9	1,442.0	34 %	33 %
Operating, administrative and other expenses, excluding gross contract costs	1,081.2	989.7	91.5	9	7
Depreciation and amortization	217.5	226.4	(8.9)	(4)	(5)
Restructuring and acquisition charges	84.7	142.4	(57.7)	(41)	(40)
Total fee-based operating expenses	7,033.3	5,566.4	1,466.9	26	25
Gross contract costs	11,290.2	10,464.4	825.8	8	6
Total operating expenses	\$ 18,323.5	16,030.8	2,292.7	14 %	12 %
Operating income	\$ 1,043.5	559.1	484.4	87 %	86 %
Equity earnings	\$ 209.4	8.0	201.4	n.m.	n.m.
Adjusted EBITDA	\$ 1,496.5	859.6	636.9	74 %	73 %

Reconciliation of Non-GAAP Financial Measures

Below are the reconciliations of (i) Revenue to fee revenue and (ii) Operating expenses to fee-based operating expenses.

(in millions)	Year Ended December 31,	
	2021	2020
Revenue	\$ 19,367.0	16,589.9
<i>Adjustments:</i>		
Gross contract costs	(11,290.2)	(10,464.4)
Net non-cash MSR and mortgage banking derivative activity	(59.3)	(66.6)
Fee revenue	\$ 8,017.5	6,058.9
Operating expenses	\$ 18,323.5	16,030.8
Less: Gross contract costs	(11,290.2)	(10,464.4)
Fee-based operating expenses	\$ 7,033.3	5,566.4
Operating income	\$ 1,043.5	559.1

Below is (i) a reconciliation of Net income attributable to common shareholders to EBITDA and Adjusted EBITDA, (ii) the Net income margin attributable to common shareholders (measured on Revenue), and (iii) the Adjusted EBITDA margin (measured on fee-revenue and presented on a local currency basis).

(\$ in millions)	Year Ended December 31,	
	2021	2020
Net income attributable to common shareholders	\$ 961.6	402.5
<i>Add:</i>		
Interest expense, net of interest income	40.1	52.8
Provision for income taxes	264.3	106.9
Depreciation and amortization	217.5	226.4
EBITDA	\$ 1,483.5	788.6
<i>Adjustments:</i>		
Restructuring and acquisition charges	84.7	142.4
Gain on disposition	(12.4)	(4.8)
Net non-cash MSR and mortgage banking derivative activity	(59.3)	(66.6)
Adjusted EBITDA	\$ 1,496.5	859.6
Net income margin attributable to common shareholders	5.0 %	2.4 %
Adjusted EBITDA margin	18.8 %	14.2 %

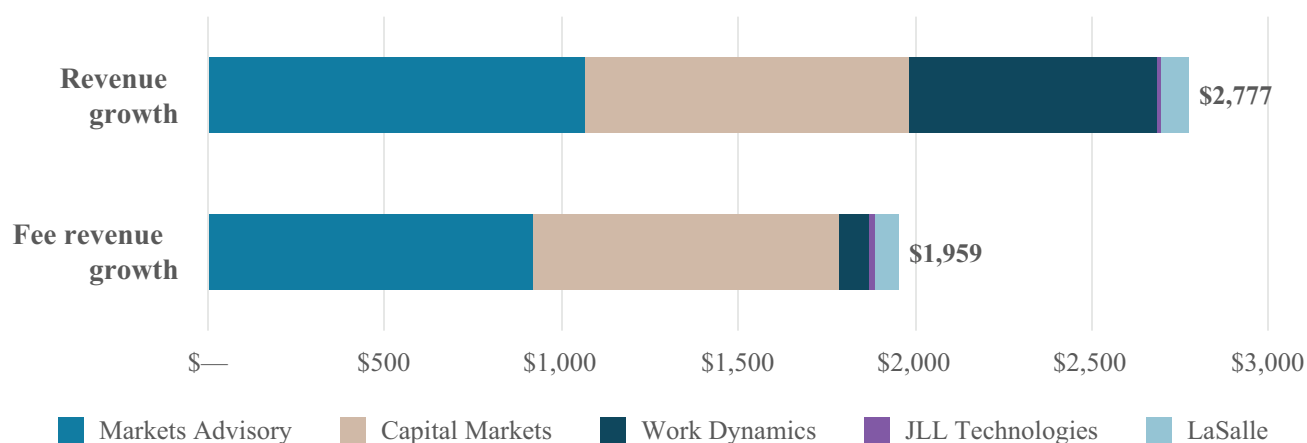
The following table reflects the reconciliation to local currency amounts for consolidated (i) Revenue, (ii) Fee revenue, (iii) Operating income and (iv) Adjusted EBITDA.

(\$ in millions)	Year Ended December 31,	
	2021	% Change
Revenue:		
At current period exchange rates	\$ 19,367.0	17 %
Impact of change in exchange rates	(297.5)	n/a
At comparative period exchange rates	\$ 19,069.5	15 %
Fee revenue:		
At current period exchange rates	\$ 8,017.5	32 %
Impact of change in exchange rates	(96.9)	n/a
At comparative period exchange rates	\$ 7,920.6	31 %
Operating income:		
At current period exchange rates	\$ 1,043.5	87 %
Impact of change in exchange rates	(3.8)	n/a
At comparative period exchange rates	\$ 1,039.7	86 %
Adjusted EBITDA:		
At current period exchange rates	\$ 1,496.5	74 %
Impact of change in exchange rates	(7.4)	n/a
At comparative period exchange rates	\$ 1,489.1	73 %

Revenue

Revenue increased 15% to \$19.4 billion in 2021 and fee revenue increased 31% to \$8.0 billion, compared with 2020, reflecting broad-based growth across all segments. Markets Advisory led the top-line growth with revenue and fee revenue increases of 30% and 38%, respectively, driven by Leasing. Capital Markets also experienced significant year-over-year growth, achieving revenue and fee revenue increases of 47% and 50%, respectively. New wins and expansions of existing client mandates in 2021 within Workplace Management drove the 6% revenue increase in Work Dynamics. LaSalle's 17% revenue growth, compared with 2020, was driven by higher incentive and advisory fees.

The following charts highlight the proportion of consolidated top-line growth on a local currency basis, compared with 2020, by segment (\$ in millions). Refer to segment operating results for further detail.



Our consolidated revenue increased 17% in U.S. dollars and 15% on a local currency basis, compared with 2020, while consolidated fee revenue increased 32% in U.S. dollars and 31% on a local currency basis, compared with 2020. The spread between U.S. dollars and local currency was driven by a weakening of the U.S. dollar against most currencies, especially the British pound, euro, Australian dollar, Canadian dollar and Chinese yuan.

Operating Expenses

In 2021, consolidated operating expenses increased 12% to \$18.3 billion. Consolidated fee-based operating expenses were \$7.0 billion in 2021, a 25% increase from prior year. The higher expenses were primarily attributable to Markets Advisory and Capital Markets, which drove 49% and 39%, respectively, of the total increase in fee-based operating expenses on a local currency basis. Refer to segment operating results for additional detail.

The overall expense increase is net of lower Restructuring and acquisition charges; refer to the following table and commentary for additional detail.

(in millions)	Year ended December 31,	
	2021	2020
Severance and other employment-related charges	\$ 14.3	69.0
Restructuring, pre-acquisition and post-acquisition charges	67.8	88.2
Fair value adjustments that resulted in a net increase (decrease) to earn-out liabilities from prior-period acquisition activity	2.6	(14.8)
Total restructuring and acquisition charges	\$ 84.7	142.4
<i>Portion of total restructuring and acquisition charges related to the acquisition and integration of HFF</i>	<i>\$ 40.0</i>	<i>75.9</i>

Charges associated with the acquisition and integration of HFF, Inc. ("HFF") primarily included expenses from retention awards granted to employees upon acquisition as well as other integration expenses, such as early lease termination costs.

The decrease in severance and other employment-related charges, compared with the prior year, reflected notable cost mitigation actions taken across the globe in response to the pandemic in 2020.

Interest Expense

Interest expense, net of interest income, for 2021 was \$40.1 million, down from \$52.8 million in 2020. The decrease was driven by a lower effective interest rate on our Facility and a year-over-year reduction in the average outstanding borrowings. The average outstanding borrowings under our Facility decreased to \$432.0 million, with an average effective interest rate of 0.94% in 2021, from \$865.1 million, with an average effective interest rate of 1.60% during 2020.

Equity Earnings

Equity earnings were \$209.4 million in 2021, up from \$8.0 million in 2020.

Valuation increases related to JLL Technologies' investments resulted in \$140.7 million of equity earnings in 2021, compared with \$5.7 million in 2020, reflecting continued progress in the strategy to invest in early-stage proptech companies; refer to the JLL Technologies segment discussion for additional detail.

LaSalle recognized \$62.7 million of equity earnings in 2021, compared with \$12.5 million of equity losses in the prior year. Refer to the LaSalle segment discussion for additional detail.

Income Taxes

The provision for income taxes was \$264.3 million and \$106.9 million for the years ended December 31, 2021 and 2020, respectively, representing effective tax rates ("ETR") of 21.6% and 20.2%, respectively. Refer to the Income Tax discussion in the Summary of Critical Accounting Policies and Estimates and Note 8, Income Taxes, of the Notes to Consolidated Financial Statements, included in Item 8, for a further discussion of our effective tax rate.

Net Income and Adjusted EBITDA

Net income attributable to common shareholders was \$961.6 million for 2021, or \$18.47 per diluted common share, compared with \$402.5 million for 2020, or \$7.70 per diluted common share. Adjusted EBITDA increased 73% from the prior year to \$1,496.5 million in 2021. Net income margin attributable to common shareholders was 5.0% in 2021 up from 2.4% in the prior year. Adjusted EBITDA margin, calculated on a fee revenue basis, was 18.7% in USD for 2021 (18.8% in local currency), compared with 14.2% last year. The 450 basis point margin expansion was primarily driven by the significant increase in revenue, particularly from higher margin transaction-based service lines, as well as higher equity earnings, as noted above. These drivers were partially offset by the expected reduction of certain non-permanent cost savings from 2020 and incremental investments in people and technology.

Segment Operating Results

For segment reporting, (i) gross contract costs and (ii) net non-cash MSR and mortgage banking derivative activity are both excluded from revenue in determining Fee revenue. Gross contract costs are excluded from operating expenses in determining Fee-based operating expenses. In addition, our measure of segment results also excludes Restructuring and acquisition charges.

Markets Advisory

(\$ in millions)	Year Ended December 31,		Change in U.S. dollars	% Change in Local Currency	
	2021	2020			
Revenue	\$ 4,188.7	3,187.0	1,001.7	31 %	30 %
Gross contract costs	(987.0)	(889.5)	(97.5)	11	9
Fee revenue	\$ 3,201.7	2,297.5	904.2	39 %	38 %
<i>Leasing</i>	2,598.5	1,732.3	866.2	50	49
<i>Property Management</i>	478.7	453.4	25.3	6	3
<i>Advisory, Consulting and Other</i>	124.5	111.8	12.7	11	8
Compensation and benefits, excluding gross contract costs	2,299.6	1,649.0	650.6	39	38
Operating, administrative and other expenses, excluding gross contract costs	361.7	317.3	44.4	14	12
Depreciation and amortization	69.4	68.0	1.4	2	1
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	2,730.7	2,034.3	696.4	34	33
Gross contract costs	987.0	889.5	97.5	11	9
Segment operating expenses	\$ 3,717.7	2,923.8	793.9	27%	26%
Equity earnings	\$ 0.7	13.7	(13.0)	(95)%	(93)%
Adjusted EBITDA	\$ 546.5	337.8	208.7	62 %	61 %

Markets Advisory revenue and fee revenue increases were led by Leasing, driven by higher transaction volumes and an increase in average deal size, especially in the U.S., with strong performance across all sectors, highlighted by office and industrial. Notably, organic Leasing fee revenue exceeded 2019. Advisory, Consulting and Other largely recovered from pandemic-impacted activity in 2020, especially in Greater China and MENA.

The increases in segment operating expenses and segment fee-based operating expenses compared to 2020 were primarily due to higher revenue-related expenses, the expected reduction of certain non-permanent cost savings from 2020 (including the benefit from pandemic-related government relief programs) and incremental investments in people and technology.

In 2020, substantially all of the \$13.7 million equity earnings were attributable to gains by consolidated variable interest entities in which the company held no equity interest; therefore, these gains had no net impact to Adjusted EBITDA.

Adjusted EBITDA margin for the year, calculated on a fee revenue basis, was 17.1% in USD and local currency in 2021, compared with 14.7% in 2020. The margin expansion was driven by transaction-based revenue growth, partially offset by the above-noted expense drivers.

Capital Markets

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2021	2020	U.S. dollars		in Local Currency
Revenue	\$ 2,620.5	1,763.5	857.0	49 %	47 %
Gross contract costs	(48.0)	(42.8)	(5.2)	12	8
Net non-cash MSR and mortgage banking derivative activity	(59.3)	(66.6)	7.3	(11)	(11)
Fee revenue	\$ 2,513.2	1,654.1	859.1	52 %	50 %
<i>Investment Sales, Debt/Equity Advisory and Other</i>	2,013.2	1,240.7	772.5	62	60
<i>Valuation Advisory</i>	359.8	302.1	57.7	19	15
<i>Loan Servicing</i>	140.2	111.3	28.9	26	26
Compensation and benefits, excluding gross contract costs	1,767.6	1,188.2	579.4	49	47
Operating, administrative and other expenses, excluding gross contract costs	204.2	217.6	(13.4)	(6)	(8)
Depreciation and amortization	63.1	69.8	(6.7)	(10)	(11)
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	2,034.9	1,475.6	559.3	38	36
Gross contract costs	48.0	42.8	5.2	12	8
Segment operating expenses	\$ 2,082.9	1,518.4	564.5	37 %	35 %
Equity earnings	\$ 4.9	1.4	3.5	250 %	236 %
Adjusted EBITDA	\$ 543.2	247.8	295.4	119 %	115 %

Top-line growth in Capital Markets was led by Investment Sales and Debt Advisory as global market volumes reached a record high in 2021, according to JLL Research. The increases were broad-based across geographies and asset classes, most notably residential, office and industrial. The increase in Valuation Advisory was led by organic growth, highlighted by the U.S., Australia and the U.K. Strong growth in Loan Servicing was driven by an increase in the servicing portfolio, particularly from originations under the Fannie Mae DUS program (approximately half of the increase) as well as incremental prepayment fees.

The increases in segment operating expenses and segment fee-based operating expenses, compared with the prior year, were primarily due to higher revenue-related expenses, the expected reduction of certain non-permanent cost savings from 2020 (including the benefit from pandemic-related government relief programs) and incremental investments in people and technology. In addition, we recognized a \$13.8 million non-cash reduction to our loan loss credit reserves related to our multi-housing business in 2021, compared with a \$21.6 million non-cash increase to the credit reserves recognized in 2020.

Adjusted EBITDA margin for the year, calculated on a fee-revenue basis, was 21.6% in USD (and 21.5% local currency) in 2021, compared with 15.0% in 2020. The margin expansion was primarily driven by transaction-based revenue growth and the year-over-year impact of changes to the loan loss credit reserves, partially offset by the additional expense drivers discussed above.

Work Dynamics

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2021	2020	U.S. dollars		in Local Currency
Revenue	\$ 11,891.5	11,061.5	830.0	8 %	6 %
Gross contract costs	(10,199.3)	(9,474.7)	(724.6)	8	6
Fee Revenue	\$ 1,692.2	1,586.8	105.4	7%	5%
<i>Workplace Management</i>	654.9	600.3	54.6	9	7
<i>Project Management</i>	774.2	751.1	23.1	3	1
<i>Portfolio Services and Other</i>	263.1	235.4	27.7	12	11
Compensation and benefits, excluding gross contract costs	1,103.4	984.3	119.1	12	10
Operating, administrative and other expenses, excluding gross contract costs	406.8	374.4	32.4	9	6
Depreciation and amortization	66.2	68.0	(1.8)	(3)	(4)
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	1,576.4	1,426.7	149.7	10	8
Gross contract costs	10,199.3	9,474.7	724.6	8	6
Segment operating expenses	\$ 11,775.7	10,901.4	874.3	8 %	6 %
Equity earnings (losses)	\$ 0.4	(0.3)	0.7	233 %	297 %
Adjusted EBITDA	\$ 182.4	227.6	(45.2)	(20)%	(18)%

Over half of the revenue and fee revenue growth for Work Dynamics was driven by Workplace Management, led by new client wins and the expansion of existing mandates, especially in the United States. Portfolio Services and Other growth was largely from higher consulting and transaction management services, influenced by client leasing activity during 2021, compared with more significant impacts from COVID during the prior year.

The increases in segment operating expenses and segment fee-based operating expenses, compared with last year, were primarily due to higher revenue-related expenses, the expected reduction of certain non-permanent cost savings from 2020 (including the benefit from pandemic-related government relief programs), incremental investments in people and technology, and higher self-insurance expenses, specifically medical and dental, which were lower than historical experience in 2020.

Adjusted EBITDA margin, calculated on a fee-revenue basis, was 10.8% in USD (11.1% in local currency) for 2021, compared with 14.3% in 2020. The margin contraction was attributable to the expense drivers noted above, which more than offset the revenue growth.

JLL Technologies

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2021	2020	U.S. dollars		in Local Currency
Revenue	\$ 166.2	156.1	10.1	6 %	6 %
Gross contract costs	(29.0)	(36.3)	7.3	(20)	(21)
Fee revenue	\$ 137.2	119.8	17.4	15 %	14 %
Compensation and benefits, excluding gross contract costs	169.2	126.0	43.2	34	33
Operating, administrative and other expenses, excluding gross contract costs	55.4	32.6	22.8	70	69
Depreciation and amortization	10.5	11.3	(0.8)	(7)	(8)
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	235.1	169.9	65.2	38	38
Gross contract costs	29.0	36.3	(7.3)	(20)	(21)
Segment operating expenses	\$ 264.1	206.2	57.9	28%	27%
Equity earnings	\$ 140.7	5.7	135.0	n.m.	n.m.
Adjusted EBITDA	\$ 53.4	(33.1)	86.5	261 %	263 %

JLL Technologies top-line growth included \$3.3 million of incremental fee revenue from acquisitions closed in late 2021. Organic fee revenue increased 11%, driven by new customers as well as growth from existing customers in software and solutions offerings.

The higher equity earnings in 2021 were attributable to valuation increases for several of our investments in proptech funds and early to mid-stage proptech companies, primarily reflecting subsequent financing rounds at increased per-share values.

The increases in segment operating expenses and segment fee-based operating expenses were driven by revenue-related expense growth as well as incremental investments in people and technology to support future growth.

Adjusted EBITDA margin for the year, calculated on a fee-revenue basis, was 38.9% in USD (39.5% in local currency), compared with negative 27.6% in 2020. The margin expansion was driven by higher earnings, partially offset by the above-noted expense drivers.

LaSalle

(\$ in millions)	Year Ended December 31,		Change in		% Change
	2021	2020	U.S. dollars		in Local Currency
Revenue	\$ 500.1	421.8	78.3	19 %	17 %
Gross contract costs	(26.9)	(21.1)	(5.8)	27	26
Fee revenue	\$ 473.2	400.7	72.5	18 %	17 %
<i>Advisory fees</i>	345.7	320.7	25.0	8	6
<i>Transaction fees and other</i>	33.6	38.5	(4.9)	(13)	(13)
<i>Incentive fees</i>	93.9	41.5	52.4	126	128
Compensation and benefits, excluding gross contract costs	310.1	260.4	49.7	19	18
Operating, administrative and other expenses, excluding gross contract costs	53.1	47.8	5.3	11	9
Depreciation and amortization	8.3	9.3	(1.0)	(11)	(12)
Segment fee-based operating expenses (excluding restructuring and acquisition charges)	371.5	317.5	54.0	17	16
Gross contract costs	26.9	21.1	5.8	27	26
Segment operating expenses	\$ 398.4	338.6	59.8	18 %	16 %
Equity earnings (losses)	\$ 62.7	(12.5)	75.2	602 %	601 %
Adjusted EBITDA	\$ 171.0	79.5	91.5	115 %	113 %

LaSalle advisory fee growth was led by core open-end funds, a result of capital raising and valuation increases in AUM, as well as a newly-launched fund in Asia Pacific. The increase in incentive fees reflected the strong fund performance in the U.S. and real estate dispositions on behalf of clients in Asia Pacific and continental Europe.

