

Annual

MORNINGSTAR®

2022
Annual Report

Letter to shareholders	3
Financial Highlights	7
Morningstar Wealth	10
Company Goals	12
Delivering Differentiated Insights Across Asset Classes to Public and Private Market Investors	12
Establishing Leading ESG Positions Across Each Business	14
Driving Operational Excellence and Scalability to Growth	17
Building an Inclusive Culture That Supports Exceptional Talent	18
People Highlights and Transitions	19
Closing Thoughts	21
<hr/>	
U.S. Securities and Exchange Commission Form 10-K	23
Part I	25
Part II	73
Part III	146
Part IV	147
<hr/>	
Additional Information	151

Financial Highlights

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
										10.1%
									22.3%	
									17.9%	
									15.6%	
									11.9%	
									14.2%	
									1.2%	
									3.8%	
									8.9%	
									6.1%	
\$698.3	\$760.1	\$788.8	\$798.6	\$911.7	\$1,019.9 ⁽³⁾	\$1,179.0	\$1,389.5	\$1,699.3	\$1,870.6	Revenue (\$M)
13.3%	−38.1%	80.5%	−5.2%	−6.0%	27.1%	−12.1%	13.5%	19.4%	−34.7%	
\$170.7	\$105.6 ⁽¹⁾	\$190.6	\$180.8	\$169.8 ⁽²⁾	\$215.8 ⁽³⁾	\$189.6	\$215.2	\$257.0	\$167.8	Operating Income (\$M)
29.1%	−50.7%	135.2%	−18.1%	21.6%	30.1%	6.6%	20.9%	13.2% ⁽⁴⁾	−51.7% ⁽⁵⁾	
\$159.0	\$78.3 ⁽¹⁾	\$184.2	\$150.9	\$183.5	\$238.7 ⁽³⁾	\$254.4	\$307.6	\$348.1	\$168.3	Free Cash Flow (\$M)⁽⁶⁾
\$192.6	\$136.6	\$241.5	\$213.7	\$250.1	\$314.8	\$334.4	\$384.3	\$449.9	\$297.8	Cash Flows
(33.6)	(58.3)	(57.3)	(62.8)	(66.6)	(76.1)	(80.0)	(76.7)	(101.8)	(129.5)	Cash provided by operating activities
\$159.0	\$78.3 ⁽¹⁾	\$184.2	\$150.9	\$183.5	\$238.7 ⁽³⁾	\$254.4	\$307.6	\$348.1	\$168.3	Capital expenditures
										Free cash flow ⁽⁵⁾

(1) Operating income and free cash flow for 2014 includes a \$61.0 million litigation settlement expense and corresponding cash outflow.

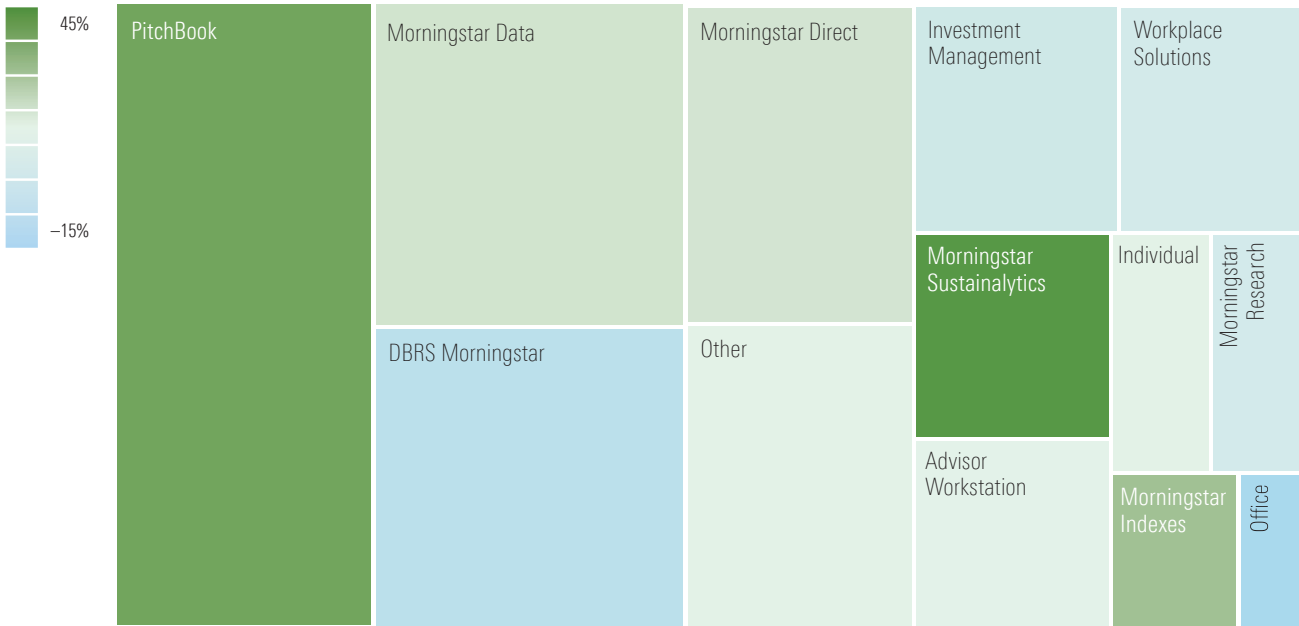
(2) Operating income for 2017 includes the negative impact of a \$4.1 million impairment charge for certain software licenses due to the shift to our cloud-based strategy.

(3) Revenue, operating income, and free cash flow in 2018 include a \$10.5 million revenue benefit related to an amended license agreement and a corresponding favorable cash impact.

(4) Excluding \$16.6 million of M&A-related earn-out payments in Q2 2021, free cash flow would have grown by 18.6%.

(5) Excluding \$40.0 million and \$16.6 million of M&A-related earn-out payments in the second quarter of 2022 and 2021, respectively, free cash flow would have declined by 42.9%.

(6) Free cash flow, which we define as cash provided by operating activities less capital expenditures, is considered a non-GAAP financial measure.



The size of the rectangles represents 2022 reported revenue. The color of the rectangles represents 2022 organic revenue growth. Organic revenue growth is a non-GAAP financial measure. LCD revenue is included in *Other*.

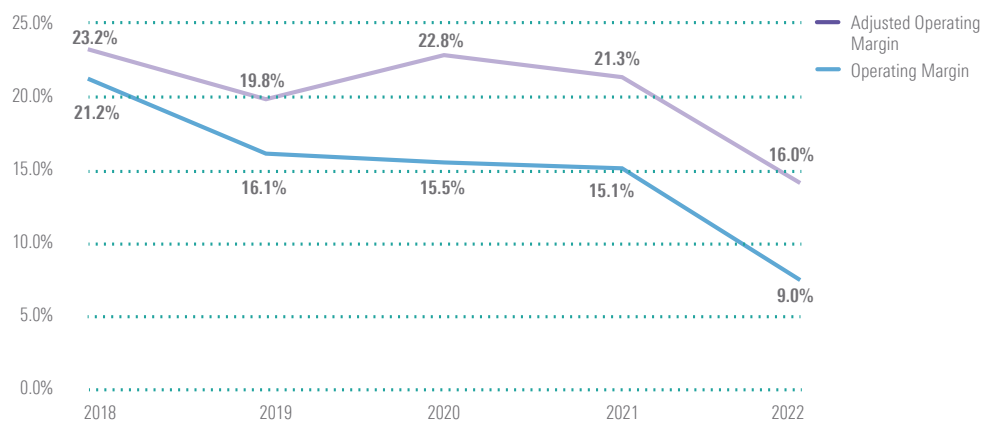
Dear fellow shareholders,

While 2021 was a banner year for global markets, 2022 presented challenges for investors and our business. Inflation surged globally, interest rates shot up, and stocks and bonds plunged. The Morningstar US Moderate Target Allocation Index — a benchmark for 60/40 portfolios — fell 15% for the full year, the worst performance for that type of portfolio since the Great Financial Crisis. Perhaps the only silver lining continued to be in private equity, where PitchBook data reveals that while returns dropped in 2022, the damage was contained.

There's no sugarcoating that market volatility and losses created strong headwinds for our asset-based and credit rating products. In our asset-based products, we're primarily paid basis points on assets under management, so market declines have a direct negative impact. Meanwhile, uncertainty about how far global central banks would go to tame inflation and the resulting impact on the economy and borrowing costs brought sharp reductions in global bond issuance. In particular, the decline in structured credit ratings, following a post-financial-crisis high in 2021, hit DBRS Morningstar's revenue.

We like the significant operating leverage these areas provide. Over time, we expect costs to grow more slowly than revenue, helping to drive increased profitability. But these products are vulnerable during periods of market weakness and create lumpiness in our

Operating Margins



Adjusted operating income is a non-GAAP financial measure. Please see accompanying financial statements for more detail.

results. Those pressures, taken together with the significant investments we made in the business, contributed to a decline in operating margin in 2022.

We were pleased with a few bright spots. Our license-based product areas maintained strong momentum. Our investments continued to drive organic growth in PitchBook and Morningstar Sustainalytics as demand for private market and environmental, social, and governance data remained strong. Morningstar Data and Morningstar Direct also grew nicely.

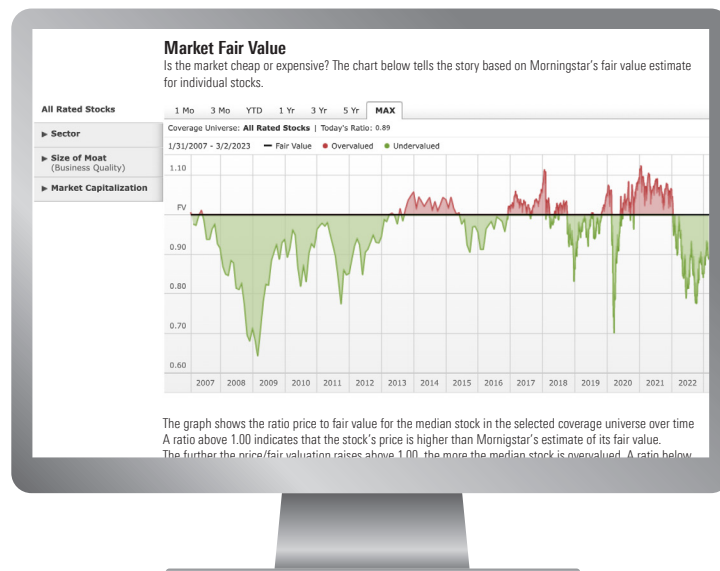
During the year, we closed two noteworthy acquisitions. The first was Leveraged Commentary & Data, a market leader in news, research, data, insights, and indexes for the leveraged finance market. This extends our lead in private equity markets to fast-growing private debt markets. We believe that this product had been underinvested in and we're unlocking its potential within PitchBook. Knowing what we do now, I can confidently say that we underestimated the opportunity in the private debt arena when we first evaluated LCD. It is a secular growth area that will drive growth for us that PitchBook, credit ratings, and indexes will all benefit from.

The second was the acquisition of Praemium's business outside Australia, which offers proprietary, friction-free technology that enables advisors to outsource key elements of the

advice workflow. It is a key building block in our wealth strategy outside the United States. As a bonus, we got Mark Sanderson to lead our international platform and U.K. business. Mark is practical, customer-centric, and determined to ensure we have the right platform to grow in the wealth space, particularly in the United Kingdom.

As we kept our eye on the long term with our investments in 2022, we've told investors to stay focused on the long term, too. On Morningstar.com, we continued to bring our readers a balanced perspective on how to invest through volatile markets while we provided tools, data, and analytics across our products to help advisors keep their clients invested in portfolios that are right for them. It was encouraging to see the Wall Street Journal article highlighting data from Vanguard that showed roughly 90% of investors in 401(k) retirement plans that it administers maintained or increased their savings in 2022. That aligns with our experience in our Workplace Solutions product area, where we saw strong net inflows to managed accounts in 2022.

And there are reasons for investors to be more optimistic about the long term as we head into 2023. During the fall 2022 selloff, our Market Fair Value chart showed that stocks in our



coverage universe hadn't been so cheap—except for a month or so in the early days of the pandemic—since 2011. Although equity markets have come off those lows, as of the end of February 2023, about 45% of our analyst-rated stocks had 4- or 5-star ratings, meaning that our analysis suggests that they're trading at meaningful discounts to their intrinsic values. In the past, paying attention to this barometer has been a good tell for the long-term prospects of the equity markets.

Despite the challenges of 2022, we're also optimistic. We believe that many of the trends we're building the business around are robust and position us well for the future. These include opportunities created by technological innovation, the demand for increased personalization (including the incorporation of ESG preferences), and the evolution of investors' portfolios to span public and private markets.

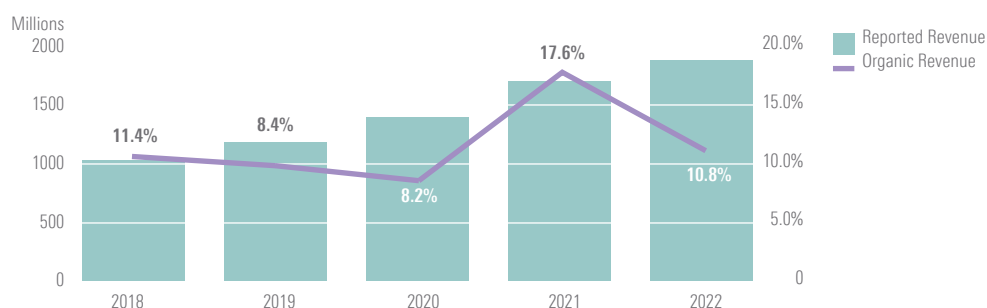
As we invest around these trends, we've built a portfolio of products that we believe is both resilient and offers the opportunity for significant, profitable growth. At roughly 70% of revenue, our license-based products anchor that portfolio with a subscription-based revenue model that has held up well in difficult markets. They're also well positioned to benefit from strong investor demand for private market data and ESG and steady growth in our core managed products data business.

The remaining 30% of revenue comes from our transaction- and asset-based products, which apply the strength of the data and research insights embedded in our license-based areas to help us meet important investor needs. While these products are more sensitive to macroeconomic swings, we have always taken a long-term view and believe that over time, returns in these areas will meet our expectations.

Financial Highlights

Revenue grew to just under \$1.9 billion in 2022 as organic growth remained strong at 10.8%. Our five-year average annual organic growth rate of 11.3% is a shade stronger.

Organic Revenue Growth



Organic revenue growth is a non-GAAP financial measure. Please see accompanying financial statements for more detail.

As I touched on earlier, that headline number obscures big differences across the business.

Our license-based product areas drove growth, with revenue up 17.7% for the year, or 18.0% on an organic basis. When you look at the graphic on the opening pages of this letter that shows the relative growth rates and contributions to revenue from our various product areas, you'll see PitchBook and Morningstar Sustainalytics in the darkest green, indicating that their revenue grew organically at rates of 40% or higher in 2022.

It's also important to note the contributions coming from Morningstar Data and Morningstar Direct, our second- and fourth-largest product areas by revenue in 2022. (That's indicated by the size of the boxes on the page.) These products posted solid organic growth for the year, at or near 10%. For Morningstar Data, we saw strong demand for managed funds data and ESG data, including for regulatory needs. For Morningstar Direct, almost half of our new seats sold came from firms that didn't previously use Direct, a statistic that highlights the benefit of the increasing collaboration between our

Direct sales specialists and our marketing demand generation team. We also saw good interest in our Morningstar Sustainalytics Level 2 company data, which became available in July 2022 and helps clients better understand the underlying ESG risks of managed investments and portfolios. Sales also benefited from improvements to the platform's functionality, like the expanded Analytics Lab, which gives our clients unprecedented access to our data and the ability to create custom analytics for reporting.

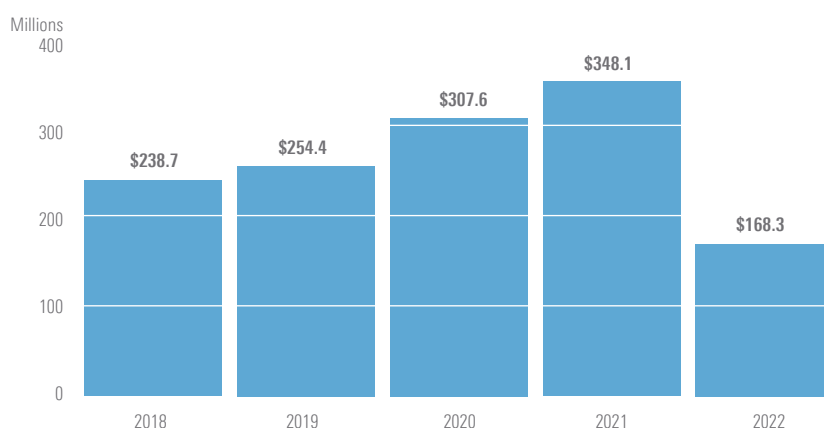
Revenue for our asset-based product areas was up just 1.7%, or 1.5% on an organic basis, in 2022. Solid growth from Morningstar Indexes somewhat offset market-driven declines in Investment Management. Although the \$147.7 billion in Indexes assets under management as of December 2022 was flat with December 2021, higher average AUM during 2022 relative to 2021 helped drive growth in investable products revenue. Impressively, Workplace Solutions revenue was down just slightly for the year. The team notched some important successes, starting with the addition of one of the U.S.' largest retirement plans to the platform.

Finally, revenue for our transaction-based product areas slowed by 11.0%, or 8.3% on an organic basis, in 2022. It was a rough second half of the year for DBRS Morningstar, as it was for our competitors in this space. Revenue tied to U.S. commercial and residential mortgage-backed securities was particularly hard-hit as issuance declined sharply in the second half after reaching post-financial-crisis highs in 2021. There were a few encouraging signs in an otherwise challenging year, including solid growth in revenue attributable to our ratings of U.S. middle-market corporates. During 2022, we issued more than 110 new ratings on middle-market corporates globally. Our small but growing credit data products business was another area of relative strength.

All told, in 2022 we generated \$167.8 million in operating profit, or \$298.9 million when adjusting for intangible amortization and other M&A-related expenses and costs associated with the transition and shift of global support activities conducted in China to other markets. That resulted in operating and adjusted operating margins of 9.0% and 16.0%,

respectively, a decline from the previous year and lower than we've seen in the past five years. In contrast to prior years, we also saw a meaningful decline in free cash flow, which dropped to \$168.3 million, due to a combination of lower cash earnings, a higher bonus payout (tied to the strength of our 2021 results), higher interest expenses, and increases in capital expenditures related to higher capitalized software costs.

Free Cash Flow



Free cash flow is a non-GAAP financial measure. Please see accompanying financial statements for more detail.

Many of our long-term shareholders have noted the decline in our margins. This decline partially reflected market- and macro-driven weakness in product areas tied to assets under management and credit ratings. We'd expect to see those product areas rebound with improvements in the market environment. The decline also reflects the significant investments we've made in the business, particularly in Morningstar Sustainalytics, Wealth, and PitchBook. That's meant expenses growing faster than revenue across these areas. While we think the investments will pay off over time, there's no doubt that with Wealth in particular, the market environment has meant that our expected returns have been delayed.

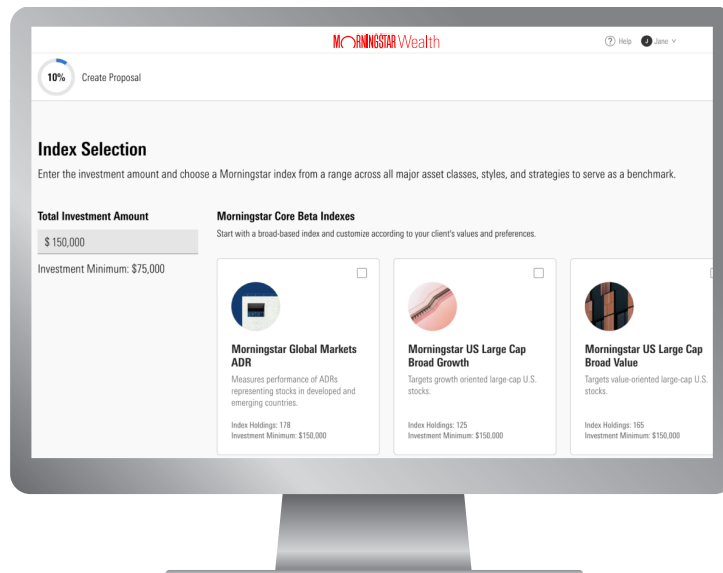
Indeed, as long as market volatility and uncertainty about the path of interest rates remain, our asset-based and ratings businesses will face headwinds. Thus, while we are executing our strategy, we are slowing the pace of investments in 2023. A more cautious pace makes sense, given the challenges in the external environment.

I'd note that our confidence in the long-term value of the investments we're making was reflected in our share repurchases during the year, which totaled \$226.0 million for more than 880,000 shares. We don't buy stock to offset dilution like others do. For us, it's simply a case of doing so when we think it's the best use of capital.

Finally, we saw an increase in debt this year with the acquisition of LCD. That increased debt/EBITDA to 2.2 times as of year-end. We have historically taken a conservative approach to managing our balance sheet, and that isn't changing. Over time, we seek to balance capital allocation priorities, but debt repayment will be a near- to intermediate-term priority for the deployment of cash.

Morningstar Wealth

While I've talked in the past about some areas we're investing in, I thought I'd use this year's letter to highlight Morningstar Wealth. In 2022, we brought together several products, including Investment Management, Morningstar Office, ByAllAccounts, Praemium's U.K. and international business, AdviserLogic in Australia, and the individual investor experience under the Morningstar Wealth umbrella, led by Daniel Needham. I wish we had done this many years ago.



Our vision here is meaningful. We are building a comprehensive, end-to-end wealth platform designed to help independent advisors through every step of their investment workflow. While established competitors exist in this space, we see it as a compelling opportunity. (It's also different from our strategy for Morningstar Advisor Workstation, which we built primarily for enterprise deployment in the U.S., such as at some of the largest broker/dealers.)

We believe that positive secular trends in this space have a way to go. Household wealth has been rising globally, and investors are turning to advisors for help managing those assets. We're well positioned to meet that demand: Morningstar is a well-known and trusted brand among advisors and their clients, with a nearly 40-year record of providing independent insights and views, transparency, and a commitment to investor success. We know this segment well and are bringing our capabilities together to create a best-in-class wealth-management platform that will streamline advisor workflows and help them deliver great financial advice to more people.

In the U.S., we're enhancing our existing turnkey asset-management platform, fully integrating our Office portfolio accounting capabilities, and leveraging SMARtX's technology, which we view as best of breed. Outside the U.S., we're working through Morningstar Wealth Platform (the rebranded Praemium platform). Our U.S. offering takes advisors through client onboarding, investment selection, portfolio construction, trading, rebalancing, portfolio accounting, performance analysis, reporting, billing, and business intelligence. Advisors on the platform will be able to access Morningstar-run investments and, by the second quarter, third-party models curated with the high level of diligence applied by our research analysts. Outside the U.S., we're following a similar path covering the full advisor workflow.

In 2022, we took an important step forward in addressing the increasing demand for personalization with the launch of Morningstar Direct Indexing. Direct indexing allows investors to own all or a portion of the stocks in an index, personalized to meet their

financial needs (think tax management) and preferences (think ESG, sector, or individual stock exposures). (For more, check out the explainer at <https://mp.morningstar.com/en-us/direct-indexing>.) To launch the product, we combined the expertise of our Wealth team with Morningstar Indexes' capabilities and Morningstar Sustainalytics' ESG data and analytics.

While we made good progress in enhancing our wealth offering last year, the early financial results aren't what we'd hoped for. First, market declines hurt assets under management. Second, net inflows were soft. While redemptions were roughly in line with our expectations, market volatility and uncertainty led to gross inflows falling short, consistent with the industry results for 2022. Advisors and their clients tend to be reluctant to switch to new investment products when markets decline. Our focus this year is to continue to strengthen our platform and to get more advisors using it. If we succeed, our wealth strategy will be a meaningful driver of our business in the years to come.

Wealth has been a major focus of our teams and investment over the past year. Here's how we progressed against our broader company goals in other parts of the business in 2022:

Company Goals



Delivering Differentiated Insights Across Asset Classes to Public and Private Market Investors

In addition to integrating LCD, PitchBook continued to invest in data and product capabilities focused on offering a comprehensive, fast, and intuitive experience for clients. Highlights included the expansion of global company and fund coverage in Europe, the Middle East and Africa, with coverage increasing to nearly 300,000 private capital transactions across 20,000 funds, as well as in the Asia-Pacific region, with coverage of 100,000 private capital transactions across 13,000 funds. In addition, PitchBook continued to build out alternative datasets, including real assets and hedge funds, and introduced the Portfolio Forecasting tool, which allows limited partners to manage cash flows, pace commitments, and hit allocation targets within the platform accurately and efficiently.

At the same time, we expanded our public equity data with the launch of a revamped business segment dataset for 23,000 companies; this allows users to analyze company results along geographic, business, and product lines, powered by data collected from quarterly and annual reports. We also introduced our first set of industry metrics for the IT and communications sector. These metrics are found outside the main financial statements and include important metrics such as constant-currency revenue growth, number of subscribers, and average revenue per user. We've seen good traction, with public company profile views in PitchBook increasing 35% in the fourth quarter of 2022 compared with the fourth quarter of 2021.

In 2022, Morningstar Indexes demonstrated the power of combining Morningstar's intellectual property with our index expertise with the launch of the Morningstar PitchBook Global Unicorn indexes, the first global benchmark series to provide daily tracking for the late-stage venture capital market, and continued growth of the ESG indexes lineup in collaboration with Morningstar Sustainalytics. During the year, we launched more than 50 new investable products, including the Global X Morningstar Japan High Dividend ESG exchange-traded fund and six iShares mutual funds tracking the Morningstar ESG Enhanced Index series. We are making terrific progress in Japan in this space thanks to the talents of Kana Kawasaki in our Tokyo office. The team has also made strides in building a more durable and diversified index business with its licensed data product, which contributed to solid growth in a difficult market environment. Amelia Furr leads our global sales effort here and deserves kudos for continuing to execute strongly with ever-increasing goals.

Turning to Morningstar Advisor Workstation, we expanded its research library to include data, screening, and comparison tools for public model portfolios via Model Exchange, as well as structured products and annuities through a collaboration with Luma Financial Technologies. We also launched the App Hub, which allows clients to access third-party applications. We were excited to hire Vimal Vel during the year to lead this product. Vimal is quickly demonstrating a methodical approach to product development, and I'm excited to see him go further in 2023.

Finally, our public and private equity and manager research teams are responsible for driving our differentiated insights across asset classes and investment vehicles. Across those teams, our analysts cover roughly 1,500 public equities and 4,500 managed investments (including mutual funds, exchange-traded funds, separately managed accounts, collective investment trusts, and model portfolios globally). In 2022, these teams delivered insightful research on emerging parts of the market, including landscape reports on the cryptocurrency and robo-advisor spaces. And PitchBook introduced its Healthcare Services Report, the first in a series that covers more established industries with heavy interest from private equity as well as other investors.



Establishing Leading ESG Positions Across Each Business

Our work to become leading providers of ESG data, analytics, research, and tools reflects our understanding that ESG offerings enable personalization and personal choice to become part of the investor's decision-making process. That's important as we think about how to get people of any age to engage with the markets and their money. Our role, as it has been throughout Morningstar's nearly 40-year history, is to advance transparency, make the information accessible, and surface choices facing investors in their portfolios. The choices investors make with that information are up to them.

ESG data and analytics is information to help investors of all different persuasions understand and engage with the market in a way that was once limited to only the biggest and wealthiest institutional investors. ESG has been the domain of institutional investors to date, and we're committed to making it accessible, understandable, and personal for Main Street.

ESG is a story that varies across the globe. It has become a political lightning rod in the U.S., but in Europe, it's a critical component in understanding a quickly evolving regulatory

environment. On the transparency front, we're helping global institutions navigate reporting and disclosure requirements: In 2022, Morningstar Sustainalytics expanded its EU Action Plan solutions to help our clients comply with the increased reporting requirements created by EU regulators. We also continued to build out our ESG Risk Rating coverage and introduced Physical Climate Risk Metrics, a data point that lets investors determine the potential risks companies face due to physical hazards brought about by climate change.

As we close in on the third anniversary of acquiring Sustainalytics, we're seeing benefits of the integration of its capabilities with the broader business. In the fall, we launched Investable World, a data-driven initiative to make sustainable investing more understandable, engaging, and actionable for investors. I encourage you to check out our Investable World website, which helps investors explore five key topics: water, food, energy, health, and community. The tool leverages analytics available in Direct that allow investors to explore a universe of funds across the sustainability spectrum, to support goals that range from minimizing risk to advancing sustainable outcomes. We also noted that the European Securities and Markets Authority used Morningstar's Sustainable Attributes data for the first time in its latest annual review of fund costs. That shows that the data has gained ground and is truly recognized as a reliable way to identify sustainable investments in Europe.

When it comes to surfacing investor choices, ESG data and analytics continue to make a mark on the full Morningstar product suite, with highlights including ESG investable products powered by Morningstar ESG indexes, the incorporation of ESG public company data in the PitchBook platform, and a new Sustainability Hub in Direct that helps users access research, insights, and related workflows for managed investment products. In January 2023, Workplace Solutions formally released the Morningstar ESG Pooled Employer Plan (PEP) with Plan Administrators, Inc., a retirement plan administrator and recordkeeper. The PEP is built on a lineup of funds that limit exposure to material ESG risks and will give small employers, often limited in the options they can bring to their employee base, access to ESG investments.

We're drawing on the same metrics and methodologies that power our products to drive sustainability principles and expertise through Morningstar to build a future-focused firm. Our approach is focused on three areas. First, we're committed to modeling industry-leading transparency. This year, for example, we've increased disclosure of equity in our workforce, releasing diverse representation data by functional area and racial representation in Canada to demonstrate our gender and racial diversity across business segments.

Second, we're using ESG and relevant data to track and report our progress when it comes to areas material to our business, including governance, data privacy and security, and the management of human capital. In this year's corporate sustainability report, for example, readers will find that we've expanded our pay equity assessment to include all business units. And we've published—again—the dollar amount required to reduce our gender and racial adjusted pay gaps. Our eagerness to quantify—and then address—this challenge reflects our understanding that to attract and retain talent and build trust with colleagues, transparency is essential.

Third, we're committed to mapping our products and our firm strategy to outside frameworks and partnerships that can scale our efforts and truly affect the market. As part of our commitment to provide climate products for all investors, we've joined other global data providers to build the Net-Zero Data Public Utility, an open climate data platform for all audiences. We're also aligning firm strategy with climate science: This year, we published our first climate transition plan, outlining steps to halve Morningstar's carbon emissions by 2030 and achieve net zero by 2050. More than half of our top 10 clients and many of our largest institutional shareholders share this commitment to a lower-carbon future; they'll be looking to us for data, research, tools, guidance, and transparency on how to get there.



Driving Operational Excellence and Scalability to Support Growth

Many of the enhancements we're making around this goal happen behind the scenes and get rolled out without much fanfare. But as we continue to grow, we must build the infrastructure needed to support our business today and our ambitions for the future.

A key focus in recent years has been the migration of our on-premises data centers to the cloud and a focus on building new products and capabilities in the cloud. This transition has several benefits for our business. Historically, we've had to build capacity to handle peak demand on our on-premises data servers; we don't need to invest that way anymore.

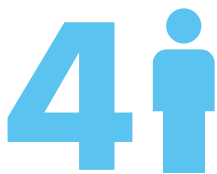
The shift to the cloud also means that we're nimbler at pushing out product updates, which comes in handy when global markets move quickly. For example, within days of Russia's invasion of Ukraine in early 2022, we were able to push out analytics to clients to help them understand their exposure to the top 10 stocks in our Russia index. We're also able to target product updates more carefully, starting with an initial release to a subset of clients that allows us to troubleshoot problems before a wider rollout.

This is a multiyear transition, and we're seeing real progress. Since 2017, for example, we have closed six data centers globally, including one in London in 2022. That's allowed us to retire more than 7,000 servers globally (about 1,300 of those in 2022) and left us with roughly 3,000, primarily in the U.S.

We're also investing in sales and marketing. Last year, I talked about the expansion of the "generalist/specialist" sales model. In 2022, we continued to build on this model, adding sales specialists and expanding to more products. We've been happy with the results, which have helped drive sales in product groups including Morningstar Direct and Morningstar Sustainalytics. Meanwhile, our marketing teams are focused on developing a robust demand-generation architecture with dedicated product-level support. Marketing demand generation covers both in-person events and digital, which includes

email campaigns, research releases, and webinars. Finally, we're increasing collaboration between sales and marketing. These investments are starting to bear fruit. In 2022, we benefited from a record number of marketing-generated leads.

We've also invested in talent, both internal and external, to support our growth. In the spring, we named Steve Bendt as chief marketing officer. Steve spent close to six years at PitchBook, where his team was a model for successful integrated marketing across brand, creative, communications, product, and demand marketing, applying disciplined go-to-market processes and brand-building that helped propel PitchBook's growth. Needless to say, Steve earned the promotion.



Building an Inclusive Culture That Supports Exceptional Talent

People are at the center of everything we do at Morningstar, and I've often talked about the importance of finding—and retaining—great talent. In 2022, we welcomed more than 4,600 new employees to Morningstar as we hired to support growth and backfilled existing positions.

We're committed to getting good people in the door and ensuring they can grow throughout their careers with us. In 2022, we significantly expanded our Morningstar Development Program. This program is the primary entry point to Morningstar for recent college graduates and allows new joiners to explore and learn in a variety of different roles, with support via apprenticeships and mentoring. Based on its success in Chicago, we expanded the program to New York, Toronto, and Mumbai, bringing in a number of our early-career colleagues and increasing the number of participants in the program more than fivefold. For those further along in their careers, we've introduced the Advancing Leaders Program. This program curates learning modules designed around leadership competencies that we look to develop in existing and aspiring leaders across the organization.

We know that one reason people leave their jobs is to advance their careers. To help our employees build long-term careers with us, in early 2023 we launched a pilot of a new Career Hub for our MDP teammates. The Career Hub is designed to match employees with development opportunities, and we expect to roll it out across the company later this year. In 2022, we filled 37% of our non-entry-level positions with internal hires; our goal for 2023 is 40%.

One relevant measure of how we're doing more broadly is our employee turnover rate, which spiked at Morningstar as it did for many other companies during the "great resignation." In 2022, Morningstar's average turnover was roughly unchanged at 18.9% compared with 18.5% the prior year. That headline number isn't what we'd like to see.

Encouragingly, however, the increase in turnover that started in 2021 and persisted through the first few quarters of 2022 reversed in the fourth quarter, as turnover fell noticeably on a seasonally adjusted basis. At the same time, our internal data shows that our employees continue to respond favorably to questions on topics such as motivation, intent to stay, and overall satisfaction. As of December 2022, Morningstar's overall engagement score remained consistent at 80% compared with 81% in 2021. We'll continue our work to improve the employee experience while keeping a close eye on turnover trends.

People Highlights and Transitions

The past year included several important transitions for our people.

In January 2023, Bevin Desmond stepped down from her role leading our talent and culture organization after 30 years at Morningstar. Her impact on the company, and many of us personally, will last for years to come. She is clearly among the group of individuals who can take pride in having helped build Morningstar from the ground up.