Equity earnings in 2021 were primarily attributable to increases in the estimated fair value of underlying real estate investments within LaSalle's co-investment portfolio across asset classes and geographies. In the prior year, equity losses were largely driven by the pandemic's impact on real estate prices, which drove lower estimated fair values within the portfolio.

The increases in 2021 segment operating expenses and segment fee-based operating expenses, compared with 2020, were primarily driven by compensation expense related to the higher incentive fees, deferred variable compensation expenses associated with the run-off of a previous compensation program, and incremental investments in people and technology.

Adjusted EBITDA margin, calculated on a fee revenue basis, was 36.1% in USD (36.3% in local currency) for 2021, compared with 19.8% in 2020. The significant margin expansion was largely driven by higher equity earnings and incentive fees, partially offset by the expense drivers noted above.

As of December 31, 2021, LaSalle had \$76.6 billion of AUM, an increase of 11% in USD and local currency from \$68.9 billion as of December 31, 2020. The net increase in AUM during the year resulted from (i) \$7.6 billion of net valuation increases, (ii) \$7.3 billion of acquisitions and (iii) \$0.2 billion of foreign currency increases, partially offset by (iv) \$7.4 billion of dispositions and withdrawals.

LIQUIDITY AND CAPITAL RESOURCES

Cash Flows from Operating Activities

Operating activities provided \$199.9 million of cash in 2022, compared with \$972.4 million provided in 2021. The decrease in cash provided was primarily due to (i) higher commission payments in 2022, reflecting greater payments in early 2022 for commissions earned from the strong performance in the prior-year fourth quarter as well as incremental commissions this year, attributable to the full-year Leasing growth and changes to the Capital Markets incentive compensation structure, (ii) higher annual incentive compensation payments, typically paid in the first quarter, compared with 2021, (iii) lower cash provided by earnings, and (iv) an incremental \$59.0 million of cash paid for taxes. These drivers were partially offset by lower prepaid and other expenses, including the net conversion of contract assets.

Cash Flows from Investing Activities

We used \$243.1 million of cash for investing activities during 2022, compared with \$805.8 million used in 2021. The decrease in cash used was primarily driven by lower business acquisitions volume in the current year and the year-over-year change in net investment activity related to less than wholly-owned entities. We discuss key drivers, along with other investing activities, individually below in further detail.

Cash Flows from Financing Activities

Financing activities used \$13.1 million of cash during 2022, compared with \$143.8 million used during 2021. The increase in net borrowings from our Facility (\$1,075.0 million of net borrowings in 2022 versus \$150.0 million of net borrowings in 2021) were used to (i) fund the higher annual incentive compensation payments made in the first quarter discussed above, (ii) return an incremental \$257.9 million to shareholders via our share repurchase program, and (iii) redeem our 2022 senior notes, as further described below. In addition, the cash outflow relating to noncontrolling interest distributions in 2022 included a \$142.3 million gain by a consolidated variable interest entity in which the company held no equity interest that was also distributed during the year. The offset to this is included in cash from investing activities, specifically investment activity by less than wholly-owned entities.

Debt

On August 31, 2022, we amended our Facility to increase the borrowing capacity from \$2.75 billion to \$3.35 billion. Our Facility matures on April 14, 2026 and bears a variable rate of interest. As of December 31, 2022, we had outstanding borrowings under the Facility of \$1,213.8 million, compared with \$138.2 million outstanding as of December 31, 2021.

We had Short-term borrowings (including financing lease obligations, overdrawn bank accounts and local overdraft facilities) of \$164.2 million as of December 31, 2022, compared with \$147.9 million as of December 31, 2021. In addition, we had the capacity to borrow up to an additional \$52.3 million under local overdraft facilities as of December 31, 2022.

As of December 31, 2022, we had €350.0 million of Euro Notes, evenly divided between maturities of June 2027 (with a fixed interest rate of 1.96%) and June 2029 (with a fixed interest rate of 2.21%). During 2022, we used proceeds from our Facility to redeem all of our outstanding 4.4% Senior Notes due November 2022. The redemption price for the notes was equal to the \$275.0 million principal amount plus accrued and unpaid interest on the Notes.

We will continue to use the Facility for working capital needs (including payment of accrued incentive compensation), co-investment activities, share repurchases, capital expenditures and acquisitions.

Refer to Note 10, Debt in the Notes to Consolidated Financial Statements, included in Item 8, for additional information on our debt.

Investment Activity

As of December 31, 2022, we had a carrying value of \$873.8 million in Investments, primarily related to investments by JLL Technologies in early to mid-stage proptech companies and proptech funds as well as LaSalle co-investments. In 2022 and 2021, funding of investments exceeded returns of capital by \$142.9 million and \$107.1 million, respectively. We expect continued investments by JLL Technologies as well as strategic co-investment opportunities with our investment management clients globally as co-investment remains an important foundation to the continued growth of LaSalle's business.

We have unfunded capital commitments to investment vehicles and direct investments totaling a maximum of \$349.1 million as of December 31, 2022.

See Note 5, Investments, of the Notes to Consolidated Financial Statements, included in Item 8, for additional information on our investment activity.

Share Repurchase and Dividend Programs

In February 2022, our Board of Directors authorized an additional \$1.5 billion for the repurchase of our common stock in the open market and privately negotiated transactions. The number of shares repurchased and cash paid for repurchases is noted in table below.

(\$ in millions)	Year Ended December 31,	
	2022	2021
Total number of shares repurchased (in 000's)	2,922.5	1,451.7
Total paid for shares repurchased	\$ 601.2	343.3

As of December 31, 2022, \$1,155.6 million remained authorized for repurchases under our share repurchase program.

Capital Expenditures

Capital expenditures, excluding those made by a consolidated VIE in which we held no equity interest, were \$205.8 million and \$175.9 million in 2022 and 2021, respectively. Expenditures in both years were primarily related to office leasehold improvements, hardware and purchased/developed software.

Investment Asset Activity of Consolidated Less Than Wholly-Owned Entities

Net capital additions made by consolidated VIEs in which we held no equity interest were net proceeds of \$134.8 million in 2022, compared with net acquisitions of \$70.9 million in 2021, primarily to acquire (and dispose of) real estate.

Refer to Note 5, Investments, of the Notes to the Consolidated Financial Statements, included in Item 8, for further information on our consolidated VIE investments.

Business Acquisitions

In 2022, we paid \$23.8 million for business acquisitions. This included \$5.7 million of payments relating to acquisitions that closed in 2022 and \$18.1 million for deferred business acquisition and earn-out obligations related to acquisitions completed in prior years, which are primarily reflected in cash flows from financing activities.

Terms for our acquisitions have typically included cash paid at closing with provisions for additional consideration and earn-out payments subject to certain contract provisions and performance. Deferred business acquisition obligations totaled \$26.2 million and \$28.1 million on the Consolidated Balance Sheets as of December 31, 2022 and 2021, respectively. These obligations represent the current discounted values of payments to sellers of businesses for which our acquisition has closed as of the balance sheet dates and for which the only remaining condition on those payments is the passage of time. As of December 31, 2022, we had the potential to make earn-out payments on 17 acquisitions subject to the achievement of certain performance conditions, representing \$73.3 million accrued for potential earn-out payments, of a potential maximum of \$114.6 million (undiscounted). These earn-outs will come due at various times over the next five years, assuming the achievement of the applicable performance conditions.

We will continue to consider acquisitions we believe will strengthen our market position, increase our profitability and supplement our organic growth.

Refer to Note 4, Business Combinations, Goodwill and Other Intangible Assets, of the Notes to the Consolidated Financial Statements, included in Item 8, for further information on business acquisitions.

Repatriation of Foreign Earnings

Based on our historical experience and future business plans, we do not expect to repatriate our foreign source earnings to the U.S. We believe our policy of permanently reinvesting earnings of foreign subsidiaries does not significantly impact our liquidity. As of December 31, 2022 and 2021, we had total cash and cash equivalents of \$519.3 million and \$593.7 million, respectively, of which \$400.8 million and \$487.9 million, respectively, was held by our foreign subsidiaries.

Restricted Net Assets

We face regulatory restrictions in certain countries that limit or prevent the transfer of funds to other countries or the exchange of the local currency to other currencies, however, we generally face no such restrictions with regard to the use or application of funds for ordinary course business activities within such countries. The total assets of these countries in aggregate totaled approximately 4% of our total assets as of both December 31, 2022 and 2021.

Leases

Our lease obligations primarily consist of operating leases of office space in various buildings for our own use as well as operating leases for equipment. The total minimum rentals to be received in the future as sublessor under noncancelable operating subleases as of December 31, 2022 was \$37.3 million.

Refer to Note 11, Leases, of the Notes to the Consolidated Financial Statements, included in Item 8, for further information on our lease obligations.

Deferred Compensation

Deferred compensation obligations are inclusive of amounts attributable to service conditions satisfied as of December 31, 2022, as well as service conditions expected to be satisfied in future periods. The deferred compensation plans include a provision for deferred compensation plans, predominantly in the U.S., that allow employees to defer portions of their compensation. We recognize an asset for the amount that could be realized under these insurance contracts at the balance sheet date, and the deferred compensation obligation is adjusted to reflect the changes in the fair value of the amount owed to the employees. The timing of payments to employees is, in part, dependent on their employment with JLL and, therefore, cannot be determined with precision.

Refer to the Consolidated Balance Sheets, of the Consolidated Financial Statements, and Note 9, Fair Value Measurements, of the Notes to the Consolidated Financial Statements, included in Item 8, for further information on our deferred compensation.

Defined Benefit Plans

The defined benefit plan obligations represent estimates of the expected benefits to be paid out by our defined benefit plans. We will fund these obligations from the assets held by these plans. If the assets these plans hold are not sufficient to fund these payments, JLL will fund the remaining obligations. We have historically funded pension costs as actuarially determined and as applicable laws and regulations require. We expect to contribute \$7.8 million to our defined benefit pension plans in 2023. As payments to recipients are based on their retirement date, age and other factors, we cannot determine the timing of such payments with precision.

Refer to Note 7, Retirement Plans, of the Notes to the Consolidated Financial Statements, included in Item 8, for further information on our defined benefit plans.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Information regarding market risk is included in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations under the caption "Market Risks" and is incorporated by reference herein.

Disclosure of Limitations

As the information presented above includes only those exposures that exist as of December 31, 2022, it does not consider those exposures or positions which could arise after that date. The information we present has limited predictive value. As a result, the ultimate realized gain or loss with respect to interest rate and foreign currency fluctuations will depend on the exposures that arise during the applicable period, the hedging strategies at the time, and interest and foreign currency rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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JONES LANG LASALLE INCORPORATED CONSOLIDATED FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Jones Lang LaSalle Incorporated:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Jones Lang LaSalle Incorporated and subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 28, 2023 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits 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. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

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: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter 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.

Sufficiency of audit evidence over income taxes

As described in Notes 2 and 8 to the consolidated financial statements, the Company recorded a provision for income taxes of \$200.8 million for the year ended December 31, 2022 based on local tax rules and regulations for the tax jurisdictions in which they operate. The Company has operations which constitute a taxable income presence in 92 countries or other taxable jurisdictions outside of the U.S.

We identified the evaluation of the sufficiency of audit evidence over income tax expense as a critical audit matter. The Company's global tax structure adds complexity that required subjective auditor judgment to evaluate the sufficiency of audit evidence obtained. This required the involvement of domestic and international tax professionals with specialized skills and knowledge, in order to assess the nature and extent of procedures performed in relation to the amounts recorded and disclosed in the consolidated financial statements.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls over the Company's income tax process, including controls over the amounts recorded. We applied auditor judgment to determine the nature and extent of procedures to be performed over income tax expense. For certain taxing jurisdictions, we analyzed supporting documentation for the provision for income taxes. In addition, we involved tax professionals with specialized skills and knowledge who evaluated certain of the Company's interpretations and applications of the tax rules and regulations. We evaluated the sufficiency of audit evidence obtained by assessing the results of procedures performed over income tax expense, including the appropriateness of the nature and extent of such evidence.

/s/ KPMG LLP

We have served as the Company's auditor since 1988.

Chicago, Illinois
February 28, 2023

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Jones Lang LaSalle Incorporated:

Opinion on Internal Control Over Financial Reporting

We have audited Jones Lang LaSalle Incorporated and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of comprehensive income, changes in equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes (collectively, the consolidated financial statements), and our report dated February 28, 2023 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible 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 an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

/s/ KPMG LLP

Chicago, Illinois
February 28, 2023

JONES LANG LASALLE INCORPORATED
CONSOLIDATED BALANCE SHEETS

(in millions, except share and per share data)	December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 519.3	593.7
Trade receivables, net of allowance of \$66.7 and \$67.6	2,148.8	2,004.1
Notes and other receivables	469.5	389.3
Reimbursable receivables	2,005.7	1,734.5
Warehouse receivables	463.2	822.3
Short-term contract assets, net of allowance of \$1.9 and \$2.5	359.7	343.1
Prepaid and other	603.5	500.7
Total current assets	6,569.7	6,387.7
Property and equipment, net of accumulated depreciation of \$960.5 and \$909.1	582.9	740.0
Operating lease right-of-use assets	776.3	723.4
Goodwill	4,528.0	4,611.6
Identified intangibles, net of accumulated amortization of \$445.8 and \$340.1	858.5	887.0
Investments, including \$794.9 and \$639.6 at fair value	873.8	745.7
Long-term receivables	331.1	316.4
Deferred tax assets, net	379.6	330.8
Deferred compensation plan	517.9	528.8
Other	175.9	233.6
Total assets	\$ 15,593.7	15,505.0
Liabilities and Equity		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 1,236.8	1,262.8
Reimbursable payables	1,579.5	1,350.0
Accrued compensation and benefits	1,749.8	2,029.5
Short-term borrowings	164.2	147.9
Current maturities of long-term debt, net of debt issuance costs of \$— and \$0.3	—	274.7
Short-term contract liabilities and deferred income	216.5	208.2
Short-term acquisition-related obligations	23.1	45.8
Warehouse facilities	455.3	795.7
Short-term operating lease liabilities	156.4	153.8
Other	330.5	218.1
Total current liabilities	5,912.1	6,486.5
Credit facility, net of debt issuance costs of \$11.2 and \$11.8	1,213.8	138.2
Long-term debt, net of debt issuance costs of \$1.2 and \$1.4	372.8	395.6
Deferred tax liabilities, net	194.0	179.7
Deferred compensation	492.4	525.4
Long-term acquisition-related obligations	76.3	66.3
Long-term operating lease liabilities	775.8	714.4
Other	407.0	577.7
Total liabilities	9,444.2	9,083.8
Redeemable noncontrolling interest	7.0	7.8
Company shareholders' equity:		
Common stock, \$0.01 par value per share, 100,000,000 shares authorized; 52,085,968 and 52,076,800 shares issued; 47,507,758 and 50,024,139 outstanding	0.5	0.5
Additional paid-in capital	2,022.6	2,053.7
Retained earnings	5,590.4	4,937.6
Treasury stock, at cost, 4,578,210 and 2,052,661 shares	(934.6)	(406.3)
Shares held in trust	(9.8)	(5.2)
Accumulated other comprehensive loss	(648.2)	(395.4)
Total Company shareholders' equity	6,020.9	6,184.9
Noncontrolling interest	121.6	228.5
Total equity	6,142.5	6,413.4
Total liabilities, redeemable noncontrolling interest and equity	\$ 15,593.7	15,505.0

See accompanying notes to Consolidated Financial Statements.

JONES LANG LASALLE INCORPORATED
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Year Ended December 31,

(in millions, except share and per share data)	2022	2021	2020
Revenue	\$ 20,862.1	19,367.0	16,589.9
Operating expenses:			
Compensation and benefits	\$ 10,010.8	9,535.5	7,708.1
Operating, administrative and other	9,650.3	8,485.8	7,953.9
Depreciation and amortization	228.1	217.5	226.4
Restructuring and acquisition charges	104.8	84.7	142.4
Total operating expenses	\$ 19,994.0	18,323.5	16,030.8
Operating income	\$ 868.1	1,043.5	559.1
Interest expense, net of interest income	75.2	40.1	52.8
Equity earnings	51.0	209.4	8.0
Other income	150.3	10.8	15.3
Income before income taxes and noncontrolling interest	994.2	1,223.6	529.6
Provision for income taxes	200.8	264.3	106.9
Net income	793.4	959.3	422.7
Net income (loss) attributable to noncontrolling interest	138.9	(2.3)	20.2
Net income attributable to common shareholders	\$ 654.5	961.6	402.5
Basic earnings per common share	\$ 13.51	18.89	7.79
Basic weighted average shares outstanding (in 000's)	48,453	50,917	51,683
Diluted earnings per common share	\$ 13.27	18.47	7.70
Diluted weighted average shares outstanding (in 000's)	49,341	52,071	52,282
Net income attributable to common shareholders	\$ 654.5	961.6	402.5
Change in pension liabilities, net of tax	(21.5)	38.5	(9.2)
Foreign currency translation adjustments	(231.3)	(56.7)	59.8
Comprehensive income attributable to common shareholders	\$ 401.7	943.4	453.1

See accompanying notes to Consolidated Financial Statements.

JONES LANG LASALLE INCORPORATED
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2022, 2021 AND 2020

(in millions, except share and per share data)	Company Shareholders' Equity								Total Equity
	Common Stock		Additional Paid-In Capital	Retained Earnings	Shares Held in Trust	Treasury Stock	AOCI ⁽¹⁾	NCI ⁽²⁾	
	Shares Outstanding	Amount							
December 31, 2019	51,549,654	\$ 0.5	1,962.8	3,588.3	(5.7)	—	(427.8)	86.6	\$ 5,204.7
Net income ⁽³⁾	—	—	—	402.5	—	—	—	20.5	423.0
Shares issued under stock compensation programs	632,638	—	0.2	—	—	3.9	—	—	4.1
Shares repurchased for payment of taxes on stock awards	(179,938)	—	(23.5)	—	—	—	—	—	(23.5)
Amortization of stock-based compensation	—	—	83.8	—	—	—	—	—	83.8
Shares held in trust	—	—	—	—	0.1	—	—	—	0.1
Cumulative effect from adoption of new accounting for credit losses	—	—	—	(14.9)	—	—	—	—	(14.9)
Repurchase of common stock	(896,937)	—	—	—	—	(100.0)	—	—	(100.0)
Change in pension liabilities, net of tax	—	—	—	—	—	—	(9.2)	—	(9.2)
Foreign currency translation adjustments	—	—	—	—	—	—	59.8	—	59.8
Net decrease in amounts attributable to noncontrolling interest	—	—	—	—	—	—	—	(17.9)	(17.9)
December 31, 2020	51,105,417	\$ 0.5	2,023.3	3,975.9	(5.6)	(96.1)	(377.2)	89.2	\$ 5,610.0
Net income ⁽³⁾	—	—	—	961.6	—	—	—	(2.2)	959.4
Shares issued under stock-based compensation programs	558,573	—	(37.7)	—	—	57.3	—	—	19.6
Shares repurchased for payment of taxes on stock-based compensation	(188,131)	—	(28.3)	—	—	(24.2)	—	—	(52.5)
Amortization of stock-based compensation	—	—	96.4	—	—	—	—	—	96.4
Shares held in trust	—	—	—	—	0.4	—	—	—	0.4
Dividends from vested historic award	—	—	—	0.1	—	—	—	—	0.1
Repurchase of common stock	(1,451,720)	—	—	—	—	(343.3)	—	—	(343.3)
Change in pension liabilities, net of tax	—	—	—	—	—	—	38.5	—	38.5
Foreign currency translation adjustments	—	—	—	—	—	—	(56.7)	—	(56.7)
Net increase in amounts attributable to noncontrolling interest	—	—	—	—	—	—	—	141.5	141.5
December 31, 2021	50,024,139	\$ 0.5	2,053.7	4,937.6	(5.2)	(406.3)	(395.4)	228.5	\$ 6,413.4
Net income ⁽³⁾	—	—	—	654.5	—	—	—	139.2	793.7
Shares issued under stock-based compensation programs	616,702	—	(73.3)	(1.7)	—	116.5	—	—	41.5
Shares repurchased for payment of taxes on stock-based compensation	(210,617)	—	(43.6)	—	—	(43.6)	—	—	(87.2)
Amortization of stock-based compensation	—	—	85.8	—	—	—	—	—	85.8
Shares held in trust	—	—	—	—	(4.6)	—	—	—	(4.6)
Repurchase of common stock	(2,922,466)	—	—	—	—	(601.2)	—	—	(601.2)
Change in pension liabilities, net of tax	—	—	—	—	—	—	(21.5)	—	(21.5)
Foreign currency translation adjustments	—	—	—	—	—	—	(231.3)	—	(231.3)
Deconsolidation of variable interest entity	—	—	—	—	—	—	—	(113.9)	(113.9)
Net decrease in amounts attributable to noncontrolling interest	—	—	—	—	—	—	—	(132.2)	(132.2)
December 31, 2022	47,507,758	\$ 0.5	2,022.6	5,590.4	(9.8)	(934.6)	(648.2)	121.6	\$ 6,142.5

(1) AOCI: Accumulated other comprehensive income (loss)

(2) NCI: Noncontrolling interest

(3) Excludes net (loss) income attributable to redeemable noncontrolling interest of \$(0.3) million, \$(0.1) million and \$(0.3) million for the years ended December 31, 2022, 2021 and 2020, respectively.