Bevin was deeply involved in the search for her successor, Marie Trzupsek Lynch. Before moving to Morningstar, Marie led Skills for Chicagoland's Future, a nationally recognized nonprofit she founded that partners with companies like ours to create equal access to jobs for everyone. We're excited to welcome Marie to the Morningstar family.

At the end of 2022, Haywood Kelly retired from his role as head of research at Morningstar, also after more than three decades at Morningstar. There are countless ways in which Haywood helped to build and shape Morningstar. Chief among them was his unwavering commitment to our mission and independence, his thoughtfulness about business strategy, and his ability to grow and nurture talent for all of Morningstar.

One beneficiary of Haywood's efforts to develop early career talent was Mike Holt, our chief strategy officer, who has assumed leadership of the research organization in addition to his other duties. Connecting the research organization with corporate strategy reflects the strategic role the research team plays today.

I also want to thank Pat Maloney, who retired as our general counsel, also at the end of 2022. Although his tenure at Morningstar didn't number in the decades, Pat made substantial contributions during his six very full years at Morningstar. Pat was particularly adept at helping us get our acquisitions to the finish line and did a great job helping Morningstar prepare for a world where more of our businesses were regulated. I will miss Pat's biting humor and the debates we frequently had.

On the latter point, Pat's successor, Kathleen Peacock, has quickly filled that void. We welcomed Kathleen as chief legal officer in September. She joined us from the London Stock Exchange Group, where she led a sizable legal team within the data and analytics division. Kathleen brings deep experience in the industry and a global perspective that our business requires.

Additional appointments of note include Bob Mann, who stepped up to lead Morningstar Sustainalytics with Michael Jantzi's departure. We also promoted Gabriel Presler to head of sustainability and Sarah Bush to lead investor relations. Gabriel and Sarah both started in the manager research group back in the day and are perfect examples of how we encourage careers to develop here in nontraditional ways. They also happen to be amazing at what they do!

Finally, I wanted to thank our colleagues in China for all they've done to build Morningstar over the past 20 years. The decision to transition and shift our global activities from China was an incredibly difficult one. Announcing to my colleagues in China that we had made the decision to limit our operations there was likely the hardest day I've experienced personally as CEO. I am glad that more than 100 of them agreed to stay with Morningstar by accepting roles in our other office locations.

Closing Thoughts

As I near finishing this letter, we've announced that we're regaining full control of our brand in Japan as we exit a licensing agreement that dates to the establishment of a joint venture with SoftBank in 1998. For the longest time, we've wanted to do so much more in Japan but have been limited by our previous agreement. All that changes in the first half of 2023, and the person who deserves credit for making it happen is Yu-Tsung Chang, who leads our business in Japan. Yu-Tsung is finally getting all the pieces in place as he hoped, and we are raising the bar on expectations for our performance there in the years ahead. No pressure, Yu-Tsung!

I look forward to seeing you at our company meeting on May 12 in Chicago. As you know, it's the one time annually when we take live questions from shareholders, and we welcome the opportunity to engage with you. I do hope you can join us!

Best regards,

A handwritten signature in black ink, appearing to be 'Kunal', with a large, stylized flourish extending from the end of the signature.

Kunal



UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2022

OR

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

For the transition period from _____ to _____
Commission File Number: 000-51280

MORNINGSTAR, INC.

(Exact Name of Registrant as Specified in its Charter)



Illinois
(State or Other Jurisdiction of
Incorporation or Organization)

22 West Washington Street
Chicago, Illinois 60602
(Address of Principal Executive Offices) (Zip Code)

36-3297908
(I.R.S. Employer
Identification Number)

(312) 696-6000

(Registrant's Telephone Number, Including Area Code)
Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common stock, no par value	MORN	The Nasdaq Stock Market LLC

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

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

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

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

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

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

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

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

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

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

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

The aggregate market value of shares of common stock held by non-affiliates of the registrant as of June 30, 2022 was \$6.0 billion. As of February 10, 2023, there were 42,480,051 shares of the registrant's common stock, no par value, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Certain parts of the registrant's Definitive Proxy Statement for the 2023 Annual Meeting of Shareholders are incorporated into Part III of this Form 10-K.

Auditor Name: KPMG LLP

Auditor Location: Chicago, IL

Auditor Firm ID: 185

Table of Contents

Part I	25
Item 1. Business	25
Item 1A. Risk Factors	54
Item 1B. Unresolved Staff Comments	72
Item 2. Properties	72
Item 3. Legal Proceedings	72
Item 4. Mine Safety Disclosures	72
Part II	73
Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	73
Item 6. [Reserved]	74
Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations	75
Item 7A. Quantitative and Qualitative Disclosures about Market Risk	98
Item 8. Financial Statements and Supplementary Data	99
Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	144
Item 9A. Controls and Procedures	144
Item 9B. Other Information	145
Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	145
Part III	146
Item 10. Directors, Executive Officers, and Corporate Governance	146
Item 11. Executive Compensation	146
Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	146
Item 13. Certain Relationships and Related Transactions, and Director Independence	146
Item 14. Principal Accountant Fees and Services	146
Part IV.	147
Item 15. Exhibits and Financial Statement Schedules	147
Item 16. Form 10-K Summary	149

Part I

Item 1. Business

Our Mission

Our mission is to empower investor success and everything we do at Morningstar is in the service of the investor. The investing ecosystem is complex, and navigating it with confidence requires a trusted, independent voice. We deliver our perspective to institutions, advisors, and individuals with a single-minded purpose: to empower every investor with conviction that he or she can make better-informed decisions and realize success on his or her own terms.

Our Business

Morningstar, Inc. is a leading global provider of independent investment insights. Our core competencies are data, research, and design, and we employ each of these to create products that clearly convey complex investment information. We started with affordable publications for individuals, then moved to creating technology solutions for professionals to help them research and select investments for clients. Today, we offer a variety of products and solutions that serve market participants of all kinds, including individual and institutional investors in public and private capital markets, financial advisors, asset managers, retirement plan providers and sponsors, and issuers of securities. We also apply our investing philosophy to managing assets for clients who prefer to employ the expertise of professional portfolio management teams. Since our founding in 1984, we've expanded our presence in global markets where investors need an independent view they can trust.

We help investors in two primary ways. First, we support asset managers, financial advisors, individuals, and institutions who make their own investment decisions. Our customers have access to a wide selection of investment data, fundamental equity research, manager research, private capital markets research, credit ratings, environmental, social, and governance (ESG) ratings, fund ratings, and indexes directly on our proprietary desktop or web-based software platforms, or through subscriptions, data feeds, and third-party distributors.

Second, we provide investment management services, investment analysis platforms, and portfolio management and accounting software tools to advisors and financial institutions. Our managed portfolio offerings help financial institutions deliver investor-friendly products based on our valuation-driven, fundamentals-based approach to investing. Applying our expertise in asset allocation, investment selection, and portfolio construction, our global investment team creates long-term investment strategies built on Morningstar's data and ratings. We help retirement plan sponsors build high-quality savings programs for employees. Our financial technology solutions allow advisors to continually demonstrate their value to clients, from aggregating client accounts to provide visibility into holdings, spending habits and cash flows and creating an initial investment proposal, to reporting portfolio performance and providing automated rebalancing tools. Investors also use our indexes as benchmarks, to create investable products based off our proprietary research, or to construct portfolios using customized indexes.

Through DBRS Morningstar, we also provide independent credit ratings services for financial institutions, corporate and sovereign entities, and structured finance products and instruments. Through Morningstar Sustainalytics, issuers of green bonds can also obtain Second-Party Opinions, which facilitate alignment with industry standards for sustainable finance.

While other companies may offer research, ratings, data, software products, indexes, or investment management services, we are one of the few companies that can deliver all of these with the mission of empowering investor success. We believe that focus on putting investors first, paired with the way we use design and technology to communicate complex financial information, sets us apart from our peers in the financial services industry.

Our Data, Research, and Ratings

Morningstar's trusted data, research, and ratings underpin our products. Our data covers a wide range of investment offerings, including managed investment products, publicly listed companies, private companies, fixed-income securities, private credit, and bank loans.

We focus our data, research, and ratings efforts on several areas:

Manager research (including mutual funds, exchange-traded funds, separately-managed accounts, and other vehicles)

We've been providing independent analyst research on managed investment strategies since the mid-1980s. We use this analysis to provide research reports and qualitative, forward-looking Morningstar Analyst Ratings for more than 4,500 mutual funds, exchanged-traded funds (ETFs), separately managed accounts (SMAs), collective investment trusts (CITs), and model portfolios globally spanning more than 21,000 share classes. We also offer the Morningstar Quantitative Rating, which is a forward-looking rating that uses algorithmic techniques to evaluate managed investments that significantly expands the breadth of our forward-looking ratings to an additional 56,000 funds, SMAs, and model portfolios and more than 380,000 share classes worldwide. The Morningstar Quantitative Rating employs machine learning to infer patterns from the way Morningstar's manager research analysts assign ratings to funds and then applies those learnings to rate funds that the analysts don't cover. This analysis augments other quantitative ratings and analytics, such as the Morningstar Rating for funds (the "star rating"), which ranks managed investment strategies such as mutual funds based on their past risk-adjusted performance versus peers. We also publish qualitative research and ratings on state-sponsored college-savings plans, target-date funds, and health-savings accounts.

In addition, the Morningstar Style Box visually depicts a strategy's underlying investment style, making it easier to compare investments and build portfolios. The star rating and style box have become important tools that millions of investors and advisors use in making investment decisions.

We also offer the Morningstar Sustainability Rating, Low Carbon Risk Designation, Morningstar ESG Commitment Level, and Sustainability Summary to help investors evaluate funds based on ESG factors.

As of December 31, 2022, we had more than 145 manager research analysts and other researchers globally, including teams in North America, Europe, Australia, and Asia.

Public and Private Company Research

As part of our research efforts on individual stocks, we popularized the concepts of economic moat, a measure of competitive advantage originally developed by Warren Buffett, and margin of safety, which reflects the size of the discount in a stock's price relative to its estimated value. The Morningstar Rating for stocks is based on the stock's current price relative to our analyst-generated fair value estimates, as well as the company's level of business risk and economic moat. Our analysts cover approximately 1,500 companies using a consistent, proprietary methodology that focuses on fundamental analysis, competitive advantage assessment, and intrinsic value estimation. Morningstar's data and research on publicly traded companies is used extensively in our products and solutions, such as institutional equity research, Morningstar Indexes such as the Morningstar Wide Moat Focus Index, our Global Market Barometer, and as a basis for equity portfolio strategies used in Morningstar Managed Portfolios.

Morningstar adheres to a globally consistent framework that integrates ESG risk into our equity research. Analysts identify valuation-relevant risks for each company using Sustainalytics' ESG Risk Ratings, which measure a company's exposure to material ESG risks, and then evaluate the probability that those risks materialize and the associated valuation impact. Results from this research inform Morningstar's assessment of a stock's intrinsic value and the margin of safety required before assigning a Morningstar Rating for stocks.

PitchBook's Institutional Research Group is a provider of investment strategy, fund performance and industry research. The group leverages PitchBook's proprietary data, such as valuations, deal multiples, and fund returns, to deliver analysis that allows clients to quickly gauge trends, price transactions, assess risks and identify notable company sets in the private capital markets. As of December 31, 2022, the team provides coverage of the private equity, venture capital, real assets, leveraged loan, high-yield bond, and private credit asset classes. PitchBook also provides full-time analyst coverage of emerging technology industries, delivering comprehensive assessments of disruptive sectors to help clients better segment and size markets, understand company and investor landscapes, evaluate opportunities, and develop conviction around the growth trajectories of emerging industries.

As of December 31, 2022, we had 130 public equity researchers and more than 35 private markets researchers globally, making us one of the largest providers of independent equity research. In addition to our analyst-driven coverage, we provide quantitative ratings and reports for approximately 58,000 publicly traded companies across Morningstar's solutions and cover 3.5 million privately-held companies through the PitchBook Platform.

Credit ratings

DBRS Morningstar provides global credit ratings as the world's fourth largest credit rating agency. We rate more than 4,000 issuers and 60,000 securities worldwide, providing independent credit ratings for financial institutions, corporate and sovereign entities, and structured finance products and instruments. Our goal is to bring more clarity, diversity, and responsiveness to the ratings process. Our approach and size provide the agility to respond to customers' needs with the necessary expertise and resources.

As of December 31, 2022, we had more than 565 credit rating analysts and analytical support staff based in the United States (U.S.), Canada, the United Kingdom, Europe, and India.

ESG ratings

Morningstar Sustainalytics' ESG Risk Ratings empower investors by providing them with the tools to assess financially material ESG risks that could affect the long-term performance of their investments at the security, fund, and portfolio levels. The ratings introduce a single measurement unit to assess ESG risks across 20 different material ESG issues (MEIs). Unlike other ESG ratings that are based on a relative, best-in-class approach, Sustainalytics' ESG Risk Ratings provide a powerful signal of a company's absolute ESG risk that is comparable across peers and sub-industries while allowing for aggregation at the portfolio level. As of December 31, 2022, we rated more than 20,000 companies worldwide, and offered more than 13,000 ESG Risk Ratings free to the public so that any investor can benefit from our research.

As of December 31, 2022, we employed more than 885 ESG research professionals based in the U.S., Canada, Europe, and Asia.

Our People

At Morningstar, our people are our most important asset. We are committed to fostering an environment where the people who power our mission know their ideas are welcome, their voices are heard, and their contributions are rewarded.

Our human capital management efforts are directly managed by our Talent and Culture department with oversight from our CEO and Board of Directors. The Compensation Committee of our Board of Directors approves incentive plan design and performance goals and reviews emerging compensation policies, practices, and potential risks. In addition, human capital management efforts are implemented by leaders across the company. Led by our CEO, Chief Talent and Culture Officer, and a Diversity, Equity, and Inclusion (DEI) steering committee, we embed DEI goals into each business unit and functional area. This reflects our commitment to improve representation and inclusion metrics across all areas of our business.

As of December 31, 2022, we had 12,224 permanent, full-time employees around the world. Approximately 39% of our employees work in India, 28% in the U.S., 10% in Continental Europe, 7% in Canada, 6% in China, 6% in the United Kingdom, and the remainder in Australia, Asia, and other regions.

Diversity, Equity, and Inclusion

We believe that diverse teams make better decisions, and we contend that a combination of different backgrounds, beliefs, and experiences makes Morningstar a stronger organization. As a global employer, our goal is to build an inclusive environment that encourages open dialogue and unique perspectives, creativity, and innovation, as we believe this leads to better business outcomes. We are doing this with clear objectives, education, and data-driven recruiting, hiring, retention, and employee experience programs.

As of December 31, 2022, approximately 41% of our employees are female. As of the same date, 50% of our board of directors are female. In the U.S., our employee population identifies as approximately 66% White, 22% Asian, 5% Hispanic, 4% Black, and 3% Mixed Race and Other.

To ensure equity in compensation throughout our organization, Morningstar conducts a pay equity study twice annually and adjusts employee compensation as needed. In our most recent pay examination, we expanded our pay equity study to include employees at PitchBook and Morningstar Sustainalytics.

Morningstar's adjusted pay gap tracks equal pay for equal work. It examines a group of employees performing substantially similar work and looks for pay practices that result in lower pay for the measured peer group. In our latest adjusted pay gap analysis, we found that, overall, women are paid 98.8% of what men are paid, and U.S. underrepresented minorities are paid 99.1% of what the U.S. majority groups are paid. Employees who were identified through this examination received a pay increase, separate from their ordinary course annual compensation consideration, as part of our October 1, 2022 pay cycle.

For additional breakdowns on our diverse representation by organizational level and functional areas, as well as more details on Morningstar's pay equity program, see details in Morningstar's 2022 Enterprise Sustainability Report.

Employee Engagement

Morningstar understands the value in hearing directly from our colleagues and offering platforms for open communication. We encourage colleagues to voice their opinions and use employee feedback to enhance our efforts. In recent years, we've built robust feedback mechanisms to measure employee engagement, including measurements of satisfaction, intent to stay, discretionary effort, and employee enablement. We do so through quarterly surveys, exit surveys, third-party surveys, in-person and digital focus groups, and tracking of turnover and advancement data. In 2022, Morningstar's average turnover for all permanent employees globally was 18.9% compared to 18.5% in 2021, reflecting the continued global trend of workers rethinking their expectations of work. Even in times of labor market upheaval, year-over-year data shows that our employees continue to respond favorably to questions on topics such as motivation, intent to stay, and overall satisfaction. Based on our internal quarterly measure in December 2022, Morningstar's overall engagement score remained consistent at 80% compared to 81% in 2021.

Morningstar believes that an attractive benefits and total rewards package, which includes a voluntary equity ownership program, promotes employee engagement by supporting the financial, emotional, and physical well-being of our employees. We're also proud of our global sabbatical program, which provides additional sabbatical leave after every four years of service. The additional leave varies between two and six weeks in duration depending on office location and local legal parameters.

Professional Growth

Morningstar offers a variety of educational and career development programs to ensure ongoing growth opportunities for all colleagues. Our goal is to provide an impactful and consistent set of development experiences for colleagues at all levels, in all

relevant job fields, and in all locations across the company. Notably, we offer our employees annual educational stipends to spend on their choice of professional development activities, while also providing financial support for continuing education and the pursuit of professional certifications.

We also offer programs for employee learning and growth. The Morningstar Development Program is the primary entry point to Morningstar for recent college graduates. Through this program, we place these new hires into many different entry roles and offer the flexibility to explore and learn through guided placements into subsequent roles, apprenticeships, and mentoring. In 2022, based on the success of the Morningstar Development Program in Chicago, we expanded the program to New York, Toronto, and Mumbai, significantly increasing the number of participants. For those further along in their career, Morningstar provides a focused learning journey for leaders and managers. Our Advancing Leaders Program curates learning modules designed around leadership competencies that we look to develop in existing and aspiring leaders throughout the organization.

Our Strategy



Our strategy is to deliver insights and experiences that make us essential to investor workflow. Proprietary data sets, meaningful analytics, independent research, and effective investment strategies are at the core of the powerful digital solutions that investors across our client segments rely on. We have a keen focus on innovation across data, research, product, and delivery so that we can effectively cater to the evolving needs and expectations of investors globally.

We execute our strategy through four connected elements: our values, our work, our clients, and our brand. The interaction between these four elements has enabled Morningstar to establish a position in the industry that is differentiated from our competition. We believe that our intangible assets, including the strength of our brand and our unique intellectual property, are difficult for competitors to replicate. Additionally, we strive to ensure our customers receive demonstrable value from our solutions making them reluctant to undertake the cost of switching to other providers.

We are focused on the following four strategic priorities:

Deliver differentiated insights across asset classes to public and private market investors

Shifting investor needs and expectations, innovative investment approaches and technologies, and a changing political and regulatory environment continue to drive the evolution of the financial services industry. We remain committed to ensuring that the modern investor is empowered with new data, research, and analytics. This includes:

- ▷ Expanding our data, research, and analytics to deliver unique, personalized, and impactful insights to investors across asset classes.
- ▷ Optimizing our advisor platform and service position by driving innovation and delivering exceptional investment solutions—including sustainable options—to advisors, facilitating great outcomes for the clients they serve around the world.
- ▷ Providing regulatory and compliance solutions for the wealth, buy-side, and asset management segments.
- ▷ Pursuing actionable information and developing workflow tools to serve core use cases of identifying private market investment opportunities, raising capital, valuing companies and investments, and buying/selling a company.

Establish a leading ESG position across each business area

With Sustainalytics as part of the Morningstar business, we are positioned to successfully offer ESG solutions across the investing landscape, which is a pivotal part of our long-term strategy. We remain focused on the growth of Morningstar Sustainalytics and its ESG ratings, while prioritizing ESG integration across all areas of our business to empower investors with ESG research, solutions, and tools to inform their investment choices. This includes:

- ▷ Developing ESG solutions for wealth managers, advisors, and individual investors.
- ▷ Continuing to expand the use of ESG in credit rating workflows, research, and analyses.
- ▷ Making relevant ESG data points available across our software platforms enabling users to adopt and seamlessly incorporate ESG into their product creation, monitoring, distribution, regulatory, and advice workflows.
- ▷ Integrating ESG into fixed income portfolios and workflows, indexes, and products to support investors with their evolving use cases.

Drive operational excellence and scalability to support growth targets

Morningstar has grown significantly in the last few years, and as we have continued to focus on growth in 2022 and beyond, we are emphasizing execution and scalability in our operations, processes, and technology. This includes:

- ▷ Creating a secure, robust, and scalable infrastructure that leverages advanced technology in our data, research, and product quality and delivery efforts.
- ▷ Scaling the demand generation function across Morningstar and driving transformation in global sales, customer success, and customer support functions to improve sales effectiveness.

-
- ▷ Scaling corporate systems to create more integrated platforms that enable growth of business areas while reducing legacy system fragmentation.

Build an inclusive culture that drives exceptional talent engagement and development

Morningstar is committed to investing in talent and building a culture that realizes our DEI goals. We are successful because of our team, and building an inclusive culture is one of our top priorities. We are committed to cultivating a diverse culture that maximizes talent and drives innovation. Our DEI initiatives are embedded in all areas of our business. This includes:

- ▷ Emphasizing employee engagement and education by providing inclusive leadership training to all managers and hosting conferences and speaker series to generate DEI awareness for all employees.
- ▷ Improving talent acquisition processes by forming strategic partnerships, focused campus recruiting and enhanced interview processes.
- ▷ Creating company-wide transparency on DEI metrics with employee dashboards and ongoing reviews with leadership.

Major Customer Groups

Given our strategy and core capabilities discussed above, we focus on six primary customer groups:

- ▷ Advisors (including independent financial advisors and those affiliated with Registered Investment Advisors (RIAs), broker/dealers or other intermediaries).
- ▷ Asset management (including fund companies, insurance companies, and other companies that build and manage portfolios of securities for their clients).
- ▷ Fixed-income security issuers and arrangers.
- ▷ Private market/venture capital investors.
- ▷ Workplace/retirement (including retirement plan providers, advisors, and sponsors).
- ▷ Individual investors.

Advisors

Financial advisors work with individual investors to help them reach their financial goals. This customer group includes independent advisors at RIA firms, advisors affiliated with independent broker/dealers, dually registered advisors, and “captive” advisors who are employees of a broker/dealer. These broker/dealers include wirehouses, regional broker/dealers, and banks. The advisor landscape is broad in both the U.S. and in other parts of the world where we focus. Our largest market is the U.S., where Cerulli Associates estimated in 2021 that there would be more than 294,000 financial advisors by the end of 2022.

We believe our deep understanding of individual investors’ needs allows us to work with advisors to help them make more efficient use of their time and deliver better investment outcomes for their clients. Our advisor solutions also draw on Morningstar’s proprietary investment research methodologies and research insights.

We sell our advisor-related solutions both directly to independent financial advisors and through enterprise licenses, which allow financial advisors associated with the licensing firm to use our products.

In the U.S. and the U.K. we are building comprehensive wealth platforms for financial advisors that expand the range of services we offer to help them with all aspects of their daily workflow needs, including investment decision-making, portfolio construction, client monitoring and reporting, practice management, portfolio rebalancing that connects with custodial and trading interfaces, and financial planning. Because advisors are increasingly outsourcing investment management, we’re continuing to enhance Morningstar Managed Portfolios to help advisors save time and reduce compliance risk.

Our main products for financial advisors are Morningstar Advisor Workstation, Morningstar Office, and Morningstar Managed Portfolios.

Asset management

Asset management firms manufacture financial products and manage and distribute investment portfolios. This customer group includes individuals involved in sales, marketing, product development, business intelligence, and distribution, as well as investment management (often referred to as the “buy side”), which includes portfolio management and research.

Our asset management offerings help companies connect with their clients because of Morningstar’s strong brand presence with both financial advisors and individual investors. We offer a global reach and have earned investors’ trust in our unbiased approach, investor-centric mission, and thought leadership.

The key products we offer for asset management firms include Morningstar Direct, Morningstar Data, and Morningstar Indexes. For the buy side, key products areas include Morningstar Research, DBRS Morningstar, Morningstar Data, Morningstar Direct, and Morningstar Sustainalytics.

Fixed income security issuers, arrangers, and investors

DBRS Morningstar typically issues credit ratings in response to requests from issuers, intermediaries, or investors. DBRS Morningstar credit ratings are requested for corporate short and long-term fixed income obligations, sovereign debt, single project financings and structured finance programs, including securitization of receivables, such as auto loans, credit cards, residential real estate loans and commercial real estate loans. In addition, claims-paying-ability credit ratings are issued for life, covering property/casualty, financial guaranty, title, and mortgage insurance companies.

We estimate that the global ratings market totaled \$10 billion as of year-end 2021, representing a 6.3% compound annual growth rate over the prior decade. In 2022, global issuance fell sharply due to uncertainty related to the macroeconomic environment and the future path of interest rates. We estimate that the global ratings market totaled roughly \$7.7 billion as of year-end 2022 and the 10-year compound annual growth rate declined to 2.1%. As the macroeconomic environment stabilizes we expect a return to higher long-term growth rates, supported by various secular trends.

Credit markets continue to evolve with companies using structured products as a key avenue for raising capital. Overall demand for structured products by institutional investors, including banks in the U.S. and Europe, remains high.

As of December 31, 2022, we provided ratings for more than 4,000 issuers of debt.

Private market/venture capital investors

PitchBook covers the full lifecycle of venture capital, private equity, and merger and acquisition (M&A) activities, including the limited partners, investment funds, and service providers involved. Our main product for this customer group is the PitchBook Platform, an all-in-one research and analysis workstation that gives clients the ability to access data, discover new connections, and conduct research on potential investment opportunities. An Excel plug-in and mobile capabilities are included with the platform license, and Morningstar public equity research can also be delivered through the platform.

As of December 31, 2022, we served over 10,100 clients, including investment and research firms, venture capital and private equity firms, investment banks, limited partners, lenders, law firms, and accounting firms. We also served corporate development teams at firms across industry sectors.

Workplace/retirement

In the U.S., 401(k) and other types of defined-contribution (DC) retirement plans are the dominant retirement savings vehicle offered by employers. According to the Investment Company Institute, there were \$8.9 trillion in assets in DC plans at end of the third quarter of 2022, compared to \$3.0 trillion in private-sector defined benefit (DB) plans and \$7.2 trillion in government DB plans.

Our solutions are designed to help improve the DC retirement system by offering highly personalized savings and investment advice at the employee level, scalable investment and risk mitigation services at the plan and advisor level, and industry research at the policy and institutional level. Currently, our focus is the U.S. market, because it continues to demonstrate healthy growth, and because many of our solutions are not easily adapted to foreign markets due to significant differences in regulatory frameworks that govern retirement saving and investing.

Our core retirement products (managed retirement accounts, fiduciary services, and custom models) primarily reach individual investors through employers (plan sponsors) that offer DC plans for their employees. As of December 31, 2022, we served 89 retirement service providers, broker dealers, asset managers, plan sponsors and RIAs, representing about 323,300 retirement plans.

Historically we have worked with retirement plan recordkeepers to deliver our services. However, in recent years, we have expanded our distribution network to include retirement plan advisors and asset managers and currently offer a suite of advisor-focused services. Those include Morningstar Plan Advantage, a practice-management platform; advisor managed accounts, a variation of our managed accounts service that enables advisors and asset managers to incorporate their firm's investment allocation philosophies and branding; and personal target-date funds, a service that enables employees in a retirement plan to receive a blended target-date fund based on their personal information.

Individual investors

We offer tools and content for individual investors who invest to build wealth and save for other goals, such as retirement or college tuition. A Gallup survey released in 2022 found that approximately 58% of individuals in the U.S. invest in the stock market either directly, through mutual funds, or self-directed retirement plans. We design products for individual investors who are actively involved in the investing process and want to take charge of their own investment decisions. We also reach individuals who want to learn more about investing or want to validate the advice they receive from brokers or financial advisors.

We offer three products for individual investors. Our largest based on engagement is our investing media site Morningstar.com, which offers data, editorial and research content available for free to registered customers and visitors. Our second product is Morningstar Investor (Morningstar Premium outside of the U.S. and Australia), which provides access to Morningstar's research, advanced screening tools and portfolio management tools. The third product is a set of investment newsletters based on different investment types and investing strategies.

Revenue Types

We leverage our proprietary data and research to sell products and services across our portfolio that generate revenue in three primary ways:

License-based: The majority of our research, data, and proprietary platforms are accessed via subscription services that grant access on either a per user or enterprise-basis for a specified period of time. License-based revenue includes PitchBook, Morningstar Data, Morningstar Direct, Morningstar Advisor Workstation, Morningstar Sustainalytics, and other similar products. Licensed-based revenue represented 71.2% of our 2022 consolidated revenue compared to 66.6% in 2021 and 67.3% in 2020.

Asset-based: We charge basis points and other fees for assets under management or advisement. Our Investment Management, Workplace Solutions, and Morningstar Indexes products are categorized as asset-based revenue. Asset-based revenue represented 14.4% of our 2022 consolidated revenue compared to 15.6% in 2021 and 16.1% in 2020.

Transaction-based: Credit ratings and ad sales on Morningstar.com comprise the majority of the products that are transactional, or one-time, in nature, versus the recurring revenue streams represented by our licensed and asset-based products. Transaction-based revenue represented 14.4% of our 2022 consolidated revenue compared to 17.8% in 2021 and 16.6% in 2020.

Major Products and Services

The section below describes our top five products by 2022 revenue and some of our other key products and services.

PitchBook

PitchBook's main product is the PitchBook Platform, an all-in-one web-hosted solution for investment and research professionals, including venture capital and private equity firms, corporate development teams, investment banks, limited partners, lenders, law firms, and accounting firms. Clients rely on us for a central, easy-to-use platform that provides access to the broadest and most powerful collection of data and research covering the private capital markets, including venture capital, private equity, and M&A activities. To accommodate our clients' diverse needs, the platform offers company profiles for both private and public companies, advanced search functionality, and other features that help to optimize workflow by surfacing relevant information and insights. Our clients source deals, raise funds, build buyer lists, create benchmarks, and network with the PitchBook Platform. PitchBook also offers a mobile application, CRM integrations, an Excel plug-in, data feeds, and flexible, à la carte data solutions that allow clients to access a variety of data points on demand.

In 2022, PitchBook continued to make significant investments in data sets and product capabilities, all focused on offering a comprehensive, fast, and intuitive platform experience for our clients. PitchBook's most significant investment in 2022 came with Morningstar's acquisition of Leveraged Commentary & Data (LCD). LCD is the industry standard for leveraged loan and high-yield bond data, news, analysis, and indexes, providing coverage across the full lifecycle of loans. PitchBook continues to integrate LCD data into its platform, providing critical datasets for participants across the debt markets.

At the same time, we continued to expand our core datasets across global venture capital, private equity, and M&A. During the year, we focused our efforts on increasing the number of companies and funds under coverage in the Europe, Middle East, and Africa (EMEA) and Asia-Pacific regions as well as expanding alternative asset class data sets including real assets and hedge funds. PitchBook also integrated data sets that enable biotech and pharmaceutical investors and business professionals to track the progress of clinical trials. Notable product releases included Portfolio Forecasting, a tool that enables limited partners to accurately and efficiently manage cash flow, pace commitments, and hit allocation targets directly within the PitchBook platform.

Finally, PitchBook Institutional Research Group (PIRG) continued to expand the scope of its coverage during 2022. PIRG added full-time analyst coverage of several new industries including Carbon and Emissions Technology, e-Commerce, and Healthcare Services, among others. The group also added ESG research capabilities and expanded analyst coverage of the leveraged loans, high-yield bond, and private credit markets with the acquisition of LCD.

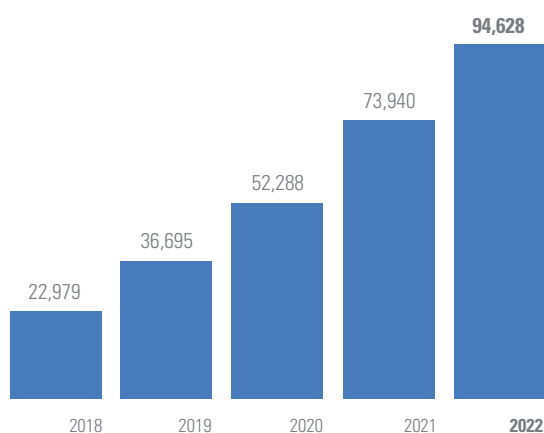
Pricing for the PitchBook Platform is based on the number of seats, with standard base license fees per user and customized prices for large enterprises, boutiques, and startup firms.

In 2022, PitchBook's largest markets were North America and EMEA. PitchBook's main competitors are CB Insights, Prequin, and S&P Capital IQ.

PitchBook is our largest product area based on revenue and comprised 21.8%, 17.1%, and 14.5% of our consolidated revenue in 2022, 2021, and 2020, respectively. Reported and organic results exclude contributions from the LCD acquisition in 2022. In 2022, we estimate that our annual revenue renewal rate for PitchBook was approximately 121% versus 127% in 2021.

PitchBook had 94,628 licensed users worldwide as of December 31, 2022.

PitchBook Platform Licenses



Morningstar Data

Our licensed data gives asset managers, redistributors, and wealth managers independent, comprehensive, and timely data and research they can use to empower investor success. Our offering spans managed investments (including mutual funds, ETFs, separate accounts, collective investment trusts, and model portfolios), equities, and fixed income securities and is available globally.

We are well-known for enriching managed investment raw data with research-driven intellectual property, resulting in proprietary statistics, such as the Morningstar Category, Morningstar Style Box, and Morningstar Rating, which we distribute through licensed data feeds. We also offer a wide range of other data sets, including information on investment performance, risk analytics, full historical portfolio holdings, operations data (such as managed investments' fees and expenses), cash flows, financial statement data, consolidated industry statistics, and investment ownership.

Clients license Morningstar Data to build transparent products and services that all investors, from those just starting out to sophisticated and high net worth individuals, can easily understand and use to reach their investing goals. Morningstar Data is used to serve retail investors and their intermediaries, supporting a variety of investor communications, including websites, print publications, and marketing fact sheets, as well as for internal research and product development. Demand for Morningstar Data has increased as clients build digital solutions, prepare for regulatory requirements, and incorporate automation, artificial intelligence, machine learning, and other forms of data analytics into their workflows. We're committed to covering our clients' whole portfolios, and offering the data they need to make informed investment decisions.

Our goal is to offer our clients data that's available quickly and in the most appropriate format to meet their workflow. Our data feeds enable our clients to discover the data that they need, and to schedule delivery in S3, FTP, CSV, XML, JSON, Text, and TSV output formats. We provide access to Morningstar Data utilizing an application programming interface (API) format to download and process large data files.

The Morningstar Data team applies emerging methods in artificial intelligence to regression, classification, deep learning, natural language processing, and optical character recognition to extract data from structured and unstructured content. The Morningstar Data team uses a “human in the loop” approach where machine inferences are presented to a data analyst for validation. Validated data is published in Morningstar products and used to retrain and continuously improve the Morningstar Data team’s machine learning models. This approach enables Morningstar to produce data faster without compromising the quality of data that our clients use in making sound investment decisions.

In 2022, we built on our commitment to cover the whole investor portfolio. We expanded our coverage of public equities and fixed-income securities, while adding fixed-income analytics to deliver global reference data and evaluated prices for corporate and sovereign bonds. Within managed investment data, we added to existing coverage of 529 plan portfolios, collective investment trusts (CITs), and model portfolios. During the year, we also launched a U.K. Managed Portfolio database, which standardized portfolio data allowing for better like-for-like competitive analysis, distribution to advisors, and reporting to clients. Finally, we introduced new regulatory data solutions in response to global investor protection, capital adequacy and sustainability regulations, as well as new data management solutions to support our asset management and wealth management clients by driving connectivity across their business functions.