See accompanying notes to Consolidated Financial Statements.

JONES LANG LASALLE INCORPORATED
CONSOLIDATED STATEMENTS OF CASH FLOWS

Year Ended December 31,

(in millions)	2022	2021	2020
Cash flows from operating activities:			
Net income	\$ 793.4	959.3	422.7
Reconciliation of net income to net cash provided by operating activities:			
Depreciation and amortization	228.1	217.5	226.4
Equity earnings	(51.0)	(209.4)	(8.0)
Net (gain) loss on the disposition of assets	(133.9)	(10.9)	1.2
Distributions of earnings from investments	21.2	28.6	11.7
Provision for loss on receivables and other assets	27.0	12.1	45.6
Amortization of stock-based compensation	85.8	96.4	83.8
Net non-cash mortgage servicing rights and mortgage banking derivative activity	(11.0)	(59.3)	(66.6)
Accretion of interest and amortization of debt issuance costs	4.8	4.4	5.1
Other, net	5.9	(14.0)	(27.1)
Change in:			
Receivables	(319.1)	(402.0)	414.3
Reimbursable receivables and reimbursable payables	(52.2)	(82.4)	122.2
Prepaid expenses and other assets	50.8	(232.1)	(32.9)
Deferred tax assets, net	(40.5)	(0.4)	(37.1)
Accounts payable and accrued liabilities	(115.2)	(11.6)	177.1
Accrued compensation	(294.2)	676.2	(223.7)
Net cash provided by operating activities	199.9	972.4	1,114.7
Cash flows from investing activities:			
Net capital additions – property and equipment	(205.8)	(175.9)	(149.4)
Net investment asset activity (less than wholly-owned)	134.8	(70.9)	1.0
Business acquisitions, net of cash acquired	(5.7)	(416.8)	—
Capital contributions to investments	(167.3)	(181.1)	(80.3)
Distributions of capital from investments	24.4	74.0	41.5
Other, net	(23.5)	(35.1)	16.6
Net cash used in investing activities	(243.1)	(805.8)	(170.6)
Cash flows from financing activities:			
Proceeds from borrowings under credit facility	7,560.0	5,094.0	5,217.0
Repayments of borrowings under credit facility	(6,485.0)	(4,944.0)	(5,742.0)
Repayments of senior notes	(275.0)	—	—
Net proceeds from (repayments of) short-term borrowings	20.1	91.8	(64.3)
Payments of deferred business acquisition obligations and earn-outs	(12.6)	(63.7)	(44.4)
Shares repurchased for payment of employee taxes on stock awards	(87.2)	(52.5)	(23.5)
Repurchase of common stock	(601.2)	(343.3)	(100.0)
Deconsolidation of variable interest entity	(20.4)	—	—
Noncontrolling interest (distributions) contributions, net	(142.7)	19.0	(0.9)
Other, net	30.9	54.9	(13.1)
Net cash used in financing activities	(13.1)	(143.8)	(771.2)
Effect of currency exchange rate changes on cash, cash equivalents and restricted cash	(39.3)	(21.0)	14.8
Net change in cash, cash equivalents and restricted cash	(95.6)	1.8	187.7
Cash, cash equivalents and restricted cash, beginning of the year	841.6	839.8	652.1
Cash, cash equivalents and restricted cash, end of the year	\$ 746.0	841.6	839.8
Supplemental disclosure of cash flow information:			
Restricted cash, beginning of the year	\$ 247.9	265.5	200.2
Restricted cash, end of the year	226.7	247.9	265.5
Cash paid during the year for:			
Interest	\$ 74.3	38.8	50.2
Income taxes, net of refunds	321.3	262.5	138.5
Operating leases	181.6	196.7	191.4
Non-cash activities:			
Business acquisitions (including contingent consideration)	\$ 5.3	68.6	—
Deferred business acquisition obligations	3.1	10.0	—
Non-cash consideration received for disposition	15.8	23.9	—

See accompanying notes to Consolidated Financial Statements.

JONES LANG LASALLE INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. ORGANIZATION

Jones Lang LaSalle Incorporated ("Jones Lang LaSalle," which we may refer to as "JLL," "we," "us," "our," or the "Company") was incorporated in 1997. We have corporate offices worldwide and over 103,000 employees, including approximately 45,400 employees whose costs are reimbursed by our clients. We provide comprehensive integrated real estate and investment management expertise on a local, regional and global level to owner, occupier and investor clients. We are an industry leader in property and facility management services, with a managed portfolio of approximately 4.6 billion square feet worldwide as of December 31, 2022. LaSalle Investment Management ("LaSalle") is one of the world's largest and most diversified real estate investment management firms, with \$79.1 billion of assets under management (unaudited) as of December 31, 2022.

We work for a broad range of clients representing a wide variety of industries in markets throughout the world. Our clients vary greatly in size and include for-profit and not-for-profit entities of all kinds, public-private partnerships and governmental (public sector) entities. We provide real estate investment management services on a global basis for both public and private assets through LaSalle. Our integrated global business model, industry-leading research capabilities, client relationship management focus, consistent worldwide service delivery and strong brand are attributes that enhance our services.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

Our Consolidated Financial Statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") and include the accounts of JLL and its majority-owned and controlled subsidiaries. Intercompany balances and transactions have been eliminated. Investments over which we exercise significant influence, but do not control, are accounted for either at fair value or under the equity method.

When applying principles of consolidation, we begin by determining whether an investee entity is a variable interest entity ("VIE") or a voting interest entity. U.S. GAAP draws a distinction between voting interest entities, which are embodied by common and traditional corporate and certain partnership structures, and VIEs, broadly defined as entities for which control is achieved through means other than voting rights. For voting interest entities, the interest holder with control through majority ownership and majority voting rights consolidates the entity. For VIEs, determination of the "primary beneficiary" dictates the accounting treatment. We identify the primary beneficiary of a VIE as the enterprise having both (1) the power to direct the activities of the VIE that most significantly impact the entity's economic performance and (2) the obligation to absorb losses or receive benefits of the VIE that could potentially be significant to the VIE. We perform the primary beneficiary analysis as of the inception of our investment and upon the occurrence of a reconsideration event. When we determine we are the primary beneficiary of a VIE, we consolidate the VIE; when we determine we are not the primary beneficiary of the VIE, we account for our investment in the VIE at fair value or under the equity method, based upon an election made at the time of investment.

Our determination of the appropriate accounting method to apply for unconsolidated investments is based on the level of influence we have in the underlying entity. When we have an asset advisory contract with a real estate limited partnership in which we also hold an ownership interest, the combination of our limited partner interest and the advisory agreement generally provides us with significant influence over such real estate limited partnership. Accordingly, we account for such investments either at fair value or under the equity method. We eliminate transactions with such subsidiaries to the extent of our ownership in such subsidiaries.

For less-than-wholly-owned consolidated subsidiaries, noncontrolling interest is the portion of equity not attributable, directly or indirectly, to JLL. We evaluate whether noncontrolling interests possess any redemption features outside of our control. If such features exist, the noncontrolling interests are presented outside of permanent equity on the Consolidated Balance Sheets within Redeemable noncontrolling interest. Redeemable noncontrolling interests are adjusted to the greater of their fair value or carrying value as of each balance sheet date through a charge to Additional paid-in capital, if necessary. When noncontrolling interests have no redemption features outside of our control, noncontrolling interests are presented as a component of permanent equity on the Consolidated Balance Sheets. We report revenues, expenses and net income (loss) from less-than-wholly-owned consolidated subsidiaries at the consolidated amounts, including both the amounts attributable

to the Company and noncontrolling interests; the income or loss attributable to the noncontrolling interest holders is reflected in Net income attributable to noncontrolling interest on the Consolidated Statements of Comprehensive Income.

Changes in amounts attributable to non-redeemable noncontrolling interests are reflected in the Consolidated Statements of Changes in Equity. Changes in amounts attributable to redeemable noncontrolling interests are presented in the following table.

(in millions)

Redeemable noncontrolling interests as of December 31, 2019	\$	8.6
Net loss		(0.3)
Distribution to redeemable noncontrolling interest		(0.5)
Redeemable noncontrolling interests as of December 31, 2020		7.8
Net loss		(0.1)
Other		0.1
Redeemable noncontrolling interests as December 31, 2021		7.8
Net loss		(0.3)
Distribution to redeemable noncontrolling interest		(0.2)
Other		(0.3)
Redeemable noncontrolling interests as of December 31, 2022	\$	7.0

Use of Estimates

The preparation of the Consolidated Financial Statements in conformity with U.S. GAAP requires us to make estimates and assumptions about future events that affect reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and reported amounts of revenue and expenses during each reporting period. Such estimates include the value and allocation of purchase consideration, valuation of accounts receivable, Reimbursable receivables, Warehouse receivables, Investments, Goodwill, intangible assets, derivative financial instruments, other long-lived assets, earn-out liabilities, legal contingencies, assumptions used in the calculation of income taxes, incentive compensation, self-insurance program liabilities, and retirement and other post-employment benefits, among others.

These estimates and assumptions are based on management's best estimate and judgment. We evaluate these estimates and assumptions on an ongoing basis using historical experience and other factors, including the current economic environment, which we believe to be reasonable under the circumstances. We adjust such estimates and assumptions when facts and circumstances dictate. Market factors, such as illiquid credit markets, volatile equity markets and foreign currency exchange rate fluctuations can increase the uncertainty in such estimates and assumptions. Because future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Changes in those estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods. Although actual amounts may differ from such estimated amounts, we believe such differences are not likely to be material.

Revenue Recognition

We earn revenue from the following services (segments are bolded).

- **Markets Advisory**
 - Leasing
 - Property Management
 - Advisory, Consulting and Other
- **Capital Markets**
 - Investment Sales, Debt/Equity Advisory and Other
 - Loan Servicing
 - Valuation Advisory
- **Work Dynamics**
 - Workplace Management
 - Project Management
 - Portfolio Services and Other
- **JLL Technologies**
- **LaSalle**

Markets Advisory

Leasing

Leasing revenue is earned from brokerage commissions as we represent tenants and/or landlords in connection with real estate leases. Our performance obligation is to facilitate the execution of a lease agreement, which is satisfied at a point in time, upon lease execution. Generally, we are either entitled to the full consideration upon lease execution or in part upon lease execution with the remainder upon the occurrence of a future event outside of our control (e.g., tenant occupancy, lease commencement, or rent commencement). The majority of the events that preclude our entitlement to the full consideration upon lease execution are considered to be “normal course of business” and, therefore, do not result in a constraint upon the recognition of revenue. In the infrequent instance our fee entitlement in a contract with a customer is predicated on the occurrence of a future event(s) uncertain of occurring, we constrain the recognition of revenue until the uncertainty is resolved or the future event occurs. Generally, less than 5% of our Leasing revenue recognized in a period had previously been constrained.

Property Management

Property Management provides on-site day-to-day real estate management services for owners of office, industrial, retail, multifamily residential and various other types of properties, representing a series of daily performance obligations delivered over time. Pricing is generally in the form of a monthly management fee based upon property-level cash receipts, square footage under management or some other variable metric.

Although we are principal in limited situations, we generally act as agent on behalf of our Property Management clients in relation to third-party vendors and subcontractors engaged to deliver operational services to our clients' properties. In these situations, we arrange, but do not control, the services provided by third party vendors and subcontractors prior to the transfer of the services to the client. As a result, the third-party costs incurred on behalf of clients, along with the corresponding revenue, are presented net on our Consolidated Statements of Comprehensive Income.

Advisory, Consulting and Other

Advisory, Consulting and Other includes a variety of different service offerings, whereby our performance obligation is to provide services as specified in the contract. Occasionally, our entitlement to consideration is predicated on the occurrence of an event such as the delivery of a report to the client. However, except for event-driven point-in-time transactions, the majority of services provided within this service line are delivered over time due to the continuous transfer of control to our clients.

Capital Markets

Investment Sales, Debt/Equity Advisory and Other

We provide brokerage and other services for capital transactions, such as real estate sales or loan originations and refinancing. Our performance obligation is to facilitate the execution of capital transactions, and we are generally entitled to the full consideration at the point in time upon which our performance obligation is satisfied, at which time we recognize revenue. In addition, revenue related to mortgage servicing rights ("MSR" or "MSRs") and loan origination fees are reported within Investment Sales, Debt/Equity Advisory and Other.

Loan Servicing

We service substantially all the loans we originate and sell, and service loans we did not originate but subsequently acquire the rights to service. We obtain a periodic fee for each loan we service based on a proportion of the cash collections.

Capital Markets revenue excluded from the scope of Accounting Standards Codification Topic 606, Revenue from Contracts with Customers ("ASC Topic 606")

Our mortgage banking and servicing operations, comprised of (i) all Loan Servicing revenue and (ii) activities related to MSRs and loan origination fees (included in Investment Sales, Debt/Equity Advisory and Other), are not considered revenue from contracts with customers, and accordingly are excluded from the scope of ASC Topic 606. Such out-of-scope revenue is presented below.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Revenue excluded from scope of ASC Topic 606	\$ 293.6	337.1	305.3

Valuation Advisory

Valuation Advisory service offerings include (but are not limited to) asset appraisal, business valuation, property tax advisory, complex litigation, and environmental property consulting. Our performance obligation is to provide services as specified in the contract and our pricing is negotiated based on the scale and complexity of each assignment. Typically, our entitlement to consideration is predicated on the occurrence of an event such as the delivery of an appraisal or report to the client.

Work Dynamics

Workplace Management

Workplace Management, previously referred to as Integrated Facilities Management (IFM), provides comprehensive, on-site day-to-day real estate management services to corporations and institutions across a broad range of industries that outsource the management of the real estate they occupy, representing a series of daily performance obligations delivered over time. Pricing generally includes a management fee and, in many instances, an incentive fee or other form of variable consideration.

Although we may act as agent on behalf of our clients with respect to certain mandates, we generally act as principal for our Workplace Management contracts with respect to third-party vendors and subcontractors engaged to deliver operational services to our clients' facilities. In these situations, we control the services provided by such third-party vendors and subcontractors prior to the transfer of the services to the client. As a result, the third-party costs incurred on behalf of our clients, along with the corresponding reimbursement revenue, are presented gross on our Consolidated Statements of Comprehensive Income.

Project Management

Project Management, previously referred to as Project & Development Services, provides construction-related services, primarily short-term in nature, ranging from development and design to general contracting and project management for owners and occupiers of real estate. Depending on the terms of our engagement, our performance obligation is either to arrange for the completion of a project or to assume responsibility for completing a project on behalf of a client. Our obligations to clients are satisfied over time due to the continuous transfer of control of the underlying asset. Therefore, we recognize revenue over time, generally using input measures (e.g., to-date costs incurred relative to total estimated costs at completion).

Typically, we are entitled to consideration at distinct milestones over the term of an engagement. For certain contracts where we assume responsibility for completing a project, we control the services provided by third-party vendors and subcontractors prior to transfer of the assets to the client. In these situations, the third-party costs incurred on behalf of clients, along with the associated reimbursement revenue, are presented gross on our Consolidated Statements of Comprehensive Income. In contrast, where we act as agent on behalf of clients, third-party costs incurred and the associated revenue are presented net on our Consolidated Statements of Comprehensive Income.

Portfolio Services and Other

Portfolio Services and Other includes a variety of different service offerings, including advising clients on how to optimize their workplace strategies and occupancy planning efforts, and overall portfolio strategy management and administration for our clients. Our performance obligation is to provide services as specified in the contract. For event-driven point-in-time transactions, we record revenue when our performance obligation is complete, such as the delivery of a report to the client, whereas revenue is recorded over time for services with a continuous transfer of control to our clients.

JLL Technologies

JLL Technologies offers multiple cloud-based software solutions that generate value for investors and businesses by enabling higher-quality decision-making through improved data and analytics. We recognize cloud-based software revenue over time commensurate with the length and terms of the contract. In addition, we offer professional services such as program and project management, implementation and support, managed services, and advisory services. We recognize professional services revenue at the time our performance obligation is satisfied.

LaSalle

LaSalle provides real estate investment management services to clients and generally earns consideration in the form of advisory fees, transaction fees and incentive fees. Typically, our performance obligation is to manage clients' capital for a specified period of time and is delivered as a series of daily performance obligations over time. Revenue recognition for transaction and incentive fees is generally constrained until all contingencies have cleared due to the possibility of a significant reversal until completion of the events necessary to realize the associated consideration. Substantially all incentive fees recognized as revenue were previously constrained.

Contract Costs

Expenses, primarily employee commissions, incurred on leasing and capital markets transactions represent substantially all our incremental costs to obtain revenue contracts. We apply the applicable practical expedient offered by ASC Topic 606 when the amortization period is one year or less and, therefore, recognize these costs as an operating expense as they are incurred.

We also incur costs to fulfill revenue contracts, primarily related to transition costs incurred prior to delivering Property Management and Workplace Management services. These costs are not expensed as incurred but are deferred and amortized as an operating expense over the expected life of the contract in accordance with the transfer of related services. These deferred costs are assessed periodically for impairment.

Contract Assets and Liabilities

Contract assets include amounts recognized as revenue for which we are not yet entitled to payment for reasons other than the passage of time, but that do not constrain revenue recognition. We include Contract assets in our reserving process and assess the risk of loss similar to our methodology for Trade receivables, since Contract assets are reclassified to Trade receivables when we become entitled to payment. Accordingly, a reserve is applied upon recognition of the contract asset.

Contract liabilities include advance payments we have received which relate to performance obligations we have not yet satisfied. Our contract assets, net of allowance, are included in Short-term contract assets and Other assets and our contract liabilities are included in Short-term contract liabilities and deferred income on our Consolidated Balance Sheets. The majority of contract liabilities are recognized as revenue within 90 days.

Such contract assets and liabilities are presented below.

(in millions)	December 31, 2022	December 31, 2021
Contract assets, gross	\$ 447.0	438.7
Contract asset allowance	(2.3)	(2.8)
Contract assets, net	\$ 444.7	435.9
Contract liabilities	\$ 151.4	128.9

Deferred Income

Deferred income includes payments received from customers for which we have satisfied our performance obligations but are not yet able to recognize the related revenue because of contractual requirements.

Remaining Performance Obligations

Remaining performance obligations represent the aggregate transaction price for contracts where our performance obligations have not yet been satisfied. As of December 31, 2022, the aggregate amount of transaction price allocated to remaining performance obligations represented less than 5% of our total revenue. In accordance with ASC Topic 606, excluded from the aforementioned remaining performance obligations are (i) amounts attributable to contracts expected to be completed within 12 months and (ii) variable consideration for services performed as a series of daily performance obligations, such as facilities management, property management, and LaSalle contracts. Contracts within these businesses represent a significant portion of our contracts with customers not expected to be completed within 12 months.

Cash and Cash Equivalents

We consider all highly-liquid investments purchased with maturities of less than three months to be cash equivalents. The carrying amount of cash equivalents approximates fair value due to the short-term maturity of these investments.