Pricing is based on the number of investment vehicles, the amount of information provided for each security, the frequency of updates, the method of delivery, the size of the licensing firm, the level of distribution, and the intended use by the client, otherwise known as the “use-case.”

In 2022, Morningstar Data’s largest markets were North America and EMEA.

Our main global competitors for mutual fund data include Refinitiv and FE fundinfo. We also compete against smaller players that focus on local or regional information.

For market and equity data, we primarily compete with FactSet, S&P Global, ICE Data Services, Bloomberg, and Refinitiv.

Morningstar Data is our second-largest product area based on revenue and accounted for 13.6%, 14.3%, and 15.5% of our consolidated revenue in 2022, 2021, and 2020, respectively. We estimate that the annual revenue renewal rate for Morningstar Data was approximately 104% in 2022 versus 100% in 2021.

DBRS Morningstar

DBRS Morningstar is the fourth largest credit rating agency in the world, offering a wide range of credit rating services and products that contribute to the transparency of international and domestic credit markets.

DBRS Morningstar generates its revenue from providing independent credit ratings on financial institutions, corporates, and sovereigns, as well as on securitizations and other structured finance instruments, such as asset-backed securities (ABS), residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS) and collateralized loan obligations (CLO). The credit analysis and the assignment of credit ratings can take place on issuance of new bonds or on a continuous basis for existing credit exposures. The fees to the issuer are based on the type of issuance, the size of the transaction, and the complexity of the analysis.

Credit ratings are forward-looking opinions on credit risk that reflect the creditworthiness of a company or fixed-income security. They are determined within the framework of a ratings committee that represents a collective assessment of DBRS Morningstar’s opinion rather than the opinion of an individual analyst. These credit ratings are based on information that incorporates both global and local considerations and the use of approved methodologies and are determined in compliance with policies and procedures

designed to avoid or manage conflicts of interest. DBRS Morningstar's credit rating methodologies are publicly available and support the objectivity and integrity of the credit rating process. DBRS Morningstar also offers a micro-website dedicated to ESG factors deemed relevant to credit ratings analysis.

In addition to ratings and research opinions, DBRS Morningstar also offers data products derived from its ratings activities and analytical tools. These include ratings data feeds that can be integrated into companies' internal databases, web-based research, and analytical tools.

In 2021, Morningstar expanded the way it interacts with issuers and investors by launching a new credit solution provider, Morningstar Credit Information and Analytics (MCIA), that is separate from DBRS Morningstar and offers credit products and services beyond credit ratings. DealView, a commercial mortgage-bond monitoring service, is the main product sold by MCIA. In 2022, MCIA continued to work on developing modular credit information products that leverage our credit expertise and embed in the workflows of internal and external customers, along with an initiative to develop a unified commercial real estate product with a strategic partner.

In 2022, DBRS Morningstar's largest markets by revenue were the United States, followed by Canada and EMEA.

DBRS Morningstar competes with several other firms, including Fitch, Kroll Bond Ratings, Moody's, and S&P Global Ratings.

DBRS Morningstar is our third-largest product area based on revenue and accounted for 12.7%, 16.0%, and 14.9% of our consolidated revenue in 2022, 2021, and 2020, respectively.

For 2022, we estimate that transaction-based fees comprised 58% of DBRS Morningstar's revenue; the remainder can be classified as transaction-related, or revenue generated by annual fees tied to surveillance, research, and other services.

Morningstar Direct

Morningstar Direct is an investment-analysis platform that delivers rich data and analytics across asset classes, built on Morningstar's global database of both registered and non-registered securities, as well as data from third-party providers. Users can create advanced performance comparisons and in-depth analysis of an investment's underlying investment style, as well as custom-branded reports and presentations. Morningstar Direct helps equity and multi-asset strategy asset managers with market research, product positioning, competitive analysis, and distribution strategies, whereas wealth managers predominately use the tool to assist with manager research, fund selection, and the construction, monitoring, and distribution of model portfolios. Morningstar Direct is built on everything that makes Morningstar special: data and research, ratings, analytics, design, and a mission of empowering investor success.

Morningstar Direct is a Windows desktop application that is installed locally on users' computers. The Direct desktop application connects over the internet to databases and application servers hosted primarily in Morningstar data centers, with some use of cloud (AWS) infrastructure. A large portion of Morningstar Direct's features and functionality are delivered using modern web components and frameworks delivered within the legacy application.

In 2022, Morningstar Direct continued to execute against a product strategy centered around removing barriers to our clients' success, surfacing research within the product that enables users to take their next step faster, and expanding the data breadth and depth to more vehicle types. The team is dedicated to improving the user experience from the inside out by making innovative solutions within the platform even more accessible.

During the year, we introduced the flexibility to allow clients to create their own performance reporting feeds using Morningstar Direct as a delivery mechanism, streamlining the workflow for clients using Morningstar Direct's robust performance reporting capabilities to better understand the competitive landscape. We also continued to enrich and expand Analytics Lab, a data analytics platform introduced in 2021 that integrates Jupyter Notebooks, an open-source technology, with Morningstar's proprietary data, research, and investment and portfolio objects. Throughout 2022, we launched more than 20 new notebooks, all with the goal of helping clients answer the questions we know they are asking faster than ever before.

Morningstar Direct also released two hubs which act as a central repository of research and tools related to a specific topic that lives inside the platform, connecting disparate areas together, so users don't have to navigate across multiple menus and modules to get everything they need for a given workflow. These two hubs are dedicated to Sustainability and Portfolios, allowing our users to access education and research content, and then seamlessly shift into an analytical workflow.

Lastly, we continue to expand portfolio level data within Morningstar Direct, enriching our data coverage across fixed income, ETFs, ESG, model portfolios, and alternatives to reflect investors' more complex and dynamic strategies.

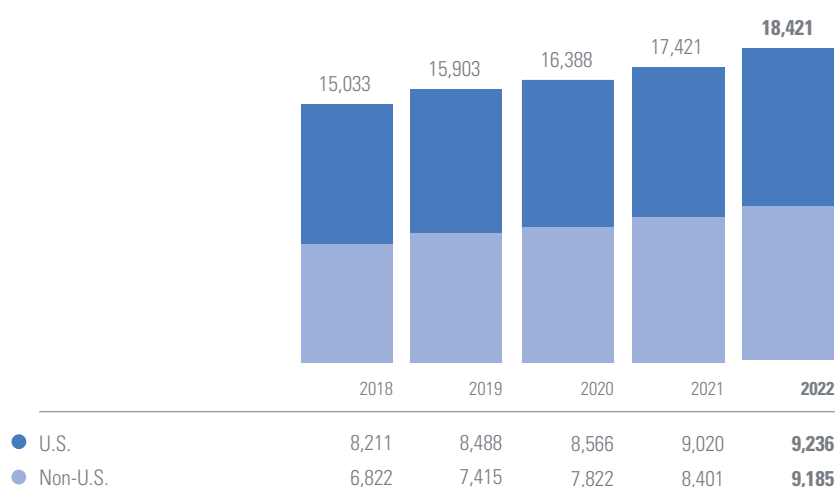
Pricing for Morningstar Direct is based on the number of licenses purchased. We have simplified our licensing model to eliminate charges for add-on features to maximize our customer experience and allow users to extract more value from our products.

Morningstar Direct's primary competitors are Bloomberg, eVestment Alliance, FactSet Research System's Cognity and SPAR, Zephyr, Strategic Insight's Simfund, and Refinitiv's Eikon. Morningstar Direct's primary markets are North America and EMEA.

Morningstar Direct is our fourth-largest product based on revenue and accounted for 9.9%, 10.2%, and 11.4% of our consolidated revenue in 2022, 2021, and 2020, respectively. We estimate that our annual revenue renewal rate for Morningstar Direct in 2022 was approximately 99% versus 97% in 2021.

Morningstar Direct had 18,421 licensed users worldwide as of December 31, 2022.

Morningstar Direct Licenses



Investment Management

Investment Management's flagship offering is Morningstar® Managed PortfoliosSM, an advisor service consisting of model portfolios designed for fee-based independent financial advisors. Our core markets are the U.S., U.K., South Africa, Australia, and India. We target like-minded advisors that hire us to manage a substantial portion of their client's assets the Morningstar way—putting investors first, keeping costs low, and investing for the long-term. We build our multi-asset strategies using mutual funds, ETFs, and individual securities, and tailor them to meet specific investment time horizons, risk levels, and projected outcomes. In 2022, flows exceeded \$350 million across our Managed Portfolios.

Morningstar Managed Portfolios are available through two core distribution channels: our fee-based discretionary asset management service, also known as a turnkey asset management program (TAMP), or as strategist models on third-party managed account platforms. We charge asset-based program fees for Managed Portfolios, which are typically based on the distribution channel (i.e., TAMP versus strategist models) and the products contained within the portfolios. We have TAMPs available in the U.S. and India, and act as a fund and model provider in our other international markets.

Our TAMP is an end-to-end digital investing experience, in which advisors access our model portfolios through a proprietary wealth management platform that offers functionality, such as risk assessments, proposals, digital account opening and ongoing management, client reporting, customer support, marketing services, and back-office features, such as trading and billing services. Using our TAMP allows the advisor to share fiduciary responsibility with us.

In 2022, Morningstar acquired Praemium's U.K. and international wealth management platform business. Praemium offers proprietary, friction-free, SaaS-based technology and services that allow fee-based advisors to outsource key elements of the advice workflow. The platform enables us to expand our wealth management platform capabilities internationally beyond the U.S.

We continued to enhance the advisor and client experience on our TAMP, augmenting customer support with a digital self-service help center, document submission, and case tracking center. In 2022 we launched direct indexing capabilities through the TAMP allowing advisors to work with clients to personalize index portfolios to address individual preferences and tax management needs, as part of our ongoing strategy to build a comprehensive Wealth platform leveraging capabilities from across Morningstar.

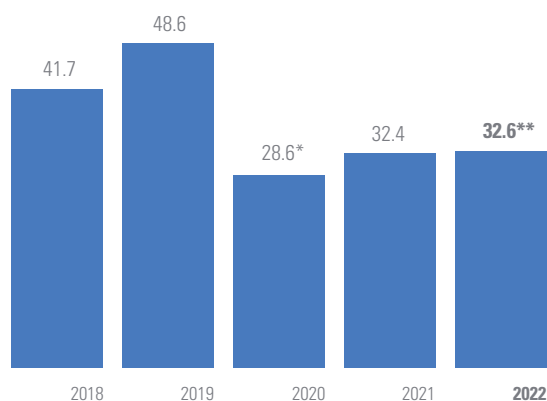
In addition to Morningstar Managed Portfolios, other services we provide include institutional asset-management (e.g., act as a subadvisor) and asset-allocation services for asset managers, broker/dealers, and insurance providers. We offer these services through a variety of registered entities in Australia, Canada, the United Arab Emirates (UAE), France, India, Japan, South Africa, the U.K., and the U.S.

We base pricing for institutional asset-management and asset-allocation services on the scope of work, our degree of investment discretion, and the level of service required. For most of our contracts, we receive asset-based fees.

For Morningstar Managed Portfolios offered through our TAMP, our primary competitors are AssetMark, Orion/Brinker Capital, and SEI Investments. Our primary strategist offering competitors are Blackrock, Russell, and Vanguard in the U.S., and we face competition from Financial Express and Tatton in EMEA, and Blackrock, Dimensional, and Vanguard in Australia. We also compete with in-house research teams at independent broker/dealers who build proprietary portfolios for use on brokerage firm platforms, as well other registered investment advisors that provide investment strategies or models on these platforms.

Morningstar Investment Management is our fifth-largest product area based on revenue and comprised 6.3%, 7.4%, and 8.5% of our consolidated revenue in 2022, 2021, and 2020, respectively.

Morningstar Managed Portfolios Assets under Management/Advisement (\$bil)



* The decline in Morningstar Managed Portfolios assets was largely attributed to a client contract change from a variable to fixed-fee arrangement. Excluding the assets from this client contract in the prior-year period, assets in Morningstar Managed Portfolios increased 1.8%.

** Includes \$4.4 billion of assets related to the acquisition of Praemium's U.K. and international business in the second quarter. Excluding Praemium, assets in Morningstar Managed Portfolios would have declined 13.0% compared with the prior year, reflecting the broad decline in global markets.

Workplace Solutions

Morningstar Workplace Solutions includes several different offerings, including managed retirement accounts (MRA), fiduciary services, Morningstar Lifetime Allocation Funds, and custom models.

Delivered primarily through the Morningstar Retirement Manager platform, our MRA program helps retirement plan participants define, track, and achieve their retirement goals. As part of this service, we deliver personalized recommendations for a target retirement income goal, a recommended contribution rate to help achieve that goal, a portfolio mix based on our Total Wealth methodology, and specific investment recommendations. We then manage the participant's investment portfolio for them, assuming full discretionary control. We also offer Advisor Managed Accounts, a program that allows advisor firms to specify and assume fiduciary responsibility for the underlying portfolios that are used within MRA. We do not hold assets in custody for the MRA we provide.

Our main competitors in MRA are Edelman/Financial Engines, Fidelity, and NextCapital. Companies that provide automated investment advice to consumers, such as Betterment and Wealthfront, are also attempting to break into employer-sponsored retirement markets. In our fiduciary services offering, we help plan sponsors build out and manage an appropriate investment lineup for their participants while helping to mitigate their fiduciary risk. Morningstar Plan Advantage is an extension of our fiduciary services that includes a technology platform that enables advisors at broker/dealer firms to more easily offer fiduciary protection, provider pricing, and investment reporting services to their plan sponsor clients.

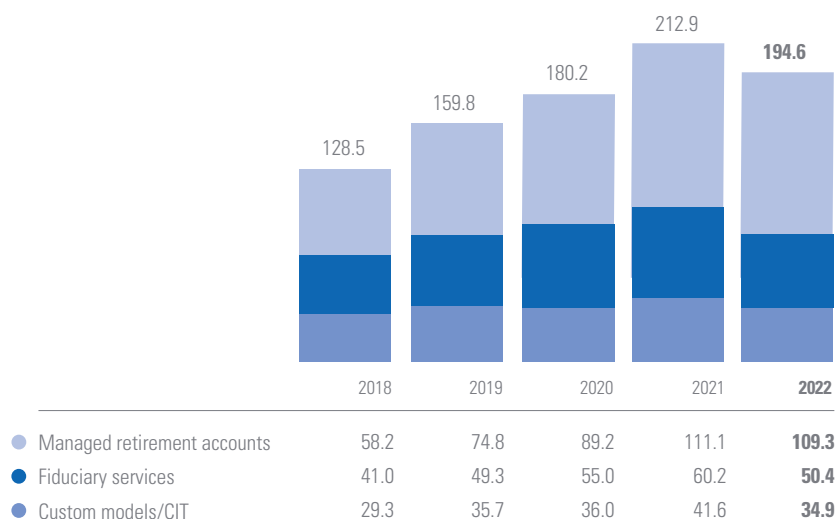
Our main competitors in fiduciary services are Mesirow and Wilshire Associates, but we are starting to see growing competition from smaller players, such as LeafHouse Financial and IRON Financial. Broker/dealers are also looking to introduce their own fiduciary services distributed through their advisors.

With our custom models, we offer two different services. We work with retirement plan record-keepers to design scalable solutions for their investment lineups, including target maturity models and risk-based models. We also provide custom model services direct to large plan sponsors, creating target date funds that are customized around a plan’s participant demographics and investment menus. For custom models, we often compete with retirement plan consultants. We also serve as a non-discretionary subadvisor and index provider for the Morningstar Lifetime Allocation Funds, a series of target-date CITs offered by Benefit Trust to retirement plan sponsors. Retirement plan sponsors can select a conservative, moderate, or growth version of the glide path for the funds based on the needs of participants in the plan. For the Lifetime Allocation Funds, we compete with other providers of target-date funds.

In 2022, we added 250 plans and 11,500 participants across the 16 RIAs and one asset manager on our advisor managed accounts network. We also onboarded one of the nation’s largest retirement plans onto our managed accounts platform; developed a personal target-date fund service that can blend target-date vintages to provide a more customized asset allocation for a participant; and launched the Morningstar Center for Retirement and Policy Studies, which is tasked with helping the industry make better public policy, plan design, and product decisions.

Pricing for Workplace Solutions is generally asset-based and depends on several factors, including the level of services offered (including whether the services involve acting as a fiduciary under the Employee Retirement Income Security Act, or ERISA), the number of participants, the level of systems integration required, total assets under management or advisement, and the availability of competing products.

Workplace Solutions Assets under Management/Advisement (\$bil)



Morningstar Sustainalytics

Morningstar Sustainalytics provides ESG data, research, analysis, and insights to institutional investors globally, covering equity, fixed income, and sovereign asset classes. Its flagship ESG Risk Ratings also underpin Morningstar’s Sustainability Fund Ratings for mutual funds and ETFs, multiple investable indexes, and numerous investment platforms. Morningstar Sustainalytics also serves issuers and banking institutions through its corporate solutions unit and is notably the world’s largest provider of green bond Second Party Opinions.

In 2022, Morningstar Sustainalytics expanded its EU Action Plan Solutions to enable clients to comply with the increased reporting requirements created by European regulators. The EU Action Plan, first laid out in 2018, is a sweeping regulation with multiple components that aims to direct private capital towards sustainable investments. To help investors fulfill their EU Action Plan requirements, we expanded our Principle Adverse Indicator (PAI) data set to cover 13,000 companies, and we launched our Sustainable Finance Disclosure Regulation (SFDR) PAI Portfolio Reporting Solution. In addition, we expanded our EU Taxonomy Solution research, which now includes coverage on more than 10,500 companies. With reporting central to compliance requirements, we also released our EU Taxonomy Portfolio Reports, which are designed to help clients identify and understand the portions of their portfolios which are both eligible and aligned to the Taxonomy.

During the year, additional new product launches included Physical Climate Risk Metrics, a data product that enables investors to assess the potential risks companies face as a result of physical hazards brought about by climate change. We also incorporated Impact Metrics into Morningstar's various software platforms. Impact Metrics support institutional investors' diverse ESG investing activities, from selecting companies with desired social or environmental impacts to reporting on company or fund-level impact to product creation.

Finally, Morningstar Sustainalytics expanded our ratings coverage universe by approximately 30% to cover more than 16,300 analyst-based ESG Risk Ratings, spanning public equity, fixed-income, and privately held companies. The expanded research universe covers more Chinese companies listed in Shanghai and Shenzhen, which figure prominently in emerging-market indices.

Morningstar Sustainalytics operates on a subscription-based pricing model for its ESG research products, which supports a recurring revenue model. The corporate solutions unit deploys a model that combines one-time revenue with subscription-based recurring licensing revenue.

In 2022, Morningstar Sustainalytics' largest markets were EMEA and North America.

Major competitors for Morningstar Sustainalytics include MSCI, FTSE Russell, Institutional Shareholder Services (ISS), S&P Global, Moody's, and Federated Hermes. While the traditional ESG research market continues to aggressively consolidate, we expect that the market will continue to evolve as new entrants emerge and investors acquire ESG data from new distributors (for example, directly from stock exchanges). Large asset managers like BlackRock, State Street, UBS, and JP Morgan are also investing heavily to build in-house ESG capabilities and sustainable investing products. New technologies, specifically those that employ artificial intelligence, are facilitating these trends by accelerating the sourcing and use of unstructured ESG data.

We estimate that our annual revenue renewal rate for Morningstar Sustainalytics' license-based products was approximately 100% in 2022. In 2021, we did not calculate a revenue renewal rate for Morningstar Sustainalytics because that year included only six months of organic revenue contribution.

Morningstar Advisor Workstation

Morningstar Advisor Workstation is a web-based research, investment planning, and portfolio analysis platform that empowers financial professionals to build trusted client relationships through personalized investment advice. It is powered by Morningstar data, research, investor profiling tools, and robust portfolio analytics. The software is typically sold through an enterprise contract and is primarily for retail advisors due to its strong ties and integrations with home-office applications and processes and a library of Financial Industry Regulatory Authority (FINRA)-reviewed reports for compliance needs. It allows advisors to build and maintain a client portfolio database that can be fully integrated with the home-office firm's back-office technology and resources. This helps advisors present and clearly illustrate their portfolio investment strategies and show the value of their advice.

In 2022, we enhanced our investment planning tools with new capabilities to help advisors offer personalized investment advice to their clients. Upgrades to the Morningstar Risk Ecosystem now enable “remote risk profiling,” making it easier for advisors to capture and integrate each client’s specific situation into investment proposals. Moreover, we launched a new Risk Comfort Range that clearly shows how investment proposals align to a client’s long-term willingness to take risk. Finally, we added a new portfolio optimization tool that enables advisors to capture each client’s values and sustainability preferences and then incorporate them into investment plans.

To help advisors differentiate themselves to their clients with more specialized financial recommendations, we expanded our research library to include data, screening, and comparison tools for public models via the Model Exchange, and structured products and annuities through a collaboration with Luma Technologies. We also launched the App Hub in Advisor Workstation, a two-sided digital marketplace where clients can access third-party applications that connect into the platform. Furthermore, we integrated Morningstar Research Portal, which delivers a modernized suite of tools and visuals to help advisors show the value of their advice to investors.

Finally, we launched Scenario Builder to help our enterprise clients meet the evolving regulatory requirements of the new SEC Marketing Rule, which prohibits an advisor from presenting hypothetical performance unless specific conditions are met to address its potentially misleading nature. Evolved from the legacy Hypothetical Illustration Tool, Scenario Builder provides several new enterprise-level customizations, like the ability to set firm-wide fee structures and control over which hypothetical workflows their advisors can access. Scenario Builder is powerful tool that can be tailored to the custom compliance decisions unique to each enterprise.

Pricing for Morningstar Advisor Workstation for our enterprise clients varies based on the number of users, the number of research databases licensed, and level of functionality deployed. We charge fixed annual fees per licensed user for a base configuration of Morningstar Advisor Workstation, but pricing varies significantly based on the scope of the license. We also provide a three-tiered pricing model for individual subscribers who are not affiliated with an active enterprise client.

Morningstar Advisor Workstation is offered in the U.S. and Canada.

Competitors for Morningstar Advisor Workstation include AdvisoryWorld (LPL Financial), YCharts, Riskalyze, Orion, Broadridge, and CapIntel outside of the U.S. Occasionally, broker/dealers also decide to build their own internal tools and attempt to bring their advisors’ practice management tools in-house.

We estimate that our annual revenue renewal rate for Advisor Workstation for 2022 was approximately 89% versus 92% in 2021.

[Morningstar.com](https://www.morningstar.com)

Our largest website, Morningstar.com, helps individual investors discover, evaluate, and monitor stocks, ETFs, and mutual funds; build and monitor portfolios; and monitor the markets. Revenue is generated from paid memberships for Morningstar Investor, Morningstar Premium and Internet advertising sales. Morningstar Investor is the successor to Morningstar Premium in the U.S. and Australia.

Our Morningstar Investor offering is focused on bringing clarity and confidence to investment decisions. Members have access to proprietary Morningstar research, ratings, data, and tools, including analyst reports, portfolio management tools (such as Portfolio X-Ray), and stock and fund screeners. We offer Investor and Premium memberships in Australia, Canada, Italy, the U.K., and the U.S.

Unlike many consumer-facing websites, Morningstar.com sells ad space directly to advertisers. This approach allows us to build meaningful relationships with our advertisers and helps us protect the integrity of our brand. In our experience, advertisers continue to support Morningstar.com because of our commitment to transparency and clarity.

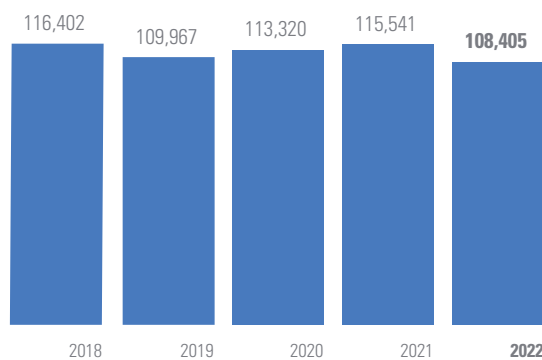
In 2022, we continued to invest in the technology platform supporting Morningstar.com, which provides improved web performance, ranking in search engines, and cost savings in website maintenance. We also further developed our new individual investor digital portfolio management and research tool in Morningstar Investor. Individuals can now leverage the same account aggregation technology used by advisors (By All Accounts) to seamlessly match their investment holdings with our data and proprietary research content to help them better understand what they own across their full portfolio, find new investment ideas, and make more informed investment decisions.

We charge a monthly or annual subscription fee for Morningstar Investor and Morningstar Premium and an annual subscription fee for Morningstar Newsletters.

Morningstar.com primarily competes with trading platforms that concurrently offer research and investing advice, such as Fidelity, Schwab, and TD Ameritrade. Research sites, such as The Motley Fool, Seeking Alpha, and Zacks Investment Research, also compete with us for paid membership. In addition, free or “freemium” websites, such as Yahoo Finance and Dow Jones/Marketwatch are also competitors for some customers. The Wall Street Journal, Kiplinger, and TheStreet.com, all compete for the advertising dollars of entities wishing to reach an engaged audience of investors.

As of December 31, 2022, Morningstar.com had more than 108,000 paid Morningstar Investor members in the U.S. plus an additional roughly 13,700 Premium and Morningstar Investor members across other global markets.

Morningstar Investor Memberships (U.S.)*



* In 2022, Morningstar Investor was launched as the successor to Morningstar.com Premium.

Morningstar Indexes

Morningstar offers a broad range of market indexes that can be used as performance benchmarks and as the basis for investment products and other portfolio strategies for a wide range of retail and institutional investor clients. Drawing on Morningstar’s deep intellectual property and focus on the end investor, our indexes track all major global regions and asset classes, including equity, fixed income, and multi-asset as well as private markets.

We believe investors today are looking for better value from their index provider. This means two things. First, broad market cap indexes for benchmarking purposes, arguably a commodity, should be of high quality but also inexpensive. Second, strategic beta indexes for investment strategies and market exposure, of growing importance to all investors, should be unique, research-driven and deliver better outcomes to investors. We are responding to this need by offering core beta benchmarks while delivering our Morningstar research and insights through unique and differentiated strategic beta indexes.

In 2022, Morningstar Indexes continued to grow its capabilities. The team made significant progress on building its in-house index calculation, expected to be completed in 2023 and drive significant benefits for clients and the business. Morningstar Indexes also completed the acquisition, integration, and rebranding of the LCD Leveraged Loan Indexes under the Morningstar Indexes umbrella. The team also expanded on its U.K. and EMEA-based product, client, and service organization, grew its ESG indexes in collaboration with Morningstar Sustainalytics, and worked with PitchBook to introduce the Morningstar PitchBook Global Unicorn Indexes, the first global benchmark series to provide daily tracking for the late-stage venture capital market.

We license Morningstar Indexes to numerous institutions that offer ETFs, exchange-traded notes, mutual funds and separately managed accounts based on the indexes. Firms license Morningstar Indexes for both product creation (where we typically receive the greater of a minimum fee or basis points tied to assets under management) and data licensing (where we typically receive annual licensing fees). In both cases, our pricing varies based on the level of distribution, the type of user, and the specific indexes licensed.

In 2022, Morningstar Indexes' largest markets were North America and EMEA.

Major competitors for Morningstar Indexes include MSCI, FTSE Russell, S&P Dow Jones Indices (offered through S&P Global), and Bloomberg Indices.

Largest Customer

In 2022, our largest customer accounted for less than 3% of our consolidated revenue.

Acquisitions and Divestitures

Since our founding in 1984, we've supported our organic growth by introducing new products and services and expanding our existing offerings. From 2006 through 2022, we also completed 42 acquisitions to support our growth objectives. We acquired Aquantix in the first quarter of 2022. We acquired LCD and Praemium Portfolio Services Limited in the second quarter of 2022. We had no divestitures in 2022.

For more information about our acquisitions, refer to Note 8 of the Notes to our Consolidated Financial Statements.

International Operations

We conduct our business operations outside of the U.S. through wholly- or majority-owned subsidiaries located in each of the following 31 countries: Australia, Brazil, Canada, Cayman Islands, Chile, China, Cyprus, Denmark, France, Germany, Hong Kong, India, Italy, Japan, Jersey, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Romania, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, UAE, and the U.K. See Note 6 of the Notes to our Consolidated Financial Statements for additional information concerning revenue from customers and assets from our business operations outside the U.S.

Intellectual Property and Other Proprietary Rights

We treat our brand name and logo, product names, databases and related content, software, technology, know-how, and the like as proprietary. We seek to protect this intellectual property through a combination of: (i) trademark, copyright, patent and trade secrets laws; (ii) licensing and nondisclosure agreements; and (iii) other security and related technical measures designed to restrict

unauthorized access and use. For example, we generally provide our intellectual property to third parties using standard licensing agreements, which define the extent and duration of any third-party usage rights and provide for our continued ownership in any intellectual property furnished.

Because of the value of our brand name and logo, we generally seek to register one or both as trademarks in the relevant international classes in any jurisdiction in which we have business offices or significant operations. We registered the Morningstar name and/or logo in approximately 50 jurisdictions, including the EU. In some jurisdictions, we may also choose to register one or more product names.

“Morningstar” and the Morningstar logo are both registered marks of Morningstar in the U.S. The table below includes some of the trademarks and service marks referenced in this report:

Morningstar® Advisor Workstation SM	Morningstar® Plan Advantage SM
Morningstar Analyst Rating TM	Morningstar® Portfolio X-Ray®
Morningstar® ByAllAccounts®	Morningstar Rating TM
Morningstar® Data	Morningstar® Retirement Manager SM
Morningstar Direct SM	Morningstar Style Box TM
Morningstar® Enterprise Components	Morningstar Sustainability Rating TM
Morningstar® Indexes	Morningstar.com®
Morningstar® Managed Portfolios SM	PitchBook®
Morningstar Market Barometer SM	DBRS®
Morningstar Office Cloud SM	Morningstar Sustainalytics®

In addition to trademark registrations, we hold several U.S. patents, either directly or through our wholly-owned subsidiary, Morningstar Investment Management LLC. These patents include those for coordinate-based document processing/data entry, portfolio management analysis, lifetime asset allocation, and asset allocation with annuities.

License Agreements

We license our products and related intellectual property to our customers, generally for a fee. Generally, we use our standard agreement forms, and we do not provide our products and services to customers or other users without having an agreement in place.

We maintain licensing agreements with most of our larger Morningstar operating companies around the world to allow them to access our intellectual property, including, without limitation, our products, trademarks, databases and content, technology, and know-how. We put these agreements in place to allow our operating companies to both market standard Morningstar products and services in their operating territories and to develop and sell territory-specific variants of those products under the Morningstar name in their specific territories.

In the ordinary course of our business, we obtain and use intellectual property from a variety of sources, including licensing it from third-party providers, developing it internally, and gathering it through publicly available sources (e.g., regulatory filings).

Seasonality

We believe our business has a minimal amount of seasonality. We sell most of our products with subscription terms of at least one year and we recognize revenue ratably over the term of each subscription agreement. This tends to mitigate most of the seasonality in our business.

We believe market movements and general market conditions have more influence on our performance than seasonality. The revenue we earn from asset-based fees depends on the value of assets on which we provide advisory services, and the size of our asset base can increase or decrease along with trends in market performance. In addition, our credit ratings business is subject to market effects on the level of fixed income issuance.

Competitive Landscape

The economic and financial information industry includes a few large firms, as well as numerous smaller companies, including startup firms. Some of our main competitors include Bloomberg, S&P Global, Refinitiv, Moody's, and Fitch. These companies have financial resources that are significantly greater than ours. We also compete with a variety of other companies of varying sizes in specific areas of our business. We discuss some of the key competitors in each area in the Major Products and Services section of this report.

We believe the most important competitive factors in our industry are brand and reputation, data accuracy and quality, technology, breadth of data coverage, quality of investment and credit research and analytics, design, product reliability, and value of the products and services provided.

Research and Development

A key aspect of our growth strategy is to expand our investment and credit research capabilities and enhance our existing products and services. We strive to adopt new technology that can improve our products and services. As a general practice, we manage our own websites and build our own software rather than relying on outside vendors. This allows us to control our technology development and better manage costs, enabling us to respond quickly to market changes and to meet customer needs efficiently.

Government Regulation

In addition to generally applicable laws and regulations, certain subsidiaries of Morningstar engage in lines of business or other activities that subject them to various laws and regulations specific to those businesses or activities. These laws and regulations are primarily designed to protect investors and are most pervasive across all or most markets in which we operate in our credit rating, investment management, and investment research businesses. Regulatory bodies or agencies that regulate our credit rating and investment adviser and research subsidiaries often have broad administrative powers, including the power to prohibit or restrict the subsidiary or persons connected with the subsidiary from carrying out business if it or they fail to comply with such laws and regulations or to impose censures, fines, or remedial undertakings as a result of such noncompliance. The rules governing the regulation of these subsidiaries are very detailed and technical. Accordingly, the discussion below is general in nature, does not purport to be complete and is subject to change based on future legislative, enforcement, and examination activities. Additional legislation and regulations, including those not directly tied to regulated activities (e.g., privacy and cybersecurity), or changes in the interpretation or enforcement of existing laws and rules may adversely affect our business and profitability.

Credit Ratings

United States

DBRS Morningstar's U.S. credit rating entity, DBRS, Inc., is registered with the U.S. Securities and Exchange Commission (SEC) as a Nationally Recognized Statistical Rating Organization (NRSRO) and is authorized to rate classes of credit ratings in structured finance instruments, corporate credit issuers, sovereign entities, insurance companies, and financial institutions. As an NRSRO, DBRS, Inc. is subject to certain requirements and regulations under the Exchange Act. These requirements primarily relate to record-keeping, reporting, governance, and conflicts of interest. As part of its NRSRO registration, DBRS, Inc. is subject to annual examination by the SEC. DBRS, Inc.'s affiliated rating agencies, DBRS Limited, DBRS Ratings Limited, and DBRS Ratings GmbH, are each also registered with the SEC as credit rating affiliates of DBRS, Inc.

Canada

DBRS Morningstar's Canadian credit rating entity, DBRS Limited, is designated as a Designated Rating Organization (DRO) in Canada with the Ontario Securities Commission (OSC) as its principal regulator. DBRS Limited provides independent credit rating services in structured finance instruments, corporate credit issuers, governments, insurance companies, and financial institutions. As a DRO, DBRS Limited is subject to certain requirements and regulations under National Instrument 25-101. These requirements primarily relate to record-keeping, reporting, governance, and conflicts of interest. As part of its DRO registration, DBRS Limited is subject to examination by the OSC. DBRS Limited's affiliated rating agencies, DBRS, Inc., DBRS Ratings Limited, and DBRS Ratings GmbH, are each also designated as DRO affiliates in Canada.

United Kingdom

DBRS Morningstar's credit rating entity located in the U.K., DBRS Ratings Limited, is registered with, and regulated, by the U.K. Financial Conduct Authority (FCA) as a credit rating agency. DBRS Ratings Limited provides independent credit rating services in sovereign and public finance, structured finance, and corporate finance, including financial institutions, corporate credit issuers, and insurance undertakings. As a registered credit rating agency, DBRS Ratings Limited is subject to certain requirements under the U.K. regulations governing credit rating agencies. These requirements primarily relate to record-keeping, reporting, governance, and conflicts of interest.