Financing Receivables

We account for Trade receivables, Notes and other receivables, Long-term receivables, Reimbursable receivables, and Warehouse receivables as financing receivables.

Trade Receivables

Pursuant to contractual arrangements, Trade receivables, net of allowances include unbilled amounts of \$593.1 million and \$600.6 million as of December 31, 2022 and 2021, respectively.

We estimate the allowance necessary to provide for uncollectible accounts receivable. The estimate includes specific amounts for which payment has become unlikely. We also base this estimate on historical experience combined with a review of current developments and client credit quality. The process by which we calculate the allowance begins with the individual business units where specific accounts for which collectability is uncertain are identified and reserved as part of an overall reserve that is formulaic and driven by the age profile of the receivables and our historical experience. We then review these allowances on a quarterly basis to ensure they are appropriate. After all collection efforts have been exhausted by management, the outstanding balance considered not collectible is written off against the allowance.

The following table details the changes in the allowance for uncollectible receivables.

(in millions)	2022	2021	2020
Allowance as of January 1,⁽¹⁾	\$ 67.6	66.5	71.7
Charged to income	25.0	25.5	24.3
Write-off of uncollectible receivables	(23.2)	(22.1)	(29.5)
Impact of exchange rate movements and other	(2.7)	(2.3)	—
Allowance as of December 31,	\$ 66.7	67.6	66.5

(1) January 1, 2020 includes \$3.6 million adjustment due to the adoption of ASC Topic 326.

Notes and Other Receivables and Long-Term Receivables

We make ongoing assessments of the collectability of outstanding Notes and other receivables and Long-term receivables, considering both objective and subjective factors such as the aging profile of outstanding balances, the contractual terms of repayment, and credit quality. Aspects of credit quality considered in our assessments of collectability include historical experience, current and expected economic conditions, and our broader business relationship with the obligor. We record an allowance against the outstanding balance when our assessments determine payment has become unlikely. After all collection efforts have been exhausted by management, the outstanding balance is written off against the reserve. Historically, credit quality deterioration to the point of impairment or non-performance in our Notes and other receivables and Long-term receivables has been limited and has not had a material impact on the Consolidated Financial Statements.

Reimbursable Receivables

We recognize Reimbursable receivables for costs incurred on behalf of clients, primarily while performing Property & Facility Management services. These costs include direct reimbursements, primarily payroll and third-party vendor and subcontractor costs. We record an allowance based on specific identification of an uncollectible reimbursable receivable, considering current and future economic conditions as well as client credit quality. Historically, we have not experienced any material collection issues and, as such, have not applied a formulaic reserve to these receivables. Reimbursable receivables relate to our Reimbursable payables, which are typically satisfied on a pay-when-paid basis.

Warehouse Receivables

We classify Warehouse receivables as held-for-sale as they represent originated mortgage loans for which we have simultaneously executed commitments to sell to a third-party investor, primarily the Federal Home Loan Mortgage Corporation (*Freddie Mac*), the Federal National Mortgage Association (*Fannie Mae*), and the Government National Mortgage Association (*Ginnie Mae*). These loans (also referred to as "Warehouse receivables") are funded directly to borrowers by our warehouse facilities and are generally repaid within a 45-day period after origination when the third-party investor buys the loan(s); upon surrender of control over each loan, we account for the transfer as a sale. Warehouse receivables are measured and reported at fair value in accordance with our entity-wide election of the fair value option. As such, increases or decreases in the fair value of loans are recognized as Revenue on the Consolidated Statements of Comprehensive Income. Historically, we have not experienced credit quality deterioration or uncollectible balances with respect to our Warehouse receivables.

We generally retain certain servicing rights upon sale of the mortgage loan (refer to the Mortgage Servicing Rights section below). We typically retain no exposure for credit losses on loans subsequent to sale, except for loans under Fannie Mae's Delegated Underwriting and Servicing ("DUS") program. See the following section, Financial Guarantees, as well as Note 13, Commitments and Contingencies for additional information on the risk of loss retained related to DUS program loans.

Contractually specified servicing fees related to sold warehouse receivables were \$119.0 million, \$101.8 million and \$80.0 million for the years ended December 31, 2022, 2021, and 2020, respectively, and are included in Revenue on the Consolidated Statements of Comprehensive Income.

Financial Guarantees

Certain loans we originate and sell under the Fannie Mae DUS program retain a percentage of the risk of loss. This loss-sharing aspect of the program represents an off-balance sheet credit exposure, and we have established a contingent reserve ("loan loss guarantee reserve") for this risk in accordance with ASC Topic 326. To estimate the reserve, we use a model that analyzes historical losses, current and expected economic conditions, and reasonable and supportable forecasts. The model also considers specific details of the underlying property used as collateral, such as occupancy and financial performance. The loan loss guarantee reserve is calculated on an individual loan level. As of December 31, 2022 and 2021, the loan loss guarantee reserve was \$24.8 million and \$22.9 million, respectively, and was included within Other liabilities on the Consolidated Balance Sheets.

For all DUS program loans with loss-sharing obligations, we record a non-contingent liability equal to the estimated fair value of the guarantee obligations undertaken upon sale of the loan, which reduces our gain on sale of the loan. Subsequently, this liability is amortized over the estimated life of the loan and recognized as Revenue on the Consolidated Statements of Comprehensive Income. The loss-sharing guarantee obligation (in accordance with ASC Topic 460, *Guarantees*) is separate from the loan loss guarantee reserve discussed above. As of December 31, 2022 and 2021, loss-sharing guarantee obligations were \$29.0 million and \$24.6 million, respectively, and was included in Other liabilities on the Consolidated Balance Sheets.

See Note 13, Commitments and Contingencies, for further information on the DUS program.

Mortgage Servicing Rights

We generally retain certain servicing rights in connection with the origination and sale of Warehouse receivables. We initially record MSR's based on the fair value of these rights on the date the loans are sold, which could result in net gains which we recognize as Revenue on the Consolidated Statements of Comprehensive Income. As of December 31, 2022 and 2021, we had \$505.1 million and \$478.7 million, respectively, of MSR's carried at the lower of amortized cost or fair value in Identified intangibles on the Consolidated Balance Sheets.

We amortize servicing rights over the estimated period net servicing income is projected to be received. In addition, we evaluate MSR intangible assets for impairment on a quarterly basis, or more frequently if circumstances or events indicate a change in fair value. Other than write-offs due to prepayments of sold Warehouse receivables for which we retained the servicing rights, there have been no significant instances of impairment during the three-year period ended December 31, 2022. However, an increase in loan prepayment activity or deterioration in the credit quality of borrowers could result in a decrease to our MSR balance. MSR's do not actively trade in an open market with readily available observable prices; therefore, if necessary, the fair value of these rights are determined in part based on certain assumptions and judgments that are unobservable within the fair value hierarchy, including the estimation of the present value of future cash flows to be realized from servicing the underlying mortgages. The estimated fair value of MSR's was \$695.3 million and \$561.5 million as of December 31, 2022 and 2021, respectively.

See Note 4, Business Combinations, Goodwill and Other Intangible Assets for additional information on MSR's.

Restricted Cash

Restricted cash primarily consists of cash amounts set aside to satisfy legal or contractual requirements arising in the normal course of business. We are restricted in our ability to withdraw these funds other than for their specified use. Restricted cash was included in Prepaid and other current assets on the Consolidated Balance Sheets.

Property and Equipment

We record property and equipment at cost and depreciate these assets over their relevant useful lives. We capitalize certain direct costs relating to internal-use software when incurred during the development phase.

We evaluate property and equipment for impairment whenever events or circumstances indicate the carrying value of an asset group may not be recoverable. We record an impairment loss to the extent the carrying value exceeds the estimated fair value. We did not recognize any significant impairment losses related to property and equipment during the three years ended December 31, 2022.

We calculate depreciation on property and equipment for financial reporting purposes using the straight-line method based on the estimated useful lives of our assets. Depreciation expense related to property and equipment for the years ended December 31, 2022, 2021 and 2020 was \$157.7 million, \$164.2 million, and \$169.3 million, respectively. The following table shows the gross value of major asset categories and the standard depreciable lives, as of December 31, 2022, for each of these asset categories.

(\$ in millions)	December 31,		Depreciable Life
	2022	2021	
Furniture, fixtures and equipment	\$ 138.7	132.5	3 to 13 years
Computer equipment and software	932.2	886.9	2 to 7 years
Leasehold improvements	431.2	396.0	1 to 15 years
Other ⁽¹⁾	41.3	233.6	2 to 30 years
Total	1,543.4	1,649.0	
Less: Accumulated depreciation	960.5	909.1	
Net property and equipment	\$ 582.9	740.0	

(1) Other includes certain assets, such as land, which are not depreciated.

Business Combinations, Goodwill and Other Intangible Assets

We have historically grown, in part, through a series of acquisitions. Consistent with the services nature of the majority of businesses we have acquired, we have recognized significant goodwill and intangible assets resulting from these acquisitions. Intangible assets are initially recorded at their respective acquisition date fair values and amortized on a straight-line basis over their estimated useful lives. They primarily represent customer relationships, management contracts and customer backlogs acquired as part of our acquisitions.

In conjunction with our new organizational structure described more fully in Note 1, Organization, we reassessed our reporting units as of January 1, 2022, and reassigned goodwill to reflect our new segment structure using a relative fair value allocation approach. We now define our reporting units as our five global business segments, (i) Markets Advisory, (ii) Capital Markets, (iii) Work Dynamics, (iv) JLL Technologies and (v) LaSalle. This change did not impact our LaSalle reporting unit and, therefore, its goodwill balance was excluded from this exercise and remained unchanged. Under the relative fair value allocation approach, the fair value of each impacted reporting unit was determined using a combination of the income approach and the market approach, and this resulting relative fair value was used to reassign the balance of goodwill.

We considered the change to our reportable segments a triggering event for the impacted reporting units requiring the testing of goodwill for impairment as of January 1, 2022. We performed a quantitative test relying on the discounted cash flow (“DCF”) method, an income approach, in determining the estimated fair value of our reporting units. Our DCF analysis relied on significant judgments and assumptions in determining the inputs, specifically, forecasted revenue growth, forecasted profitability margin, and the discount rate used to present value the estimated future cash flows. Our analysis indicated that no impairment existed as the estimated fair value of each impacted reporting unit exceeded its respective carrying value.

We evaluate goodwill for impairment annually on July 1st of each year or when a triggering event occurs. In our annual goodwill impairment evaluation on July 1, 2022, we considered qualitative and quantitative factors and determined it is not more-likely-than-not that the fair value of all our reporting units are less than their carrying values. In performing our assessments of all reporting units, we primarily considered (i) macroeconomic and industry trends, (ii) our overall financial performance, and nature of the key drivers thereof, during the year at both the reporting unit and consolidated reporting levels, (iii) near and longer-term forecasts of operating income and cash flows generated by our reporting units in relation to the carrying values of the net assets of each reporting unit, and (iv) our market capitalization in relation to the aggregate carrying value of our net assets.

In addition to our annual impairment evaluation, we evaluated whether events or circumstances have occurred in the period subsequent to our annual impairment testing and determined it is not more-likely-than-not that the fair value of all our reporting units are less than their respective carrying values. It is possible our determination that goodwill for a reporting unit is not impaired could change in the future if current economic or other conditions deteriorate. We will continue to monitor the relationship between our market capitalization and carrying value, as well as the ability of our reporting units to deliver current and projected earnings and cash flows sufficient to support the carrying values of the net assets of their respective businesses.

We evaluate our Identified intangibles for impairment annually or more frequently if other events or circumstances indicate the carrying value may be impaired.

See Note 4, Business Combinations, Goodwill and Other Intangible Assets, for additional information on business combinations, goodwill and other intangible assets.

Investments

We invest in certain ventures that primarily own and operate commercial real estate on a global basis across a wide array of sectors including retail, residential and office. Historically, these investments have primarily been co-investments in funds our LaSalle business establishes in the ordinary course of business for its clients. These investments take the form of equity ownership interests generally ranging from less than 1% to 10% of the respective ventures and, based upon investment-specific objectives, have generally included five to nine-year investment periods. Typically, our investments are not redeemable until the earlier of the disposition of the underlying real estate investments or the end of the fund's life. When in place, such restrictions are a result of our role beyond that of a passive investor, which generally means an advisory or management responsibility on behalf of the other investors who are typically clients of our LaSalle business. We primarily account for these investments at fair value utilizing information provided by investees, however, as further discussed below, we report certain of our investments under the equity method.

In addition to our LaSalle investments, JLL Technologies has strategic investments in early to mid-stage proptech companies as well as property technology ("proptech") funds to improve our strategic position within the real estate technology landscape, including investments through the JLL Spark Global Ventures Funds. We generally account for these investments at fair value. The fair value of these investments was \$480.4 million and \$330.1 million as of December 31, 2022, and 2021, respectively.

For limited partnerships in which we are a general partner, the entities are generally well-capitalized and grant the limited partners substantive participating rights, such as the right to replace the general partner without cause, to dissolve or liquidate the partnership, to approve the sale or refinancing of the principal partnership assets, or to approve the acquisition of principal partnership assets. We account for such general partner interests at fair value or under the equity method.

For limited partnerships in which we are a limited partner, management has concluded we do not have a controlling interest in these limited partnerships. When we have an asset advisory contract with the limited partnership, the combination of our limited partner interest and the advisory agreement generally provides us with significant influence over the real estate limited partnership venture. Accordingly, we account for such investments at fair value or under the equity method.

See "Principles of Consolidation" above for additional discussion of the accounting for our co-investments.

For investments reported at fair value, we maintain an investment account that is increased or decreased each reporting period by the difference between the fair value of the investment and the carrying value as of the balance sheet date. These fair value adjustments are reflected as gains or losses on the Consolidated Statements of Comprehensive Income within Equity earnings. To the extent applicable, we estimate fair value of our investments using the net asset value ("NAV") per share (or its equivalent) our investees provide. For JLL Technologies investments in proptech companies, we primarily estimate the fair value based on the per-share pricing. Subsequent funding rounds or changes in the companies' business strategy/outlook are indicators of a change in fair value.

For investments accounted for under the equity method, we maintain an investment account that is (i) increased by contributions made and by our share of net income earned by the real estate ventures, and (ii) decreased by distributions received and by our share of net losses realized by the real estate ventures. Our share of each real estate venture's net income or loss, including gains and losses from capital transactions, is reflected on the Consolidated Statements of Comprehensive Income as Equity earnings. We evaluate our investments accounted for under the equity method for other-than-temporary

impairment on a quarterly basis, or as events or changes in circumstances warrant such an evaluation. Our evaluations consider the existence of impairment indicators in the underlying real estate assets that compose the majority of our investments. We base such evaluations, in regard to both the investment and the investment's underlying asset levels, on regular updates to future cash flow models, our share of co-investment cash flows, and factors such as operational performance, market conditions, major tenancy matters, legal and environmental concerns, and our ability and intent to hold each investment. If an investment is considered other-than-temporarily impaired, we record the excess of the carrying value over the estimated fair value as an impairment charge.

Impairment charges to write down the carrying value of the real estate assets underlying our investments are generally based on the result of discounted cash flow models that primarily rely upon unobservable inputs to determine fair value. We recognize our proportionate share of such impairment within Equity earnings on the Consolidated Statements of Comprehensive Income.

See Note 5, Investments and Note 9, Fair Value Measurements for additional information on Investments.

Stock-Based Compensation

Stock-based compensation in the form of restricted stock units ("RSUs") and performance stock units ("PSUs") is an important element of our compensation programs. We determine the fair value of RSUs, subject only to service requirements, based on the closing market price of our common stock on the grant date. PSUs are subject to service requirements and performance measures. All PSUs contain one or more performance conditions, such as a pre-defined target based on the Company's cumulative earnings per share over a multi-year period. For certain executives there is an additional performance measure, a market condition, based on total shareholder return ("TSR") against a peer group. The number of shares that will be issued upon vesting of these PSUs can range from 0% to 150% of the target award, depending on the achievement of each performance condition. We determine the fair value of PSUs based on the (i) closing market price of our common stock on the grant date taking, (ii) the achievement probability for each performance condition, and (iii) the market condition valuation, as applicable, based on the output of Monte Carlo simulations. We periodically assess the achievement probability for performance conditions. As of December 31, 2022, approximately 9% of unvested shares were subject to a market condition.

Employees of a specific age, with a sum of age plus years of service with the Company which meets or exceeds 65, based on the terms of the Jones Lang LaSalle 2019 Stock Award and Incentive Plan ("SAIP"), are eligible to be considered for receipt of retirement benefits upon departure from the Company. These award provisions require acceleration of compensation expense such that all expense is recognized by the time these employees are considered retirement eligible.

We do not estimate forfeitures; instead, we recognize forfeitures in Compensation and benefits expense as they occur.

We also have a "noncompensatory" Employee Stock Purchase Plan ("ESPP") for U.S. employees and a Jones Lang LaSalle Savings Related Share Option Plan ("Save As You Earn" or "SAYE") for U.K. employees. The fair value of options granted under the SAYE plan are determined on the grant date and amortized over the associated vesting period.

See Note 6, Stock-Based Compensation, for additional information on our stock-based compensation plans.

Income Taxes

We account for income taxes under the asset and liability method. We recognize deferred tax assets and liabilities for the expected future tax consequences of events that have been included in our consolidated financial statements or tax returns. Under this method, we determine deferred tax assets and liabilities based on the differences between the financial reporting and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse.

An increase or decrease in a deferred tax asset or liability that results from a change in circumstances, and that causes a change in our judgment about expected future tax consequences of events, would be included in the tax provision when the changes in circumstances and our judgment occurs. Deferred income taxes also reflect the impact of operating loss and tax credit carryforwards. A valuation allowance is established if we believe it is more-likely-than-not all or some portion of a deferred tax asset will not be realized. An increase or decrease in a valuation allowance that results from a change in circumstances, and that causes a change in our judgment about the ability to realize the related deferred tax asset, would be included in the tax provision when the changes in circumstances and our judgment occurs.

See Note 8, Income Taxes, for additional information on income taxes.

Derivatives and Hedging Activities

We do not enter into derivative financial instruments for trading or speculative purposes. However, in the normal course of business, we do use derivative financial instruments in the form of foreign currency forward contracts to manage our foreign currency exchange rate risk. We currently do not use hedge accounting for these contracts, which are marked-to-market each period with changes in unrealized gains or losses offset by foreign currency gains and losses on associated intercompany loans and other foreign currency balances. Gains and losses from the revaluation of these contracts are recognized as a component of Operating, administrative and other expense and are offset by the gains and losses recognized on the revaluation of intercompany loans and other foreign currency balances such that the impact to net income was not significant for any of the three years ended December 31, 2022.

For presentation and disclosure, we net our exposure by counterparty for all counterparties subject to International Swaps and Derivatives Association Master Agreements.

We have considered the counterparty credit risk related to these forward foreign currency exchange contracts and do not deem any counterparty credit risk to be material as of December 31, 2022, in part due to the short-term nature of these contracts.

In addition, certain loan commitments and forward sales commitments related to our Warehouse receivables meet the definition of a derivative and are recorded at fair value on the Consolidated Balance Sheets. The estimated fair value of loan commitments includes the fair value of the expected net cash flows associated with servicing of the loan, other net cash flows associated with origination and sale of the loan, and the effects of market interest rate movements. The estimated fair value of forward sale commitments includes the effects of market interest rate movements. Therefore, the effect of market interest rate movements on estimated fair value offset between the loan commitments and the forward sale commitments. Adjustments to fair value related to loan and forward sale commitments are included within Revenue on the Consolidated Statements of Comprehensive Income.

See Note 9, Fair Value Measurements, for additional information on derivative financial instruments.

Leases

Substantially all of our operating leases are related to office space we lease in various buildings for our own use. The terms of these non-cancelable operating leases typically require us to pay rent and a share of operating expenses and real estate taxes, generally with an inflation-based rent increase included. We also lease equipment under both operating and finance lease arrangements. Our lease agreements do not contain any material residual value guarantees or material restrictive covenants.