European Union

DBRS Morningstar's credit rating entity in the European Union (EU), DBRS Ratings GmbH (located in Frankfurt, Germany), which together with its branches, DBRS Ratings GmbH Sucursal en España (located in Madrid, Spain) and DBRS Ratings GmbH, Branch India (located in Mumbai, India) is registered with, and regulated by the European Securities and Markets Authority (ESMA) as a credit rating agency. DBRS Ratings GmbH is registered to provide independent credit rating services in sovereign and public finance, structured finance, and corporate finance, including financial institutions, corporate credit issuers, and insurance undertakings. As a registered credit rating agency, DBRS Ratings GmbH is subject to certain requirements under Regulation (EC) No 1060/2009, as amended. These requirements primarily relate to record-keeping, reporting, governance, and conflicts of interest.

Investment Management and Investment Research

United States

Investment advisory and broker/dealer businesses are subject to extensive regulation in the U.S. at both the federal and state level, as well as by self-regulatory organizations. The SEC is responsible for enforcing the federal securities laws and oversees federally registered investment advisors and broker/dealers.

Three of our subsidiaries, Morningstar Investment Management LLC (Morningstar Investment Management), Morningstar Investment Services LLC, and Morningstar Research Services LLC, are registered as investment advisors with the SEC under the Investment Advisers Act of 1940 (Advisers Act). As Registered Investment Advisors, these companies are subject to the requirements and regulations of the Advisers Act, including certain fiduciary duties to clients. The fiduciary duties of a Registered Investment Adviser to its clients include an obligation of good faith and full and fair disclosure of all facts material to the client's engagement of the advisor, an obligation to provide investment advice suitable for the particular client, an obligation to have a reasonable, independent basis for investment recommendations, an obligation when directing client brokerage transactions to seek the best execution thereof, and an obligation to vote client proxies in the best interests of the client. Other requirements primarily relate to record-keeping and reporting, as well as general anti-fraud prohibitions. As Registered Investment Advisors, these subsidiaries are subject to examination by the SEC, which may include an on-site examination.

Morningstar Funds Trust (the Trust) is registered with the SEC as an open-end management investment company under the Investment Company Act of 1940, as amended (Investment Company Act). Morningstar Investment Management serves as the sponsor and investment advisor of the Trust, and therefore is subject to the requirements of the Investment Company Act. These requirements relate primarily to record-keeping, reporting, standards of care, valuation, and distribution. As sponsor and investment advisor to the Trust, Morningstar Investment Management is subject to examinations by the SEC, which may include on-site examinations.

Connected with the Trust, Morningstar Investment Management is registered with the U.S. Commodity Futures Trading Commission as a commodity pool operator (CPO) and a member of the National Futures Association (NFA). As such, Morningstar Investment Management is subject to the requirements and regulations applicable to CPOs under the Commodity Exchange Act. These requirements primarily relate to record-keeping and reporting. As a CPO, Morningstar Investment Management is subject to examinations by the NFA and/or the U.S. Commodity Futures Trading Commission, which may include on-site examinations.

In cases where these subsidiaries provide investment advisory services to retirement plans and their participants, they may be acting as fiduciaries under ERISA. As fiduciaries under ERISA, they have duties of loyalty and prudence, as well as duties to diversify investments and to follow plan documents to comply with the applicable portions of ERISA.

Morningstar Investment Services LLC is a broker/dealer registered under the Securities Exchange Act of 1934 (Exchange Act) and a member of FINRA. The regulation of broker/dealers has, to a large extent, been delegated by the federal securities laws to self-regulatory organizations, including FINRA. Subject to approval by the SEC, FINRA adopts rules that govern its members. FINRA and the SEC conduct periodic examinations of the brokerage operations of Morningstar Investment Services.

Broker/dealers are subject to regulations that cover all aspects of their securities business, including sales practices, capital structure, record-keeping, and the registration and conduct of directors, officers, and employees. As a registered broker/dealer, Morningstar Investment Services LLC is subject to certain net capital requirements under the Exchange Act. These requirements are designed to regulate the financial soundness and liquidity of broker/dealers.

Australia

Morningstar Australasia Pty Limited and Morningstar Investment Management Australia Limited are subsidiaries that provide financial services that include investment management, asset allocation, portfolio construction and investment research services in Australia. They are each registered under an Australian Financial Services license and subject to oversight by the Australian Securities and Investments Commission (ASIC). The licenses require them to maintain positive net asset levels and minimum capital requirements, and to comply with the audit requirements of the ASIC. Morningstar Investment Management Australia Limited is additionally the Responsible Entity and the issuer of units in managed funds for superannuation funds, institutions, platform distributors, financial advisers, and individuals within the Australian market.

United Kingdom

Morningstar Investment Management Europe Limited is authorized and regulated by the FCA to provide financial services commensurate with the regulatory permissions afforded. Those regulatory permissions allow Morningstar Investment Management Europe Limited to advise, arrange, deal and manage investments for professional and eligible counterparty clients across a range of investment instruments including shares, debt securities and units in collective investment schemes. The related services are delivered through managed portfolios, manager selection, segregated mandates and U.K. authorized fund offerings, predominantly to U.K. domiciled clients and investors. As an authorized firm, Morningstar Investment Management Europe Limited is subject to the applicable requirements and regulations, as defined in the FCA Handbook of rules and guidance.

European Union

Morningstar Investment Consulting France SAS is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) as a Markets in Financial Instruments Directive (MiFID) investment firm. Under this authorization and commensurate with the passporting arrangements established, Morningstar Investment Consulting France SAS is permitted to provide investment advice pertaining to shares, debt securities and units, or shares, of collective investment undertakings to financial institutions based in the EU.

South Africa

Morningstar Investment Management South Africa (Pty) Ltd is an authorized financial services provider, regulated by the South African Financial Sector Conduct Authority to provide financial services, commensurate with the regulatory permissions afforded. Specifically, Morningstar Investment Management South Africa (Pty) Ltd is permitted to undertake activity under both Category I (advisory) and Category II (discretionary) licenses. The related advisory and discretionary activities are delivered pursuant to the associated product approvals, granted by the Financial Sector Conduct Authority.

Other Regions

We have a variety of other entities (including in Canada, Hong Kong, India, Japan, and Singapore) that are registered with their respective regulatory bodies; however, the amount of regulated business activity conducted by these entities remains relatively small to date.

Morningstar Sustainalytics

Morningstar Sustainalytics' ESG research, ratings and data supports investors around the world with the development and implementation of investment strategies tied to ESG goals and priorities. Via its subsidiary GES International AB, Morningstar Sustainalytics has notified the Swedish Finansinspektionen under Section 3 of the Act on Proxy Advisors of its business activity as a proxy advisor in Sweden. Morningstar Sustainalytics UK Ltd. was added to the FCA's list of Proxy Advisors in early 2022. These regulations require disclosure of information regarding the models and methodologies applied in the preparation of voting recommendations and certain governance information such as a code of conduct and conflicts of interest policies. Other Morningstar Sustainalytics products including second party opinions on green and sustainability linked bonds, ESG indexes, and the provision of ESG ratings and data have been the subject of proposed legislation. We continue to monitor these developments closely and will assess what modifications will be needed to Morningstar Sustainalytics' business model, operational processes, and corporate organization in the event potential regulation becomes operative. See the section "Regulatory Trends Affecting Our Business" for a further discussion of these developments.

Indexes

With our acquisition of Moorgate Benchmarks, Morningstar's affiliates, Moorgate Benchmarks Limited and Moorgate Benchmarks GmbH are permitted to act as a U.K. and EU benchmark administrator, respectively. While this cross-permissioning allows flows of U.K., benchmarks into the EU and vice versa as well as U.S. benchmarks into the UK, the benchmark administrator designation

also has significant compliance responsibilities and costs. These compliance responsibilities include specified governance and oversight arrangements, outsourcing limitations, specified items in a code of conduct, key information disclosures, and required systems and controls governing data, complaints and record-keeping. Supplemental regulations under the EU Benchmark Administration contain further operational and administrative requirements and work is underway to evaluate an optimal long-term structure to provision Morningstar's index services across the region.

Information about our Executive Officers

We have five executive officers. The table below summarizes information about each of these officers.

Name	Age	Position
Joe Mansueto	66	Executive Chairman and Chairman of the Board
Kunal Kapoor	47	Chief Executive Officer
Jason Dubinsky	49	Chief Financial Officer
Bevin Desmond	56	Chief Talent and Culture Officer
Danny Dunn	47	Chief Revenue Officer

Joe Mansueto

Joe Mansueto founded Morningstar in 1984 and became executive chairman in 2017. He has served as chairman of the board of directors from the company's inception, and as chief executive officer from 1984 to 1996 and again from 2000 to 2016.

Under Mansueto's leadership, Morningstar has been named twice to Fortune magazine's "100 Best Companies to Work For" list, in 2011 and 2012. The Chicago Tribune recognized Morningstar as one of the top 100 workplaces in the Chicago area in 2010, 2011, and 2012, and Crain's Chicago Business listed Morningstar in its Fast Fifty feature in 2007, 2008, 2009, and 2011. Morningstar won the 2010 AIGA Chicago Chapter Corporate Design Leadership Award, which recognizes forward-thinking organizations that have advanced design by promoting it as a meaningful business policy.

In December 2016, InvestmentNews named Mansueto to its list of 20 Icons & Innovators. MutualFundWire.com recognized Mansueto as one of the 10 most influential individuals in the mutual fund industry in 2015, and he was the recipient of PLANSPONSOR's Lifetime Achievement Award in 2013. In 2010, Mansueto received the Tiburon CEO Summit award, MutualFundWire.com named him ninth on its list of the 100 Most Influential People of the year, and Chicago magazine listed Mansueto among its top 40 Chicago pioneers over the past four decades. In 2007, SmartMoney magazine recognized him in the "SmartMoney Power 30," its annual list of the 30 most powerful forces in business and finance. He received the Distinguished Entrepreneurial Alumnus Award from the University of Chicago Booth School of Business in 2000.

Before founding Morningstar, Mansueto was a securities analyst at Harris Associates. He holds a bachelor's degree in business administration from the University of Chicago and a master's degree in business administration from the University of Chicago Booth School of Business.

Kunal Kapoor

Kunal Kapoor, CFA, is chief executive officer of Morningstar. Before assuming his current role in 2017, he served as president, responsible for product development and innovation, sales and marketing, and driving strategic prioritization across the firm.

Since joining Morningstar in 1997 as a data analyst, Kapoor has held a variety of roles at the firm, including leadership positions in research and innovation. He served as director of mutual fund research and was part of the team that launched Morningstar Investment Services, Inc., before moving on to other roles including director of business strategy for international operations, and later, president and chief investment officer of Morningstar Investment Services. During his tenure, he also led Morningstar.com® and the firm's data business as well as its global products and client solutions group.

Kapoor holds a bachelor's degree in economics and environmental policy from Monmouth College and a master's degree in business administration from the University of Chicago Booth School of Business. He also holds the Chartered Financial Analyst® designation, is a member of the CFA Society of Chicago, and served on the board of PitchBook, prior to its acquisition by Morningstar in late 2016. Kapoor is also a member of the board of trustees of The Nature Conservancy in Illinois. In 2010, Crain's Chicago Business named him to its annual 40 Under 40 class, a list that includes professionals from a variety of industries who are contributing to Chicago's business, civic, and philanthropic landscape.

Jason Dubinsky

Jason Dubinsky is chief financial officer of Morningstar, responsible for controllership, tax, internal audit, financial planning and analysis, and investor relations.

Before joining Morningstar in 2017, Dubinsky served as senior vice president and chief financial officer of planning and central operations for Walgreens Boots Alliance, Inc. where he was responsible for accounting and shared service functions for Walgreens' U.S. operations and led the FP&A function for the global business. Prior to this merger, he was Walgreens' vice president of finance and treasurer with responsibility for business unit finance, treasury operations, risk management, and investor relations. Before joining Walgreens in 2009, he served as vice president of investment banking at Goldman Sachs and Lehman Brothers, where he led mergers and acquisitions and corporate finance activity for clients across various industries.

Dubinsky holds a bachelor's degree in business administration from the University of Michigan and a master's degree in business administration from New York University's Stern School of Business.

Bevin Desmond

Bevin Desmond is chief talent and culture officer, a role she has held since 2010. She is responsible for overseeing talent and culture for all of Morningstar's global operations. She also oversees both quality and transformation as well as Morningstar's data and development centers. During 2022, Desmond announced her retirement to spend more time with her family, her last day of employment at Morningstar was January 31, 2023.

Desmond joined Morningstar in 1993 and was one of three employees who started the company's international business in the late 1990s. From 1999 to 2000, she served as manager of all international ventures. From 2000 to 2008, Desmond was president of Morningstar's international operations. She has also served as president of institutional software. Previously, Desmond was head of global markets from 2010 to 2017 and head of international operations from 2001 until 2010.

Desmond holds a bachelor's degree in psychology from St. Mary's College.

Danny Dunn

Danny Dunn is chief revenue officer for Morningstar. He is responsible for the firm's global revenue and client-facing functions including global marketing, sales, client solutions, customer success, field operations, services and support.

Before joining Morningstar in 2016, Dunn was vice president of IBM's Midwest enterprise unit. He was responsible for marketing, strategy, sales, channels, and customer service for the complete IBM portfolio, including Cloud, Software, Services, Systems, and IBM Credit, LLC in the region. Prior to that, he was the Chicago territory director for IBM and held numerous other sales leadership roles. Before joining IBM in 2007, he led sales, account management and client service at Neology, a software and technology services subsidiary of SmithBucklin Corporation.

Dunn holds a bachelor's degree from the University of Vermont and a master's degree in business administration, with concentrations in marketing, strategy, and managerial economics, from the Kellogg School of Management at Northwestern University.

Company Information

Morningstar, Inc. was incorporated in Illinois on May 16, 1984. Our corporate headquarters is located at 22 West Washington Street, Chicago, Illinois, 60602.

We maintain a corporate website at <http://www.morningstar.com/company>. Shareholders and other interested parties may access our investor relations website at <http://shareholders.morningstar.com>, which we use as a primary channel for disclosing key information to our investors, some of which may contain material and previously non-public information. Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to any of these documents are available free of charge on this site as soon as reasonably practicable after the reports are filed with or furnished to the SEC. We also post quarterly press releases on our financial results and other documents containing additional information related to Morningstar on this site. We provide this website and the information contained in or connected to it for informational purposes only. That information is not part of this report.

Item 1A. Risk Factors

Risk Factor Summary

Below is a summary of the principal risk factors that could impact our business, financial condition, or operating results. Additional discussion of the risks summarized in this risk factor summary, and other risks that we face, can be found after this summary, and should be carefully considered.

- ▷ *Risks Related to Our Business and Industry*
 - ▷ Failing to maintain and protect our brand, independence, and reputation may harm our business
 - ▷ Failing to innovate our product and service offerings or anticipate our clients' changing needs may negatively affect our competitive position and business results
 - ▷ Prolonged volatility or downturns affecting the financial sector, global financial markets, and the global economy may impact our results
- ▷ *Risks Related to Our Information Technology and Security*
 - ▷ We could face significant reputational and financial consequences relating to cybersecurity and the protection of confidential information, including personal information about individuals
 - ▷ Our business, products and facilities are at risk of a number of material disruptive events, which our operational risk management and business continuity programs may not be adequate to address
 - ▷ We could face liability for the information and data we collect, store, use, create, and distribute or the reports and other documents we publish or that are produced by our software products
 - ▷ Failure to protect our intellectual property rights, or claims of intellectual property infringement against us, could harm our brand and ability to compete effectively
- ▷ *Risks Related to Legal and Regulatory Matters*
 - ▷ Compliance failures, regulatory action, or changes in laws applicable to our credit ratings operations, investment advisory, ESG and index businesses could adversely affect our business
 - ▷ Errors in our automated advisory tools may subject us to fiduciary liability for any losses that result
- ▷ *Risks Related to Our Operations*
 - ▷ Our future success depends on our ability to recruit, develop, and retain qualified employees
 - ▷ We may not realize the expected business or financial benefits of our acquisitions and investments
 - ▷ Supporting our growing domestic and international operations, employee headcount and customer base could strain our resources and infrastructure, and if we are unable to scale our operations and increase productivity, we may not be able to successfully implement our business plan
 - ▷ Today's fragmented geopolitical, regulatory, and cultural world could adversely affect our ability to maintain growth across our businesses
 - ▷ As a global taxpayer, we face challenges due to increasing complexities in accounting for taxes (e.g., base erosion, minimum taxes, and tax transparency), which are high priorities in jurisdictions in which we operate and could materially affect our tax obligations and effective tax rate
- ▷ *Risks Related to Ownership of Our Common Stock*
 - ▷ Our indebtedness could adversely affect our cash flows and financial flexibility. Our variable rate indebtedness could subject us to interest rate risk, which could cause our debt service obligations to increase significantly
 - ▷ The concentrated ownership position of Joe Mansueto could adversely affect our other shareholders
 - ▷ Fluctuations in our operating results may negatively affect our stock price
 - ▷ The future sale of shares of our common stock may negatively affect our stock price

Risk Factors

You should carefully consider the risks and uncertainties described below and all of the other information included in this report when deciding whether to invest in our common stock or otherwise evaluating our business. If any of the following risks or uncertainties materialize, our business, financial condition, or operating results could suffer. In that case, the trading price of our common stock could decline, and you may lose all or part of your investment. Our operations could also be affected by other risks and uncertainties that are not presently known to us or that we currently consider to be immaterial to our operations.

Risks Related to Our Business and Industry

Failing to maintain and protect our brand, independence, and reputation may harm our business. Our reputation and business may also be harmed by allegations made about possible conflicts of interest, by other negative publicity or media reports, or by adverse outcomes in regulatory proceedings.

We believe that the reputation of our company and our brand generally, as well as the perception of our research and ratings products and services, is based on the trust that users of our products and services have in our commitment to our mission of empowering investor success, our independence of editorial judgment, our insistence on methodological rigor, and our transparency concerning our processes. Any failure to uphold these commitments and standards and ensure that our customers have a consistently positive experience with us could damage our reputation.

Our ESG offerings often place Morningstar into the public debate over a variety of issues surrounding climate, environment, social concerns, and corporate governance. Our position as an independent enabler of investor choice may cause proponents of certain causes to question the adequacy, completeness and objectivity of our methodologies and models and of the data underlying them; the timing and nature of changes in our ratings or assessments and in other products, such as indexes, built on these ratings and assessments; the independence of our ratings determinations and editorial decisions and the influence of third parties, including governments and large institutional investors or asset owners, on such determinations or decisions; and our role in and influence upon various investment processes. Our position as a leading source of ESG research and opinions may also cause proponents of various causes to demand that we publicly take stands on a variety of controversial topics perceived by them as relevant to investor success or the evolving expectations of businesses but which we may believe we are unsuited or unprepared to address. New research and ratings offerings face a challenge to create objective, understandable methodologies in a rapidly developing field without widely accepted standards. Our methodologies generally are susceptible to potential claims of imprecision, empirical or methodological error, bias and puffery. We evaluate the potential impact of ESG factors on other companies and risk a claim of hypocrisy if we take or fail to take corporate actions that are or seem inconsistent with our own sustainability and corporate responsibility policies and practices, including publicly disclosed ESG and climate-related targets and goals. Our failure to successfully navigate these issues as they arise from time to time may have an adverse effect on our reputation and our business.

As our business has evolved, we have entered lines of business and business arrangements that may give rise to allegations of conflicts of interest or perceived failures of our independence. We provide ratings, analyst research, and investment recommendations on mutual funds and other investment products offered by our institutional clients. While we don't charge asset management firms for their products to be rated, we do charge licensing fees for the use of our ratings. We also provide investment advisory and investment management services, including through our own series of mutual funds, which expose us to the claim that we are acting as both a referee and a player in the investment management industry. In our credit ratings business and Morningstar Sustainalytics' Sustainable Finance Solutions products we are participants in an issuer-pay business model under which we receive payments from issuers for our ratings rather than from the investors who consume such ratings. These payments may create the perception that our ratings and research in these areas are not independently determined.

Our business expansion, including through acquisitions, has resulted in greater exposure to governmental regulation across our product lines and risks that acquired businesses may harbor business practices that could harm our brand. In some cases, such as with respect to our credit ratings business, interactions with regulators are extensive and continuous, raising the risk that they may result in enforcement investigations and proceedings. To the extent any of those investigations or proceedings result in a finding of misconduct or noncompliance, they could pose a significant reputational risk to us and negatively impact our business. Regardless of source, allegations of improper conduct, whether the ultimate outcome is favorable or unfavorable to us, as well as negative publicity or media reports about Morningstar and its relationships with third parties, whether valid or not, may harm our reputation and damage our business.

Our reputation may also be harmed by factors outside of our control, such as news reports about our clients, consultants, or suppliers, or adverse publicity about certain types of investment and ratings products generally. We may also suffer brand dilution as our brand becomes associated with an ever more diverse variety of products and services that may align less well with our corporate mission. In addition, any failures by us to continue to instill effectively in our employees the non-negotiable expectation of independence and integrity may devalue our reputation over time and negatively effect both hiring and retention efforts.

Failing to innovate our product and service offerings, create innovative, proprietary and insightful financial technology solutions, keep pace with new investor requirements and technology developments, or anticipate our clients' changing needs may negatively affect our competitive position and business results.

We believe innovation in financial information services and investable products available to investors and the various advisers and other intermediaries who serve them continues to accelerate. Developments in technology are fundamentally changing the ways investors, financial intermediaries, and other market participants access data and content, allowing for greater personalization of products customized to individual investor profiles and interests such as direct indexing and sustainability goals-based investing. These developments can render our existing products less competitive, obsolete or unmarketable. As a result, our future success will continue to depend upon our ability to identify and develop new products and enhancements that address the future needs of our target markets and to deliver them in ways that support our customers' investing needs and business models.

Our core competencies are around data and research, technology, and design. Morningstar deploys each of these to create unique intellectual property, products, and solutions that clearly convey complex investment information to investors of all kinds. Morningstar offers a suite of solutions that serve individuals, financial advisors, asset managers, retirement plan providers and sponsors, institutional investors in the private capital markets, and participants in the fixed income markets. Our customers have access to a wide selection of investment data, fundamental equity research, manager research, credit ratings, private capital markets research, and ESG data and research, directly on Morningstar's proprietary desktop or web-based software platforms, or through subscriptions, data feeds, and third-party distributors. Our financial technology solutions also allow advisors to serve investors at all stages of the investing process. Morningstar's managed portfolio offerings help advisors outsource investment selection and asset allocation through proprietary portfolio strategies based on Morningstar's valuation-driven, fundamentals-based approach to investing. Applying its expertise in asset allocation, investment selection, and portfolio construction, our global investment team creates long-term investment strategies built on Morningstar's data and ratings. We also help retirement plan sponsors build high-quality savings programs for employees and advise participants in retirement plans on saving for retirement and choosing plan investments. The breadth and depth of our service offerings set us apart from our competitors, which we believe is a significant competitive advantage.

If we fail to continuously innovate and develop new datasets, research, methodologies, content or software to meet the needs of our customers, our competitive position and business results may suffer. In addition, our reputation could be harmed if we are perceived as not moving quickly enough to meet the changing needs of investors or their financial advisors. These changing needs

include a greater expectation that advice be delivered with a high degree of personalization and an increased focus on sustainability. There is also increased interest in alternative asset classes creating a need for applicable datasets and analytical expertise. Our competitive position and business results may suffer if other companies have greater breadth of product offerings or are able to successfully introduce innovative, proprietary research tools and software that gain attention from our clients.

In addition, the value of our products and services may be negatively affected by the increasing amount of information and tools that are available for free, or at low cost, through Internet sources or other low-cost delivery systems, and by the ability of machine learning and other artificial intelligence systems to process and organize large data sets. Although we believe our products and services contain value-added features and functionality that deeply embed them in our customers' workflows, such developments may over time reduce the demand for, or customers' willingness to pay for, certain of our products and services.

In addition, we must make long-term investments and commit significant resources often before knowing whether such investments will result in products or services that satisfy our clients' needs or generate revenues sufficient to justify such investments. In addition, from time to time, we also incur costs to transition clients to new or enhanced products or services. Such transitions can involve material execution risks and challenges. If we are unable to manage these investments and transitions successfully, our business, financial condition, and results of operations could be materially adversely affected.

As our financial intermediary customers further automate their business processes, their need for our products may change and the technological flexibility and interoperability of our systems may become more important. For example, the COVID-19 pandemic accelerated advisor and client demand for digital, friction-free technology and experiences with our turnkey asset management platform, shining a light on dated, legacy operational workflows. In addition, there has been an increasing focus on technology not merely supplying additional tools for users, but also offering solutions to specific client problems, such as those we are seeking to address for wealth advisors through bringing together our multiple wealth management capacities around asset management, data aggregation and client portfolio management software. We have a myriad of potential technology investments across our product lines and need to prioritize scarce technology development resources to focus on products that best anticipate the needs and priorities of our customers.

Our software development process is based on frequently rolling out new features so that we can quickly incorporate user feedback. However, at times adoption of new features or enhanced versions is slowed by the significant client investment required for more advanced use cases. While some changes in technology may offer opportunities for us, we cannot guarantee that we will successfully adapt our product offerings to meet evolving customer needs or that the transition to such new offerings will be seamless. If we fail to develop and implement new technology rapidly enough, we may sacrifice new business opportunities or renewals from existing customers. We may also incur additional operating expense if major software projects take longer than anticipated or if clients decline to migrate to new systems and we must support multiple platforms over an extended period of time. Our competitive position depends on our execution speed and we regularly face new competitors from venture capital funded fintech firms that may be significantly more focused or nimble.

Our technology is also heavily dependent on the quality and comprehensiveness of our data and our ability to successfully build analytics, research, and other intellectual property around that data. For example, in order to provide the personalized holistic advice that clients value, we need to collect, organize, and protect large, non-homogenous datasets and synthesize and effectively analyze the insights offered by this data. We are investing significant resources in consolidating our various data assets and improving their usability and deliverability across our platform of products. Our competitive position and business results may suffer if we fail to realize the value and potential of our data assets.

Prolonged volatility or downturns affecting the financial sector, global financial markets, and the global economy may impact our results, resulting in lower revenue from asset-based fees and credit ratings business, as well as other parts of our business to a lesser extent.

Our business results are partly driven by factors outside of our control, including general economic and financial market trends which may be impacted by changes in interest rates, availability of credit, inflation rates, changes in laws, trade barriers, commodity prices, currency exchange rates and controls, and national and international political circumstances. Prolonged economic and financial downturns, sustained volatility in the financial markets, interest and inflation rate fluctuations and periods of stagflation, and a lack of investor confidence can reduce investor interest and investment activity and decrease demand for our software, data, analyst ratings, and research products and flows of funds into our investment management products. Rising interest rates and rate uncertainty brought on by central bank decisions that reduce credit issuance has put negative pressure on our credit ratings business. Continued unfavorable trends in the market environment in which we operate could cause a corresponding negative effect on our business results. As a result, we may experience lower revenue, operating income, and other financial results in the event of a market downturn.

For our licensed-based businesses, many of our customers are asset-management and financial advisory firms and other financial-services companies, which are also subject to external trends and changes. The ascendance of passive strategies may affect both the profitability of asset managers, on whose success we in part depend, and the perceived value of our research regarding such strategies. A sustained global recession or other financial crisis would likely lead to material spending cutbacks among many of the companies to which we sell and longer sales cycles. Consolidation in the financial services sector reduces the number of potential clients for our products and services. These trends could impact demand for our products and services or change the financial services landscape in which we operate.

Many companies in the financial services industry have also been subject to sustained pressure to reduce fees. As a result, many of these firms have sought to reduce their operating costs by working with fewer service providers and/or negotiating lower fees for services they purchase. Our PitchBook business may also be subject to cyclical trends specific to the private capital markets. Many of PitchBook's clients are investment banks and other participants in the capital and M&A markets, which are subject to periodic business downturns driven by changes in such markets. During these downturns, they often seek to reduce spending on third-party services, as well as the number of employees, which would directly affect the number of prospective users for the PitchBook platform.

The amount of asset-based revenue we earn primarily depends on the value of assets on which we provide advisory services, and the size of our asset base can increase or decrease based on market performance. Our revenue from asset-based fees has been adversely affected by market declines. Asset levels can also be affected if net inflows into the portfolios on which we provide investment advisory services drop or if these portfolios experience redemptions. A drop in net inflows or an increase in redemptions can result from a variety of factors, including overall market conditions or uncompetitive investment performance. If the level of assets on which we provide investment advisory or investment management services goes down, we expect our fee-based revenue to show a corresponding decline. The industrywide trend toward lower asset-based fees may also impact our fee-based revenue. A shift by investors to non-traditional asset classes such as cryptocurrencies, private debt, real estate, structured products, and collectibles may affect our assets under management if we are unable to incorporate them into our investment strategies or if they fail to perform in the manner that our research anticipates.

Our largest transaction-based business, the credit ratings business, as well as Morningstar Sustainalytics' second party opinion business, has been, and may continue to be, impacted by volatility in U.S. and international financial markets due to their dependence

on the number and dollar volume of debt securities issued in the capital markets. Market disruptions, rising interest rates, widening credit spreads and economic slowdowns historically have impacted the volume of debt securities issued in global capital markets and the demand for credit ratings and ESG-related ratings and opinions. Demand for credit ratings can also be negatively affected by negative publicity about the credit ratings business, regulatory and political developments, growth in the use of alternative sources of credit, and defaults by significant issuers. Our ability to reduce costs in the event of such adverse developments can be negatively impacted by, among other things, our obligations to monitor and maintain outstanding ratings. Declines or other changes in the markets for debt securities may materially and adversely affect our business, operating results, and financial condition.

Risks Related to Our Information Technology and Security

We could face significant reputational and financial consequences relating to cybersecurity and the protection of confidential information, including personal information about individuals.

Our business requires that we securely collect, process, store, and transmit confidential information, including personal information, relating to our operations, customers, employees, and other third parties. We continuously invest in systems, processes, controls, and other security measures to guard against the risk of improper access to or release of such information. However, these measures do not guarantee absolute security, and improper access to or release of confidential information may still occur through employee error or malfeasance, system error, other inadvertent release, failure to properly purge and protect data, or cyberattack.

We may be targeted by malicious individuals or groups (including those sponsored by nation-states or terrorist organizations) seeking to attack our products and services or penetrate our network infrastructure to gain access to intellectual property, confidential or personal information, or to facilitate distributed denial of service attacks. While we have dedicated resources responsible for maintaining appropriate levels of cybersecurity and have implemented systems and processes intended to help identify cyberattacks and protect and remediate security issues in our software and network infrastructure, these attacks have become increasingly frequent, sophisticated, and difficult to detect. Even in cases where an attack is ultimately detected, based on industry data, incidents may go undetected for several months. Our measures may not be adequate for all eventualities, and we may be vulnerable to circumvention of security systems, denial of service attacks or other cyberattacks, hacking including “hactivism”, “phishing” or other social engineering attacks, computer viruses, ransomware or malware, employee or insider error, employee or vendor malfeasance, physical breaches or other malicious actions. Furthermore, some of these security measures are less effective in situations where employees are utilizing personal devices and home networks while working remotely.

We may also be impacted by a cyberattack targeting one of our vendors or within our technology supply chain or infrastructure. Our information technology systems interact with those of customers, vendors, and service providers and collect an increasing amount of confidential data as we expand our product and service offerings. As a result, inadequacies of our customers’ security technologies and practices introduce additional risk and cost of monitoring and may only be detected after a security breach has occurred. These risks may be heightened as we continue to offer employees flexibility to work more frequently from remote work environments, thereby increasing our dependency on certain service providers, such as video conferencing and web conferencing services.

We are experiencing enhanced government and regulatory scrutiny of the measures taken by companies to protect against cyberattacks. These include rules, such as those proposed by the SEC, that would require enhanced public disclosure around the occurrence of cybersecurity incidents, the company’s cybersecurity risk management policies, and governance practices and the cybersecurity expertise of the company’s board of directors. These new rules may include additional regulatory expectations for the oversight of customers, vendors, and service providers, which may be difficult and costly to implement. In addition, the proliferation of personal data privacy regimes across the globe have made scalable and comprehensive compliance practices ever more difficult and costly to implement.

Any failure to safeguard confidential information or any material cybersecurity failures or incidents in our systems (or the systems of a customer, vendor, or service provider which stores or processes confidential information for which we are responsible) could cause us to experience reputational harm, loss of customers, regulatory actions, sanctions or other statutory penalties, litigation, or financial losses and increased expenses related to addressing or mitigating the risks associated with any such material failures or incidents.

In addition to the risks above related to general confidential information, we may also be subject to specific obligations relating to personal information and personal financial information. Our products and websites in certain cases collect, store, process, and transmit personal information about an individual, including personally identifiable information and personal financial information such as portfolio holdings, account numbers, and credit card information. Our business also operates across national borders and routinely moves personal information from one jurisdiction to another. Regulators and political leaders in various countries are increasingly interested in restricting cross-border data transfers that they perceive as problematic. We and our customers are often subject to federal, state, and foreign laws relating to privacy, cybersecurity, and data protection. The scope of the laws that may be applicable is often uncertain and required practices may be inconsistent with laws of other jurisdictions.

Consequently, our business is subject to a variety of continuously evolving and possibly conflicting regulations and customer requirements. Our compliance with these changing and increasingly burdensome regulations and requirements may cause us to incur substantial costs or require us to change our business practices which may impact financial results. If we fail to comply with these regulations or requirements, we may be exposed to litigation expenses and possible significant liability, fees, or fines. For example, in the EU, noncompliance with the General Data Protection Regulation (GDPR) requirements could result in penalties of up to 4% of worldwide revenues.

One of Morningstar's core strengths is the ability to collect data and enrich it with data from another part of the business to provide valuable information and insights to investors. As data is accessible across our products, consistent data privacy practices and disclosure becomes more important and challenging. Failure to comply with our public statements or to adequately disclose our privacy or data protection practices could result in costly investigations by governmental authorities, litigation, and fines as well as reputational damage and customer loss.

We also from time to time acquire other companies that collect and process personal information. While we perform extensive due diligence on the technology systems and practices of these companies, there can be no assurance that such companies have not suffered data breaches or system intrusions prior to or continuing after our acquisition for which we may be liable. Acquired businesses may not have invested as heavily in such security measures or data privacy controls, and they introduce additional cybersecurity and data privacy risk as their systems are integrated with ours. Even after an acquisition is completed, time is required to integrate the acquired business' technology and processes, which may result in an increased risk of security incidents until the integration for the new business is completed.

While we maintain insurance coverage that is intended to address certain aspects of cybersecurity and data protection risks, such coverage may not be sufficient to cover all or the majority of the costs, losses, or types of claims. Our insurance coverage would not extend to any reputational damage, loss of customers, or required improvements to our systems.

Our business, products and facilities are at risk of a number of material disruptive events, including an outage of our database, technology-based products and services or network facilities, which our operational risk management and business continuity programs may not be adequate to address.

Our business and several of our major products are dependent on our ability to provide data, software applications, and other products and services on a current and time-sensitive basis. We rely extensively on our computer systems, database storage facilities, and other network infrastructure, which are located across multiple facilities in the U.S. and globally. We are at risk of disruptions from numerous factors, including pandemic, violent incident, natural disaster, power loss, telecommunications and Internet failures, civil unrest, cybersecurity attacks and breaches, and other events beyond our reasonable control. We are also subject to potential shortcomings in our own business resilience practices, such as failures to fully understand dependencies between different business processes across the locations in which they are performed, inadequate vendor risk assessment and management processes and critical vendor dependencies, concentration of certain critical activities in areas of geopolitical risk, concentration of certain skills and know-how with small groups of key employees, and possibly ineffective location recovery strategies in the event of a location disruption. As we grow through acquisitions, the newly acquired businesses may not have invested in technological infrastructure and disaster recovery to the same extent as we have. As their systems are integrated into ours, a vulnerability could be introduced, which could impact our platforms across the company.

While many of our employees continue to work remotely on a full-time or part-time basis, we remain exposed to disruptive events at our significant office locations. Our corporate headquarters in Chicago, Illinois is the home office for a significant number of our employees including most of our executive leadership team, as well as substantial numbers of employees involved in the delivery of most of our major products and services. Our data collection, technology, and operational center in Mumbai, India is our largest location measured by number of employees and is where employees maintain and update our equity database and PitchBook's data and research operations and provide shared services to many of our operations. While we are significantly reducing our operations in Shenzhen, China and shifting its global business functions to other Morningstar locations, we will continue during 2023 to rely on employees in that location to maintain and update our mutual fund and equity databases.

We engage third party vendors in several locations, including Colombia, India, and Ukraine, which provide contract labor in support of our operations. If a pandemic, war, natural disaster, violent incident, or another dangerous emergency significantly impacted the safety or communication connectivity of people living in and around these locations, we might not be able to continue business operations at an acceptable level that would meet all our legal and contractual commitments. Each of these locations has experienced various types of geopolitical risks and changes in laws and regulations relating to data privacy, security, protection of intellectual property rights, and acceptable telecommunication infrastructure which create uncertainty regarding our long-term operations there. Any extended disruptions to our operations in these locations would make it difficult for us to meet our operating goals.

We do have a long-standing relationship with a third-party vendor in Ukraine which provides contract labor in support of development efforts at PitchBook. Our team has provided financial help and other assistance to these individuals and to date, we have been able to maintain the operations conducted by our contractors in Ukraine at an acceptable level. Through advanced preparation and business continuity planning, there has been limited disruption to the operations of PitchBook or our clients' access to the platform. However, the situation remains volatile and our team continues to monitor new developments to guard against negative impacts to our operations.

Our operations and those of our suppliers and customers are vulnerable to interruption by fire, earthquake, power loss, telecommunications failure, terrorist attacks, wars, computer viruses, and other events beyond our control. Our database and network facilities may also be vulnerable to external attacks that misappropriate our data, corrupt our databases, or limit access to our information systems. Our exposure to such attacks may increase in circumstances where our business exposes us to greater controversy and potential opposition, such as with respect to various ESG-related matters. We rely on cloud providers and other vendors to maintain, service, and improve our technological infrastructure, which underpins and protects our data, research, and

other products and services. To defend against these threats, we implement a series of controls focusing on both prevention and detection, including firewalls, intrusion detection systems, automated scanning and testing, server hardening, antivirus software, training, and patch management. We make significant investments in servers, storage, and other network infrastructure to prevent incidents of network failure and downtime, but we cannot guarantee that these efforts will work as planned. If disruptions, failures, or slowdowns of these electronic delivery systems or the Internet occur, our ability to distribute our products and services effectively and to serve our customers may be impaired.

We are shifting the storage of our data and delivery of several of our products and services to cloud-based delivery systems. We rely on cloud providers and other vendors to maintain, service, and improve our technological infrastructure, which underpins and protects our data, research, and other products and services. Some of these providers have recently experienced widely reported service disruptions that affected numerous customers including ourselves. In addition, as we offer our employees opportunities to work from remote environments more frequently, the daily activities and productivity of our work force is now closely tied to key vendors, such as video conferencing services, consistently delivering their services without material disruption. Our ability to deliver information using the Internet and to operate in a remote working environment may be impaired because of infrastructure failures, service outages at third-party Internet providers, malicious attacks, or other factors. If disruptions, failures, or slowdowns of these electronic delivery systems or the Internet occur, our ability to distribute our products and services effectively and to serve our customers may be impaired.

We maintain off-site backup facilities for our data, but we cannot guarantee that these facilities will operate as expected during an interruption that affects our primary facility. There may be single points of failure that affect our core databases, data transfer interfaces, or storage area networks. We may not be able to fully recover data or information lost during a database or network facility outage. Any losses, service disruption, or damages incurred by us could have a material adverse effect on our business, operating results, or financial condition.

We could face liability for the information and data we collect, store, use, create, and distribute or the reports and other documents we publish or that are produced by our software products.

We may be subject to claims for securities law violations, defamation (including libel and slander), negligence, or other claims relating to the information we publish, including our research and ratings. For example, investors may take legal action against us if they rely on published information that contains an error, or a company may claim that we have made a defamatory statement about it or its employees. In addition, in our credit ratings business, we have access to significant amounts of material nonpublic information on issuers of securities, the inadvertent disclosure of which, or the misappropriation by employees or others, could expose us to various liabilities under securities and other laws. Less significant errors could still require us to remove ratings, research, or data temporarily which could diminish the perceived value of the product or cause us to be deficient in our service-level agreements with clients that require us to meet certain obligations for delivering time-sensitive, up-to-date data and information.

Some of our products support the investment processes or the client account reporting practices and other activities of our clients who manage significant assets of other parties. Use of our products as part of such activities creates the risk that clients, or the parties whose assets are managed by our clients, may pursue claims against us for losses that may have some connection to our products, and we may be subject to investigation of our products and their use by government regulators who regulate the business of our clients. In the case of software products, even though most of our contracts for such products contain limitations of our liability in such cases, we may be required to compensate such clients or their customers for losses in order to maintain our business relationships. We could also be subject to claims based on the content that is accessible from our website through links to other websites.

We rely on a variety of outside parties as the original sources for the information we use in our published data and research. These sources include securities exchanges, fund companies, hedge funds, transfer agents, issuers, and other data providers. We also incorporate data from a variety of third-party sources for many of our products. Accordingly, in addition to possible exposure for publishing incorrect information that results directly from our own errors, we could face liability based on inaccurate data provided to us by others. For example, our Morningstar Sustainalytics business is reliant on self-reported information for some of its issuer-focused ESG ratings and analysis. We also face the risk that a significant data source terminates its distribution of the data to us, which could impact our products, research, or other calculations that utilize that information.

We could be subject to claims by providers of data and information we compile from websites and other sources that we have improperly obtained that data in violation of the source's copyrights or terms of use. We could also be subject to claims from third parties, such as securities exchanges from which we license and redistribute data and information, that we have used or redistributed the data or information in ways not permitted by our license rights or that we have inadequately permissioned our clients to use such data. The agreements with such exchanges and other data providers give them extensive data use audit rights, and such audits can be expensive and time consuming and potentially result in substantial fines. We could also be subject to claims from regulators that we have mishandled private ratings or nonpublic data and information, in particular in our credit ratings business. These regulatory bodies have audit rights regarding our data use which could have similar adverse consequences in terms of time, expense, or fines. Defending claims based on the information we publish could be expensive and time-consuming and could adversely impact our business, operating results, and financial condition.

Finally, our global business regularly seeks to optimize our data storage in order to improve information accuracy and streamline the technology, which supports our business operations. These efforts are constrained by data privacy legislation, such as GDPR, which defines standards for storage, transfer, and use of certain personal information from and about individuals, and which may limit the processing of information about individuals outside their home jurisdictions. Legislation aimed at protecting material nonpublic information or mitigating potential conflicts of interest further define how certain information can be accessed and retained which may result in less efficient or higher cost technological processes and infrastructure.

Failure to protect our intellectual property rights, or claims of intellectual property infringement against us, could harm our brand and ability to compete effectively.

The steps we have taken to protect our intellectual property may not be adequate to safeguard our proprietary information. We rely primarily on patent, trademark, copyright, and trade secret rights, as well as contractual protections and technical safeguards, to protect our intellectual property rights and proprietary information. Despite these efforts, third parties may still attempt to challenge, invalidate, or circumvent our rights or improperly obtain our proprietary information. Further, effective trademark, copyright, and trade secret protection may not be available in every country in which we offer our services or utilize our intellectual property. Failure to adequately protect our intellectual property could harm our brand, devalue our proprietary content, and affect our ability to compete in the marketplace.

We believe our trademark rights with respect to the Morningstar name and logo represent a materially valuable intangible asset. From time to time, we encounter jurisdictions in which one or more third parties have a pre-existing trademark registration in certain relevant international classes that may prevent us from registering these or other marks in those jurisdictions. Our continued ability to use the "Morningstar" name or logo, either on a stand-alone basis or in association with certain products or services, could be compromised in those jurisdictions because of these pre-existing registrations. Similarly, from time to time, we encounter situations in certain jurisdictions where one or more third parties are already using the Morningstar name, either as part of a registered

corporate name, a registered domain name, or otherwise. Our ability to effectively market certain products and/or services in those locations could be adversely affected by these pre-existing usages.

We have from time to time been subject to claims by third parties alleging infringement of their intellectual property rights. Such claims can also be alleged against clients, customers, or distributors of our products or services whom we have agreed to indemnify against third party claims of infringement. The defense of such claims can be costly and consume valuable management time and attention. We may be forced to settle such claims on unfavorable terms, which can include the payment of damages, the entry into royalty or licensing arrangements on commercially unfavorable terms, or the suspension of our ability to offer affected products or services. If litigation were to arise from any such claim, there can be no certainty we would prevail in it. If any of these risks were to materialize, it could have a material adverse effect on our business, financial condition, or results of operations.

Risks Related to Legal and Regulatory Matters

Compliance failures, regulatory action, or changes in laws applicable to our credit ratings operations, investment advisory, ESG and index businesses could adversely affect our business.

DBRS Morningstar, our credit ratings business, operates in a highly regulated environment in Canada, the U.S., the U.K., and the EU. The laws and regulations governing credit ratings impose substantial ongoing compliance obligations and costs and subject DBRS Morningstar to regular regulatory examinations and occasional investigations, relating to the company itself or sometimes to the credit ratings industry as a whole. In operating under these laws and regulations, DBRS Morningstar can experience good faith uncertainty over the scope, interpretation, and administration of such laws and regulations. In addition, differences between the laws and rules governing credit rating agencies in Canada, the U.S., the U.K., and the EU can result in inconsistent regulatory requirements that it may not be possible to fully reconcile in a cost-efficient manner for a credit rating agency of DBRS Morningstar's size.

New laws, regulations and regulatory implementation guidance may also affect the day-to-day operation of the business of DBRS Morningstar, its customers, and users of its credit ratings, including by imposing new or expanded requirements on such matters as communications with issuers as part of the rating assignment process, conflict of interest monitoring, the manner in which DBRS Morningstar's ratings are developed and communicated, the manner in which customers may use credit ratings, and other aspects of the business model for credit rating agencies. Failures by DBRS Morningstar could lead to negative publicity, fines, settlements, and/or temporary or permanent operating restrictions. Further, many aspects of credit ratings agency policies and practices and their compliance with applicable law, regulations, contracts and license arrangements are not the subject of definitive regulatory guidance or case law.

Three of our subsidiaries, Morningstar Investment Management LLC (MIM), Morningstar Investment Services LLC, and Morningstar Research Services LLC, are registered as investment advisors with the SEC under the Advisers Act. In addition, in the case of MIM's advisory relationship with the Morningstar Funds Trust, it is subject to the Investment Company Act of 1940 and the Commodity Exchange Act. Morningstar Investment Services is also a broker/dealer registered under the Exchange Act and is subject to the rules of FINRA. As registered investment advisors, these entities are subject to the requirements and regulations of the Advisers Act. These requirements primarily relate to record-keeping, reporting, and standards of care, as well as general anti-fraud prohibitions. The fiduciary duties of a registered investment advisor to its clients include an obligation of good faith and full and fair disclosure of all facts material to the client's engagement of the advisor, an obligation to provide investment advice suitable for the particular client, an obligation to have a reasonable, independent basis for investment recommendations, an obligation when directing client brokerage transactions to seek the best execution thereof, and an obligation to vote client proxies in the best interests of the client. As registered investment advisors, these subsidiaries are subject to on-site examination by the SEC.

In addition, in cases where these subsidiaries provide investment advisory services to retirement plans and their participants, they may be acting as fiduciaries under ERISA. As fiduciaries under ERISA, they have obligations to act in the best interest of their clients. They also have duties of loyalty and prudence, as well as duties to diversify investments and to follow plan documents to comply with the applicable portions of ERISA. We may face liabilities for actual or claimed breaches of our fiduciary duties, particularly in areas where we provide retirement advice and managed retirement accounts. In some of our retirement contracts, we act as an ERISA fiduciary by, for example, selecting and monitoring a broad range of diversified plan options. We also provide a managed account service for retirement plan participants who elect to have their accounts managed by our programs. Such activities have been the subject of extensive class action litigation, including one such proceeding involving us that was dismissed.

Many of our asset management and financial advisor clients are similarly regulated. If our license products and services fail to satisfy the regulatory requirements applicable to these clients, we may lose their business. For example, SEC amendments in 2022 to the advertising and solicitation rule for registered investment advisers resulted in costs to comply with new evaluation, implementation, and disclosure requirements in our investment management operations, as well as costs to modify software used by our unaffiliated registered investment adviser clients who must also comply with such amendments.

We also provide investment advisory services in other areas around the world, and our operations are subject to additional regulations in markets outside the U.S. In preparation for the end of the transition period following the U.K.'s exit from the EU, we restructured our European investment management operations. While we have been granted authorization for our French investment advisory subsidiary to continue to provide investment advisory services to those EU institutional clients previously serviced by our U.K. based investment advisory subsidiary, this process has been time consuming and has resulted in increased costs and duplication of functions. Furthermore, we anticipate ongoing costs to monitor and comply with potentially diverging legal and regulatory developments in each jurisdiction. Our 2022 acquisition of the U.K. and international operations of Praemium (renamed Morningstar Wealth Platform) involves operating a regulated business in a new jurisdiction (Isle of Jersey) as well as activities not traditionally undertaken by Morningstar such as the custody of client assets.

The Morningstar Funds Trust is a registered open-end mutual fund for which Morningstar Investment Management acts as investment advisor under an investment management agreement. The independent trustees of the Morningstar Funds Trust must annually evaluate the terms of the investment management agreement (including fees) the Trust has with Morningstar Investment Management. Upon evaluation, the independent trustees may elect to either renew the investment management agreement or make changes. Such changes could include taking steps to improve performance (e. g. removing a portfolio manager, or enhancing research capabilities), merge or liquidate a fund, close a fund to new investors, adjust an advisory fee schedule, or terminate the investment management agreement with Morningstar Investment Management any of which could have an adverse effect on Morningstar Investment Management.

Our Morningstar Sustainalytics business could be negatively affected by increased regulation of ESG research and data. The European Commission's legislative proposal for registering and supervising companies that act as external reviewers for green bonds aligned with the European Green Bond Standards (EuGBS) framework would require significant investments to build and maintain appropriate internal control and compliance processes for these teams. Similarly, the ESMA, FCA and International Organization of Securities Commissions' consultations on proposed ESG regulation of climate-related issuer disclosures and ESG rating and data providers contemplate governance policies, quality assurance and control programs requirements applicable to ESG ratings and data providers, and standardized procedures and methodologies related to data collection and fees. The final form of any of these regulations is still uncertain. We are also monitoring activities of regulators in North America and APAC that have announced that they are reviewing this topic and are contemplating proposed legislation. Such regulatory regimes could impose significant compliance burdens and

costs on Morningstar Sustainalytics and, as with all new regulation, could be subject to ambiguous interpretation that could result in inadvertent noncompliance. Furthermore, as our Morningstar Sustainalytics business operates globally and we look to integrate ESG factors throughout our products, we may be subject to future regulation in multiple jurisdictions, which may be inconsistent.

Our index business is subject to regulations relating to benchmark administration in the EU and the U.K. Morningstar Indexes has affiliates permitted to act as a EU and U.K. benchmark administrator. While this cross-permissioning allows flows of U.K. benchmarks into the EU and vice versa, the benchmark administrator designation also has significant compliance responsibilities and costs. These compliance responsibilities include specified governance and oversight arrangements, outsourcing limitations, specified items in a code of conduct, key information disclosures, and systems and controls governing data, complaints and record-keeping. Possible reductions to the scope of the benchmarks subject to regulation in the EU and the U.K. or the possible delay or repeal of rules to become effective in 2024 that would subject more non-EU benchmarks to regulation could negatively affect the value of our benchmark administration permissions. In addition, the SEC has sought comment on whether index providers, model portfolio providers and pricing services should be regulated as investment advisers or outsourced service providers in the U.S., which potential regulations could affect our business and increase our costs of compliance.

The laws, rules, and regulations, and their interpretations, applicable to our business may change in the future, and we may not be able to comply with these changes without extensive changes to our business practices. In the recent past, the scope and pace of global regulatory change has both increased and involved shorter compliance time frames, which has increased both the risk that we will properly identify and respond to regulatory changes applicable to our operations and the risk that we will implement such changes on a timely and complete basis. Regulations aimed at increasing transparency for investors or providing individuals greater control over their own data may devalue the investments we have made in our data sets or reduce their use cases. In addition, the broad scope of our business operations makes it more difficult to monitor areas that may be subject to regulatory and compliance risk. If we fail to comply with any applicable law, rule, or regulation, we could be fined, sanctioned, or barred from providing certain products and services in the future, which could adversely affect our business.

Errors in our automated advisory tools may subject us to fiduciary liability for any losses that result.

We rely on automated investment technology for our retirement advice and managed retirement accounts services. The Wealth Forecasting Engine is our core advice and managed accounts engine that determines appropriate asset allocations for retirement plan participants and assigns individuals to portfolios. We also rely on automated portfolio construction tools. As these become more interconnected with other product offerings, including the technology of clients and other third parties, the increasing complexity of the technology requires more expertise and efforts to manage and test. Problems could arise if these programs do not work as intended, particularly if we failed to detect program errors over an extended period and are found to be a breach of our fiduciary duty or applicable law. There is a need to continually invest in training to develop and maintain in-house expertise to manage these systems effectively and to educate recordkeeper and retirement plan clients and participants in the capabilities, proper use, and competitive differentiation of these offerings, which can be costly and time consuming.

We seek to constantly innovate and improve our retirement services offering, for example to add new capabilities in income generating products and strategies or ESG-related investment strategies, and in doing so, we regularly release new versions of the technology and update our methodology. Additional customer support may be needed to ensure that clients implement the new, more complex, versions and updates properly and understand the implications for their plan participants, including issues concerning suitability of certain strategies. More resources may also be required to continue to support legacy versions of the Wealth Forecasting Engine that continue to be used by certain clients. If we make an error, we may be subject to potentially large liabilities for make-whole payments and/or litigation. We cannot quantify the potential size of these liabilities with any level of precision.

Risks Related to Our Operations

Our future success depends on our ability to recruit, develop, and retain qualified employees.

Our strategy envisions building and expanding our business which requires identifying, attracting, hiring, and on-boarding new qualified employees. In 2022, our employee headcount increased by 2,668 persons globally. Engineering, research, quantitative, fixed income data, credit analysis and ESG skill sets are particularly needed to capitalize on near-term growth opportunities. We experience competition for analysts, technology experts, data and software engineers, and other employees from other companies and organizations. While we have a geographically diversified workforce location strategy, building valued teams in a variety of locations around the globe, we experience recruiting challenges in nearly all our global locations. Such significant talent acquisition activities place a strain on our human resource management team. We must continue to refine and expand our recruiting capabilities, our systems and processes in order to meet this need in a highly competitive employment market.

The development, maintenance, and support of our products and services are also dependent upon the knowledge, skills, experience, and abilities of our existing employees. We invest in our employees' continued development and growth through learning tools, educational stipends, speaker series, mentoring, and other resources to help them chart a fulfilling career at Morningstar. We are also thoughtful about employee engagement and communications to keep our staff focused and motivated by our mission and our company's success. However, recent changes in labor markets such as the willingness of some employers to offer fully remote work brought on, in part, by the COVID-19 pandemic may make it more difficult for us to retain existing employees or maintain traditional workplace arrangements. We have begun to require most employees in our business locations to make a commitment to a minimum amount of in-office work, but we remain uncertain as to the effect of such requirements on employee attrition rates and engagement scores.

We believe the success of our business depends to a significant extent upon the continued service of our senior business and functional leaders and other key employees. However, the talents and experience of these individuals make them attractive candidates to many of our competitors, as well as to early-stage companies that can offer the potential for outside financial rewards if they are successful. Thus competition for these employees is intense and a high velocity of employee turnover creates a need to think strategically about the timing of new projects and initiatives to manage workloads. We may not be able to retain these leaders and employees or to develop and retain similar highly qualified personnel in the future.

In addition, we are currently exposed to rising wage scales in most of the employment markets in which our facilities are located, which negatively affect our compensation costs. Inflationary pressures, strong stock performance in our sector, and shortages of applicants with certain skills put upward pressure on wages. Shifting preferences regarding remote work flexibility and a backlog of immigration applications can further complicate employment offer negotiations with potential candidates and delay start dates.

Our future success also depends on the continued service of our executive officers, including Joe Mansueto, our Executive Chairman and Chairman of the Board and largest shareholder, and Kunal Kapoor, our Chief Executive Officer. The loss of Mansueto, Kapoor, or other executive officers could hurt our business, operating results, or financial condition. We do not have employment agreements or noncompete agreements in place with any of our executive officers. They may leave us and work for our competitors or start their own competing businesses.

Our growth has recently been derived to a significant extent from acquisitions. As we acquire and invest in companies or technologies, we may not realize the expected business or financial benefits and the acquisitions could prove difficult to integrate, disrupt our business, dilute stockholder value and adversely affect our operating results and the market value of our common stock.

As part of our business strategy, we periodically make investments in, or acquisitions of, complementary businesses, services and technologies, and intellectual property rights. We have made the four largest acquisitions by purchase price in our history in the last six years. We continue to evaluate such opportunities and expect to continue to make such investments and acquisitions in the future. However, there can be no assurance we can identify suitable acquisition candidates at acceptable prices. In addition, each acquisition presents potential challenges and risks, including the following:

From a technology perspective, we may face potential identified or unknown security vulnerabilities in acquired products that expose us to additional security risks and penalties or delay our ability to integrate the product into our service offerings; difficulties in increasing or maintaining at an acceptable cost the security standards for acquired technology consistent with our other services; difficulty in transitioning the acquired technology onto our existing platforms and customer acceptance of multiple platforms on a temporary or permanent basis; and challenges augmenting the acquired technologies and platforms to the levels that are consistent with our brand and reputation.

From a human resources perspective, we may face difficulties in assimilating, integrating, or retraining acquired employees, which may lead to retention risk with respect to both key acquired employees and our existing key employees or disruption to existing teams; differences between our values and those of our acquired companies, as well as disruptions to our workplace culture; difficulties in and financial costs of addressing acquired compensation structures inconsistent with our compensation structure; and additional stock-based compensation issued or assumed in connection with the acquisition, including the impact on stockholder dilution and our results of operations.

From an operational perspective, we may face diversion of financial and managerial resources from existing operations; challenges relating to the potential entry into new markets in which we have little or no experience or where competitors may have stronger market positions; difficulties in integrating acquired operations, technologies, services, platforms and personnel; challenges with the acquired company's customers and partners, including our ability to maintain such relationships and changes to perception of the acquired business as a result of the acquisition; challenges with the acquired company's third-party service providers, including those that are required for ongoing access to third-party data; the potential for acquired products to impact the profitability of existing products; and in the case of foreign acquisitions, challenges caused by integrating operations over distance, and across different languages, cultures and political environments.

From a financial perspective, we may face challenges and costs relating to known and potential unknown liabilities associated with the acquired businesses, including due to litigation; difficulties in managing, or potential write-offs of, acquired assets or investments, and potential financial and credit risks associated with acquired customers; negative impact to our results of operations because of the depreciation and amortization of acquired intangible assets, fixed assets and operating lease right-of-use assets; the loss of acquired unearned revenue and unbilled unearned revenue; delays in customer purchases due to uncertainty related to the acquisition; ineffective or inadequate financial controls, procedures and policies at the acquired company; and the tax effects of any such acquisitions including related integration and business operation changes, and assessment of the impact on the realizability of our future tax assets or liabilities.

We also have, and intend to continue to make, various investments in companies where we do not have or obtain a controlling interest. Such investments are motivated both by their prospective financial return and the access they give us to certain new technologies, products, business ideas, and management teams. While we obtain various rights in connection with such investments, the future value of such investments is highly dependent on the management skill of the managers of those companies, among other factors.

Finally, our ability to acquire other businesses or technologies, make strategic investments or integrate acquired businesses effectively may be impaired by trade tensions and increased global scrutiny of foreign investments and acquisitions and investments in the technology sector. For example, several countries, including the U.S. and countries in Europe and the Asia-Pacific region, are considering or have adopted restrictions of varying kinds on transactions involving foreign investments. Antitrust authorities in a number of countries have also reviewed acquisitions and investments in the technology industry with increased scrutiny. Governments may continue to adopt or tighten restrictions of this nature, and such restrictions or government actions could negatively impact our acquisition and investment opportunities, business and financial results.

Supporting our growing domestic and international operations, employee headcount and customer base could strain our resources and infrastructure, and if we are unable to scale our operations and increase productivity, we may not be able to successfully implement our business plan.

We continue to experience significant growth in our diversity of products and services, operational scale and employee and customer bases, particularly through acquisitions, which has placed a strain on and in the future may stress the capabilities of our management, administrative, operational and financial infrastructure. We anticipate that significant additional investments, both in terms of management attention and one-time and annual costs, will be required to scale our operations and increase productivity across our organization, to address the needs of our customers, to further develop and enhance our products and services, to expand into new geographic areas, and to increase our operating margin over time. The additional investments we are making will increase our cost base, which will make it more difficult for us to offset any future revenue shortfalls by reducing expenses in the short term. We may not be able to make these investments as quickly or effectively as necessary to successfully and competitively scale our operations.

We regularly upgrade or replace our various software and data offerings and our operating systems and processes. If implementations are delayed, or if we encounter unforeseen problems with our upgraded or new offerings, systems and processes or in migrating away from existing offerings, systems and processes, our operations and our ability to manage our business could be negatively impacted.

Morningstar's growth also places increasing demands on our functional resources to scale and optimize globally and to balance global consistency with local flexibility. Our sales and marketing teams are focused on multi-product-based strategies to bring the breadth of our offerings and the full value of our intellectual property to our customers. However, such sales efforts can breed customer confusion, implicate regulatory limits on how certain products or services can be sold and by whom in certain jurisdictions, and if coupled with misaligned incentive structures, can create opportunities for misconduct or excessive risk taking. Additional complexity also creates a need for clear responsibilities and ownership across various global teams within Morningstar, which we may not be successful in implementing. A higher velocity of hiring and turnover in the competitive talent acquisition environment also creates challenges for cross-company collaboration. Morningstar is fortunate to have many opportunities for global growth in its strategic plan, however, we cannot be certain that further growth or profitability will be at the same or higher level given the headwinds of deglobalization and political, regulatory, and cultural fragmentation.

Our success will depend in part upon the ability of our senior management—including the senior management of businesses we acquire—to manage our anticipated growth effectively. To do so, we must continue to increase the productivity of our existing employees and to hire, train and manage new employees who can meet or exceed our productivity standards. Additionally, changes in our work environment and workforce in the wake of the COVID-19 pandemic could adversely affect our operations. For instance, we have offered a significant percentage of our employees some flexibility in the amount of time they work in an office. Our new office model and any adjustments made to our current and future office environments or work-from-home policies may not meet our productivity expectations, on the one hand, and the expectations of our workforce, on other hand, which could negatively impact our growth plans and our ability to attract and retain our employees. To manage the expected domestic and international growth of our operations and personnel, we will need to continue to improve our operational, financial and management controls, our reporting systems and procedures, our uses of automation and artificial intelligence systems to increase productivity, and our

utilization of real estate. If we fail to successfully scale our operations and increase productivity, we may be unable to execute our business plan and the value of our company could decline.

Today's fragmented geopolitical, regulatory, and cultural world could adversely affect our ability to maintain growth across our businesses.

Morningstar's strategy for growth involves, in part, continuous expansion into new and adjacent product lines to anticipate and meet our customers' needs. Our ability to realize those opportunities in one of our businesses, however, may be hindered by regulatory requirements governing a different business within the Morningstar group. In certain cases, regulatory sanctions against one of our businesses could affect our ability to continue to operate in unrelated regulated areas. In addition, the day-to-day sharing and optimization of the value of our intellectual property across our product lines can be affected by regulatory concerns. Similarly, differences in data privacy regimes and governmental surveillance rights applicable in specific countries significantly affect our workforce location strategy and technology infrastructure in relation to cross-border processing of personally identifiable information of customers, employees and other third parties. Such limitations, which seem likely to proliferate as global consensus regarding regulatory principles wanes, may impact our ability to maintain growth across our businesses.

The dynamics of today's geopolitical discourse may also impact business growth across different markets. It has been our experience that adoption of many ESG-focused products has been more rapid in European countries than in other parts of the world, and there is more agreement on ESG taxonomies, methodologies, and acceptable sources of data in that market. Customer opinions about such products, or preferences regarding their methodology or approach, are at times impacted by regional or national political trends which may differ significantly. Preferred terminology and information sources may similarly differ from place to place. In such an environment, Morningstar may struggle to maintain its reputation for methodological transparency and consistency which underpins the value and reputation of our research.

As a global taxpayer, we face challenges due to increasing complexities in accounting for taxes (e.g., base erosion, minimum taxes, and tax transparency), which are high priorities in jurisdictions in which we operate and could materially affect our tax obligations and effective tax rate.

Our effective tax rate is based on the mix of income and losses in our U.S. and non-U.S. operations, statutory tax rates, and tax-planning opportunities available in the various jurisdictions in which we operate. We could be subject to changes in our tax rates, the adoption of new U.S. or non-U.S. tax legislation or exposure to additional tax liabilities. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. Our future effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates including, impacts related to transfer pricing, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation by relevant authorities. Significant judgment is required to evaluate our tax positions.

Corporate tax reform, base-erosion efforts, and tax transparency continue to be high priorities in many jurisdictions in which we operate. In October 2021, the Organization for Economic Co-operation and Development (OECD) agreed to a two-pillar approach to global taxation focusing on global profit allocation (Pillar One) and a global minimum tax rate (Pillar Two). In December 2022, the EU member states agreed to implement the OECD's global corporate minimum tax rate of 15% under Pillar Two to be effective in January 2024. Other countries are also considering changes to their tax laws to adopt certain parts of the OECD's proposals. This legislation may represent a significant change in the international tax regime and there is risk of an adverse impact to our effective tax rate, but the amount of such impact remains uncertain at this time.

In August 2022, the Inflation Reduction Act of 2022 (IRA) was enacted into law in the United States. The IRA includes a 15% corporate alternative minimum tax on U.S. corporations with adjusted financial statement income in excess of \$1.0 billion which is

effective for taxable years beginning after December 31, 2022. The IRA also includes a 1% excise tax on publicly traded U.S. corporations for the value of any stock that is repurchased by the corporation. We do not currently anticipate that these provisions will have a material impact on our financial results.

Risks Related to Ownership of Our Common Stock

Our indebtedness, which has increased significantly in 2022, could adversely affect our cash flows and financial flexibility. Our variable rate indebtedness could subject us to interest rate risk, which could cause our debt service obligations to increase significantly.

For an overview of our current outstanding indebtedness, refer to Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources below. Our long-term debt increased to \$1,077.5 million at December 31, 2022, as compared to \$359.4 million at December 31, 2021, primarily as a result of our acquisition of the Leveraged Commentary and Data business of S&P Global. While our business has historically generated strong cash flow and we are in compliance with all of our debt covenants, our annual debt service requirements are affected by rising interest rates and we cannot provide assurance that we will generate and maintain cash flows sufficient to permit us to service our indebtedness. Our ability to make payments on indebtedness and to fund planned capital expenditures depends on our ability to generate and access cash in the future, which, in turn, is subject to general economic, financial, competitive, regulatory, tax and other factors, many of which are beyond our control. If we cannot refinance or otherwise pay our obligations as they mature and fund our liquidity needs, our business, financial condition, results of operations, cash flows, liquidity, ability to obtain financing and ability to compete in our industry could be materially adversely affected.

In addition, any borrowings under our current credit facility bear interest at fluctuating interest rates based on the Secured Overnight Financing Rate (SOFR) which replaced USD LIBOR as the reference rate under our credit facility. SOFR is intended to be a broad measure of the cost of borrowing cash overnight collateralized by U.S. Treasury securities and is not the economic equivalent of USD LIBOR. While SOFR is a secured rate, USD LIBOR is an unsecured rate. As a result, there can be no assurance that SOFR will perform in the same way as USD LIBOR would have at any time, which may result in increased volatility in the interest rates payable under our credit facility and potentially increase our funding costs.

Furthermore, the terms of our debt agreements include restrictive covenants that limit, among other things, our and our subsidiaries’ financial flexibility and ability to implement certain transactions. If we are unable to comply with the restrictions and covenants in our debt agreements, there could be a default that, in some cases, if continuing, could result in the accelerated payment of our debt obligations or the termination of borrowing commitments on the part of the lenders under our Credit Agreement. Refer to Item 7—Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources for a description of the restrictive covenants in our debt agreements.

The concentrated ownership position of Joe Mansueto could adversely affect our other shareholders.

As of December 31, 2022, Joe Mansueto, our Executive Chairman and Chairman of the Board, owned approximately 39.52% of our outstanding common stock. While Joe has reduced his percentage ownership of the company in recent years as part of a personal plan to diversify his assets, his concentrated ownership position gives him substantial influence over substantially all matters submitted to our shareholders for approval, including the election and removal of directors and any merger, consolidation, or sale of our assets. This concentration of ownership may disincentivize other shareholders from proposing the election of other persons to our board of directors, delay or prevent a change in control, impede a merger, consolidation, takeover, or other business combination involving Morningstar, discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of the company, or result in actions that may be opposed by other shareholders.

Fluctuations in our operating results may negatively affect our stock price.

We believe our business has relatively large fixed costs, principally in relation to compensation, and low variable costs, which magnify the impact of revenue fluctuations on our operating results. As a result, a decline in our revenue may lead to a larger decline in operating income. In addition, because we manage our business with a long-term perspective, we generally don't make significant adjustments to our strategy or cost structure in response to short-term factors, including through reductions in force. For example, if the U.S. economy were to continue to experience current inflationary pressures over a prolonged period, increased compensation and other expenses could adversely impact our operating results. Uncertainty regarding inflation could also impact our ability to forecast costs, which inform our longer-term budget and capital allocation decisions. In addition, we do not provide earnings guidance or hold management meetings with institutional investors and research analysts. Because of this policy and limited analyst coverage of our stock, our stock price may not always reflect the intrinsic value of our business and assets. If our operating results or other operating metrics fail to meet the expectations of outside research analysts and investors, the market price of our common stock may decline.

The future sale of shares of our common stock may negatively affect our stock price.

If our significant shareholders sell substantial amounts of our common stock, the market price of our common stock could fall. A significant reduction in ownership by Joe Mansueto or any other large shareholder over a short period of time could cause the market price of our common stock to fall. In addition, the average daily trading volume in our stock is relatively low. The lack of trading activity in our stock may lead to greater fluctuations in our stock price. Low trading volume may also make it difficult for shareholders to make transactions in a timely fashion.