Operating lease right-of-use assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments (e.g. rent) over the lease term beginning at the commencement date. The Operating lease right-of-use assets are adjusted for lease incentives, deferred rent, and initial direct costs, if incurred. Our leases generally do not include an implicit rate; therefore, we use an incremental borrowing rate based on information available at the lease commencement date in determining the present value of future minimum lease payments. The related lease expense is recognized on a straight-line basis over the lease term.

Finance leases are included in Property and equipment, net of accumulated depreciation, Short-term borrowings, and Other liabilities on our Consolidated Balance Sheets. Our finance leases do not represent a significant portion of our leasing activity.

See Note 11, Leases, for additional information on leases.

Foreign Currency Translation

We prepare the financial statements of our subsidiaries located outside the U.S. using local currency as the functional currency. The assets and liabilities of these subsidiaries are translated to U.S. dollars at the rates of exchange as of the balance sheet date with the resulting translation adjustments included as a separate component of equity on the Consolidated Balance Sheets (Accumulated other comprehensive loss) and on the Consolidated Statements of Comprehensive Income (Other comprehensive income-foreign currency translation adjustments).

See Note 15, Accumulated Other Comprehensive Income (Loss), for additional information on the components of Accumulated other comprehensive loss.

Income and expenses are translated at the average monthly rates of exchange. We include gains and losses from foreign currency transactions in net earnings as a component of Operating, administrative and other expense. For the years ended December 31, 2022, 2021 and 2020, we had net foreign currency transaction gain (loss) of \$6.4 million, \$(8.1) million and \$(4.6) million, respectively.

The effect of foreign currency exchange rate changes on Cash, cash equivalents and restricted cash is presented as a separate caption in the Consolidated Statements of Cash Flows.

Cash Held for Others

We manage significant amounts of cash and cash equivalents in our role as agent for certain of our investment, facility management and property management clients. We do not include such amounts on the Consolidated Balance Sheets.

Taxes Collected from Clients and Remitted to Governmental Authorities

We account for tax assessed by a governmental authority that is based on a revenue or transaction value (i.e., sales, use and value-added taxes) on a net basis, excluded from revenue, and recorded as current liabilities until paid.

Other Commitments and Contingencies

We are subject to various claims and contingencies related to disputes, lawsuits and taxes as well as commitments under contractual obligations. Many of these claims are covered under our current insurance programs, subject to deductibles. Our current insurance programs include professional, auto and general liability.

For professional indemnity coverage, the level of risk retained by our captive insurance company is limited per claim, inclusive of the deductible. We contract third-party insurance companies to provide coverage of risk in excess of the policy limits. We recognize the liability associated with a loss contingency when a loss is probable and estimable.

See Note 13, Commitments and Contingencies, for additional information on commitments and contingencies.

Earnings Per Share; Net Income Available to Common Shareholders

The difference between basic weighted average shares outstanding and diluted weighted average shares outstanding represents the dilutive impact of our common stock equivalents. Common stock equivalents consist of shares to be issued under employee stock-based compensation programs. Anti-dilutive shares were de minimis for all periods presented.

See Note 6, Stock-Based Compensation, for additional information on our stock-based compensation plans.

New Accounting Standards

Recently adopted accounting guidance

In September 2022, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2022-04, *Liabilities-Supplier Finance Programs (Subtopic 450-50): Disclosure of Supplier Finance Program Obligations*, which requires entities that use supplier finance programs in connection with the purchase of goods and services to disclose the key terms of the programs and information about their outstanding obligations at the end of the reporting period. The guidance is intended to address requests from stakeholders for information about an entity's use of supplier finance programs and their effect on the entity's working capital, liquidity and cash flows. This ASU is effective for annual and interim periods beginning after December 15, 2022, with early adoption permitted. We do not expect the new guidance to have a material impact to our financial statements and related disclosures.

3. BUSINESS SEGMENTS

On February 28, 2022, we announced a new organizational structure that became effective on January 1, 2022. Under the new structure, we organize our operations around, and publicly report our financial results on, five global business segments:

- (1) Markets Advisory,
- (2) Capital Markets,
- (3) Work Dynamics,
- (4) JLL Technologies, and
- (5) LaSalle.

Markets Advisory offers a wide range of real estate services, including agency leasing and tenant representation, property management, advisory, and consulting services. Capital Markets service offerings include investment sales, equity and debt advisory, loan servicing, and valuation advisory. Our Work Dynamics business provides a broad suite of integrated services to occupiers of real estate, including facility and project management, as well as portfolio and other services. Our JLL Technologies segment offers software products, solutions and services, while LaSalle provides investment management services on a global basis to institutional investors and high-net-worth individuals.

We allocate all indirect expenses to our segments, other than interest and income taxes, as nearly all expenses incurred benefit one or more of the segments. Allocated expenses primarily consist of corporate functional costs across the globe, which we allocate to the business segments using an expense-specific driver-based methodology.

Adjusted EBITDA does not include (i) restructuring and acquisition charges, (ii) gain/loss on disposal, (iii) interest on employee loans, net, (iv) net non-cash MSR and mortgage banking derivative activity, (v) interest expense, net of interest income, (vi) provision for income tax, and (vii) depreciation and amortization, which are otherwise included in Net income on the Consolidated Statements of Comprehensive Income.

The Chief Operating Decision Maker ("CODM") of JLL measures and evaluates the segment results based on Adjusted EBITDA for purposes of making decisions about allocating resources and assessing performance. Our CODM is not provided with total asset information by segment and accordingly does not measure or allocate resources based on total assets information. Therefore, we have not disclosed asset information by segment. As of December 31, 2022, we define the Global Executive Board, collectively, as our CODM.

Summarized financial information by business segment is as follows.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Markets Advisory			
Leasing	\$ 2,759.2	2,618.1	1,747.8
Property Management	1,525.3	1,437.9	1,317.9
Advisory, Consulting and Other	131.0	132.7	121.3
Revenue	\$ 4,415.5	4,188.7	3,187.0
Depreciation and amortization⁽¹⁾	\$ 70.6	69.4	68.0
Equity (losses) earnings	\$ (0.3)	0.7	13.7
Adjusted EBITDA	\$ 527.5	546.5	337.8
Capital Markets			
Investment Sales, Debt/Equity Advisory and Other	\$ 1,955.4	2,111.0	1,341.1
Valuation Advisory	374.9	369.3	311.0
Loan Servicing	157.9	140.2	111.4
Revenue	\$ 2,488.2	2,620.5	1,763.5
Depreciation and amortization	\$ 61.6	63.1	69.8
Equity earnings	\$ 3.1	4.9	1.4
Adjusted EBITDA	\$ 444.0	543.2	247.8
Work Dynamics			
Workplace Management	\$ 9,819.2	8,731.5	8,112.2
Project Management	2,972.3	2,684.9	2,530.2
Portfolio Services and Other	477.0	475.1	419.1
Revenue	\$ 13,268.5	11,891.5	11,061.5
Depreciation and amortization	\$ 71.1	66.2	68.0
Equity earnings (losses)	\$ 1.2	0.4	(0.3)
Adjusted EBITDA	\$ 230.1	182.4	227.6
JLL Technologies			
Revenue	\$ 213.9	166.2	156.1
Depreciation and amortization	\$ 15.4	10.5	11.3
Equity earnings	\$ 46.6	140.7	5.7
Adjusted EBITDA	\$ (50.9)	53.4	(33.1)
LaSalle			
Advisory fees	\$ 404.6	364.7	336.4
Transaction fees and other	44.8	41.5	43.9
Incentive fees	26.6	93.9	41.5
Revenue	\$ 476.0	500.1	421.8
Depreciation and amortization	\$ 6.5	8.3	9.3
Equity earnings (losses)	\$ 0.4	62.7	(12.5)
Adjusted EBITDA	\$ 96.6	171.0	79.5

(1) This adjustment excludes the noncontrolling interest portion of amortization of acquisition-related intangibles which is not attributable to common shareholders.

The following table is a reconciliation of Adjusted EBITDA to Net income attributable to common shareholders.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Adjusted EBITDA - Markets Advisory	\$ 527.5	546.5	337.8
Adjusted EBITDA - Capital Markets	444.0	543.2	247.8
Adjusted EBITDA - Work Dynamics	230.1	182.4	227.6
Adjusted EBITDA - JLL Technologies	(50.9)	53.4	(33.1)
Adjusted EBITDA - LaSalle	96.6	171.0	79.5
Adjusted EBITDA - Consolidated	\$ 1,247.3	1,496.5	859.6
Adjustments:			
Restructuring and acquisition charges	\$ (104.8)	(84.7)	(142.4)
Net (loss) gain on disposition	(7.5)	12.4	4.8
Interest on employee loans, net	9.7	—	—
Net non-cash MSR and mortgage banking derivative activity	11.0	59.3	66.6
Interest expense, net of interest income	(75.2)	(40.1)	(52.8)
Provision for income taxes	(200.8)	(264.3)	(106.9)
Depreciation and amortization⁽¹⁾	(225.2)	(217.5)	(226.4)
Net income attributable to common shareholders	\$ 654.5	961.6	402.5

(1) This adjustment excludes the noncontrolling interest portion of amortization of acquisition-related intangibles which is not attributable to common shareholders.

The following table sets forth the revenue from our most significant currencies.

(in millions)	Year Ended December 31,		
	2022	2021	2020
United States dollar	\$ 12,375.9	11,283.1	9,457.8
British pound	1,575.6	1,626.6	1,341.1
Euro	1,535.6	1,393.3	1,350.6
Australian dollar	1,183.0	1,118.7	876.1
Canadian dollar	593.8	508.3	432.6
Indian rupee	591.0	508.2	524.5
Hong Kong dollar	532.3	545.6	512.2
Chinese yuan	506.0	539.1	473.1
Singapore dollar	368.4	327.4	246.6
Japanese yen	233.8	256.8	257.9
Other currencies	1,366.7	1,259.9	1,117.4
Total revenue	\$ 20,862.1	19,367.0	16,589.9

4. BUSINESS COMBINATIONS, GOODWILL AND OTHER INTANGIBLE ASSETS

2022 Business Combinations Activity

During 2022, there were no material acquisitions. We paid \$18.1 million for deferred business acquisition and earn-out obligations for acquisitions completed in prior years.

2021 Business Combinations Activity

During the year ended December 31, 2021, we completed four new strategic acquisitions: two in JLL Technologies, one in Capital Markets, and one in Markets Advisory.

Aggregate terms of these acquisitions included: (i) cash paid at closing of \$416.8 million (net of \$13.9 million in cash acquired), (ii) guaranteed deferred consideration of \$10.0 million and (iii) contingent earn-out consideration of \$68.6 million recorded at their respective acquisition date fair value, which we will pay upon satisfaction of certain performance conditions.

As of December 31, 2021, a preliminary allocation of this purchase consideration resulted in goodwill of \$442.3 million, identifiable intangibles of \$210.2 million, and other net liabilities (assumed liabilities less acquired assets) of \$34.6 million. The noncontrolling interest of 49.9% in the less-than-wholly-owned acquisition was \$122.5 million at the acquisition date. As of December 31, 2022, the purchase price allocations for our 2021 acquisitions was final. There were no significant adjustments to the purchase price allocation recorded during the year ended December 31, 2022.

During the year ended December 31, 2021, we also paid \$88.7 million for deferred business acquisition and earn-out obligations for acquisitions completed in prior years.

Of the \$442.3 million of total additions to goodwill in 2021, we expected to amortize and deduct \$99.8 million for tax purposes as of December 31, 2021, subject to statutory amortization periods.

Earn-Out Payments

(\$ in millions)	December 31, 2022	December 31, 2021
Number of acquisitions with earn-out payments subject to the achievement of certain performance criteria	17	19
Maximum earn-out payments (undiscounted)	\$ 114.6	149.9
Short-term earn-out liabilities (fair value) ⁽¹⁾	5.0	39.0
Long-term earn-out liabilities (fair value) ⁽¹⁾	68.3	45.1

(1) Included in Short-term and Long-term acquisition-related obligations on the Consolidated Balance Sheets.

Assuming the achievement of the applicable performance criteria, we anticipate making these earn-out payments over the next five years. Refer to Note 9, Fair Value Measurements, and Note 14, Restructuring and Acquisition Charges, for additional discussion of our earn-out liabilities.

Goodwill and Other Intangible Assets

Goodwill and unamortized intangibles as of December 31, 2022 consisted of: (i) goodwill of \$4,528.0 million, (ii) identifiable intangibles of \$810.3 million amortized over their remaining finite useful lives and (iii) \$48.2 million of identifiable intangibles with indefinite useful lives that are not amortized. Significant portions of our goodwill and unamortized intangibles are denominated in currencies other than the U.S. dollar, which means a portion of the movements in the reported book value of these balances is attributable to movements in foreign currency exchange rates.

In conjunction with our new organizational structure, we reassessed our reporting units as of January 1, 2022, and reassigned goodwill to reflect our new segment structure. Refer to Note 2, Summary of Significant Accounting Policies, and Note 3, Business Segments, for additional detail.

The following table details, by reporting segment, the annual movements in goodwill. As a result of reassigning goodwill, only activity in periods after the reassignment are disclosed.

(in millions)	Markets Advisory	Capital Markets	Work Dynamics	JLL Technologies	LaSalle	Consolidated
Balance as of January 1, 2022	\$ 1,782.9	1,983.9	539.9	247.5	57.4	\$ 4,611.6
Additions, net of adjustments	—	8.5	4.6	0.4	—	13.5
Impact of exchange rate movements	(40.0)	(43.2)	(11.9)	(0.2)	(1.8)	(97.1)
Balance as of December 31, 2022	\$ 1,742.9	1,949.2	532.6	247.7	55.6	\$ 4,528.0

The following tables detail, by intangible type, movements in the gross carrying amount and accumulated amortization of our identifiable intangibles.

(in millions)	MSRs	Other Intangibles	Consolidated
Gross Carrying Amount			
Balance as of December 31, 2020	\$ 572.1	403.0	\$ 975.1
Additions, net of adjustments ⁽¹⁾	161.1	210.2	371.3
Adjustment for fully amortized intangibles	(63.5)	(50.5)	(114.0)
Impact of exchange rate movements	—	(5.3)	(5.3)
Balance as of December 31, 2021	669.7	557.4	1,227.1
Additions, net of adjustments ⁽¹⁾	140.9	19.3	160.2
Adjustment for fully amortized intangibles	(63.3)	(13.5)	(76.8)
Impact of exchange rate movements	—	(6.2)	(6.2)
Balance as of December 31, 2022	\$ 747.3	557.0	\$ 1,304.3
Accumulated Amortization			
Balance as of December 31, 2020	\$ (147.8)	(147.5)	\$ (295.3)
Amortization expense, net ⁽²⁾	(106.7)	(53.2)	(159.9)
Adjustment for fully amortized intangibles	63.5	50.5	114.0
Impact of exchange rate movements	—	1.1	1.1
Balance as of December 31, 2021	(191.0)	(149.1)	(340.1)
Amortization expense, net ⁽²⁾	(114.5)	(70.3)	(184.8)
Adjustment for fully amortized intangibles	63.3	13.5	76.8
Impact of exchange rate movements	—	2.3	2.3
Balance as of December 31, 2022	\$ (242.2)	(203.6)	\$ (445.8)
Net book value as of December 31, 2022	\$ 505.1	353.4	\$ 858.5

(1) Included in this amount for MSRs was (i) \$28.0 million and \$31.2 million for 2022 and 2021, respectively, relating to write-offs due to prepayments of sold warehouse receivables for which we retained the servicing rights and (ii) \$(0.1) million for 2021 relating to an impairment valuation allowance.

(2) Amortization of MSRs is included in Revenue within the Consolidated Statements of Comprehensive Income.

The remaining weighted average amortization period of MSRs and other finite-lived identifiable intangible assets is 4.1 years and 4.6 years, respectively, and the remaining estimated future amortization expense by year, as of December 31, 2022, is presented in the following table.

(in millions)	MSRs	Other Intangibles	Total
2023	\$ 91.2	67.9	\$ 159.1
2024	85.3	62.6	147.9
2025	76.4	42.0	118.4
2026	63.1	18.4	81.5
2027	52.0	14.7	66.7
Thereafter	137.1	99.6	236.7
Total	\$ 505.1	305.2	\$ 810.3

5. INVESTMENTS

Summarized investment balances are presented in the following table.

(in millions)	December 31,	
	2022	2021
JLL Technologies investments	\$ 483.4	353.6
LaSalle co-investments	366.5	354.6
Other investments	23.9	37.5
Total	\$ 873.8	745.7

Approximately 90% of our investments, as of December 31, 2022, are (i) investments by JLL Technologies in early to mid-stage proptech companies as well as proptech funds, or (ii) direct investments in 55 separate property or commingled funds, where we co-invest alongside our clients and for which we also have an advisory agreement. The remaining 10% of our Investments, as of December 31, 2022, were attributable to investment vehicles that use our capital and outside capital primarily provided by institutional investors to invest, generally, in certain real estate ventures that own and operate real estate. Of our investments attributable to investment vehicles, the majority was invested in LaSalle Investment Company II ("LIC II"), in which we held an effective ownership interest of 48.78%.

We have maximum potential unfunded commitments to direct investments or investment vehicles of \$336.3 million and \$12.8 million as of December 31, 2022 for our LaSalle Investment Management business and JLL Technologies, respectively. Of the \$336.3 million related to LaSalle, while we remain contractually obligated, we do not expect a call on the \$60.3 million relating to our investment in LIC II as its fund life terminated in January 2020.

We evaluate our less-than-wholly-owned investments to determine whether the underlying entities are classified as variable interest entities ("VIEs"); we assess each identified VIE to determine whether we are the primary beneficiary. We had equity method investments, either directly or indirectly, of \$116.0 million and \$95.2 million as of December 31, 2022 and 2021, respectively, in entities classified as VIEs.

In prior periods, we determined we were the primary beneficiary of certain VIEs and accordingly, we consolidated such entities. In December of 2022, as a result of a reconsideration event, we concluded we were no longer the primary beneficiary of these VIEs and, therefore, no longer consolidate these VIEs.

Summarized financial information for our consolidated VIEs is presented in the following tables. As a result of the reconsideration event described above, there are no consolidated VIE balances as of December 31, 2022 and net income is consolidated up to the reconsideration date.

(in millions)	December 31,		
	2022	2021	
Property and equipment, net	\$	—	184.7
Investments		—	10.2
Other assets		—	17.7
Total assets	\$	—	212.6
Other current liabilities	\$	—	2.1
Mortgage indebtedness (included in Other liabilities)		—	107.5
Total liabilities		—	109.6
Members' equity (included in Noncontrolling interest)		—	103.0
Total liabilities and members' equity	\$	—	212.6

(in millions)	Year Ended December 31,			
	2022	2021	2020	
Revenue	\$	17.6	11.0	13.9
Operating and other expenses		(23.8)	(14.9)	(15.6)
Net gain on sale of investments⁽¹⁾		142.3	—	22.1
Net income (loss)	\$	136.1	(3.9)	20.4

(1) The 2022 gain was included in Other income (expense) on the Consolidated Statements of Comprehensive Income. \$12.3 million of the 2020 gain was included in Equity earnings; the remaining \$9.8 million was included in Other income.

We allocate the members' equity and net income (loss) of the consolidated VIEs to the noncontrolling interest holders as Noncontrolling interest on the Consolidated Balance Sheets and as Net income attributable to noncontrolling interest in the Consolidated Statements of Comprehensive Income, respectively.

The following tables summarize the combined financial information for certain of our unconsolidated investments accounted for under the equity method or at fair value.

(in millions)	December 31,		
	2022	2021	
Balance Sheets:			
Investments, net of depreciation	\$	36,855.2	31,084.0
Total assets		40,367.9	34,816.3
Mortgage indebtedness		11,790.0	9,708.5
Other borrowings		3,100.5	1,864.1
Total liabilities		16,986.9	13,275.3
Total equity		23,381.0	21,541.0

(in millions)	Year Ended December 31,			
	2022	2021	2020	
Statements of Operations:				
Revenue	\$	2,193.4	2,103.6	1,702.3
Net income		576.6	1,850.7	241.5

Impairment

During the year ended December 31, 2022, we recorded a \$19.6 million other-than-temporary impairment charge related to an investment accounted for under the equity method. This activity was included within Equity earnings on our Consolidated Statements of Comprehensive Income. There were no other significant impairments in 2022. In addition, there were no significant other-than-temporary impairment charges on Investments during 2021 or 2020.