Item 1B. Unresolved Staff Comments

We do not have any unresolved comments from the Staff of the SEC regarding our periodic or current reports under the Exchange Act.

Item 2. Properties

As of December 31, 2022, we leased approximately 547,000 square feet of office space for our U.S. operations, with approximately half of the space for our corporate headquarters located in Chicago, Illinois. We also lease another 670,000 square feet of office space in 26 other countries around the world, including approximately 220,000 square feet in Mumbai, India and 90,000 square feet in Toronto, Canada. We believe that our existing and planned office facilities are adequate for our needs and that additional or substitute space is available to accommodate growth and expansion.

Item 3. Legal Proceedings

We incorporate by reference the information regarding legal proceedings set forth in Note 15 of the Notes to our Consolidated Financial Statements contained in Part II, Item 8 of this report.

Item 4. Mine Safety Disclosures

Not applicable.

Part II

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

Our common stock is listed on the Nasdaq Global Select Market under the symbol "MORN."

As of February 10, 2023, there were 648 shareholders of record of our common stock.

We paid four quarterly dividends during 2022. In the fourth quarter of 2022, we announced an increase of our quarterly cash dividend from 36 cents per share to 37.5 cents per share. While subsequent dividends will be subject to board approval, we expect to pay a regular quarterly dividend of 37.5 cents per share in 2023.

Any determination to pay dividends in the future will be at the discretion of our board of directors and will be dependent upon our results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law, and other factors deemed relevant by the board of directors. Future indebtedness and loan facilities could also prohibit or restrict our ability to pay dividends and make distributions to our shareholders.

Issuer Purchases of Equity Securities

Subject to applicable law, we may repurchase shares at prevailing market prices directly on the open market or in privately negotiated transactions in amounts that we deem appropriate.

Throughout much of 2022, we had an ongoing authorization, approved by the board of directors on December 4, 2020, to repurchase up to \$400.0 million in shares of the company's outstanding common stock. On December 6, 2022, the board of directors approved a new share repurchase program that authorizes the company to repurchase up to \$500.0 million in shares of the company's outstanding common stock, effective January 1, 2023. The new program will replace the existing program and the new authorization expires on December 31, 2025.

Under this new authorization, we may repurchase shares from time to time at prevailing market prices on the open market or in private transactions in amounts that we deem appropriate.

The following table presents information related to repurchases of common stock we made during the three months ended December 31, 2022:

Period:	Total number of shares purchased	Average price paid per share	Total number of shares purchased as part of publicly announced programs	Approximate dollar value of shares that may yet be purchased under the programs
October 1, 2022 - October 31, 2022	27,492	\$ 211.7	27,492	\$ 172,682,401
November 1, 2022 - November 30, 2022	—	—	—	172,682,401
December 1, 2022 - December 31, 2022	—	—	—	172,682,401
Total	27,492	\$ 211.7	27,492	

Rule 10b5-1 Sales Plans

Our directors and executive officers may purchase or sell shares of our common stock in the market from time to time. We encourage them to make these transactions through plans that comply with Exchange Act Rule 10b5-1(c). Morningstar will not receive any proceeds, other than proceeds from the exercise of stock options, related to these transactions. The following table, which we are providing on a voluntary basis, shows the Rule 10b5-1 sales plans entered into by our directors and executive officers that were in effect as of February 1, 2023:

Name and Position	Date of Plan	Plan Termination Date	Number of Shares to be Sold under the Plan	Timing of Sales under the Plan	Number of Shares Sold under the Plan through February 1, 2023	Projected Beneficial Ownership (1)
Gail Landis Director	8/10/2022	10/30/2024	975	Shares to be sold under the plan if the stock reaches specified prices	—	2,846
Joe Mansueto Executive Chairman	8/31/2022	5/3/2023	400,000	Shares to be sold under the plan if the stock reaches specified prices	200,000	16,584,964

During the fourth quarter of 2022, the previously disclosed Rule 10b5-1 plan for Bevin Desmond completed in accordance with its terms.

(1) This column reflects an estimate of the number of shares each identified director and executive officer will beneficially own following the sale of all shares under the Rule 10b5-1 sales plan. This information reflects the beneficial ownership of our common stock on December 31, 2022 and includes shares of our common stock subject to options that were then exercisable or that will have become exercisable by March 1, 2023 and restricted stock units that will vest by March 1, 2023. The estimates do not reflect any changes to beneficial ownership that may have occurred since December 31, 2022. Each director and executive officer identified in the table may amend or terminate his or her Rule 10b5-1 sales plan and may adopt additional Rule 10b5-1 plans in the future.

Item 6. [Reserved]

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

The discussion included in this section, as well as other under "Business—Our Strategy," "Business—Regulatory Trends Affecting Our Business" and sections of this report, contains forward-looking statements as that term is used in the Private Securities Litigation Reform Act of 1995. These statements are based on our current expectations about future events or future financial performance. Forward-looking statements by their nature address matters that are, to different degrees, uncertain, and often contain words such as "may," "could," "expect," "intend," "plan," "seek," "anticipate," "believe," "estimate," "predict," "potential," or "continue." These statements involve known and unknown risks and uncertainties that may cause the events we discuss not to occur or to differ significantly from what we expect. For us, these risks and uncertainties include, among others:

- ▷ failing to maintain and protect our brand, independence, and reputation;
- ▷ liability related to cybersecurity and the protection of confidential information, including personal information about individuals;
- ▷ compliance failures, regulatory action, or changes in laws applicable to our credit ratings operations, investment advisory, ESG and index businesses;
- ▷ failing to innovate our product and service offerings or anticipate our clients' changing needs;
- ▷ prolonged volatility or downturns affecting the financial sector, global financial markets, and the global economy and its effect on our revenue from asset-based fees and credit ratings business;
- ▷ failing to recruit, develop, and retain qualified employees;
- ▷ liability for any losses that result from errors in our automated advisory tools;
- ▷ inadequacy of our operational risk management and business continuity programs in the event of a material disruptive event;
- ▷ failing to efficiently integrate and leverage acquisitions and other investments to produce the results we anticipate;
- ▷ failing to scale our operations and increase productivity and its effect on our ability to implement our business plan;
- ▷ failing to maintain growth across our businesses in today's fragmented geopolitical, regulatory and cultural world;
- ▷ liability relating to the information and data we collect, store, use, create, and distribute or the reports that we publish or are produced by our software products;
- ▷ the potential adverse effect of our indebtedness on our cash flows and financial flexibility;
- ▷ challenges in accounting for complexities in taxes in the global jurisdictions in which we operate could materially affect our tax obligations and tax rate; and
- ▷ failing to protect our intellectual property rights or claims of intellectual property infringement against us.

A more complete description of these risks and uncertainties can be found in Item 1A—Risk Factors of this report. If any of these risks and uncertainties materialize, our actual future results and other future events may vary significantly from what we expect. We do not undertake to update our forward-looking statements as a result of new information or future events.

This section includes comparisons of certain 2022 financial information to the same information for 2021. Year-to-year comparisons of the 2021 financial information to the same information for 2020 can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021.

All dollar and percentage comparisons, which are often accompanied by words such as "increase," "decrease," "grew," "declined," "was up," "was down," "was flat," or "was similar", refer to a comparison with the prior year unless otherwise stated.

Understanding Our Company

Key Business Characteristics

We offer an extensive line of products and services for individual investors, financial advisors, asset managers, retirement plan providers and sponsors, and institutional investors and other participants in the private capital markets. Many of our products are sold through subscriptions or license agreements. As a result, we typically generate recurring revenue.

Revenue

We generate revenue by selling a variety of investment-related products and services. We sell many of our products and services, including PitchBook, Morningstar Data, Morningstar Direct, Morningstar Sustainalytics, and Morningstar Advisor Workstation, through license agreements. Our license agreements typically range from one to three years. We sell some of our other products, such as Morningstar Investor Membership service, which represents subscription services available to customers and not a license under the accounting guidance, on Morningstar.com via subscriptions. These subscriptions are mainly offered for a one-year term, although we offer terms ranging from one month to three years.

Our investment management products have multiple fee structures, which vary by client and region. In general, we seek to receive asset-based fees for any work we perform that involves managing investments or acting as a subadvisor to investment portfolios. For any individual contract, we may receive flat fees, variable asset-based fees, or a combination of the two. Some of our contracts include minimum fee levels that provide us with a flat payment up to a specified asset level, above which we also receive variable asset-based fees. In most of our contracts that include variable asset-based fees, we bill clients quarterly in arrears based on average assets for the quarter. Other contracts may include provisions for monthly billing or billing based on assets as of the last day of the billing period rather than on average assets.

In our Workplace Solutions area, our contracts may include one-time setup fees, technology licensing fees, asset-based fees for managed retirement accounts, fixed and variable fees for advice and guidance, or a combination of these fee structures. We also offer plan sponsor advice and custom target-date consulting arrangements. Fees for these services may be based on the level of assets under advisement.

Firms license Morningstar Indexes for both product creation (where we typically receive the greater of a minimum fee or basis points tied to assets under management) and data licensing (where we typically receive annual licensing fees).

We also generate transaction-based revenue, primarily from DBRS Morningstar and from the sale of advertising on our websites and sponsorship of our conferences. For the year ended December 31, 2022, 57.6% of the revenue generated by DBRS Morningstar came from one-time, transaction-based fees driven by ratings on newly-issued securities; the remainder can be classified as transaction-related, with annual fees tied to surveillance, credit research, or other services.

Deferred Revenue

We invoice some of our clients and collect cash in advance of providing services or fulfilling subscription services to our customers. Deferred revenue totaled \$489.1 million (of which \$455.6 million was classified as a current liability with an additional \$33.5 million included in other long-term liabilities) at the end of 2022. We expect to recognize this deferred revenue in future periods as we fulfill the service obligations under our license and subscription agreements.

Operating Expense

We classify our operating expense into separate categories for cost of revenue, sales and marketing, general and administrative, and depreciation and amortization, as described below.

- ▷ *Cost of revenue.* This category includes compensation expense for employees who produce the products and services we deliver to our customers. For example, this category covers production teams and analysts who write investment research reports. It also includes compensation expense for programmers, designers, and other employees who develop new products and enhance existing products. In some cases, we capitalize the compensation costs associated with certain software development projects. This reduces the expense that we would otherwise report in this category. Cost of revenue also includes other expenses, such as third-party data purchases and data lines as well as professional fees for third-party development activities.
- ▷ *Sales and marketing.* This category includes compensation expense for our sales teams, product managers, and marketing professionals. We also include the cost of advertising, digital marketing campaigns, and other marketing and promotion efforts in this category.
- ▷ *General and administrative.* This category includes compensation expense for our management team and other corporate functions, including employees in our compliance, finance, human resources, and legal departments. It also includes costs for corporate systems and facilities.
- ▷ *Depreciation and amortization.* Our capital expenditures mainly relate to capitalized software development costs, information technology equipment, and leasehold improvements. We amortize capitalized software development costs over their estimated economic life, generally three years. We depreciate property and equipment using the straight-line method based on the useful lives of the assets, which range from three to seven years. We amortize leasehold improvements over the lease term or their useful lives, whichever is shorter. We also include amortization related to identifiable intangible assets, which is mainly driven by acquisitions, in this category. We amortize intangible assets using the straight-line method over their estimated economic useful lives, which range from one to twenty years.

International Operations

As of December 31, 2022, we had wholly- or majority-owned subsidiaries in 31 countries outside of the U.S. and included their results of operations and financial condition in our consolidated financial statements. We also have investments outside of the U.S., and where we have significant influence, we apply the equity method of accounting.

How We Evaluate Our Business

When our analysts evaluate a stock, they focus on assessing the company's estimated intrinsic value, which is based on estimated future cash flows, discounted to their value in today's dollars. Our approach to evaluating our own business works the same way.

Our goal is to increase the intrinsic value of our business over time, which we believe is the best way to create value for our shareholders. We do not make public financial forecasts for our business because we want to avoid creating any incentives for our management team to make speculative statements about our financial results that could influence our stock price or take actions that help us meet short-term forecasts, but may not build long-term shareholder value.

We provide the following measures that can help investors generate their own assessment of how our intrinsic value has changed over time:

- ▷ Revenue (including organic revenue);
- ▷ Operating income (loss) (including adjusted operating income);
- ▷ Operating margin (including adjusted operating margin); and
- ▷ Free cash flow.

Organic revenue, adjusted operating income, adjusted operating margin, and free cash flow are not measures of performance set forth under U.S. generally accepted accounting principles (GAAP).

We define organic revenue as consolidated revenue excluding acquisitions, divestitures, adoption of new accounting standard changes (accounting changes), and foreign currency translations. We present organic revenue because we believe it helps investors better compare our period-to-period results, and our management team uses this measure to evaluate the performance of our business. We exclude revenue from businesses acquired or divested from organic revenue for a period of 12 months after we complete the acquisition or divestiture. Organic revenue is not equivalent to any measure required under GAAP and may not be comparable to similarly titled measures reported by other companies.

We define adjusted operating income as operating income excluding all M&A-related expenses (including M&A-related earn-outs) and amortization, as well as all expenses related to the significant reduction and shift of the company's operations in China. We define adjusted operating margin as operating margin excluding all M&A-related expenses (including M&A-related earn-outs) and amortization, as well as all expenses related to the significant reduction and shift of the company's operations in China. We present these measures because we believe they better reflect period-over-period comparisons and improves overall understanding of the underlying performance of the business absent the impact of M&A and the shift of the company's operations in China.

We define free cash flow as cash provided by or used for operating activities less capital expenditures. We present free cash flow as supplemental information to help investors better understand trends in our business results over time. Our management team uses free cash flow to evaluate our business. Free cash flow is not equivalent to any measure required under GAAP and should not be considered an indicator of liquidity. Moreover, the free cash flow definition we use may not be comparable to similarly titled measures reported by other companies.

In addition to the measures described above, we calculate revenue renewal rates to evaluate how successful we've been in maintaining existing business for products and services that have revenue associated with periodic renewals. We use the annual contract value method, which tracks the dollar value of renewals compared with the total dollar value of contracts up for renewal during the period. We include changes in the contract value in the renewal amount. We also include variable-fee contracts in this calculation and use the actual revenue for the previous comparable fiscal period as the base rate for calculating the renewal percentage. The renewal rate excludes setup and customization fees and contract renewals that were pending as of January 31, 2023.

Regulatory Trends Affecting Our Business

As described more fully under "Government Regulation", certain subsidiaries of Morningstar engage in lines of business or other activities that subject them to various laws and regulations specific to those businesses or activities. These regulated businesses or activities includes credit ratings, investment management, investment research, environmental, social, and governance (ESG) research, ratings and data, and indexes. In addition to the industry developments described under "Business—Our Strategy", there are several longer-term regulatory trends we consider relevant to our business, as outlined below.

Even in its fragmented state, regulators globally have continued to focus on certain recurring themes, including access to financial services, the quality of advice and the value of the services provided, the protection of customer data and transparency around the uses of such data, the minimization of conflicts of interest, and improvements in corporate governance and risk management.

With respect to our credit ratings business, the European Securities Markets Authority (ESMA) or the U.K. Financial Conduct Authority (FCA) may begin to make inconsistent modifications to the laws and regulations of the credit rating agency regulatory regimes, which would increase the cost and complexity of regulatory compliance for our credit ratings business.

In the U.K. and Europe, with respect to our Investment Management business, Morningstar continues to navigate the equivalence regimes and domestic laws governing matters of access in financial services post-Brexit. In other parts of the world, recent regulations and other guidance in jurisdictions, like Australia and New Zealand, have focused on investment management compliance practices, such as design and distribution obligations, conflicts of interest and fee disclosures. The increased complexity and extent of regulatory change globally is a challenge for both Morningstar and its clients and we continue to expend resources to remain in compliance.

Interest from investors, regulators and other relevant stakeholders in firms adopting ESG related business and operational risk strategies persists. Morningstar is impacted by these trends on the corporate level, as a U.S. public company with international operations, and on a business level, as a provider of ESG data, ratings, insights and other services to help investors and advisors understand and inform their decisions. These developments will have long term impacts on our delivery of products and services, customer interactions, physical operations, technology systems, and dependencies on third parties. Given more intense regulatory scrutiny at multiple jurisdictional levels and the novelty of some of the issues presented, the possibilities for inadvertent noncompliance with regulation have increased.

Morningstar is monitoring proposed legislation in the EU relevant to its ESG business activities. The Sustainable Finance Disclosure Regulation requires various investment market participants to implement policies and make certain disclosures with regards to sustainability risks and sustainability factors relevant to their investment activities. We do not expect this disclosure requirement will have a material adverse effect on our business, operating results, or financial position.

The European Commission released its EuGBS proposal that, among other things, would set up a system for registering and supervising companies that act as external reviewers for green bonds aligned with the EuGBS Regulation framework. Morningstar Sustainability currently offers external reviews of green bonds that we expect may be in scope for the EuGBS Regulation. If adopted, the EuGBS Regulation would contain a suite of requirements covering the governance of external reviewers, as well as general principles requiring the external reviewer to employ appropriate systems, resources and procedures and to monitor and evaluate at least annually, the adequacy and effectiveness of its systems and internal control mechanisms and arrangements.

Regulators in other jurisdictions including Canada, China, India, Japan, and the UAE have also adopted or begun to work on frameworks related to ESG-disclosure and registration requirements applicable to ESG rating providers or green bond verifiers. While green bond issuances are on the rise in the U.S., there is no set framework or statutory definition in the U.S. for such financings. These and other potential regulations impact not only the scope and manner of the ESG related products and services we provide to customers, but also present an opportunity to guide and inform advisers and investors who are looking to understand the regulations and develop their own workflows to ensure their compliance with new requirements. From a corporate perspective, we are monitoring regulatory developments such as the EU's Corporate Sustainability Reporting Directive and proposed SEC rules regarding climate and cybersecurity disclosure.

The politicization of ESG-related business activities and investments has increased in recent years, particularly in the U.S. This politicization has led to the rise of anti-ESG proponents and actions, including the submission of anti-ESG shareholder proposals to U.S.-based public companies and the filing of lawsuits against U.S. companies. As Morningstar provides data and analysis with respect to ESG-related investments, Morningstar, along with other financial service providers, faces scrutiny in this political environment and expends resources in responding to inquiries. Morningstar continues to monitor the ESG and anti-ESG landscape closely.

Data privacy regulation continues to proliferate, as numerous national and state jurisdictions are considering new data privacy regulations. The General Data Protection Regulation (GDPR) continues to be a major influence on the global privacy landscape. Many non-EU countries are following the EU's lead and implementing rules similar to GDPR in their jurisdictions to enable cross-border data exchange.

In the U.S., the growing number of state privacy laws and the absence of a comprehensive federal privacy law have contributed to a challenging compliance environment. State privacy laws typically adopt similar themes as GDPR, limiting companies' ability to process certain categories of personal data and extending to customers the right to control their data. These laws may provide obligations inconsistent with other state or global privacy regulations and impose additional compliance costs.

As a related matter, issues of cybersecurity as they relate to the identification and mitigation of system vulnerabilities also continue to grow in prominence and laws governing data breaches continue to proliferate globally. Financial regulators have also increased scrutiny on the data protection practices of the entities, such as Morningstar, that they oversee. In the U.S., the SEC is focused on cybersecurity hygiene and preparedness, cyber incident reporting to the government, and in certain circumstances, disclosure to the public. This focus has the potential to impact not only Morningstar's regulated businesses, but also those of its customers who may potentially need to implement increasing scrutiny of their service providers and commercial counterparties.

Finally, our company is impacted by government regulation and policies focused on macroeconomic trends such as inflation and unemployment and the COVID-19 pandemic. Central banks' increases in interest rates to combat inflationary pressures increases our interest expense on our variable rate indebtedness, while the volatile rate environment reduces credit issuance putting negative pressure on our credit rating business. Our compensation expense reflects rising wage scales in many of the markets where we operate as unemployment rates remain low. Ongoing impacts from the COVID-19 pandemic include an increased number of our colleagues participating in hybrid working arrangements and some continued restrictions on travel to our office and customer locations. Overall, our business, balance sheet, technological infrastructure, and teams have shown resilience and flexibility navigating global macroeconomic trends.

Supplemental Operating Metrics (Unaudited)

The tables below summarize our key product metrics and other supplemental data.

(in millions)	Year ended December 31,			
	2022	2021	2022 Change	Organic Change (1)
Revenue by type				
License-based (2)	\$ 1,331.7	\$ 1,131.7	17.7%	18.0%
Asset-based (3)	269.4	264.9	1.7%	1.5%
Transaction-based (4)	269.5	302.7	(11.0)%	(8.3)%
Key product area revenue				
PitchBook	\$ 407.7	\$ 290.2	40.5%	40.5%
Morningstar Data	255.0	243.5	4.7%	9.4%
DBRS Morningstar (5)	236.9	271.2	(12.6)%	(10.0)%
Morningstar Direct	184.8	173.2	6.7%	10.7%
Investment Management	117.6	125.5	(6.3)%	(4.3)%
Workplace Solutions	103.7	104.4	(0.7)%	(0.7)%
Morningstar Sustainalytics	103.0	78.9	30.5%	41.0%
Morningstar Advisor Workstation	95.4	91.9	3.8%	4.1%

Assets under management and advisement (approximate) (\$bil) (6)	As of December 31,		
	2022	2021	2022 Change
Workplace Solutions			
Managed Accounts (7)	\$ 109.3	\$ 111.1	(1.6)%
Fiduciary Services	50.4	60.2	(16.3)%
Custom Models/CIT	34.9	41.6	(16.1)%
Workplace Solutions (total)	\$ 194.6	\$ 212.9	(8.6)%
Investment Management			
Morningstar Managed Portfolios	\$ 32.6	\$ 32.4	0.6%
Institutional Asset Management	9.8	11.8	(16.9)%
Asset Allocation Services	8.5	8.0	6.3%
Investment Management (total)	\$ 50.9	\$ 52.2	(2.5)%
Asset value linked to Morningstar Indexes (\$bil)	147.7	147.0	0.5%
Our employees			
Worldwide headcount	12,224	9,556	27.9%
Average assets under management and advisement (\$bil)	\$ 253.6	\$ 249.4	1.7%

(1) Organic revenue excludes acquisitions, divestitures, adoption of new accounting standard changes (accounting changes), and the effect of foreign currency translations.

(2) License-based revenue includes PitchBook, Morningstar Data, Morningstar Direct, Morningstar Sustainalytics, Morningstar Advisor Workstation, and other similar products.

(3) Asset-based revenue includes Investment Management, Workplace Solutions, and Morningstar Indexes.

(4) Transaction-based revenue includes DBRS Morningstar, Internet advertising, and Morningstar-sponsored conferences.

(5) For the years ended December 31, 2022 and 2021, DBRS Morningstar recurring revenue derived primarily from surveillance, research, and other transaction-related services was 42.4% and 34.3%, respectively.

(6) The asset totals shown below (including assets we either manage directly or for which we provide consulting or subadvisory work) only include assets for which we receive variable fees based on basis-points of asset balances. Some of our client contracts include services for which we receive a flat fee, but we do not include those assets in the total reported.

Excluding changes related to new contracts and cancellations, changes in the value of assets under advisement can come from two primary sources: gains or losses related to overall trends in market performance and net inflows or outflows caused when investors add to or redeem shares from these portfolios.

Aside from Morningstar Managed Portfolios, it's difficult for our Investment Management business to quantify these cash inflows and outflows. The information we receive from most of our clients does not separately identify the effect of cash inflows and outflows on asset balances for each period. We also cannot specify the effect of market appreciation or depreciation because the majority of our clients have discretionary authority to implement their own portfolio allocations.

(7) Many factors can cause changes in assets under management and advisement for our managed retirement accounts, including employer and employee contributions, plan administrative fees, market movements, and participant loans and hardship withdrawals. The information we receive from the plan providers does not separately identify these transactions or the changes in balances caused by market movements.

Consolidated Results

Key metrics (in millions)	2022	2021	Change
Revenue	\$ 1,870.6	\$ 1,699.3	10.1%
Operating income	167.8	257.0	(34.7)%
Operating margin	9.0%	15.1%	(6.1)pp
Cash provided by operating activities	\$ 297.8	\$ 449.9	(33.8)%
Capital expenditures	(129.5)	(101.8)	27.2%
Free cash flow	\$ 168.3	\$ 348.1	(51.7)%
Cash used for investing activities	\$ (799.3)	\$ (167.7)	376.6%
Cash provided by (used for) financing activities	\$ 415.1	\$ (211.8)	(296.0)%

pp—percentage points

Consolidated Revenue

(in millions)	2022	2021	Change
Consolidated revenue	\$ 1,870.6	\$ 1,699.3	10.1%

In 2022, our consolidated revenue rose \$171.3 million, or 10.1%. Foreign currency movements decreased revenue by \$45.9 million in 2022.

License-based revenue, which represents subscription services available to customers, increased 17.7% , or 18.0% on an organic basis, during 2022, driven by demand for license-based products, such as PitchBook, Morningstar Sustainalytics, and Morningstar Direct. Licensed-based organic revenue grew 18.0%. PitchBook revenue increased 40.5% on a reported and organic basis during 2022, as the company continued to enhance core data sets and improve the user experience. Reported and organic results exclude contributions from the LCD acquisition. In 2022, PitchBook added new companies and funds to coverage in the Europe, Middle East, and Africa (EMEA) and Asia-Pacific regions, while enhancing alternative data sets including real assets and hedge funds. Notable product releases included Portfolio Forecasting, a tool that allows Limited Partners to efficiently manage cash flow, pace commitments, and hit allocation targets directly within the PitchBook Platform. The number of PitchBook Platform licenses increased to 94,628 at the end of 2022, compared with 73,940 at the end of 2021.

Morningstar Sustainalytics revenue grew 30.5%, or 41.0% on an organic basis, driven by strength in its licensing business, including demand for compliance and reporting-related solutions related to the EU Action Plan, as asset managers continued to look to Morningstar Sustainalytics to help them meet the various EU regulatory requirements. In 2022, Morningstar Sustainalytics increased its ratings coverage by approximately 30% to cover more than 16,300 analyst-based ESG Risk Ratings, while expanding its EU Action Plan Solutions suite.

Morningstar Direct grew revenue by 6.7%, or 10.7% on an organic basis, driven by growth across geographies. Direct licenses increased 5.7%, reflecting gains from both new and existing clients. In 2022, Morningstar Direct enriched and expanded Analytics Lab, which combines access to Morningstar's data and research with Jupyter Notebook, an open-source data-science tool, to allow clients to explore and analyze Morningstar data more efficiently in a flexible environment. We also released the Sustainability and Portfolio Hubs, which act as a central repository of research and tools for related workflows, and broadened data coverage in fixed-income, exchange-traded funds (ETFs), ESG, model portfolios, and alternatives to better cover investor portfolios.

Morningstar Data revenue grew 4.7%, or 9.4% on an organic basis, driven by growth across geographies and strong demand for fund data. In 2022, Morningstar Data expanded the reach of its data sets to better cover the client portfolio with enhancements to fixed-income data and analytics and expanded coverage of 529 plan portfolios, public equities, collective investment trusts, and model portfolios. We also introduced new regulatory data solutions in response to global investor protection, capital adequacy, and sustainability regulations.

Asset-based revenue increased 1.7%, or 1.5% on an organic basis, during 2022, as growth in Morningstar Indexes revenue was largely offset by market-driven declines in Investment Management revenue. Morningstar Indexes revenue increased 35.5%, or 26.2% on an organic basis, due primarily to strength in investable and licensed data products. Organic revenue excludes LCD index-related revenue. In 2022, Morningstar Indexes launched more than 50 investable products including the Global X Morningstar Japan Dividend ESG ETF and six iShares mutual funds tracking the Morningstar ESG Enhanced Index series. We also completed the acquisition, integration, and rebranding of the LCD Leveraged Loan Indexes under the Morningstar Indexes umbrella and launched the Morningstar PitchBook Global Unicorn Indexes in collaboration with PitchBook.

Investment Management revenue was 6.3% lower in 2022 and 4.3% lower on an organic basis. Reported assets under management and advisement fell 2.5% versus the prior year period, reflecting the declines in global markets and softer net flows. Excluding \$4.4 billion of assets related to the acquisition of Praemium's U.K. and international offerings in the second quarter of 2022, assets would have declined 10.9% compared with the prior-year period. In 2022, the company successfully closed the Praemium acquisition, which expanded its wealth management capabilities outside the U.S. During 2022, Investment Management also continued to enhance the advisor and client experience on its turnkey asset management platform and introduced direct indexing, which allows advisors to personalize index portfolios to address individual preferences and tax management needs, as part of an ongoing strategy to build a comprehensive Wealth platform leveraging capabilities across Morningstar.

Transaction-based revenue decreased 11.0%, or 8.3% on an organic basis, during 2022 as DBRS Morningstar revenue declined, reflecting a sharp decrease in credit issuance in the second half of the year. DBRS Morningstar revenue declined 12.6%, or 10.0% on an organic basis. Revenue decreased across all geographies and most product areas during the year, with significant declines in commercial- and residential-mortgage backed securities ratings. In 2022, areas of investment included U.S. and European corporates, asset-based securities, and data products. Despite the challenging ratings environment, revenue grew for data products and U.S. corporates. Specifically for U.S. corporates, growth was driven by the addition of coverage and ratings for new middle-market credits. Annual fees tied to surveillance, research, and other services represented 42.4% of DBRS Morningstar revenue.

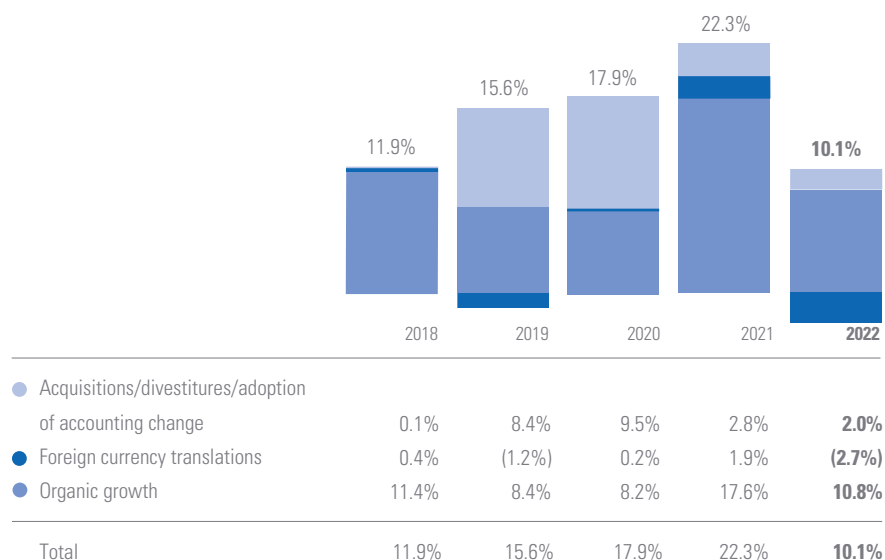
Organic revenue

Organic revenue (revenue excluding acquisitions, divestitures, adoption of new accounting standard changes (accounting changes), and the effect of foreign currency translations) is considered a non-GAAP financial measure. The definition of organic revenue we use may not be the same as similarly titled measures used by other companies. Organic revenue should not be considered an alternative to any measure of performance as required under GAAP.

We present organic revenue because we believe it helps investors better compare our period-to-period results, and our management team uses this measure to evaluate the performance of our business and product areas. We exclude revenue from acquired businesses from our organic revenue growth calculation for a period of 12 months after we complete the acquisition. For divestitures, we exclude revenue in the prior period for which there is no comparable revenue in the current period.

Excluding revenue from acquisitions, accounting changes, and the impact of foreign currency translations, organic revenue increased 10.8% in 2022. PitchBook, Morningstar Sustainalytics, Morningstar Data, and Morningstar Direct were the main drivers of the increase in organic revenue during 2022.

Contributors to Revenue Growth



The tables below reconcile consolidated revenue with organic revenue:

(in millions)	2022	2021	Change
Consolidated revenue	\$ 1,870.6	\$ 1,699.3	10.1%
Less: acquisitions	(40.9)	—	NMF
Less: accounting changes	—	(5.8)	NMF
Effect of foreign currency translations	45.9	—	NMF
Organic revenue	\$ 1,875.6	\$ 1,693.5	10.8%

NMF—Not meaningful

Revenue by geographical area

(in millions)	Year ended December 31		
	2022	2021	Change
United States	\$ 1,353.9	\$ 1,184.3	14.3%
Asia	44.8	41.1	9.0%
Australia	55.8	56.9	(1.9)%
Canada	109.8	112.9	(2.7)%
Continental Europe	162.9	159.1	2.4%
United Kingdom	133.6	135.7	(1.5)%
Other	9.8	9.3	5.4%
Total International	516.7	515.0	0.3%
Consolidated revenue	\$ 1,870.6	\$ 1,699.3	10.1%

International revenue comprised approximately 28% and 30% of our consolidated revenue in 2022 and 2021, respectively. Approximately 57% of international revenue is generated from Continental Europe and the U.K.

Revenue from international operations increased \$1.7 million, or 0.3%, in 2022. Acquisitions had a favorable impact of \$1.8 million, while foreign currency translations had an unfavorable impact of \$45.9 million in 2022.

Revenue Renewal Rates

As discussed in *How We Evaluate Our Business*, we calculate revenue renewal rates to help measure how successful we've been in maintaining existing business for products and services that have renewable revenue. The figures for license-based products includes the effect of price changes; increasing client bases upon contract renewal; changes to the contract value upon renewal (such as increased users); and changes in the value of variable-fee contracts. These factors, therefore, can result in a renewal rate percentage greater than 100%.

Revenue Renewal Rates for License-Based Products and Services



* Between 2018-2019, rates reflect updated revenue renewal rate calculation for license-based products and services.

** Includes Morningstar Sustainalytics starting in 2022. Excluding Morningstar Sustainalytics, the 2022 renewal rate would have been largely unchanged at 105%.

Our revenue renewal rate calculation includes only those products that we consider to be license-based. These are primarily weighted toward PitchBook, Morningstar Data, Morningstar Direct, and Morningstar Advisor Workstation, but also includes other license-based products and services across Morningstar. For these license-based products and services, we estimate that our annual renewal rate was approximately 105% in 2022 versus 104% in 2021.

Consolidated Operating Expense

(in millions)	2022	2021	Change
Cost of revenue	\$ 779.3	\$ 698.4	11.6%
<i>% of revenue</i>	41.7%	41.1%	0.6 pp
Sales and marketing	356.5	274.8	29.7%
<i>% of revenue</i>	19.1%	16.2%	2.9 pp
General and administrative	400.4	318.4	25.8%
<i>% of revenue</i>	21.4%	18.7%	2.7 pp
Depreciation and amortization	166.6	150.7	10.6%
<i>% of revenue</i>	8.9%	8.9%	— pp
Total operating expense	\$ 1,702.8	\$ 1,442.3	18.1%
<i>% of revenue</i>	91.0%	84.9%	6.1 pp

In 2022, operating expense increased \$260.5 million, or 18.1%.

In July 2022, the company began to significantly reduce its operations in Shenzhen, China and to shift the work related to its global business functions, including global product and software development, managed investment data collection and analysis, and equity data collection and analysis, to other Morningstar locations. These activities will result in a significant headcount reduction in Shenzhen, China and growth in other Morningstar locations including Mumbai, Toronto, Madrid, and Chicago. Going forward, the company's work in China will be focused solely on commercial activities in the domestic market.