Fair Value

We report a majority of our investments at fair value. For such investments, we increase or decrease our investment each reporting period by the change in the fair value and we report these fair value adjustments in our Consolidated Statements of Comprehensive Income within Equity earnings. The table below shows the movement in our investments reported at fair value. See Note 9, Fair Value Measurements, for further discussion of our investments reported at fair value.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Fair value investments as of January 1,	\$ 639.6	340.3	328.6
Investments	156.1	190.3	51.7
Distributions	(38.5)	(84.0)	(46.8)
Change in fair value	61.3	201.2	(1.0)
Foreign currency translation adjustments, net	(23.6)	(8.2)	7.8
Fair value investments as of December 31,	\$ 794.9	639.6	340.3

6. STOCK-BASED COMPENSATION

The Stock Award and Incentive Plan ("SAIP") provides for the granting of various stock awards to eligible employees of JLL. These awards have historically been RSUs which generally vest over three years (either cliff or graded vesting) and PSUs which generally vest in three years (cliff vesting), subject to performance and, for certain awards, market conditions.

There were approximately 0.6 million shares available for grant under the SAIP as of December 31, 2022. We also have a stock-based compensation plan for our U.K.-based employees, the SAYE plan, that allows for the purchase of stock at a 15% discount from the market price at the beginning of the plan's vesting periods. While there have been no options granted under the SAYE plan since 2017, approximately 281 thousand shares remain available for grant as of December 31, 2022.

Stock-based compensation expense, excluding expense related to retention awards issued in conjunction with acquisitions, is included within Compensation and benefits expense on the Consolidated Statements of Comprehensive Income. The expense related to retention awards issued in conjunction with acquisitions is included within Restructuring and acquisition charges. Stock-based compensation expense by award type is presented below.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Restricted stock unit awards	\$ 48.5	37.7	41.8
Performance stock unit awards	26.8	42.4	5.5
SAYE	—	—	0.2
Total	\$ 75.3	80.1	47.5

Restricted Stock Units and Performance Stock Units

	RSU Shares (in 000's)	PSU Shares (in 000's)	Total Shares (in 000's)	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Life (in years)
Unvested as of December 31, 2019	1,532.3	286.8	1,819.1	\$ 141.51	2.39
Granted	173.1	276.4	449.5	124.98	
Vested	(571.1)	—	(571.1)	137.99	
Forfeited	(38.1)	(31.7)	(69.8)	136.00	
Unvested as of December 31, 2020	1,096.2	531.5	1,627.7	137.42	1.69
Granted	335.7	218.9	554.6	189.40	
Vested	(471.1)	(79.0)	(550.1)	145.54	
Forfeited	(48.4)	(25.4)	(73.8)	148.97	
Unvested as of December 31, 2021	912.4	646.0	1,558.4	152.27	1.99
Granted	353.2	116.5	469.7	204.05	
Vested	(395.7)	(175.1)	(570.8)	147.78	
Forfeited	(28.6)	(20.4)	(49.0)	168.92	
Unvested as of December 31, 2022	841.3	567.0	1,408.3	\$ 170.78	1.79

As of December 31, 2022, we had \$79.4 million of unamortized deferred compensation related to unvested RSUs and PSUs, which we anticipate to be recognized over varying periods into 2026.

Shares vested during the years ended December 31, 2022, 2021 and 2020, had grant date fair values of \$84.3 million, \$80.1 million, and \$78.8 million, respectively. Shares granted during the years ended December 31, 2022, 2021 and 2020 had grant date fair values of \$95.8 million, \$105.0 million and \$56.2 million, respectively.

7. RETIREMENT PLANS

Defined Contribution Plans

We have a qualified profit sharing plan subject to United States Internal Revenue Code Section 401(k) for eligible U.S. employees. We make employer contributions under this qualified profit sharing plan that are reflected in Compensation and benefits in the accompanying Consolidated Statements of Comprehensive Income. Based on the impact from the COVID-19 pandemic, the employer contributions were suspended between May and December of 2020. The related trust assets of this plan are managed by trustees and are excluded from the accompanying Consolidated Financial Statements. In addition, we maintain several defined contribution retirement plans for eligible non-U.S. employees. The table below provides detail of employer contributions for these plans.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Employer contributions (US employees)	\$ 50.1	42.7	14.6
Employer contributions (non-US employees)	43.2	42.4	37.9

Defined Benefit Plans

We maintain five defined benefit pension plans across Europe. It is our policy to fund at least the minimum annual contributions as actuarially determined and as required by applicable laws and regulations. Our contributions to these plans are invested by the plan trustee and, if the investment performance is not sufficient, we may be required to provide additional contributions to cover any pension underfunding. Our largest plan has been closed to new entrants since 2013. The following table provides the projected benefit obligation and plan assets, the net of which represents our funded status, as well as the accumulated benefit obligations of our defined benefit pension plans.

(in millions)	Year Ended December 31,	
	2022	2021
Projected benefit obligation	\$ 257.1	442.4
Fair value of plan assets	287.1	506.2
Funded status and net amount recognized	30.0	63.8
Accumulated benefit obligation	\$ 257.1	442.0

The primary driver for the year-over-year change in projected benefit obligation is an actuarial gain driven by an increase in the discount rate assumptions.

Defined benefit pension plan amounts recorded in the Consolidated Balance Sheets are presented in the below table.

(in millions)	December 31,	
	2022	2021
Pension assets (included in Other assets)	\$ 31.3	72.9
Pension liabilities (included in Other liabilities)	(1.3)	(9.1)
Net asset recognized	\$ 30.0	63.8
Accumulated other comprehensive loss	\$ 97.6	70.1

Net periodic pension cost (benefit) was not material for the years ended December 31, 2022, 2021, and 2020.

8. INCOME TAXES

Our provision for income taxes consisted of the following:

(in millions)	Year Ended December 31,		
	2022	2021	2020
U.S. federal:			
Current	\$ 81.7	95.1	16.4
Deferred	(5.8)	29.1	3.8
	\$ 75.9	124.2	20.2
State and Local:			
Current	\$ 29.2	34.6	12.5
Deferred	2.1	11.8	0.2
	\$ 31.3	46.4	12.7
International:			
Current	\$ 136.3	156.0	103.7
Deferred	(42.7)	(62.3)	(29.7)
	\$ 93.6	93.7	74.0
Total	\$ 200.8	264.3	106.9

The U.S. Internal Revenue Code contains two code sections - the Base Erosion Anti-Abuse Tax and Global Intangible Low-Taxed Income Tax - for which we treat any associated income tax as a period cost and record an expense provision for any year we are subject to the taxes. Accordingly, the estimated impacts of these taxes were included in our provision for income taxes in 2022, 2021 and 2020.

In 2022, 2021 and 2020, our current tax expense increased by \$25.6 million, \$52.4 million and \$2.9 million, respectively, and our deferred tax expense reduced by a corresponding amount, due to the generation of net operating loss carryovers.

Income tax expense differed from the amounts computed by applying the U.S. federal income tax rate of 21% to earnings before provision for income taxes as a result of the following:

(\$ in millions)	Year Ended December 31,					
	2022		2021		2020	
Income tax expense at statutory rates	\$ 208.7	21.0 %	\$ 256.9	21.0 %	\$ 111.2	21.0 %
Increase (reduction) in income taxes from:						
State and local income taxes, net of federal income tax benefit	26.8	2.7	39.7	3.2	9.4	1.8
Nondeductible expenses	13.9	1.4	17.6	1.4	11.2	2.1
International earnings taxed at various rates	(34.7)	(3.5)	(22.6)	(1.8)	(20.5)	(3.9)
U.S. capital loss carryover	—	—	(35.2)	(2.9)	—	—
Valuation allowance	(4.8)	(0.5)	34.2	2.8	4.3	0.8
Other, net	(9.1)	(0.9)	(26.3)	(2.1)	(8.7)	(1.6)
Total	\$ 200.8	20.2 %	\$ 264.3	21.6 %	\$ 106.9	20.2 %

With respect to international earnings taxed at varying rates, we have operations which constitute a taxable income presence in 92 countries or other taxable jurisdictions outside of the U.S. which are treated as such by the U.S. Internal Revenue Code. Of those countries or other taxable jurisdictions, 70 had income tax rates lower than the combined U.S. federal and state income tax rate in 2022.

In defining "very low tax rate jurisdictions," we consider effective tax rates which applied in 2022 based upon income levels and including national and municipal, state or provincial taxes also based upon income levels, which may cause those effective rates to differ from the maximum national statutory rates for the jurisdictions. We consider jurisdictions with a tax rate of 25% or lower to be very low tax rate jurisdictions, based upon our historical practice. Effective January 1, 2018, the U.S. federal income tax rate was reduced to 21%. However, factoring in the impact of state income taxes, we do not consider the U.S. to be a very low tax rate jurisdiction. With respect to very low tax rate jurisdictions in which we operate, income from Hong Kong (16.5%), Singapore (17%), and the United Kingdom (19%) represent the most significant components of the international earnings line item in our effective tax rate reconciliation. In the aggregate, these very low tax rate jurisdictions contributed a large proportion of the difference between the actual income tax provision for international earnings and the equivalent provision at the U.S. federal and state statutory rate in 2022.

Our income before taxes from domestic (U.S.) and international sources is presented in the following table.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Domestic	\$ 447.9	798.9	165.2
International	546.3	424.7	364.4
Total	\$ 994.2	1,223.6	529.6

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below.

(in millions)	December 31,	
	2022	2021
Deferred tax assets attributable to:		
Accrued expenses	\$ 393.6	354.2
U.S. federal and state loss and credit carryovers	52.5	82.0
Allowances for uncollectible accounts	33.9	27.1
International loss carryovers	237.3	225.8
Pension liabilities	19.8	17.6
Other	—	1.9
Deferred tax assets	737.1	708.6
Less: valuation allowances	(120.8)	(128.8)
Net deferred tax assets	\$ 616.3	579.8
Deferred tax liabilities attributable to:		
Property and equipment	\$ 23.6	23.1
Intangible assets	325.6	342.8
Income deferred for tax purposes	7.5	6.3
Investments	72.6	56.2
Other	1.4	0.3
Deferred tax liabilities	\$ 430.7	428.7
Net deferred taxes	\$ 185.6	151.1

We have not provided a deferred tax liability on the unremitted foreign earnings of international subsidiaries because it is our intent to permanently reinvest such earnings outside of the U.S. If repatriation of all such earnings were to occur, we would incur withholding taxes, dividend distribution taxes, and potentially an amount of gain taxation which is not presently determinable.

As of December 31, 2022, we had an available U.S. federal net operating loss carryover of \$58.6 million from acquired companies, for which we have established a full valuation allowance due to significant statutory limitations on its usage, and which will begin to expire in 2028. We have U.S. state net operating loss ("NOL") carryovers with a tax effect of \$21.2 million, which expire at various dates through 2042, and international NOL carryovers of \$1,073.8 million, which generally do not have expiration dates. The change in deferred tax balances for NOL carryovers from 2021 to 2022 included increases from current year losses and decreases from current year estimated utilization.

As of December 31, 2022, we believe it is more-likely-than-not the net deferred tax assets of \$185.6 million will be realized based upon our estimates of future income and the consideration of net operating losses, earnings trends and tax planning strategies. Valuation allowances have been provided with regard to the tax benefit of certain international net operating loss carryovers, for which we have concluded recognition is not yet appropriate. In 2022, we reduced valuation allowances by \$20.1 million on some jurisdictions' net operating losses due to the utilization or expiration of those losses; and we increased valuation allowances by \$17.0 million for other jurisdictions based upon circumstances that caused us to establish or continue to provide valuation allowances on current or prior-year losses (including acquired NOL carryovers) in addition to those provided in prior years. The balance of the movement in valuation allowances comparing December 31, 2022 to December 31, 2021 was attributable to the effect of changes in foreign currency exchange rates.

As of December 31, 2022, our net current receivable for income tax was \$1.0 million, consisting of a current receivable of \$215.2 million and current payable of \$214.2 million, and our net noncurrent liability was \$114.7 million, entirely a noncurrent payable. As of December 31, 2021, our net current payable for income tax was \$33.7 million, consisting of a current receivable of \$187.3 million and a current payable of \$221.1 million, and our net noncurrent liability was \$144.6 million, entirely a noncurrent payable. The current receivables, current payables, and noncurrent payables are included in Notes and other receivables, Accounts payable and accrued liabilities, and Other liabilities, respectively, on our Consolidated Balance Sheets.

We file income tax returns in the U.S. (including 46 states, 25 cities, the District of Columbia and Puerto Rico), the United Kingdom (including England, Scotland and Wales), Australia, Germany, The People's Republic of China (including Hong Kong and Macau), France, Japan, Singapore, India, the Netherlands, Spain and 78 other countries. Generally, our open tax years include those from 2018 to the present, although reviews of taxing authorities for more recent years have been completed or are in process in a number of jurisdictions.

As of December 31, 2022, we were under examination in Germany, Nigeria, Pakistan, Egypt, Portugal, Hungary, Hong Kong, Indonesia, Malaysia, Mexico, the Philippines, Singapore and Thailand. In the U.S., we were under examination by the Internal Revenue Service for the Transition Tax reported in our 2018 federal income tax return; as well as in the states of Arizona, Connecticut, Illinois, Massachusetts, Michigan, New York, and in New York City.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is presented in the following table.

(in millions)	2022	2021
Balance as of January 1,	\$ 79.3	75.3
Additions based on tax positions related to the current year	3.6	5.7
Decrease related to tax positions of prior years	(5.6)	(1.7)
Settlements with taxing authorities	(2.2)	—
Balance as of December 31,	\$ 75.1	79.3

We believe it is reasonably possible that matters for which we have recorded \$46.2 million of unrecognized tax benefits as of December 31, 2022, will be resolved during 2023. The recognition of tax benefits, and other changes to the amounts of our unrecognized tax benefits, may occur as the result of ongoing operations, the outcomes of audits or other examinations by tax authorities, or the passing of statutes of limitations. We do not expect changes to our unrecognized tax benefits to have a significant impact on net income, the financial position, or the cash flows of JLL. We do not believe we have material tax positions for which the ultimate deductibility is highly certain, but there is uncertainty about the timing of such deductibility.

We recognize interest accrued and penalties, if any, in Provision for income taxes on our Consolidated Statements of Comprehensive Income. During the years ended December 31, 2022, 2021 and 2020, the amount of interest expense and penalties was not material. In addition, the amount of accrued interest related to income taxes was not material as of December 31, 2022 and 2021.

9. FAIR VALUE MEASUREMENTS

We measure certain assets and liabilities in accordance with ASC 820, *Fair Value Measurements and Disclosures*, which defines fair value as the price that would be received for an asset, or paid to transfer a liability, in an orderly transaction between market participants on the measurement date. In addition, it establishes a framework for measuring fair value according to the following three-tier fair value hierarchy:

- Level 1 - Quoted prices for identical assets or liabilities in active markets accessible as of the measurement date;
- Level 2 - Inputs, other than quoted prices in active markets, that are observable either directly or indirectly; and
- Level 3 - Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

Financial Instruments

Our financial instruments include Cash and cash equivalents, Trade receivables, Notes and other receivables, Reimbursable receivables, Warehouse receivables, restricted cash, contract assets, Accounts payable, Reimbursable payables, Short-term borrowings, Current portion of long-term debt, contract liabilities, Warehouse facilities, Credit facility, Long-term debt and foreign currency forward contracts. The carrying amounts of Cash and cash equivalents, Trade receivables, Notes and other receivables, Reimbursable receivables, restricted cash, contract assets, Accounts payable, Reimbursable payables, contract liabilities and the Warehouse facilities approximate their estimated fair values due to the short-term nature of these instruments. The carrying values of our Credit facility and Short-term borrowings approximate their estimated fair values given the variable interest rate terms and market spreads.

We estimated the fair value of our long-term debt, including its current portion, as \$360.9 million and \$687.2 million as of December 31, 2022 and 2021, respectively, using dealer quotes that are Level 2 inputs in the fair value hierarchy. The carrying value of the short-term portion of our long-term debt as of December 31, 2021 was \$274.7 million, net of \$0.3 million of debt issuance costs. We retired this debt during 2022. The carrying value of the long-term portion was \$372.8 million and \$395.6 million as of December 31, 2022 and 2021, respectively, which included debt issuance costs of \$1.2 million and \$1.4 million, respectively. See Note 10, Debt, for additional discussion of the redemption of our long-term debt.

Investments at Fair Value - Net Asset Value ("NAV")

We report a significant portion of our investments at fair value. For such investments, we increase or decrease our investment each reporting period by the change in the fair value, and we report these fair value adjustments in our Consolidated Statements of Comprehensive Income within Equity Earnings.

For a subset of our investments reported at fair value, we estimate the fair value using the NAV per share (or its equivalent) our investees provide. Critical inputs to NAV estimates included valuations of the underlying real estate assets and borrowings, which incorporate investment-specific assumptions such as discount rates, capitalization rates, rental and expense growth rates, and asset-specific market borrowing rates. We did not consider adjustments to NAV estimates provided by investees, including adjustments for any restrictions to the transferability of ownership interests embedded within investment agreements to which we are a party, to be necessary based upon (i) our understanding of the methodology utilized and inputs incorporated to estimate NAV at the investee level, (ii) consideration of market demand for the specific types of real estate assets held by each venture and (iii) contemplation of real estate and capital markets conditions in the localities in which these ventures operate. As of December 31, 2022 and 2021, investments at fair value using NAV were \$284.6 million and \$251.6 million, respectively. As these investments are not required to be classified in the fair value hierarchy, they have been excluded from the following table.

Recurring Fair Value Measurements

The following table categorizes by level in the fair value hierarchy the estimated fair value of our assets and liabilities measured at fair value on a recurring basis. For the comparative period, we have reclassified certain investments previously reported as NAV investments to Level 3 to conform with current presentation.

(in millions)	December 31,					
	2022			2021		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Assets						
Investments - fair value	\$ 58.3	—	452.0	84.5	—	303.5
Foreign currency forward contracts receivable	—	3.7	—	—	15.9	—
Warehouse receivables	—	463.2	—	—	822.3	—
Deferred compensation plan assets	—	517.9	—	—	528.8	—
Mortgage banking derivative assets	—	—	190.2	—	—	60.4
Total assets at fair value	\$ 58.3	984.8	642.2	84.5	1,367.0	363.9
Liabilities						
Foreign currency forward contracts payable	\$ —	4.8	—	—	0.8	—
Deferred compensation plan liabilities	—	485.4	—	—	513.0	—
Earn-out liabilities	—	—	73.2	—	—	84.1
Mortgage banking derivative liabilities	—	—	169.5	—	—	38.5
Total liabilities at fair value	\$ —	490.2	242.7	—	513.8	122.6

Investments

We classify one investment as Level 1 in the fair value hierarchy as a quoted price is readily available. We increase or decrease our investment each reporting period by the change in the fair value of the investment. We report the fair value adjustments in the Consolidated Statements of Comprehensive Income within Equity earnings.

Investments classified as Level 3 in the fair value hierarchy represent investments in early-stage non-public entities where we elected the fair value option. The carrying value was deemed to approximate fair value for the majority of these investments due to the proximity of the investment date or date of most recent financing raise to the balance sheet date as well as consideration of investee-level performance updates. To the extent there are changes in fair value, a result of pricing in subsequent funding rounds or changes in business strategy, for example, we recognize such changes through Equity earnings.

Foreign Currency Forward Contracts

We regularly use foreign currency forward contracts to manage our currency exchange rate risk related to intercompany lending and cash management practices. These contracts are on the Consolidated Balance Sheets as current assets and current liabilities. We determine the fair values of these contracts based on current market rates. The inputs for these valuations are Level 2 in the fair value hierarchy. As of December 31, 2022 and 2021, these contracts had a gross notional value of \$1.81 billion (\$1.02 billion on a net basis) and \$2.61 billion (\$1.51 billion on a net basis), respectively.