The company expects that these activities will be substantially complete by the end of the third quarter of 2023 and will result in lower ongoing run-rate costs from the overall net reduction in the related headcount and certain overhead. Excluding the impact of these activities, operating expenses increased 15.6% during 2022.

Higher compensation expense (which primarily consists of salaries, bonuses, and other company-sponsored benefits), stock-based compensation costs, professional fees, severance expense, and sales commission expense were the key contributors to operating expense growth in 2022. Foreign currency translations had a favorable impact of \$48.2 million on operating expense in 2022.

Compensation expense (which primarily consists of salaries, bonuses, and other company-sponsored benefits) increased \$81.5 million in 2022. Excluding the impact of an earn-out accrual related to our acquisition of Sustainalytics, compensation expense increased \$97.9 million during 2022. These higher costs reflect growth in headcount across key areas of the company, including product and software development, data collection and analysis, sales, and service support, in addition to annual merit increases effective January 1, 2022. The growth in headcount was highest in Morningstar Sustainalytics and PitchBook to support our strategic growth initiatives. Inflationary pressures and a competitive market for talent in many of our key geographies put further pressure on compensation expense.

Stock-based compensation expense increased \$41.3 million in 2022, primarily as a result of the overachievement of targets under the PitchBook management bonus plan.

Professional fees increased \$28.0 million in 2022, due primarily to the use of third-party resources assisting with software development and technology improvements, M&A-related services, and costs associated with the company's initiation of the significant reduction and shift of its China operations. Professional fees also reflected the impact of higher legal fees primarily associated with a completed independent investigation regarding certain research practices of Morningstar Sustainability.

Severance expense increased \$27.1 million in 2022, primarily caused by severance packages offered to the employees impacted by the company's initiation of the significant reduction of its China operations.

Sales commission expense increased \$19.4 million in 2022, from strong sales performance in license-based product areas and higher amortization of capitalized commissions related to the prior-year sales performance.

An increase of \$9.4 million in capitalized software development related to increased product development efforts for our key product areas reduced operating expense in 2022.

We had 12,224 employees worldwide at the end of 2022, compared with 9,556 at the end of 2021, which reflects further investments to support our growth objectives noted above.

Cost of revenue

Cost of revenue is our largest category of operating expense, representing about one-half of our total operating expense. Our business relies heavily on human capital, and cost of revenue includes the compensation expense for employees who produce our products and services. We include compensation expense for approximately 80% of our employees in this category.

Cost of revenue increased \$80.9 million, or 11.6%, in 2022. Higher compensation expense of \$50.0 million was the largest contributor to the increase, primarily due to the factors listed above. Professional fees increased \$9.6 million in 2022 related to higher legal fees and the use of third-party resources assisting with software development and technology improvements. These increases were partially offset by higher capitalized software expense of \$9.4 million, which resulted from an increase in development activity in key product areas.

Continuous focus on the development of our major software platforms for our key product areas, in addition to bringing new products and capabilities to market, resulted in an increase in capitalized software development over the prior year period, which in turn reduced operating expense. In 2022, we capitalized \$88.3 million associated with software development activities, mainly related to accelerated product development efforts for our key product areas and enhanced capabilities in our products, internal infrastructure, and software, compared with \$79.0 million in 2021.

Sales and marketing

Sales and marketing expense increased \$81.7 million, or 29.7%, in 2022. Higher compensation expense of \$37.7 million was the largest contributor. Sales commission expense grew by \$17.5 million due to stronger sales performance in license-based product areas and higher amortization of capitalized commissions related to prior-year sales performance. Advertising and marketing costs increased \$10.7 million during 2022 due to higher conference expense and pay-per-click advertising.

General and administrative

General and administrative expense increased \$82.0 million, or 25.8%, in 2022. Severance expense of \$25.8 million related to severance packages offered to the employees impacted by the company's initiation of the significant reduction of its China operations contributed almost one-third of the increase. Stock-based compensation expense increased \$32.1 million primarily due to the

overachievement of targets under the PitchBook management bonus plan. Professional fees grew by \$17.2 million, driven by the use of third-party resources assisting with software development and technology improvements, M&A-related services, and costs associated with the company's initiation of the significant reduction and shift of its operations in China. In addition, professional fees reflected higher legal fees primarily associated with the completed independent investigation regarding certain research practices of Morningstar Sustainalytics. These increases were offset by a decrease in compensation expense of \$6.1 million compared with the prior year, which included a \$23.5 million increase to an earn-out accrual related to our acquisition of Sustainalytics.

Depreciation and amortization

In 2022, depreciation and amortization increased \$15.9 million, or 10.6%, primarily due to depreciation expense.

Depreciation expense increased \$10.8 million in 2022, driven mainly by depreciation expense from increases in capitalized software development incurred over the past several years.

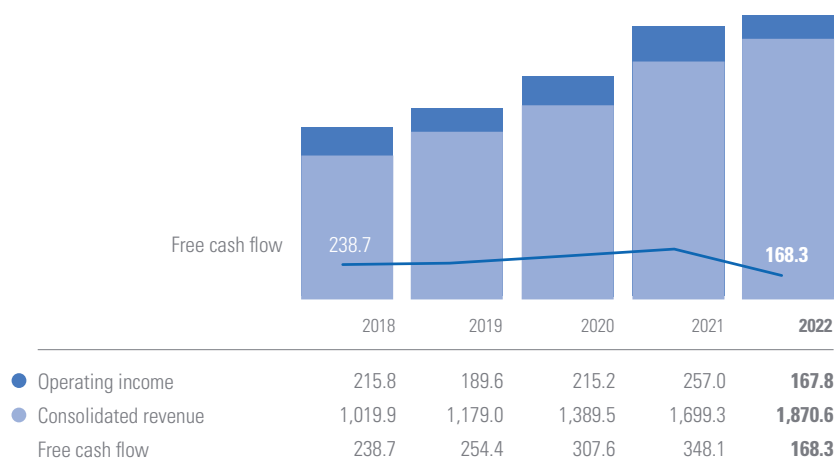
Intangible amortization expense increased \$4.7 million in 2022, primarily from additional amortization related to intangibles from the acquisition of LCD and Praemium Portfolio Services Limited.

Consolidated Operating Income and Operating Margin

(in millions)	2022	2021	Change
Operating income	\$ 167.8	\$ 257.0	(34.7)%
Operating margin	9.0%	15.1%	(6.1) pp

Consolidated operating income decreased \$89.2 million in 2022, reflecting an increase in operating expense of \$260.5 million, which was partially offset by an increase in revenue of \$171.3 million. Operating margin was 9.0% in 2022, a decrease of 6.1 percentage points compared with 2021. The year-over-year decline in margin resulted from increased compensation, stock-based compensation, severance expense, professional fees, and sales commission expense.

Key Metrics (\$mil)



In 2022, we reported adjusted operating income of \$298.9 million, which excludes intangible amortization expense, M&A-related expenses (including M&A-related earn-outs), and expenses related to the significant reduction and shift of the company's operations in China. Adjusted operating income is a non-GAAP financial measure; the table below shows a reconciliation to the most directly comparable GAAP financial measure.

(in millions)	2022	2021	Change
Operating income	\$ 167.8	\$ 257.0	(34.7)%
Add: intangible amortization expense	66.7	62.0	7.6%
Add: M&A-related expenses	17.1	17.4	(1.7)%
Add: M&A-related earn-outs	11.6	27.0	(57.0)%
Add: Severance and personnel expenses (1)	27.5	—	NMF
Add: Transformation costs (1)	8.2	—	NMF
Add: Asset impairment costs (1)	—	—	—%
Adjusted operating income	\$ 298.9	\$ 363.4	(17.7)%

In 2022, we reported an adjusted operating margin of 16.0%, which excludes intangible amortization expense, M&A-related expenses (including M&A-related earn-outs), and expenses related to the significant reduction and shift of the company's operations in China. Adjusted operating margin is a non-GAAP financial measure; the table below shows a reconciliation to the most directly comparable GAAP financial measure.

	2022	2021	Change
Operating margin	9.0%	15.1%	(6.1) pp
Add: intangible amortization expense	3.6%	3.6%	— pp
Add: M&A-related expenses	0.9%	1.0%	(0.1) pp
Add: M&A-related earn-outs	0.6%	1.6%	(1.0) pp
Add: Severance and personnel expenses (1)	1.5%	—%	1.5 pp
Add: Transformation costs (1)	0.4%	—%	0.4 pp
Add: Asset impairment costs (1)	—%	—%	— pp
Adjusted operating margin	16.0%	21.3%	(5.3) pp

(1) Reflects costs associated with the significant reduction of the company's operations in Shenzhen, China and the shift of work related to its global business functions to other Morningstar locations.

Severance and personnel expenses include severance charges, incentive payments related to early signing of severance agreements, transition bonuses, and stock-based compensation related to the accelerated expense recognition from the continued vesting of restricted stock unit (RSU) and market stock unit (MSU) awards. In addition, the reversal of accrued sabbatical liabilities is included in this category.

Transformation costs include professional fees and the temporary duplication of headcount. As the company hires replacement roles in other markets and shifts capabilities, it expects to continue to employ certain Shenzhen-based staff through the transition period, which will result in elevated compensation costs on a temporary basis.

Asset impairment costs include the write-off or accelerated depreciation of fixed assets in the Shenzhen, China office that are not redeployed, in addition to lease abandonment costs as the company plans to downsize office space prior to the lease termination date.

Non-Operating Expense, Net, Equity in Net Income (Loss) of Unconsolidated Entities, and Effective Tax Rate and Income Tax Expense

Non-Operating Expense, Net

The following table presents the components of non-operating expense, net:

(in millions)	2022	2021
Interest income	\$ 1.7	\$ 1.7
Interest expense	(30.1)	(10.4)
Realized gains (losses) on sale of investments, reclassified from other comprehensive income	(2.1)	5.0
Realized gains on sale of equity method investments	—	0.9
Other expense, net	(6.7)	(3.7)
Non-operating expense, net	\$ (37.2)	\$ (6.5)

Interest income reflects interest from our investment portfolio. Interest expense mainly relates to the outstanding principal balance under our Amended 2022 Credit Agreement and the \$350.0 million aggregate principal amount of 2.32% senior notes due October 26, 2030 (2030 Notes).

Other expense, net includes foreign currency exchange losses and unrealized gains (losses) on investments.

Equity in Net Income (Loss) of Unconsolidated Entities

(in millions)	2022	2021
Equity in net income (loss) of unconsolidated entities	\$ (3.6)	\$ 5.4

Equity in net income (loss) of unconsolidated entities primarily reflects income and losses from certain of our unconsolidated entities.

We describe our investments in unconsolidated entities in more detail in Note 9 of the Notes to our Consolidated Financial Statements.

Effective Tax Rate and Income Tax Expense

The following table summarizes the components of our effective tax rate:

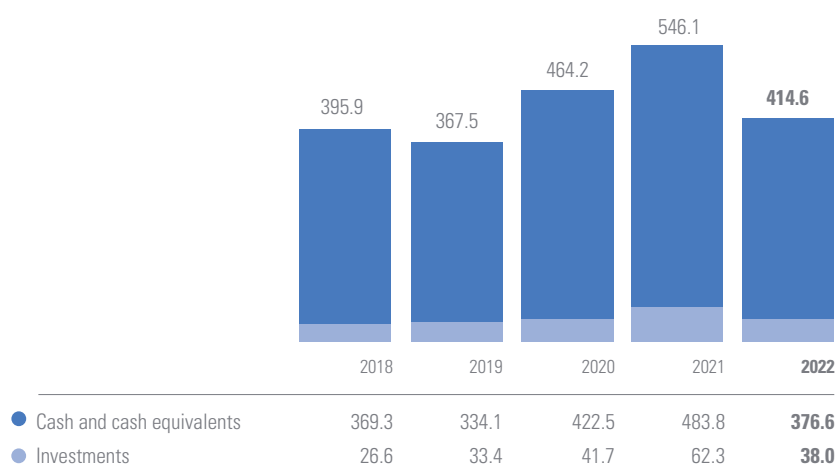
(in millions)	2022	2021
Income before income taxes and equity in net income (loss) of unconsolidated entities	\$ 130.6	\$ 250.5
Equity in net income (loss) of unconsolidated entities	(3.6)	5.4
Total	\$ 127.0	\$ 255.9
Income tax expense	\$ 56.5	\$ 62.6
Effective tax rate	44.5%	24.5%

Our effective tax rate in 2022 was 44.5%, an increase of 20.0 percentage points compared with 24.5% in 2021. The increase was primarily attributable to minimum taxes, non-deductible expenses, and additional reserves for uncertain tax positions.

Liquidity and Capital Resources

As of December 31, 2022, we had cash, cash equivalents, and investments of \$414.6 million, down \$131.5 million from the end of 2021.

Cash, Cash Equivalents, and Investments (\$mil)



Cash provided by operating activities is our main source of cash. In 2022, cash provided by operating activities was \$297.8 million, reflecting \$309.8 million of net income, adjusted for non-cash items, and an additional \$12.0 million in negative changes from our net operating assets and liabilities. Cash provided by operating activities decreased \$152.1 million, or 33.8%, in 2022. Cash flow was negatively impacted by higher bonus payouts in the first quarter of 2022 related to 2021 annual performance.

On July 2, 2019, we entered into a senior credit agreement (the 2019 Credit Agreement). The 2019 Credit Agreement provided the company with a five-year multi-currency credit facility with an initial borrowing capacity of up to \$750.0 million, including a \$300.0 million revolving credit facility (the 2019 Revolving Credit Facility) and a term loan facility of \$450.0 million. On May 6, 2022, the company terminated the 2019 Credit Agreement.

On May 6, 2022, the company entered into a new senior credit agreement (the 2022 Credit Agreement). The 2022 Credit Agreement provided the company with a five-year multi-currency credit facility with an initial borrowing capacity of up to \$1.1 billion, including a \$650.0 million term loan (the 2022 Term Facility) with an initial draw of \$600.0 million and an option for a second draw of up to \$50.0 million and a \$450.0 million revolving credit facility (the 2022 Revolving Credit Facility). The 2022 Credit Agreement also provided for the issuance of up to \$50.0 million of letters of credit and a \$100.0 million sub-limit for a swingline.

The proceeds of the first draw under the 2022 Term Facility and initial borrowings under the 2022 Revolving Credit Facility were used to finance the acquisition of LCD and to repay a portion of the borrowings under the 2019 Revolving Credit Facility. The optional second draw on the 2022 Term Facility was available to fund the contingent consideration payment of up to \$50.0 million in connection with the LCD acquisition.

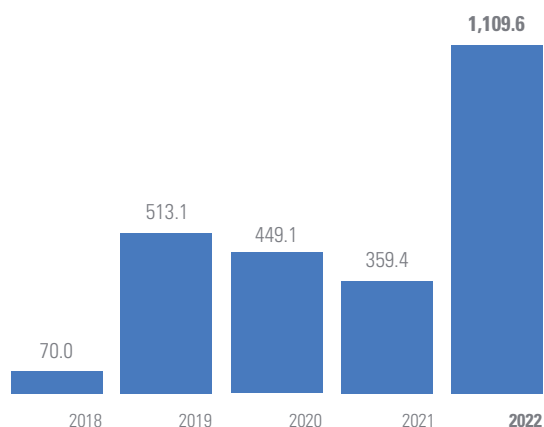
The 2022 Credit Agreement was amended (the Amended 2022 Credit Agreement) on September 13, 2022 (the First Amendment to the 2022 Credit Agreement) and on September 30, 2022 (the Second Amendment to the 2022 Credit Agreement). The First Amendment to the 2022 Credit Agreement terminated the unfunded term commitment related to the optional second draw of up to \$50.0 million in the 2022 Term Facility and increased the 2022 Revolving Credit Facility to \$600.0 million. The Second Amendment to the 2022 Credit Agreement increased the 2022 Term Facility to a fully funded \$650.0 million facility (the Amended 2022 Term Facility) and increased the 2022 Revolving Credit Facility to \$650.0 million (the Amended 2022 Revolving Credit Facility) for total borrowing capacity of \$1.3 billion. As of December 31, 2022, our total outstanding debt under the Amended 2022 Credit Agreement was \$761.1 million, net of debt issuance costs, with borrowing availability of \$530.0 million under the 2022 Revolving Credit Facility. Except for incremental borrowing capacity, there were no material changes to the existing terms and conditions of the 2022 Credit Agreement.

The proceeds of the additional draw under the Amended 2022 Term Facility were used to repay borrowings under the 2022 Revolving Credit Facility. The proceeds of future borrowings under the Amended 2022 Revolving Credit Facility may be used for working capital, capital expenditures, or other general corporate purposes. See Note 3 of the Notes to our Consolidated Financial Statements for additional information on our Amended 2022 Credit Agreement.

On October 26, 2020, we completed the issuance and sale of \$350.0 million aggregate principal amount of 2.32% senior notes due October 26, 2030 (2030 Notes), in a private placement exempt from the registration requirements of the Securities Act of 1933, as amended. Proceeds were primarily used to pay off a portion of the company's outstanding debt under the 2019 Credit Agreement. Interest on the 2030 Notes will be paid semi-annually on each October 30 and April 30 during the term of the 2030 Notes and at maturity. As of December 31, 2022, our total outstanding debt, net of issuance costs, under the 2030 Notes was \$348.5 million. See Note 3 of the Notes to our Consolidated Financial Statements for additional information on our 2030 Notes.

Each of the Amended 2022 Credit Agreement and the 2030 Notes include customary representations, warranties, and covenants, including financial covenants, that require us to maintain specified ratios of consolidated earnings before interest, taxes, depreciation, and amortization (EBITDA) to consolidated interest charges and consolidated funded indebtedness to consolidated EBITDA, which are tested on a quarterly basis. We were in compliance with these financial covenants as of December 31, 2022, with consolidated funded indebtedness to consolidated EBITDA calculated at approximately 2.2x.

Debt (\$mil)



We believe our available cash balances and investments, along with cash generated from operations and our credit facility, will be sufficient to meet our operating and cash needs for at least the next 12 months. We are focused on maintaining a strong balance sheet and liquidity position. We hold our cash reserves in cash equivalents and investments and maintain a conservative investment policy. We invest most of our investment balance in stocks, bonds, options, mutual funds, money market funds, or exchange-traded products that replicate the model portfolios and strategies created by Morningstar. These investment accounts may also include exchange-traded products where Morningstar is an index provider.

Approximately 64% of our cash, cash equivalents, and investments as of December 31, 2022 were held by our operations outside the U.S., up from 57% as of December 31, 2021. We generally consider our U.S. directly-owned foreign subsidiary earnings to be permanently reinvested.

We intend to use our cash, cash equivalents, and investments for general corporate purposes, including working capital and funding future growth.

In December 2020, the board of directors approved a share repurchase program that authorizes the company to repurchase up to \$400.0 million in shares of the company's outstanding common stock. As of December 31, 2022, we repurchased a total of 887,774 shares for \$227.3 million under this authorization.

On December 6, 2022, the board of directors approved a new share repurchase program that authorizes the company to repurchase up to \$500.0 million in shares of the company's outstanding common stock, effective January 1, 2023. The new program will replace the existing program and the new authorization expires on December 31, 2025.

In 2022, we also paid dividends of \$61.5 million. While subsequent dividends will be subject to board approval, we expect to make regular quarterly dividend payments of 37.5 cents per share in 2023.

We expect to continue making capital expenditures in 2023, primarily for computer hardware and software provided by third parties, internally developed software, and leasehold improvements for new and existing office locations. We continue to adopt more public cloud and software-as-a-service applications for new initiatives and are in the process of migrating relevant parts of our data centers to the public cloud over the next several years. During this migration, we expect to run certain applications and infrastructure in parallel. These actions will continue to have some transitional effects on our level of capital expenditures and operating expenses.

On January 27, 2023, we entered into a Termination Agreement (the Termination Agreement) with MJKK, and a Tender Offer Agreement (the Tender Offer Agreement) with SBI Global Asset Management Co., Ltd. (SBI).

Pursuant to the Termination Agreement, MJKK will cease use of the Morningstar brand and Morningstar and MJKK agreed to terminate the License Agreement originally entered into in 1998. As consideration for the transaction, Morningstar agreed to pay MJKK 8 billion Japanese yen, comprised of 6 billion Japanese yen (approximately \$45.0 million), paid upon termination of the License Agreement on March 30, 2023, and a contingent payment of 2 billion Japanese yen (approximately \$15.0 million), paid upon the achievement of certain conditions related primarily to the termination of the use of the Morningstar brand by MJKK's customers.

As part of such transaction, pursuant to the Tender Offer Agreement, Morningstar agreed to tender up to 10 million shares in MJKK to SBI. The tender period is expected to conclude on February 28, 2023.

On February 6, 2023, we made a cash payment of \$50.0 million, resolving our contingent consideration liability related to our acquisition of LCD.

We also expect to use a portion of our cash and investments balances in the first quarter of 2023 to make annual bonus payments of approximately \$99.2 million related to the 2022 bonus program compared with \$139.9 million paid in the first quarter of 2022 for the 2021 bonus program.

Consolidated Free Cash Flow

As described in more detail above, we define free cash flow as cash provided by or used for operating activities less capital expenditures. We present free cash flow solely as supplemental disclosure to help investors better understand how much cash is available after we spend money to operate our business. Our management team uses free cash flow to evaluate our business. Free cash flow is not a measure of performance. Also, the free cash flow definition we use may not be comparable to similarly titled measures used by other companies.

(in millions)	2022	2021	Change
Cash provided by operating activities	\$ 297.8	\$ 449.9	(33.8)%
Capital expenditures	(129.5)	(101.8)	27.2%
Free cash flow	\$ 168.3	\$ 348.1	(51.7)%

We generated free cash flow of \$168.3 million in 2022, a decrease of \$179.8 million compared with 2021. The change reflects a \$152.1 million decrease in cash provided by operating activities as well as a \$27.7 million increase in capital expenditures. The decline in free cash flow was due primarily to lower cash earnings, higher bonus payments made in 2022 related to 2021 performance, higher interest expense, and an increase in capital expenditures driven in large part by higher software development costs. Capital expenditures increased due to investments in office build-outs and refreshes, in addition to increased capitalized software development activities. Excluding \$40.0 million and \$16.6 million of M&A-related earn-out payments in the second quarter of 2022 and 2021, respectively, operating cash and free cash flow would have declined by 27.6% and 42.9%, respectively.

Acquisitions

We paid a total of \$739.3 million, less cash acquired, related to acquisitions over the past three years. We describe these acquisitions in Note 8 of the Notes to our Consolidated Financial Statements.

We paid a total of \$65.9 million related to additional investments in unconsolidated entities over the past three years. We describe these investments in Note 9 of the Notes to our Consolidated Financial Statements.

Divestitures

We had no divestitures in 2022, 2021, or 2020.

Application of Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based on our Consolidated Financial Statements, which have been prepared in accordance with GAAP. We discuss our significant accounting policies in Note 2 of the Notes to our Consolidated Financial Statements. The preparation of financial statements in accordance with GAAP requires our management team to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expense, and related disclosures included in our Consolidated Financial Statements.

We continually evaluate our estimates. We base our estimates on historical experience and various other assumptions that we believe are reasonable. Based on these assumptions and estimates, we make judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Our actual results could vary from these estimates and assumptions. If actual amounts are different from previous estimates, we include revisions in our results of operations for the period in which the actual amounts become known.

We believe the following critical accounting policies reflect the significant judgments and estimates used in the preparation of our Consolidated Financial Statements:

Revenue Recognition

Most of our revenue comes from the sale of subscriptions for data, software, and Internet-based products and services. We recognize this revenue in equal amounts over the term of the subscription or license, which generally ranges from one to three years. Our license-based revenue represents subscription services available to customers and not a license under the accounting guidance. We also provide research, investment management, retirement advice, and other services. We recognize this revenue when the service is provided or during the service obligation period defined in the contract.

We make judgments related to revenue recognition, including allocating the transaction price in a contract. For contracts that combine multiple products and services or other performance obligations, we make judgments regarding the value of each obligation in the arrangement based on selling prices of the items as if sold separately. We recognize revenue as we satisfy our performance obligations under the terms of the contracts with our customers. If arrangements include an acceptance provision, which exists infrequently, we begin recognizing revenue upon the receipt of customer acceptance.

We make judgments at the beginning of an arrangement regarding whether collection of the consideration to which we are entitled is probable. We typically sell to institutional customers with whom we have a history of successful collections and assess the likelihood of collection on a customer-by-customer basis.

Deferred revenue is the amount collected in advance for subscriptions, licenses, or services that has not yet been recognized as revenue. Deferred revenue totaled \$489.1 million at the end of 2022 (of which \$455.6 million was classified as a current liability with an additional \$33.5 million included in other long-term liabilities). We expect to recognize this deferred revenue in future periods as we fulfill our performance obligations under our subscription and service agreements.

The amount of deferred revenue may increase or decrease based on the mix of contracted products and services and the volume of new and renewal subscriptions. The timing of future revenue recognition may change depending on the terms of the applicable agreements and the timing of fulfilling our service obligations. To the extent that there are material differences between our determination of deferred revenue and its expected realization and actual results, our financial condition or results of operations may be affected.

Acquisitions, Goodwill, and Other Intangible Assets

We generally acquire businesses which are accounted for as business combinations. Our financial statements reflect the operations of an acquired business starting from the completion of the transaction. We record the estimated fair value of assets acquired and liabilities assumed as of the date of acquisition.

To account for each business combination, we utilize the acquisition method of accounting which requires the following steps (1) identifying the acquirer, (2) determining the acquisition date, (3) recognizing and measuring identifiable assets acquired and liabilities assumed, and (4) recognizing and measuring goodwill or a gain from a bargain purchase.

Regardless of whether an acquisition is considered to be a business combination or an asset acquisition, allocating the purchase price to the acquired assets and liabilities involves management judgment. We base the fair value estimates on available historical information and on future expectations and assumptions that we believe are reasonable, but these estimates are inherently uncertain.

Determining the fair value of intangible assets requires significant management judgment in the following areas:

- ▷ Identify the acquired intangible assets: For each acquisition, we identify the intangible assets acquired. These intangible assets generally consist of customer relationships, trademarks and trade names, technology-related intangibles (including internally developed software and databases), and in certain acquisitions, noncompete agreements.
- ▷ Estimate the fair value of these intangible assets: We may consider various approaches to value the intangible assets. These include the cost approach, which measures the value of an asset based on the cost to reproduce it or replace it with another asset of like utility by applying the reproduction cost method or replacement cost method; the market approach, which values the asset through an analysis of sales and offerings of comparable assets which can be adjusted to reflect differences between the investment or asset being valued and the comparable investments or assets, such as historical financial condition and performance, expected economic benefits, time and terms of sale, utility, and physical characteristics, and the income approach, which measures the value of an asset based on the present value of the economic benefits it is expected to produce utilizing inputs such as estimated future cash flows based on forecasted revenue growth rates and margins, estimated attrition rates and discount rate assumptions.
- ▷ Estimate the remaining useful life of the assets: For each intangible asset, we use judgment and assumptions to establish the remaining useful life of the asset. For example, for customer relationships, we determine the estimated useful life with reference to observed customer attrition rates. For technology-related assets such as databases, we make judgments about the demand for current data and historical metrics in establishing the remaining useful life. For internally developed software, we estimate an obsolescence factor associated with the software.

We record any excess of the purchase price over the estimated fair values of the net assets acquired as goodwill, which is not amortized.

We recognize the fair value of any contingent payments at the date of acquisition as part of the consideration transferred to acquire a business. Contingent payments are recognized at fair value at the date of acquisition using either a Monte Carlo simulation, which requires the use of management assumptions and inputs, such as projected financial information related to revenue growth and expected margin percentage, among other valuation related items, or calculating the weighted average of the estimated contingent payment scenarios. The liability associated with contingent consideration is remeasured to fair value at each reporting period subsequent to the date of acquisition considering factors that may impact the timing and amount of contingent payments until the

term of the agreement has expired or the contingency is resolved. Any changes in the fair value measurement will be recorded in our Consolidated Statements of Income. In evaluating the characterization of contingent and deferred payments, we analyze relevant factors, including the nature of the payment, continuing employment requirements, incremental payments to employees of the acquired business, and timing and rationale underlying the transaction, to determine whether the payments should be accounted for as additional purchase consideration or post-combination related services.

We believe the accounting estimates related to purchase price allocations, subsequent goodwill impairment testing, and contingent payments are critical accounting estimates because changes in these assumptions could materially affect the amounts and classifications of assets and liabilities presented in our Consolidated Balance Sheets, as well as the amount of amortization and depreciation expense, if any, recorded in our Consolidated Statements of Income. The significance of this policy varies from period to period depending upon the volume of applicable acquisition transactions occurring.

Recently Issued Accounting Pronouncements

Refer to Note 17 of the Notes to our Consolidated Financial Statements for recently adopted accounting pronouncements as of December 31, 2022.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Our investment portfolio is actively managed and may suffer losses from fluctuating interest rates, market prices, or adverse security selection. These accounts may consist of stocks, bonds, options, mutual funds, money market funds, or exchange-traded products that replicate the model portfolios and strategies created by Morningstar. These investment accounts may also include exchange-traded products where Morningstar is an index provider. As of December 31, 2022, our cash, cash equivalents, and investments balance was \$414.6 million. Based on our estimates, a 100 basis-point change in interest rates would not have a material effect on the fair value of our investment portfolio.

We are subject to risk from fluctuations in the interest rates related to our long-term debt. The interest rates are based upon the applicable Secured Overnight Financing Rate (SOFR) rate plus an applicable margin for such loans or the lender's base rate plus an applicable margin for such loans. On an annualized basis, we estimate a 100 basis-point change in the SOFR rate would have a \$7.6 million impact on our interest expense based on our outstanding principal balance and SOFR rates around December 31, 2022.

We are subject to risk from fluctuations in foreign currencies from our operations outside of the U.S. To date, we have not engaged in currency hedging, and we do not currently have any positions in derivative instruments to hedge our currency risk.

The table below shows our exposure to foreign currency denominated revenue and operating income for the year ended December 31, 2022:

(in millions, except foreign currency rates)	Australian Dollar	British Pound	Canadian Dollar	Euro	Other Foreign Currencies
Foreign currency rate in U.S. dollars as of December 31, 2022	0.6820	1.2105	0.7385	1.0709	n/a
Foreign denominated percentage of revenue	2.9%	7.1%	5.9%	6.3%	5.4%
Foreign denominated percentage of operating income (loss)	7.3%	(17.3)%	(3.7)%	10.9%	(77.6)%
Estimated effect of a 10% adverse currency fluctuation on revenue	\$ (5.4)	\$ (13.1)	\$ (10.5)	\$ (11.9)	\$ (10.1)
Estimated effect of a 10% adverse currency fluctuation on operating income (loss)	\$ (1.2)	\$ 2.9	\$ 0.7	\$ (1.9)	\$ 12.5

The table below shows our net investment exposure in foreign currencies as of December 31, 2022:

(in millions)	Australian Dollar	British Pound	Canadian Dollar	Euro	Other Foreign Currencies
Assets, net of unconsolidated entities	\$ 71.0	\$ 355.0	\$ 384.8	\$ 231.7	\$ 212.7
Less: liabilities	32.2	88.0	166.6	161.2	7.0
Net currency position	\$ 38.8	\$ 267.0	\$ 218.2	\$ 70.5	\$ 205.7
Estimated effect of a 10% adverse currency fluctuation on equity	\$ (3.9)	\$ (26.7)	\$ (21.8)	\$ (7.1)	\$ (20.6)

Item 8. Financial Statements and Supplementary Data

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Morningstar, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Morningstar Inc. and subsidiaries (the Company) as of December 31, 2022 and December 31, 2021, the related consolidated statements of income, comprehensive income (loss), equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedule II (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 December 31, 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 24, 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 Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the 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 Matters

Critical audit matters are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate 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.

Evaluation of acquisition-date fair value of the customer-related intangible assets

As discussed in Note 8 to the consolidated financial statements, on June 1, 2022 the Company acquired Leveraged Commentary and Data (“LCD”) in a business combination for total acquisition date fair value of consideration of \$645.5 million. As an element of the transaction, the Company acquired customer-related intangible assets. The acquisition-date fair value for the customer-related intangible assets was \$197.3 million.

We identified the evaluation of the acquisition-date fair value of the customer-related intangible assets as a critical audit matter. A high degree of subjective auditor judgment was required in evaluating certain key assumptions in the Company’s income approach methodology used to determine fair value, including:

- ▷ forecasted revenue growth rate
- ▷ margins
- ▷ discount rate

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 process to determine the acquisition-date fair value of the customer-related intangible assets, including controls over the determination of the key assumptions noted above. We evaluated the Company’s forecasted revenue growth rate and margins by comparing these assumptions to certain peer companies and internal historical data. We involved valuation professionals with specialized skills and knowledge who assisted in evaluating the Company’s selected discount rate by comparing it against a discount rate range that was independently developed using publicly available market data from comparable companies.

Evaluation of sufficiency of audit evidence over revenue

As discussed in Notes 2 and 5 to the consolidated financial statements, the Company has recorded \$1,870.6 million in revenues, for the year ended December 31, 2022. The Company’s process to account for and recognize revenue differs between certain revenue streams.

We identified the evaluation of the sufficiency of audit evidence over revenue as a critical audit matter. Evaluating the sufficiency of audit evidence obtained required especially subjective auditor judgment due to the multiple product revenue streams and the use of multiple processes to account for and recognize revenue. This included determining the revenue streams where procedures were performed and the nature and extent of audit evidence obtained over each revenue stream.

The following are the primary procedures we performed to address this critical audit matter. We used auditor judgment to determine the nature and extent of procedures to be performed, including the determination of the revenue streams over which those procedures were performed. For product revenue streams where procedures were performed, we:

- ▷ evaluated the design and tested the operating effectiveness of certain internal controls over the Company’s revenue recognition processes
- ▷ evaluated the Company’s revenue recognition accounting policies
- ▷ selected certain revenue transactions and assessed recorded amounts by comparing them for consistency with underlying documentation, including the customer contract
- ▷ evaluated certain revenue transactions for consistency with the Company’s accounting policies, as applicable, including timing of revenue recognition

In addition, we evaluated the sufficiency of audit evidence obtained by assessing the results of the procedures performed, including the appropriateness of the nature and extent of audit effort over revenue.

/s/ KPMG LLP

We have served as the Company's auditor since 2011.

Chicago, Illinois
February 24, 2023

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Morningstar, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Morningstar Inc. 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 income, comprehensive income (loss), equity, and cash flows for each of the years in the three-year period ended December 31, 2022, and the related notes and financial statement schedules II (collectively, the consolidated financial statements), and our report dated February 24, 2023 expressed an unqualified opinion on those consolidated financial statements.

The Company acquired Leverage Commentary and Data (LCD) and Praemium Portfolio Services Limited (Praemium) during 2022, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2022, the internal control over financial reporting of the operations of the acquired businesses. The operations of LCD are 0.5% of consolidated assets and 1.8% of consolidated revenue included in the consolidated financial statements of the Company as of and for the year ended December 31, 2022. The operations of Praemium are 0.4% of consolidated assets and 0.3% of consolidated revenue included in the consolidated financial statements of the Company as of and for the year ended December 31, 2022. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of LCD and Praemium.