We record the asset and liability positions for our foreign currency forward contracts based on the net payable or net receivable position with the financial institutions from which we purchase these contracts. The \$3.7 million asset as of December 31, 2022 was composed of gross contracts with receivable positions of \$7.7 million and payable positions of \$4.0 million. The \$4.8 million liability position as of December 31, 2022 was composed of gross contracts with receivable positions of \$1.6 million and payable positions of \$6.4 million. As of December 31, 2021, the \$15.9 million asset was composed of gross contracts with receivable positions of \$19.2 million and payable positions of \$3.3 million. The \$0.8 million liability position as of December 31, 2021, was composed of gross contracts with receivable positions of \$0.2 million and payable positions of \$1.0 million.

Warehouse Receivables

The fair value of the Warehouse receivables is based on already locked-in security-buy prices. As of December 31, 2022 and 2021, all of our Warehouse receivables included in the Consolidated Balance Sheets were under commitment to be purchased by government-sponsored enterprises ("GSEs") or by a qualifying investor as part of a U.S. government or GSE mortgage-backed security program. The Warehouse receivables are classified as Level 2 in the fair value hierarchy as all significant inputs are readily observable.

Deferred Compensation Plan

We maintain a deferred compensation plan for certain of our U.S. employees that allows them to defer portions of their compensation. We invest directly in insurance contracts which yield returns to fund these deferred compensation obligations. We recognize an asset for the amount that could be realized under these insurance contracts as of the balance sheet date, and we adjust the deferred compensation obligation to reflect the changes in the fair value of the amount owed to the employees. The inputs for this valuation are Level 2 in the fair value hierarchy. We recorded this plan on the Consolidated Balance Sheets as of December 31, 2022 as Deferred compensation plan assets of \$517.9 million, long-term deferred compensation plan liabilities of \$485.4 million, included in Deferred compensation, and as a reduction of equity, Shares held in trust, of \$9.8 million. We recorded this plan on the Consolidated Balance Sheets as of December 31, 2021 as Deferred compensation plan assets of \$528.8 million, long-term deferred compensation plan liabilities of \$513.0 million, included in Deferred compensation, and as a reduction of equity, Shares held in trust, of \$5.2 million.

Earn-Out Liabilities

We classify our Earn-out liabilities within Level 3 in the fair value hierarchy because the inputs we use to develop the estimated fair value include unobservable inputs. We base the fair value of our Earn-out liabilities on the present value of probability-weighted future cash flows related to the earn-out performance criteria on each reporting date. We determine the probabilities of achievement we assign to the performance criteria based on the due diligence we performed at the time of acquisition as well as actual performance achieved subsequent to acquisition. An increase to a probability of achievement would result in a higher fair value measurement. See Note 4, Business Combinations, Goodwill and Other Intangible Assets, for additional discussion of our Earn-out liabilities.

Mortgage Banking Derivatives

In the normal course of business, we enter into simultaneous contractual commitments to originate and sell multi-family mortgage loans at fixed prices with fixed expiration dates. Commitments to borrowers become effective when the borrowers "lock-in" a specified interest rate and maximum principal balance for an established time frame (hereinafter referred to as an interest rate lock commitment or "IRLC"). All mortgages are evaluated for creditworthiness prior to execution of an IRLC.

We are exposed to market interest risk (the risk of movement in market interest rates following the execution of an IRLC) until a loan is funded and onwards through delivery. To mitigate the effect of the interest rate risk inherent in providing IRLCs to borrowers, we simultaneously enter into a forward commitment to sell the eventual loan associated with the IRLC to a GSE or other investor. Similar to the IRLC, the forward sale commitment locks in an interest rate, maximum principal balance, and price for the sale of the loan. Ultimately, the terms of the forward sale commitment and the IRLC are matched in substantially all respects, with the objective of eliminating market interest rate and other balance sheet risk to the extent practical. As an additional element of protection, forward sale commitments extend for a longer period of time as compared to IRLCs to allow, among other things, for the closing of the loan and processing of paperwork to deliver the loan in accordance with the terms of the sale commitment.

The fair value of our IRLCs to prospective borrowers and the related inputs primarily include, as applicable, the expected net cash flows associated with servicing the loan and the effects of interest rate movements between the date of the IRLC and the balance sheet date based on applicable published U.S. Treasury rates.

The fair value of our forward sales contracts to prospective investors considers the market price movement of a similar security between the trade date and the balance sheet date. The market price changes are multiplied by the notional amount of the forward sales contracts to measure the fair value.

Both the rate lock commitments to prospective borrowers and the forward sale contracts to prospective investors are undesignated derivatives and considered Level 3 valuations due to significant unobservable inputs related to counterparty credit risk. An increase in counterparty credit risk assumptions would result in a lower fair value measurement. The fair valuation is determined using discounted cash flow techniques, and the derivatives are marked to fair value through Revenue in the Consolidated Statements on Comprehensive Income.

The tables below present a reconciliation for assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3).

(in millions)	Balance as of December 31, 2021	Net change in fair value	Foreign CTA ⁽¹⁾	Purchases / Additions	Settlements	Transfers Out	Balance as of December 31, 2022
Investments	\$ 303.5	62.1	(1.7)	99.3	—	(11.2)	\$ 452.0
Mortgage banking derivative assets and liabilities, net	21.9	60.8	—	165.8	(227.8)	—	20.7
Earn-out liabilities	84.1	(3.3)	(0.4)	5.3	(12.5)	—	73.2

(in millions)	Balance as of December 31, 2020	Net change in fair value	Foreign CTA ⁽¹⁾	Purchases / Additions	Settlements	Transfers Out	Balance as of December 31, 2021
Investments	\$ 59.3	125.0	0.2	120.9	—	(1.9)	\$ 303.5
Mortgage banking derivative assets and liabilities, net	13.7	19.1	—	187.4	(198.3)	—	21.9
Earn-out liabilities	85.7	3.0	(0.4)	70.2	(74.4)	—	84.1

(1) CTA: Currency translation adjustments

Net change in fair value, included in the tables above, is reported in Net income as follows.

Category of Assets/Liabilities using Unobservable Inputs	Consolidated Statements of Comprehensive Income Account Caption
Earn-out liabilities (short-term and long-term)	Restructuring and acquisition charges
Investments	Equity earnings
Other current assets - Mortgage banking derivative assets	Revenue
Other current liabilities - Mortgage banking derivative liabilities	Revenue

Non-Recurring Fair Value Measurements

We review our investments, except those investments otherwise reported at fair value, on a quarterly basis, or as otherwise deemed necessary, for indications of whether we may be unable to recover the carrying value of our investments and whether such investments are other than temporarily impaired. When the carrying amount of the investment is in excess of the estimated future undiscounted cash flows, we use a discounted cash flow approach or other acceptable method to determine the fair value of the investment in computing the amount of the impairment. Our determination of fair value primarily relies on Level 3 inputs.

During the year ended December 31, 2022, we recognized an investment-level impairment charge on one investment accounted for under the equity method of accounting, as further described in Note 5, Investments. We did not recognize any additional significant investment-level impairment losses during the three-year period ended December 31, 2022.

10. DEBT

Debt is composed of the following obligations.

(\$ in millions)	December 31,	
	2022	2021
Short-term debt:		
Local overdraft facilities	\$ 21.2	9.2
Other short-term borrowings	143.0	138.7
Long-term senior notes, 4.4%, face amount of \$275.0, due November 2022, net of debt issuance costs of \$— and \$0.3	—	274.7
Total short-term debt	\$ 164.2	422.6
Credit facility, net of debt issuance costs of \$11.2 and \$11.8	1,213.8	138.2
Long-term senior notes, 1.96%, face amount of €175.0, due June 2027, net of debt issuance costs of \$0.5 and \$0.6	186.5	197.9
Long-term senior notes, 2.21%, face amount of €175.0, due June 2029, net of debt issuance costs of \$0.7 and \$0.8	186.3	197.7
Total debt	\$ 1,750.8	956.4

Credit Facilities

On June 16, 2022, we executed Amendment No. 3 ("Amendment No. 3") to the Second Amended and Restated Multicurrency Credit Agreement dated as of June 21, 2016 (as amended, the "Credit Agreement") with a syndicate of lenders. The features of the Credit Agreement, as amended, provide for (i) Greenhouse Gas Emissions KPI to align with the World Green Building Council ("WGBC") Commitment to reach net zero by 2030 and (ii) incorporates the Adjusted Term Secured Overnight Financing Rate ("SOFR") successor rates for USD and other currency borrowings. On August 31, 2022, we executed Amendment No. 4 ("Amendment No. 4") to the Credit Agreement which increased the borrowing capacity from \$2.75 billion to \$3.35 billion. The maturity date of April 14, 2026 and covenants were unchanged by the amendments.

Pricing on the unsecured revolving credit facility (the "Facility") ranges from Adjusted Term SOFR plus 0.875% to 1.35%, with pricing as of December 31, 2022 at Adjusted Term SOFR plus 0.99%. In addition to outstanding borrowings under the Facility presented in the above table, we had outstanding letters of credit under the Facility of \$0.4 million and \$0.7 million and as of December 31, 2022 and December 31, 2021, respectively.

In November 2022, we entered into an uncommitted credit agreement (the "Uncommitted Facility"), which allows for discretionary short-term liquidity of up to \$400.0 million. Interest and fees are set at the time of utilization and calculated on a 360-day basis. Between quarter-end dates, we intend to use the proceeds to reduce indebtedness under the Facility at a lower interest rate. As such, the Uncommitted Facility has no outstanding balance as of December 31, 2022.

The following table provides additional information on our Facility and Uncommitted Facility, collectively.

(\$ in millions)	Year Ended December 31,	
	2022	2021
Average outstanding borrowings	\$ 1,399.1	432.0
Average effective interest rate	2.9 %	0.9 %

We will continue to use the Facility for, but not limited to, business acquisitions, working capital needs (including payment of accrued incentive compensation), co-investment activities, share repurchases and capital expenditures.

Short-Term and Long-Term Debt

In addition to our credit facilities, we have the capacity to borrow up to an additional \$52.3 million under local overdraft facilities. Amounts outstanding are presented in the debt table above.

During 2022 we redeemed all of our outstanding 4.4% Senior Notes due November 2022 (the "Notes"). The aggregate outstanding principal amount of the Notes was \$275.0 million. The redemption price for the Notes was equal to 100% of the principal amount of the Notes redeemed, plus accrued and unpaid interest.

As of December 31, 2022, our issuer and senior unsecured ratings were investment grade: Baa1 from Moody's Investors Service, Inc. and BBB+ from Standard & Poor's Ratings Services.

Covenants

Our Facility and senior notes are subject to customary financial and other covenants, including cash interest coverage ratios and leverage ratios, as well as event of default conditions. We remained in compliance with all covenants as of December 31, 2022.

Warehouse Facilities

(\$ in millions)	December 31, 2022		December 31, 2021	
	Outstanding Balance	Maximum Capacity	Outstanding Balance	Maximum Capacity
Warehouse facilities:				
BSBY plus 1.30%, expires September 18, 2023 ⁽¹⁾	\$ 215.7	700.0	516.9	700.0
SOFR plus 1.30%, expires September 15, 2023 ⁽²⁾	132.3	1,200.0	74.7	1,200.0
LIBOR plus 1.30%, expired August 27, 2022	—	—	192.8	300.0
SOFR plus 1.40%, expires July 28, 2023 ⁽³⁾	9.0	400.0	—	400.0
Fannie Mae ASAP ⁽⁴⁾ program, SOFR plus 1.25%	99.2	n/a	12.5	n/a
Gross warehouse facilities	456.2	2,300.0	796.9	2,600.0
Debt issuance costs	(0.9)	n/a	(1.2)	n/a
Total warehouse facilities	\$ 455.3	2,300.0	795.7	2,600.0

(1) In 2022, JLL extended the Warehouse facility; previously, the facility had a maturity date of September 19, 2022.

(2) In 2022, JLL extended the Warehouse facility and amended the interest rate; previously, the facility had a maturity date of September 16, 2022 and an interest rate of LIBOR plus 1.30%.

(3) In 2022, JLL extended the Warehouse facility and amended the interest rate; previously the facility had a maturity date of July 30, 2022 and an interest rate of LIBOR plus 1.60%.

(4) As Soon As Pooled ("ASAP") funding program.

We have lines of credit established for the sole purpose of funding our Warehouse receivables. These lines of credit exist with financial institutions and are secured by the related warehouse receivables. Pursuant to these facilities, we are required to comply with certain financial covenants regarding (i) minimum net worth, (ii) minimum servicing-related loans and (iii) minimum adjusted leverage ratios. We remained in compliance with all covenants under our facilities as of December 31, 2022.

As a supplement to our lines of credit, we have an uncommitted facility with Fannie Mae under its As Soon As Pooled ("ASAP") funding program. After origination, we sell certain warehouse receivables to Fannie Mae; the proceeds are used to repay the original lines of credit used to fund the loan. The ASAP funding program requires us to repurchase these loans, generally within 45 days, followed by an immediate, ultimate, sale back to Fannie Mae. The difference between the price paid upon the original sale to Fannie Mae and the ultimate sale reflects borrowing costs.

11. LEASES

For the years ended December 31, 2022, 2021, and 2020, operating lease expense was \$185.5 million, \$189.2 million, and \$187.3 million, respectively, and variable and short-term lease expense was \$38.8 million, \$37.0 million, and \$36.0 million, respectively. In addition, \$186.7 million and \$148.5 million of Operating lease right-of-use assets were obtained in exchange for lease obligations during the year ended December 31, 2022 and 2021, respectively.

As of December 31, 2022, our total commitments related to finance leases was \$13.5 million. Leases in which we sublet also do not represent a significant portion of our leasing activity.

Minimum future lease payments due in each of the next five years and thereafter, as of December 31, 2022, are presented in the table below.

(in millions)		
2023	\$	186.3
2024		171.4
2025		148.5
2026		128.2
2027		104.0
Thereafter		323.9
Total future minimum lease payments	\$	1,062.3
Less imputed interest		130.1
Total	\$	932.2

Other information related to operating leases was as follows.

	December 31, 2022
Weighted average remaining lease term	7.0 years
Weighted average discount rate	3.6 %

12. TRANSACTIONS WITH AFFILIATES

As part of our co-investment strategy, we have equity interests in real estate ventures, some of which have certain of our officers as trustees or board of director members, and from which we earn advisory and management fees.

Included in the accompanying Consolidated Financial Statements was revenue of \$686.4 million, \$723.3 million, and \$516.4 million for 2022, 2021 and 2020, respectively, as well as receivables of \$122.4 million and \$152.9 million as of December 31, 2022 and 2021, respectively, related to transactions with affiliates. These amounts primarily relate to transactions with the real estate ventures in which we have equity interests.

The outstanding balance of loans to employees are presented in the following table.

(in millions)	December 31,	
	2022	2021
Loans related to co-investments ⁽¹⁾	\$ 54.0	16.9
Advances, travel and other ⁽²⁾	323.2	272.7
Total	\$ 377.2	289.6

(1) These nonrecourse loans have been made to allow employees the ability to participate in investment fund opportunities. Such amounts are included in Investments on our Consolidated Balance Sheets.

(2) Consists primarily of commissions and other compensation advances to employees that are amortized to Compensation and benefits based on performance over required service periods. Such amounts are included in Notes and other receivables and Long-term receivables on our Consolidated Balance Sheets.

The Company does not extend credit or provide personal loans to any director or executive officer of JLL.

13. COMMITMENTS AND CONTINGENCIES

We are a defendant in various litigation matters arising in the ordinary course of business, some of which involve claims for damages that are substantial in amount. Many of these litigation matters are covered by insurance (including insurance provided through a consolidated captive insurance company as further discussed below), but they may nevertheless be subject to large deductibles and the amounts being claimed may exceed the available insurance. Although we cannot determine the ultimate liability for these matters, based upon information currently available, we believe the ultimate resolution of such claims and litigation will not have a material adverse effect on our financial position, results of operations or liquidity.

Professional Indemnity Insurance

In order to better manage our global insurance program and support our risk management efforts, we supplement our traditional insurance coverage for certain types of claims by using a wholly-owned captive insurance company. The level of risk retained by our captive insurance company, with respect to professional indemnity claims, is up to \$10.0 million per claim, inclusive of the deductible. We contract third-party insurance companies to provide coverage of risk in excess of this amount. When a potential loss event occurs, we estimate the ultimate cost of the claim and accrue the amount in Other current and long-term liabilities on our Consolidated Balance Sheets when probable and estimable. In addition, we have established receivables from third-party insurance providers for claim amounts in excess of the risk retained by our captive insurance company. In total, these receivables were \$22.5 million as of both December 31, 2022 and 2021 and are included in Notes and other receivables on our Consolidated Balance Sheets.

The following table shows the professional indemnity accrual activity and related payments.

(in millions)	
December 31, 2019	\$ 38.1
New claims	6.7
Prior year claims adjustments (including foreign currency changes)	3.8
Claims paid	(0.4)
December 31, 2020	48.2
New claims	1.6
Prior year claims adjustments (including foreign currency changes)	(10.5)
Claims paid	(38.1)
December 31, 2021	1.2
New claims	1.3
Prior year claims adjustments (including foreign currency changes)	(0.1)
Claims paid	(0.2)
December 31, 2022	\$ 2.2

DUS Program Loan Loss-Sharing

As a participant in the DUS program, we retain a portion of the risk of loss for loans that are originated and sold under the DUS program. Net losses on defaulted loans are shared with Fannie Mae based upon established loss-sharing ratios. Generally, we share approximately one-third of incurred losses, subject to a cap of 20% of the principal balance of the mortgage at origination. As of December 31, 2022 and 2021, we had loans, funded and sold, subject to loss-sharing arrangements with an aggregate unpaid principal balance of \$18.3 billion and \$15.4 billion, respectively. There were no loan losses incurred for the years ended December 31, 2022, 2021 and 2020. See "Financial Guarantees" section of Note 2, Summary of Significant Accounting Policies for additional information.

14. RESTRUCTURING AND ACQUISITION CHARGES

Restructuring and acquisition charges include cash and non-cash expenses. Cash-based charges primarily consist of (i) severance and employment-related charges, including those related to external service providers, incurred in conjunction with a structural business shift, which can be represented by a notable change in headcount, change in leadership, or transformation of business processes, (ii) acquisition, transaction and integration-related charges, and (iii) other restructuring including lease exit charges. Non-cash charges include (i) stock-based compensation expense for retention awards issued in conjunction with the HFF, Inc. ("HFF") acquisition and (ii) fair value adjustments to earn-out liabilities relating to prior-period acquisition activity. Restructuring and acquisition charges are presented in the table below.

(in millions)	Year Ended December 31,		
	2022	2021	2020
Severance and other employment-related charges	\$ 44.5	14.3	69.0
Restructuring, pre-acquisition and post-acquisition charges	57.5	50.0	51.5
Stock-based compensation expense for HFF retention awards	6.1	17.8	36.7
Fair value adjustments to earn-out liabilities	(3.3)	2.6	(14.8)
Restructuring and acquisition charges	\$ 104.8	84.7	142.4

We expect nearly all expenses related to (i) severance and other employment-related charges and (ii) restructuring, pre-acquisition and post-acquisition charges as of December 31, 2022 will be paid during the next twelve months.

15. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The table below presents the changes in Accumulated other comprehensive income (loss) by component.

(in millions)	Pension and postretirement benefit	Cumulative foreign currency translation adjustment	Total
Balance as of December 31, 2020	\$ (81.2)	(296.0)	\$ (377.2)
Other comprehensive income before reclassification	35.3	(56.7)	(21.4)
Amounts reclassified from AOCI after tax expense of \$0.7, \$- and \$0.7	3.2	—	3.2
Other comprehensive income after tax expense of \$7.6, \$- and \$7.6	38.5	(56.7)	(18.2)
Balance as of December 31, 2021	(42.7)	(352.7)	(395.4)
Other comprehensive income before reclassification	(23.2)	(231.3)	(254.5)
Amounts reclassified from AOCI after tax expense of \$0.4, \$- and \$0.4	1.7	—	1.7
Other comprehensive income after tax benefit of \$6.1, \$- and \$6.1	(21.5)	(231.3)	(252.8)
Balance as of December 31, 2022	\$ (64.2)	(584.0)	\$ (648.2)

For pension and postretirement benefits, we report amounts reclassified from Accumulated other comprehensive income (loss) in Other income within the Consolidated Statements of Comprehensive Income.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

The Company has established disclosure controls and procedures to ensure material information relating to the Company, including its consolidated subsidiaries, is made known to the officers who certify the Company's financial reports and to the members of senior management and the Board of Directors.

Based on management's evaluation as of December 31, 2022, the principal executive officer and principal financial officer of the Company have concluded the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) are effective.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control-Integrated Framework (2013)*, our management concluded our internal control over financial reporting was effective as of December 31, 2022.

KPMG LLP, the Independent Registered Public Accounting Firm that audited the Consolidated Financial Statements included in this Annual Report on Form 10-K, issued an audit report on the Company's internal control over financial reporting. That Report of Independent Registered Public Accounting Firm is included in Item 8. Financial Statements and Supplementary Data.

CHANGES IN INTERNAL CONTROLS OVER FINANCIAL REPORTING

There were no changes to the Company's internal controls over financial reporting during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, the Company's internal controls over financial reporting.

ITEM 9B. OTHER INFORMATION

Not applicable.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTION THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Item 401 of Regulation S-K in the definitive proxy statement for the annual meeting of shareholders to be held on or about May 25, 2023 (“Proxy Statement”), under the captions "Corporate Governance - Item 1 - Election of Directors" and “Executive Officers” is incorporated herein by reference. The information in the Proxy Statement required by Item 405 of Regulation S-K under the caption “Security Ownership - Delinquent Section 16 Reports” is incorporated herein by reference. The information in the Proxy Statement required by Items 407(d)(4) and 407(d)(5) of Regulation S-K under the caption “Corporate Governance - Board Committees” is incorporated herein by reference.

JLL has adopted a code of ethics that applies to its executives, including its principal executive officer, principal financial officer and principal accounting officer. This code of ethics and JLL's corporate governance policies are posted on JLL's website at www.jll.com. JLL intends to satisfy disclosure requirements regarding amendments to or waivers from its code of ethics by posting such information on this website. The charters of the Audit and Risk, Nominating, Governance and Sustainability, and Compensation committees of JLL's Board of Directors are available on JLL's website as well. This information is also available in print free of charge to any person who requests it.

ITEM 11. EXECUTIVE COMPENSATION

The information required by Item 402 and 407(e)(4) and (e)(5) of Regulation S-K in the Proxy Statement under the caption "Executive Compensation" is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED SHAREHOLDER MATTERS

The information required by Item 403 of Regulation S-K in the Proxy Statement under the caption "Security Ownership" is incorporated herein by reference. The following table provides information with respect to Jones Lang LaSalle's common shares issuable under our equity compensation plans.

December 31, 2022			
(in thousands, except exercise price) 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			
SAIP	1,408	\$170.78	646
ESPP	n/a	n/a	113
Subtotal	1,408		759
Equity compensation plans not approved by security holders			
SAYE ⁽¹⁾	—	—	281
Total	1,408		1,040

(1) In November 2001, we adopted the SAYE plan for eligible employees of our U.K. based operations. In November 2006, the SAYE plan was extended to employees in our Ireland operations. Under this plan, employee contributions for stock purchases are enhanced by us through an additional contribution of a 15% discount on the purchase price. Options granted under the SAYE plan vest over a period of three to five years. The original SAYE plan was not approved by shareholders since such approval was not required under applicable rules at the time of the adoption of this plan. In 2006, our shareholders approved an amendment to the SAYE plan that increased the number of shares reserved for issuance by 500,000.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 404 of Regulation S-K in the Proxy Statement under the caption "Security Ownership - Certain Relationships and Related Transactions" is incorporated herein by reference. The information required by Item 407(a) of Regulation S-K in the Proxy Statement under the caption "Corporate Governance-Director Independence" is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The Company's independent registered public accounting firm is KPMG, LLP, Chicago, IL, Auditor Firm ID: 185.

The information required by this Item 14 is set forth in the Proxy Statement under the captions "Audit Matters - Information About Our Independent Registered Public Accounting Firm" and incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

- 1. Financial Statements.** See Index to Consolidated Financial Statements in Part II, Item 8 of this report.
- 2. Financial Statement Schedules.** No financial statement schedules are included because they are not required or are not applicable, or the required information is set forth in the applicable statements or related notes.
- 3. Exhibits.** A list of exhibits is set forth in the Exhibit Index, included below.

ITEM 16. FORM 10-K SUMMARY

None.

Cautionary Note Regarding Forward-Looking Statements

This report, including this Management's Discussion and Analysis of Financial Condition and Results of Operations, contains "forward-looking statements" within the meaning of the federal securities laws. All such statements are qualified by this cautionary note, which is provided pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may also be included in our other public filings, press releases, our website, and oral and written presentations by management.

Statements in the future tense, and all statements accompanied by terms such as "believe," "will," "may," "could," "project," "expect," "estimate," "assume," "intend," "anticipate," "target," "plan" and variations thereof and similar terms, are intended to be forward-looking statements. Such statements do not relate strictly to historical or current facts as they relate to our intent, belief and current expectations about our strategic direction, prospects and future results, and give our current expectations or forecasts of future events. Management believes that these forward-looking statements are reasonable as and when made. However, caution should be taken not to place undue reliance on any such forward-looking statements because such statements speak only as of the date when made.

Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from our historical experience and our present expectations or anticipated results. These risks and uncertainties are described in Part I, Item 1A. Risk Factors and may also be described from time to time in our future reports filed with the SEC. You should consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of predictions contained in such forward-looking statements. The forward-looking statements in this report represent our estimates and assumptions only as of the date of this report. We do not undertake any obligation to update forward-looking statements to reflect events, circumstances, changes in expectations or the occurrence of unanticipated events after the date of those statements.

Power of Attorney

KNOW ALL MEN BY THESE PRESENTS, that each of Jones Lang LaSalle Incorporated, a Maryland corporation, and the undersigned Directors and officers of Jones Lang LaSalle Incorporated, hereby constitutes and appoints Christian Ulbrich, Karen Brennan and Benjamin Hawke its, his or her true and lawful attorneys-in-fact and agents, for it, him or her and in its, his or her name, place and stead, in any and all capacities, with full power to act alone, to sign any and all amendments to this report, and to file each such amendment to this report, with all exhibits thereto, and any and all documents in connection therewith, with the Securities and Exchange Commission, hereby granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform any and all acts and things requisite and necessary to be done in and about the premises, as fully to all intents and purposes as it, 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, may lawfully do or cause to be done by virtue hereof.

EXHIBIT NUMBER	DESCRIPTION
2.1	Agreement and Plan of Merger, dated as of March 18, 2019, by and among Jones Lang LaSalle Incorporated, JLL CM, Inc., JLL CMD, LLC and HFF, Inc. (Incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K dated March 21, 2019 (File No. 001-13145))
3.1	Articles of Restatement of Jones Lang LaSalle Incorporated filed with the Maryland Department of Assessments and Taxation on June 24, 2014 (Incorporated by reference to Exhibit 3.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 (File No. 001-13145))
3.2	Third Amended and Restated Bylaws of the Registrant effective as of March 2, 2018 (Incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K dated March 8, 2018 (File No. 001-13145))
4.1	Form of certificate representing shares of Jones Lang LaSalle Incorporated common stock (Incorporated by reference to Exhibit 4.1 to the Quarterly Report on Form 10-Q for the quarter ended March 31, 2001 (File No. 001-13145))
4.2	Indenture, dated as of November 9, 2012 between Jones Lang LaSalle Incorporated and The Bank of New York Mellon Trust Company, National Association (Incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K dated November 9, 2012 (File No. 001-13145))
4.3	First Supplemental Indenture (including the form of 4.400% Senior Notes due 2011), dated as of November 9, 2012 between Jones Lang LaSalle Incorporated and The Bank of New York Mellon Trust Company, National Association (Incorporated by reference to Exhibit 4.2 to the Report on Form 8-K dated November 9, 2012 (File No. 001-13145))
4.4	Description of Jones Lang LaSalle Incorporated Capital Stock (Incorporated by reference to Exhibit 4.4 to the Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-13145))
10.1	Second Amended and Restated Multicurrency Credit Agreement dated as of June 21, 2016 (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K dated June 23, 2016 (File No. 001-13145))
10.2	Amendment No.1 dated May 16, 2018 to the Second Amended and Restated Multicurrency Credit Agreement (Incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (File No. 001-13145))
10.3	Amendment No.2 to the Second Amended and Restated Multicurrency Credit Agreement, dated as of April 14, 2021 (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K dated April 16, 2021 (File No. 001-13145))
10.4	Amendment No. 3 to the Second Amended and Restated Multicurrency Credit Agreement, dated as of June 16, 2022 (Incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (File No. 001-13145))
10.5	Amendment No. 4 to the Second Amended and Restated Multicurrency Credit Agreement, dated as of August 31, 2022 (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K dated as of August 31, 2022 (File No. 001-13145))
10.6	Uncommitted Money Market Line Credit Agreement, dated as of November 3, 2022 between Jones Lang LaSalle Incorporated and Societe Generale (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K dated as of November 3, 2022 (File No. 001-13145))
10.7+	Form of Jones Lang LaSalle Incorporated Restricted Stock Unit Agreement used for the Non-Executive Directors' Annual Grants (Incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 (File No. 001-13145))
10.8+	Form of Jones Lang LaSalle Incorporated Performance Stock Unit Agreement (Under the 2017 Stock Award and Incentive Plan) used for certain Employees'; Incentive Grants. (Incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (File No. 001-13145))
10.9+	Form of Jones Lang LaSalle Incorporated Restricted Stock Unit Agreement used for Employees' Annual Grants (Incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 (File No. 001-13145))

EXHIBIT NUMBER	DESCRIPTION
10.10+	2019 Stock Award and Incentive Plan effective as of May 29, 2019 (as approved by the Shareholders of Jones Lang LaSalle Incorporated on May 29, 2019 and incorporated by reference to ANNEX C to the Proxy Statement included in Schedule 14A filed on April 18, 2019 (File No. 001-13145)).
10.11+	Amended and Restated 2019 Stock Award and Incentive Plan effective as of May 27, 2021 (as approved by the Shareholders of Jones Lang LaSalle Incorporated on May 27, 2021 and incorporated by reference to Annex C to the Proxy Statement included in Schedule 14A filed on April 16, 2021 (File No. 001-13145)).
10.12+	Form of Jones Lang LaSalle Incorporated Performance Stock Unit Agreement used for certain Employees' Incentive Grants under the 2019 Stock Award and Incentive Plan, incorporated by reference to Exhibit 10.8 to the Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-13145)
10.13+	Form of Jones Lang LaSalle Incorporated Restricted Stock Unit Agreement used for Employees' Annual Grants Agreement under the 2019 Stock Award and Incentive Plan, incorporated by reference to Exhibit 10.8 to the Annual Report on Form 10-K for the year ended December 31, 2019 (File No. 001-13145)
10.14+	HFF, Inc. 2016 Equity Incentive Plan (assumed by the Company in connection with its acquisition of HFF, Inc. pursuant to an Agreement and Plan of Merger, dated as of March 18, 2019, by and among the Company, JLL CM, Inc., JLL CMD, LCC and HFF, Inc. (Incorporated by reference to Exhibit 99.1 to the Registration Statement on Form S-8 dated July 1, 2019 (File No. 333-232500))
10.15+	Amended and Restated Severance Pay Plan effective July 1, 2010 (Incorporated by reference to Exhibit 10.9 to the Annual Report on Form 10-K for the year ended December 31, 2011 (File No. 001-13145))
10.16+	LaSalle Investment Management Long Term Incentive Compensation Program, amended and restated January 1, 2013 (Incorporated by reference to Exhibit 10.12 to the Annual Report on Form 10-K for the year ended December 31, 2013 (File No. 001-13145))
10.17+	Jones Lang LaSalle Incorporated Deferred Compensation Plan, as amended and restated effective January 1, 2009 (Incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K for the year ended December 31, 2008 (File No. 001-13145))
10.18+	Jones Lang LaSalle Incorporated First Amendment to Deferred Compensation Plan dated as of December 5, 2011 (Incorporated by reference to Exhibit 4.2 to the Registration Statement on Form S-8 dated March 28, 2012 (File No. 333-180405))
10.19*	Jones Lang LaSalle Incorporated Second Amendment to Deferred Compensation Plan dated as of March 25, 2014
10.20*	Jones Lang LaSalle Incorporated Third Amendment to Deferred Compensation Plan dated as of October 1, 2018
10.21*	Jones Lang LaSalle Incorporated Fourth Amendment to Deferred Compensation Plan dated as of July 1, 2019
10.22*	Jones Lang LaSalle Incorporated Fifth Amendment to Deferred Compensation Plan dated as of June 15, 2020
10.23*	Jones Lang LaSalle Incorporated Sixth Amendment to Deferred Compensation Plan dated as of January 1, 2022
10.24+	Jones Lang LaSalle Incorporated GEB 2015-2020 Long-Term Incentive Compensation Program effective as of January 1, 2015 (Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K dated July 15, 2015 (File 001-13145))
10.25+	Letter Agreement dated January 16, 2014 between Jones Lang LaSalle Incorporated and Gregory P. O'Brien (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K (File No. 001-13145))
10.26+	Letter Agreement dated August 23, 2016 between Jones Lang LaSalle Incorporated and Christian Ulbrich (Incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K dated August 25, 2016 (File 001-13145))

EXHIBIT NUMBER	DESCRIPTION
10.27+	Amendment, dated August 1, 2022, to the Letter Agreement dated August 23, 2016 between Jones Lang LaSalle Incorporated and Christian Ulbrich (Incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended June 30, 2022 (File No. 001-13145))
10.28+	Letter Agreement, dated September 22, 2019 between Jones Lang LaSalle Incorporated and Mihir Shah (Incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 (File No. 001-13145))
10.29+	Letter Agreement dated September 22, 2019 between Jones Lang LaSalle Incorporated and Yishai Lerner (Incorporated by reference to Exhibit 10.2 to the Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 (File No. 001-13145))
10.30+	Letter Agreement, dated June 18, 2020, between Jones Lang LaSalle Incorporated and Karen Brennan (Incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K dated June 22, 2020 (File No. 001-13145))
10.31+	Form Change in Control Agreement for Global Executive Board (Incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K dated March 4, 2021 (File No. 001-13145))
10.32+	Letter Agreement dated December 4, 2020, between Jones Lang LaSalle Incorporated and Jeff A. Jacobson (Incorporated by reference to Exhibit 10.25 to the Current Report on Form 10-K for the year ended December 31, 2020 (File No. 001-13145))
11	Statement concerning computation of per share earnings (filed in Item 8, Consolidated Statements of Comprehensive Income)
21.1 *	List of Subsidiaries
23.1 *	Consent of Independent Registered Public Accounting Firm
24.1*	Power of Attorney (Set forth on page preceding signature page of this report)
31.1 *	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) under 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) under the Securities and Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32 *	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Filed herewith

+ Indicates management compensatory plan, contract, or arrangement.

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, on the 28th day of February, 2023.

JONES LANG LASALLE INCORPORATED

By /s/ Karen Brennan
Karen Brennan
Chief Financial Officer
(Authorized Officer and Principal Financial Officer)

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 indicated on the 28th day of February, 2023.

<u>Signature</u>	<u>Title</u>
<u>/s/ Siddharth N. Mehta</u> Siddharth N. Mehta	Chairman of the Board of Directors and Director
<u>/s/ Christian Ulbrich</u> Christian Ulbrich	President, Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ Hugo Bagué</u> Hugo Bagué	Director
<u>/s/ Matthew Carter, Jr.</u> Matthew Carter, Jr.	Director
<u>/s/ Samuel A. Di Piazza, Jr.</u> Samuel A. Di Piazza, Jr.	Director
<u>/s/ Tina Ju</u> Tina Ju	Director
<u>/s/ Bridget Macaskill</u> Bridget Macaskill	Director
<u>/s/ Deborah H. McAneny</u> Deborah H. McAneny	Director
<u>/s/ Moses Ojeisekhoba</u> Moses Ojeisekhoba	Director
<u>/s/ Jeetu Patel</u> Jeetu Patel	Director
<u>/s/ Ann Marie Petach</u> Ann Marie Petach	Director
<u>/s/ Larry Quinlan</u> Larry Quinlan	Director
<u>/s/ Efrain Rivera</u> Efrain Rivera	Director
<u>/s/ Karen Brennan</u> Karen Brennan	Chief Financial Officer (Principal Financial Officer)
<u>/s/ Benjamin Hawke</u> Benjamin Hawke	Chief Accounting Officer (Principal Accounting Officer)

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Jones Lang LaSalle Incorporated

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Chicago, Illinois 60601
tel +1 312 782 5800

JLL
jll.com

LaSalle
lasalle.com

Regional contact information

Each of our businesses — JLL Real Estate Services and LaSalle — operates in the Americas, EMEA and Asia Pacific. Regional contact information for these businesses may be found on the websites referenced above.

Independent registered public accounting firm

KPMG LLP
200 East Randolph Drive
Chicago, Illinois 60601

Stock transfer agent, registrar and dividend paying agent

Computershare Investor Services
150 Royall St., Suite 101
Canton, MA 02021
tel +1 866 210 8055

computershare.com/investor

**Shareholder online inquiries
web.queries@computershare.com****Investor relations**

Inquiries from investors should be directed to:

Jones Lang LaSalle Incorporated
Investor Relations Department
200 East Randolph Drive
Chicago, Illinois 60601
tel +1 312 252 8943
ir.jll.com

NYSE and SEC certifications

As required, during 2022 our Chief Executive Officer certified to the New York Stock Exchange that he was not aware of any violation by JLL of NYSE corporate governance listing standards. In addition, JLL has filed with the Securities and Exchange Commission, as exhibits to its 2022 Annual Report on Form 10-K, the certifications of its Chief Executive Officer and Chief Financial Officer required under Section 302 of the Sarbanes-Oxley Act of 2002 regarding the quality of its public disclosure.

JLL Code of Ethics

JLL stands for uncompromising integrity and the highest ethical conduct. We are proud of, and are determined to protect and enhance, the global reputation we have established. In a service business such as ours, the integrity that our brand represents is one of our most valuable assets. The JLL Code of Ethics, which may be found in multiple languages on our website, contains the ethics policies that everyone who does business on behalf of our firm must follow. Reports of possible violations of our Code of Ethics may be made to our global Ethics Helpline at +1 877 540 5066 or by contacting jll.ethicsreports.com

**JLL Vendor Code of Conduct**

JLL expects that each of its vendors, meaning any firm or individual providing a product or service to JLL or indirectly to our clients as a contractor or subcontractor, will share and embrace the letter and spirit of our commitment to integrity, safety and respect for all individuals. While vendors are independent entities, their business practices may significantly reflect upon us, our reputation and our brand. Accordingly, we expect all vendors to adhere to the JLL Vendor Code of Conduct, which may be found in multiple languages on our website. Reports of possible violations of our Vendor Code of Conduct may be made to our global Ethics Helpline or through the Web address indicated above.

JLL Sustainability

We shape the future of real estate for a better world by partnering with our stakeholders to drive disruptive, impactful and sustainable change. We do this by embedding sustainability into everything we do through our global sustainability program. It is focused on three issue areas where JLL can deliver the greatest impacts: Climate action for sustainable real estate, Healthy spaces for all people, and Inclusive places for thriving communities. For more information, visit jll.com/sustainability

Cautionary note regarding forward-looking statements

Certain statements in this Annual Report may constitute forward-looking statements that involve known and unknown risks, uncertainties, and other factors that may cause JLL's actual results to be materially different from any future results implied by such forward-looking statements. See our 2022 Form 10-K for a discussion of such risks, uncertainties and other factors.

Integrated reporting

JLL was one of the first U.S. listed companies to participate in the International Integrated Reporting Council, and we continue to support the general principles set forth by the Integrated Reporting (<IR>) Framework in our financial reporting and sustainability materials. Our Annual Report focuses on our business strategy and our financial performance, including an attempt to illustrate how being a sustainable enterprise is integral to our success. Our governance and remuneration practices are reported primarily in the Proxy Statement for our Annual Meeting of Shareholders and our sustainability strategy and performance are reported in our Global Sustainability Report. The mechanisms we use to make our clients feel comfortable with respect to our transparency and fair dealing are summarized in our Ethics Everywhere Annual Report.



JLL
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