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 24, 2023

Morningstar, Inc. and Subsidiaries Consolidated Statements of Income

Year ended December 31 (in millions except per share amounts)	2022	2021	2020
Revenue	\$ 1,870.6	\$ 1,699.3	\$ 1,389.5
Operating expense:			
Cost of revenue	779.3	698.4	556.4
Sales and marketing	356.5	274.8	206.4
General and administrative	400.4	318.4	272.0
Depreciation and amortization	166.6	150.7	139.5
Total operating expense	1,702.8	1,442.3	1,174.3
Operating income	167.8	257.0	215.2
Non-operating income (expense), net:			
Interest expense, net	(28.4)	(8.7)	(9.5)
Realized gains (losses) on sale of investments, reclassified from other comprehensive income	(2.1)	5.0	2.1
Realized gains on sale of equity method investments	—	0.9	30.0
Holding gain on previously held equity interest	—	—	50.9
Other expense, net	(6.7)	(3.7)	(5.7)
Non-operating income (expense), net	(37.2)	(6.5)	67.8
Income before income taxes and equity in net income (loss) of unconsolidated entities	130.6	250.5	283.0
Equity in net income (loss) of unconsolidated entities	(3.6)	5.4	0.3
Income tax expense	56.5	62.6	59.7
Consolidated net income	\$ 70.5	\$ 193.3	\$ 223.6
Net income per share:			
Basic	\$ 1.65	\$ 4.50	\$ 5.22
Diluted	\$ 1.64	\$ 4.45	\$ 5.18
Dividends per common share:			
Dividends declared per common share	\$ 1.46	\$ 1.31	\$ 1.22
Dividends paid per common share	\$ 1.44	\$ 1.26	\$ 1.20
Weighted average shares outstanding:			
Basic	42.6	43.0	42.9
Diluted	42.9	43.4	43.2

See notes to consolidated financial statements.

Morningstar, Inc. and Subsidiaries

Consolidated Statements of Comprehensive Income (Loss)

Year ended December 31 (in millions)	2022	2021	2020
Consolidated net income	\$ 70.5	\$ 193.3	\$ 223.6
Other comprehensive income, net of tax:			
Foreign currency translation adjustment	(58.2)	(15.1)	37.3
Unrealized gains (losses) on securities:			
Unrealized holding gains (losses) arising during period	(7.0)	5.7	2.9
Reclassification of (gains) losses on investments included in net income	1.5	(3.9)	(1.6)
Other comprehensive income (loss), net	(63.7)	(13.3)	38.6
Comprehensive income	\$ 6.8	\$ 180.0	\$ 262.2

See notes to consolidated financial statements.

Morningstar, Inc. and Subsidiaries

Consolidated Balance Sheets

As of December 31 (in millions except share amounts)	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 376.6	\$ 483.8
Investments	38.0	62.3
Accounts receivable, less allowance for credit losses of \$6.6 million and \$4.5 million, respectively	307.9	268.9
Income tax receivable	—	8.9
Deferred commissions	40.7	31.2
Prepaid expenses	36.7	30.6
Other current assets	10.9	1.9
Total current assets	810.8	887.6
Goodwill	1,571.7	1,207.0
Intangible assets, net	548.6	328.2
Property, equipment, and capitalized software, net	199.4	171.8
Operating lease assets	191.6	149.2
Investments in unconsolidated entities	96.0	63.3
Deferred tax assets, net	10.8	12.8
Deferred commissions	35.4	31.1
Other assets	10.5	11.7
Total assets	\$ 3,474.8	\$ 2,862.7
Liabilities and equity		
Current liabilities:		
Deferred revenue	\$ 455.6	\$ 377.4
Accrued compensation	220.1	273.7
Accounts payable and accrued liabilities	76.2	76.5
Current portion of long-term debt	32.1	—
Operating lease liabilities	37.3	36.4
Contingent consideration liability	50.0	17.3
Other current liabilities	11.2	2.2
Total current liabilities	882.5	783.5
Operating lease liabilities	176.7	135.7
Accrued compensation	20.7	16.3
Deferred tax liabilities, net	62.9	101.7
Long-term debt	1,077.5	359.4
Deferred revenue	33.5	36.4
Other long-term liabilities	13.9	13.8
Total liabilities	\$ 2,267.7	\$ 1,446.8
Equity:		
Morningstar, Inc. shareholders' equity:		
Common stock, no par value, 200,000,000 shares authorized, of which 42,480,051 and 43,136,273 shares were outstanding as of December 31, 2022 and December 31, 2021, respectively	\$ —	\$ —
Treasury stock at cost, 11,991,517 and 11,124,021 shares as of December 31, 2022 and December 31, 2021 respectively	(986.7)	(764.3)
Additional paid-in capital	757.8	689.0
Retained earnings	1,535.0	1,526.5
Accumulated other comprehensive loss:		
Currency translation adjustment	(99.0)	(40.8)
Unrealized gain on available-for-sale investments, net of tax	—	5.5
Total accumulated other comprehensive loss	(99.0)	(35.3)
Total equity	1,207.1	1,415.9
Total liabilities and equity	\$ 3,474.8	\$ 2,862.7

See notes to consolidated financial statements.

Morningstar, Inc. and Subsidiaries Consolidated Statements of Equity

(in millions, except share amounts)	Morningstar, Inc. Shareholders' Equity						
	Common Stock		Treasury Stock	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Equity
	Shares Outstanding	Par Value					
Balance as of December 31, 2019	42,848,359	\$ —	\$ (728.7)	\$ 655.0	\$ 1,217.9	\$ (60.6)	\$ 1,083.6
Net income		—	—	—	223.6	—	223.6
Other comprehensive income (loss), net:							
Unrealized gain on available-for-sale investments, net of tax		—	—	—	—	2.9	2.9
Reclassification of adjustments for gain on investments included in net income, net of tax		—	—	—	—	(1.6)	(1.6)
Foreign currency translation adjustment, net		—	—	—	—	37.3	37.3
Other comprehensive income (loss), net		—	—	—	—	38.6	38.6
Issuance of common stock related to stock-option exercises and vesting of stock awards, net of shares withheld for taxes on settlements of stock awards	364,724	—	3.3	(26.4)	—	—	(23.1)
Reclassification of awards previously liability-classified that were converted to equity		—	—	6.1	—	—	6.1
Stock-based compensation—restricted stock units		—	—	22.2	—	—	22.2
Stock-based compensation—performance share awards		—	—	10.2	—	—	10.2
Stock-based compensation—market stock units		—	—	4.2	—	—	4.2
Common shares repurchased	(314,925)	—	(41.9)	—	—	—	(41.9)
Dividends declared (\$1.22 per share)		—	—	—	(52.1)	—	(52.1)
Balance as of December 31, 2020	42,898,158	—	(767.3)	671.3	1,389.4	(22.0)	1,271.4
Net income		—	—	—	193.3	—	193.3
Other comprehensive income (loss), net:							
Unrealized gain on available-for-sale investments, net of tax		—	—	—	—	5.7	5.7
Reclassification of adjustments for gain on investments included in net income, net of tax		—	—	—	—	(3.9)	(3.9)
Foreign currency translation adjustment, net		—	—	—	—	(15.1)	(15.1)
Other comprehensive income (loss), net		—	—	—	—	(13.3)	(13.3)

Morningstar, Inc. and Subsidiaries Consolidated Statements of Income

(in millions, except share amounts)	Morningstar, Inc. Shareholders' Equity						
	Common Stock		Treasury Stock	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Equity
	Shares Outstanding	Par Value					
Issuance of common stock related to stock-option exercises and vesting of stock awards, net of shares withheld for taxes on settlements of stock awards	243,015	—	4.3	(33.0)	—	—	(28.7)
Reclassification of awards previously liability-classified that were converted to equity	—	—	—	8.8	—	—	8.8
Stock-based compensation—restricted stock units	—	—	—	25.8	—	—	25.8
Stock-based compensation—performance share awards	—	—	—	10.6	—	—	10.6
Stock-based compensation—market stock units	—	—	—	5.5	—	—	5.5
Common shares repurchased	(4,900)	—	(1.3)	—	—	—	(1.3)
Dividends declared (\$1.31 per share)	—	—	—	—	(56.2)	—	(56.2)
Balance as of December 31, 2021	43,136,273	—	(764.3)	689.0	1,526.5	(35.3)	1,415.9
Net income	—	—	—	—	70.5	—	70.5
Other comprehensive income (loss), net:							
Unrealized gain (loss) on available-for-sale investments, net of tax	—	—	—	—	—	(7.0)	(7.0)
Reclassification of adjustments for gain on investments included in net income, net of tax	—	—	—	—	—	1.5	1.5
Foreign currency translation adjustment, net	—	—	—	—	—	(58.2)	(58.2)
Other comprehensive income (loss), net	—	—	—	—	—	(63.7)	(63.7)
Issuance of common stock related to vesting of stock awards, net of shares withheld for taxes on settlements of stock awards	226,652	—	3.6	(33.6)	—	—	(30.0)
Reclassification of awards previously liability-classified that were converted to equity	—	—	—	19.2	—	—	19.2
Stock-based compensation—restricted stock units	—	—	—	35.9	—	—	35.9
Stock-based compensation—performance share awards	—	—	—	37.2	—	—	37.2
Stock-based compensation—market stock units	—	—	—	10.1	—	—	10.1
Common shares repurchased	(882,874)	—	(226.0)	—	—	—	(226.0)
Dividends declared (\$1.46 per share)	—	—	—	—	(62.0)	—	(62.0)
Balance as of December 31, 2022	42,480,051	\$ —	\$ (986.7)	\$ 757.8	\$ 1,535.0	\$ (99.0)	\$ 1,207.1

See notes to consolidated financial statements.

Morningstar, Inc. and Subsidiaries

Consolidated Statements of Cash Flows

Year ended December 31 (in millions)	2022	2021	2020
Operating activities			
Consolidated net income	\$ 70.5	\$ 193.3	\$ 223.6
Adjustments to reconcile consolidated net income to net cash flows from operating activities:			
Depreciation and amortization	166.6	150.7	139.5
Deferred income taxes	(37.3)	(12.1)	(6.7)
Stock-based compensation expense	83.2	41.9	36.6
Provision for bad debt	3.8	1.9	2.8
Equity in net (income) loss of unconsolidated entities	3.6	(5.4)	(0.3)
Gain on sale of equity method investments	—	(0.9)	(30.0)
Holding gain on previously held equity interest	—	—	(50.9)
Acquisition earn-out accrual	4.5	17.8	27.8
Other, net	14.9	(0.9)	3.0
Changes in operating assets and liabilities			
Accounts receivable	(38.6)	(67.9)	(9.2)
Accounts payable and accrued liabilities	(2.0)	7.1	(9.5)
Accrued compensation and deferred commissions	(37.5)	58.0	18.2
Income taxes, current	18.9	(6.1)	8.0
Deferred revenue	60.0	78.2	29.5
Other assets and liabilities	(12.8)	(5.7)	1.9
Cash provided by operating activities	297.8	449.9	384.3
Investing activities			
Purchases of investment securities	(36.5)	(71.1)	(56.4)
Proceeds from maturities and sales of investment securities	43.0	58.8	46.9
Capital expenditures	(129.5)	(101.8)	(76.7)
Acquisitions, net of cash acquired	(646.7)	(24.8)	(67.8)
Proceeds from sale of equity method investments, net	—	1.1	35.2
Purchases of investments in unconsolidated entities	(29.4)	(29.8)	(6.7)
Other, net	(0.2)	(0.1)	1.7
Cash used for investing activities	(799.3)	(167.7)	(123.8)
Financing activities			
Common shares repurchased	(226.0)	(1.3)	(41.9)
Dividends paid	(61.5)	(54.2)	(51.4)
Proceeds from revolving credit facility	475.0	10.0	60.0
Repayment of revolving credit facility	(355.0)	(10.0)	(130.0)
Proceeds from 2030 Notes	—	—	350.0
Proceeds from term facility	650.0	—	—
Repayment of term facility	(19.1)	(90.0)	(343.4)
Proceeds from stock-option exercises	—	0.2	1.9
Employee taxes withheld for stock awards	(29.9)	(29.0)	(25.1)
Payment of acquisition-related earn-outs	(16.2)	(34.4)	—
Other, net	(2.2)	(3.1)	(2.3)
Cash provided by (used for) financing activities	415.1	(211.8)	(182.2)
Effect of exchange rate changes on cash and cash equivalents	(20.8)	(9.1)	10.1
Net increase (decrease) in cash and cash equivalents	(107.2)	61.3	88.4
Cash and cash equivalents—beginning of period	483.8	422.5	334.1
Cash and cash equivalents—end of period	\$ 376.6	\$ 483.8	\$ 422.5
Supplemental disclosure of cash flow information:			
Cash paid for income taxes	\$ 75.3	\$ 80.9	\$ 58.2
Cash paid for interest	\$ 28.4	\$ 10.4	\$ 11.1
Supplemental information of non-cash investing and financing activities:			
Unrealized gain on available-for-sale investments	\$ 0.4	\$ 2.1	\$ 1.8

See notes to consolidated financial statements.

Morningstar, Inc. and Subsidiaries

Notes to Consolidated Financial Statements

1. Description of Business

Morningstar, Inc. and its subsidiaries (Morningstar, we, our, the company) provide independent investment insights for investors around the world. We offer an extensive line of products and services for individual and institutional investors in public and private capital markets, financial advisors, asset managers, retirement plan providers and sponsors, and issuers of securities. We conduct business operations through wholly- or majority-owned subsidiaries in 32 countries.

2. Summary of Significant Accounting Policies

The acronyms that appear in these Notes to our Consolidated Financial Statements refer to the following:

ASC	Accounting Standards Codification
ASU	Accounting Standards Update
FASB	Financial Accounting Standards Board
SEC	Securities and Exchange Commission

Principles of Consolidation. We conduct our business operations through wholly- or majority-owned operating subsidiaries. The accompanying consolidated financial statements include the accounts of Morningstar, Inc. and our subsidiaries. We consolidate assets, liabilities, and results of operations of subsidiaries in which we have a controlling interest and eliminate all significant intercompany accounts and transactions.

We account for investments in entities in which we exercise significant influence, but do not control, using the equity method.

As part of our investment management operations, we manage certain funds outside of the U.S. that are considered variable interest entities. For most of these variable interest entities, we do not have a variable interest. In cases where we do have a variable interest, we are not the primary beneficiary. Accordingly, we do not consolidate any of these variable interest entities.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. (GAAP) requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses during the reporting period. Actual results may differ from these estimates.

Cash and Cash Equivalents. Cash and cash equivalents consist of cash and investments with original maturities of three months or less. We state them at cost, which approximates fair value. We state the portion of our cash equivalents that are invested in money market funds at fair value, as these funds are actively traded and have quoted market prices.

Investments. We account for our investments in debt securities in accordance with FASB ASC 320, *Investments—Debt Securities* (FASB ASC 320). We classify our debt securities into two categories: held-to-maturity and available-for-sale.

- ▷ Held-to-maturity: We classify certain investments, primarily certificates of deposit, as held-to-maturity securities, based on our intent and ability to hold these securities to maturity. We record held-to-maturity investments at amortized cost in our Consolidated Balance Sheets.

-
- ▷ Available-for-sale: Investments not considered held-to-maturity or trading securities are classified as available-for-sale securities. Available-for-sale securities primarily consist of marketable debt securities. We report unrealized gains and losses for available-for-sale securities as other comprehensive income (loss), net of related income taxes. We record these securities at their fair values in our Consolidated Balance Sheets.

We account for our investments in equity securities in accordance with FASB ASC 321, *Investments—Equity Securities* (FASB ASC 321). We measure equity investments at fair value with the related realized and unrealized gains and losses recognized in our Consolidated Statements of Income. For equity investments without a readily determinable fair value, we measure these at cost less impairment and adjusting for observable price changes in orderly transactions. We will apply this measurement method to the investment until or if it becomes eligible to be measured at fair value, which is reassessed at each reporting period. We account for non-marketable equity investments over which we exercise significant influence, but do not have control over the investee, under the equity method.

Fair Value Measurements. FASB ASC 820, *Fair Value Measurements* (FASB ASC 820) defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. Under FASB ASC 820, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. The standard applies whenever other standards require (or permit) assets or liabilities to be measured at fair value.

FASB ASC 820 uses a fair value hierarchy based on three broad levels of valuation inputs:

- ▷ Level 1: Valuations based on quoted prices in active markets for identical assets or liabilities that we have the ability to access.
- ▷ Level 2: Valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.
- ▷ Level 3: Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

We provide additional information about our cash equivalents and investments that are subject to FASB ASC 820 in Note 7.

Business Combinations. When we acquire a business, we account for the business combination in accordance with FASB ASC 805, *Business Combinations* (FASB ASC 805). We recognize and measure the fair value of the acquired business and allocate the purchase price to the identifiable tangible and intangible assets acquired and liabilities assumed based upon their estimated fair values at the date of acquisition. The difference between the purchase price and the estimated fair value of the net assets acquired or the excess of the aggregate estimated fair values of assets acquired and liabilities assumed is recorded as goodwill. In determining the estimated fair values of assets acquired and liabilities assumed in a business combination, we use various recognized valuation methods, including discounted cash flow, Monte Carlo simulations, and relief from royalty. For a business combination achieved in stages, we remeasure our previously held equity interest immediately before the acquisition to the acquisition date fair value and recognize any gain in our Consolidated Statements of Income.

We recognize the fair value of any contingent payments at the date of acquisition as part of the consideration transferred to acquire a business. The liability associated with contingent consideration is remeasured to fair value at each reporting period subsequent to the date of acquisition considering factors that may impact the timing and amount of contingent payments until the term of the agreement has expired or the contingency is resolved. Any changes in the fair value measurement will be recorded in our Consolidated Statements of Income. In evaluating the characterization of contingent and deferred payments, we analyze relevant factors, including the nature of the payment, continuing employment requirements, incremental payments to employees of the

acquired business, and timing and rationale underlying the transaction, to determine whether the payments should be accounted for as additional purchase consideration or post-combination related services.

We expense direct costs related to the business combination, such as accounting, legal, valuation, and other professional fees, as incurred. We recognize restructuring costs, including severance and relocation for employees of the acquired entity, as post-combination expenses unless the target entity meets the criteria of ASC 420, *Exit or Disposal Cost Obligations*, on the acquisition date.

As part of the purchase price allocation, we follow the requirements of FASB ASC 740, *Income Taxes* (FASB ASC 740). This includes establishing deferred tax assets or liabilities reflecting the difference between the values assigned for financial statement purposes and income tax purposes. In certain acquisitions, the goodwill resulting from the purchase price allocation may not be deductible for income tax purposes. FASB ASC 740 prohibits recognition of a deferred tax asset or liability for temporary differences in goodwill if goodwill is not amortizable and deductible for tax purposes.

Goodwill. Changes in the carrying amount of our recorded goodwill are mainly the result of business acquisitions, divestitures, and the effect of foreign currency translations. In accordance with FASB ASC 350, *Intangibles—Goodwill and Other*, we do not amortize goodwill; instead, goodwill is subject to an impairment test annually, or whenever indicators of impairment exist. An impairment would occur if the carrying amount of a reporting unit exceeded the fair value of that reporting unit. We performed our annual impairment review in the fourth quarter and did not record any impairment losses in 2022, 2021, and 2020.

Intangible Assets. We amortize intangible assets using the straight-line method over their estimated useful lives, which range from one to twenty years. We have no intangible assets with indefinite useful lives. In accordance with FASB ASC 360-10-35, *Subsequent Measurement—Impairment or Disposal of Long-Lived Assets*, we review intangible assets for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If the value of future undiscounted cash flows is less than the carrying amount of an asset group, we record an impairment loss based on the excess of the carrying amount over the fair value of the asset group. We did not record any impairment losses in 2022, 2021, and 2020.

Property, Equipment, and Depreciation. We state property and equipment at historical cost, net of accumulated depreciation in accordance with FASB ASC 360-10, *Property, Plant, and Equipment*. We depreciate property and equipment using the straight-line method based on the useful life of the asset, which ranges from three to seven years. We amortize leasehold improvements over the lease term or their useful lives, whichever is shorter. Long-lived assets that are held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If the value of future undiscounted cash flows is less than the carrying amount of an asset group, we record an impairment loss based on the excess of the carrying amount over the fair value of the asset group.

Computer Software and Internal Product Development Costs. We capitalize certain costs in accordance with FASB ASC 350-40, *Internal-Use Software*. Internal product development costs mainly consist of employee costs for developing new web-based products and certain major enhancements of existing products. We amortize these costs on a straight-line basis over the estimated economic life, which is generally three years. We include capitalized software development costs related to projects that have not been placed into service in our construction in progress balance.

The table below summarizes our depreciation expense related to capitalized developed software for the past three years:

(in millions)	2022	2021	2020
Capitalized software depreciation expense	\$ 64.3	\$ 59.9	\$ 53.9

The table below summarizes our capitalized software development costs for the past three years:

(in millions)	2022	2021	2020
Capitalized software development costs	\$ 81.0	\$ 74.0	\$ 60.3

Leases. We account for our right-of-use assets and operating lease liabilities in accordance with FASB ASC 842, *Leases* (FASB ASC 842). We determine if a contract is or contains a lease at the inception of the contract. For identified operating leases, we recognize a lease liability and right-of-use asset on the consolidated balance sheet. The right-of-use asset represents our right to use an underlying asset for the lease term, and the operating lease liability represents the company's obligation to make lease payments.

Our lease agreements consist primarily of real estate leases for office space and non-real estate leases for office equipment. In cases where an agreement contains both a lease and non-lease component, we do not allocate consideration to both components, but account for each as a single lease component by class of underlying asset. There are few instances of short-term agreements in our lease portfolio, which are typically arranged as needed and paid on a month-to-month basis. These leases are not recognized on the Consolidated Balance Sheet, but monthly lease expense is recognized on the Consolidated Statements of Income.

Right-of-use assets and operating lease liabilities are measured using the present value of future lease payments of the lease term at the commencement date. Right-of-use assets also include initial direct costs incurred by the company, net of prepayments and lease incentives. In the absence of an explicit rate in the lease agreement, the discount rate used to calculate present value is equal to the company's incremental borrowing rate. Operating lease expense is recognized on a straight-line basis over the life of the lease and is included in general and administrative expenses on the Consolidated Statements of Income.

Revenue Recognition. We recognize revenue in accordance with FASB ASC Topic 606, *Revenue from Contracts with Customers* (FASB ASC Topic 606).

Under FASB ASC Topic 606, we recognize revenue by applying the following five-step model to each of our customer arrangements:

1. Identify the customer contract;
2. Identify the performance obligations in the contract;
3. Determine the transaction price;
4. Allocate the transaction price to the performance obligations; and
5. Recognize revenue when (or as) performance obligations are satisfied.

Revenues are recognized when (or as) performance obligations are satisfied by transferring a promised product or service to the customer. Products or services are transferred when (or as) the customer obtains control of the product or service. The transaction price for a customer arrangement is the amount we expect to be entitled to in exchange for transferring the promised product or service. The transaction price may include fixed amounts, variable amounts, or both. When the right to payment exceeds revenue recognized, the result is an increase to deferred revenue. When a customer's license-based contract is signed, the customer's service is activated immediately, except where customizations are required. License-based arrangements, our largest source of revenue from customers, generally are billed quarterly or annually. Customers are typically given payment terms of zero to sixty days.

Revenue from contracts with customers is derived from license-based arrangements, asset-based arrangements, and transaction-based arrangements.

License-based revenue, which represents subscription services available to customers and not a license under the accounting guidance, is generated through subscription contracts with our customers of PitchBook, Morningstar Data, Morningstar Direct, Morningstar Sustainalytics, Morningstar Advisor Workstation, Morningstar Enterprise Components, and other similar products. Our performance obligations under these contracts are typically satisfied over time, as the customer has access to the service during the term of the subscription license and the level of service is consistent during the contract period. Each individual day within the contract period is viewed to be a service and the entirety of the service subscription term is determined to be a series combined into a single performance obligation and recognized over-time and on a straight-line basis, typically over terms of 1 to 3 years.

Asset-based revenue is generated through contracts with our customers of Morningstar Investment Management, Workplace Solutions, and Morningstar Indexes. Our performance obligations under these contracts are a daily asset management performance obligation, which is determined to be a daily service and thus satisfied over time as the customer receives continuous access to a service for the contract term. We recognize revenue daily over the contract term based on the value of assets under management and a tiered fee agreed to with the customer. Asset-based arrangements typically have a term of 1 to 3 years. The fees from such arrangements represent variable consideration, and the customer does not make separate purchasing decisions that result in additional performance obligations. Significant changes in the underlying fund assets, or significant disruptions in the market, are evaluated to determine if revisions to estimates of earned asset-based fees for the current quarter are needed. An estimate of the average daily portfolio balance is a key input in determining revenue for a given period. Estimates are based on the most recently reported quarter, and, as a result, it is unlikely a significant reversal of revenue would occur.

Transaction-based revenue is generated through contracts with our customers for DBRS Morningstar products and services, Internet advertising on Morningstar.com, and Morningstar-sponsored conferences. Our performance obligations for DBRS Morningstar include the issuance of the rating and may include surveillance services for a period of time as agreed with the customer. We allocate the transaction price to the deliverables based on their relative selling price, which is generally determined by the price we charge when the same deliverable is sold separately. Our performance obligation for the issuance of the rating is satisfied when the rating is issued, which is when we recognize the related revenue. Our performance obligations for surveillance services are satisfied over time, as the customer has access to the service during the surveillance period and the level of service is consistent during the contract period. Therefore, we recognize revenue for this performance obligation on a straight-line basis. Our performance obligations for Internet advertising and Morningstar-sponsored conferences are satisfied as the service is delivered; therefore, we recognize revenue when the performance obligation is satisfied (as the customer's advertisements are displayed and at the completion of the Morningstar-sponsored conference).

Our contracts with customers may include multiple performance obligations. For most of these arrangements, we generally allocate revenue to each performance obligation based on its estimated standalone selling price. We generally determine standalone selling prices based on prices charged to customers when the same performance obligation is sold separately.

Our contracts with customers may include third-party involvement in providing goods or services to the customer. The inclusion of third-party content does not result in separate performance obligations because it is not delivered separately from the other service offerings. In these arrangements, the customer has contracted to receive a single, integrated and bundled solution with third-party and Morningstar content delivered via Morningstar's subscription services. Revenue and related costs of revenue from third-party content is presented on a gross basis within the consolidated financial statements.

Deferred revenue represents the portion of licenses or subscriptions billed or collected in advance of the service being provided which we expect to recognize as revenue in future periods.

Sales Commissions. We capitalize sales commissions, which are considered directly attributable to obtaining a customer contract under FASB ASC Topic 606 and FASB ASC 340-40, *Other Assets and Deferred Costs—Contracts with Customers*. Estimates of these capitalized costs are developed by using a portfolio approach that aggregates these costs by legal entity within their geographical regions. Capitalized sales commissions are amortized using the straight-line method over a period that is consistent with the transfer of the products or services to the customer to which the sales commission relates. The period of transfer for each portfolio is the shorter of the weighted-average customer life, or the economic life of the underlying technology that delivers the products or services. As of December 31, 2022, the period of transfer was determined to be approximately three years. Discretionary amounts which are added to sales commission payments are expensed as incurred, as they are not considered to be directly attributable to obtaining a customer contract.

Stock-Based Compensation Expense. We account for our stock-based compensation expense in accordance with FASB ASC 718, *Compensation—Stock Compensation* (FASB ASC 718). Our stock-based compensation expense reflects grants of restricted stock units, performance share awards, and market stock units. We measure the fair value of our restricted stock units and performance share awards on the grant date based on the closing market price of Morningstar's common stock on the day prior to the grant. For market stock units, we estimate the fair value of the awards using a Monte Carlo valuation model. We amortize the fair values to stock-based compensation expense, net of estimated forfeitures, ratably over the vesting period.

We estimate expected forfeitures of all employee stock-based awards and recognize compensation cost only for those awards expected to vest. We determine forfeiture rates based on historical experience and adjust the estimated forfeitures to actual forfeiture experience, as needed.

Income Taxes. We record deferred income taxes for the temporary differences between the carrying amount of assets and liabilities for financial statement purposes and tax purposes in accordance with FASB ASC 740, which prescribes the minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. It also provides guidance on derecognition, measurement, classification, interest and penalties, accounting in interim periods, and disclosure for uncertain tax positions.

We recognize interest and penalties related to unrecognized tax benefits as part of income tax expense in our Consolidated Statements of Income. We classify liabilities related to unrecognized tax benefits as either current or long-term liabilities in our Consolidated Balance Sheet, depending on when we expect to make payment.

Severance: We account for post-employment benefits in accordance with FASB ASC 712, *Compensation—Non-retirement Post-employment Benefits* (FASB ASC 712). Under FASB ASC 712, we recognize compensation expense associated with these benefits as a liability when probable and estimable.

In July 2022, the company began to significantly reduce its operations in Shenzhen, China and to shift the work related to its global business functions, including global product and software development, managed investment data collection and analysis, and equity data collection and analysis, to other Morningstar locations.

As a result of these activities, the company incurred \$25.9 million of severance expense in 2022, which represents substantially all of the severance costs expected to be incurred with the remainder to be recognized through the third quarter of 2023. These amounts were recorded within "General and administrative" on our Consolidated Statements of Income.

3. Credit Arrangements

Debt

The following table summarizes our debt as of December 31, 2022 and 2021.

(in millions)	As of December 31, 2022	As of December 31, 2021
Term Facility, net of unamortized debt issuance costs of \$0.7 million and \$0.1 million, respectively	\$ 641.1	\$ 11.0
Revolving Credit Facility	120.0	—
2.32% Senior Notes due October 26, 2030, net of unamortized debt issuance costs of \$1.5 million and \$1.6 million, respectively	348.5	348.4
Total debt	\$ 1,109.6	\$ 359.4

Credit Agreement

On July 2, 2019, the company entered into a senior credit agreement (the 2019 Credit Agreement). The 2019 Credit Agreement provided the company with a five-year multi-currency credit facility with an initial borrowing capacity of up to \$750.0 million, including a \$300.0 million revolving credit facility (the 2019 Revolving Credit Facility) and a term loan facility of \$450.0 million. The 2019 Credit Agreement also provided for the issuance of up to \$50.0 million of letters of credit and a \$100.0 million sub-limit for a swingline facility under the 2019 Revolving Credit Facility. On May 6, 2022, the company terminated the 2019 Credit Agreement.

On May 6, 2022, the company entered into a new senior credit agreement (the 2022 Credit Agreement). The 2022 Credit Agreement provided the company with a five-year multi-currency credit facility with an initial borrowing capacity of up to \$1.1 billion, including a \$650.0 million term loan (the 2022 Term Facility) with an initial draw of \$600.0 million and an option for a second draw of up to \$50.0 million and a \$450.0 million revolving credit facility (the 2022 Revolving Credit Facility). The 2022 Credit Agreement also provided for the issuance of up to \$50.0 million of letters of credit and a \$100.0 million sub-limit for a swingline.

The proceeds of the first draw under the 2022 Term Facility and initial borrowings under the 2022 Revolving Credit Facility were used to finance the acquisition of Leveraged Commentary & Data (LCD) and to repay a portion of the borrowings under the 2019 Revolving Credit Facility. The optional second draw on the 2022 Term Facility was available to fund the contingent consideration payment of up to \$50.0 million in connection with the LCD acquisition.

The 2022 Credit Agreement was amended (the Amended 2022 Credit Agreement) on September 13, 2022 (the First Amendment to the 2022 Credit Agreement) and on September 30, 2022 (the Second Amendment to the 2022 Credit Agreement). The First Amendment to the 2022 Credit Agreement terminated the unfunded term commitment related to the optional second draw of up to \$50.0 million in the 2022 Term Facility and increased the 2022 Revolving Credit Facility to \$600.0 million. The Second Amendment to the 2022 Credit Agreement increased the 2022 Term Facility to a fully funded \$650.0 million facility (the Amended 2022 Term Facility) and increased the 2022 Revolving Credit Facility to \$650.0 million (the Amended 2022 Revolving Credit Facility) for total borrowing capacity of \$1.3 billion. As of December 31, 2022, our total outstanding debt under the Amended 2022 Credit Agreement was \$761.1 million, net of debt issuance costs, with borrowing availability of \$530.0 million under the 2022 Revolving Credit Facility. Except for incremental borrowing capacity, there were no material changes to the existing terms and conditions of the 2022 Credit Agreement.

The proceeds of the additional draw under the Amended 2022 Term Facility were used to repay borrowings under the 2022 Revolving Credit Facility. The proceeds of future borrowings under the Amended 2022 Revolving Credit Facility may be used for working capital, capital expenditures, or other general corporate purposes.

The interest rate applicable to any loan under the Amended 2022 Credit Agreement is, at the company's option, either: (i) the applicable Secured Overnight Financing Rate (SOFR) plus an applicable margin for such loans, which ranges between 1.00% and 1.48%, based on the company's consolidated leverage ratio or (ii) the lender's base rate plus the applicable margin for such loans, which ranges between 0.00% and 0.38%, based on our consolidated leverage ratio.

The portions of deferred debt issuance costs related to the Amended 2022 Revolving Credit Facility are included in other current and non-current assets, and the portion of deferred debt issuance costs related to the Amended 2022 Term Facility is reported as a reduction to the carrying amount of the Amended 2022 Term Facility. Debt issuance costs related to the Amended 2022 Revolving Credit Facility are amortized on a straight-line basis to interest expense over the term of the Amended 2022 Credit Agreement. Debt issuance costs related to the Amended 2022 Term Facility are amortized to interest expense using the effective interest method over the term of the Amended 2022 Credit Agreement.

Private Placement Debt Offering

On October 26, 2020, we completed the issuance and sale of \$350.0 million aggregate principal amount of 2.32% senior notes due October 26, 2030 (the 2030 Notes), in a private placement exempt from the registration requirements of the Securities Act of 1933, as amended. Proceeds were primarily used to pay off a portion of the company's outstanding debt under the 2019 Credit Agreement. Interest on the 2030 Notes will be paid semi-annually on each October 30 and April 30 during the term of the 2030 Notes and at maturity, with the first interest payment date occurring on April 30, 2021. As of December 31, 2022, our total outstanding debt, net of issuance costs, under the 2030 Notes was \$348.5 million.

Compliance with Covenants

Each of the Amended 2022 Credit Agreement and the 2030 Notes include customary representations, warranties, and covenants, including financial covenants, that require us to maintain specified ratios of consolidated earnings before interest, taxes, depreciation, and amortization (EBITDA) to consolidated interest charges and consolidated funded indebtedness to consolidated EBITDA, which are tested on a quarterly basis. We were in compliance with these financial covenants as of December 31, 2022.

4. Income Per Share

The following table shows how we reconcile our net income and the number of shares used in computing basic and diluted net income per share:

(in millions, except per share amounts)	2022	2021	2020
Basic net income per share:			
Consolidated net income	\$ 70.5	\$ 193.3	\$ 223.6
Weighted average common shares outstanding	42.6	43.0	42.9
Basic net income per share	\$ 1.65	\$ 4.50	\$ 5.22
Diluted net income per share:			
Consolidated net income	\$ 70.5	\$ 193.3	\$ 223.6
Weighted average common shares outstanding	42.6	43.0	42.9
Net effect of dilutive stock options and stock awards	0.3	0.4	0.3
Weighted average common shares outstanding for computing diluted income per share	42.9	43.4	43.2
Diluted net income per share	\$ 1.64	\$ 4.45	\$ 5.18

During the periods presented, the number of anti-dilutive restricted stock units, performance share awards, or market stock units excluded from our calculation of diluted earnings per share was immaterial.

5. Revenue

Disaggregation of Revenue

The following table presents our revenue disaggregated by revenue type. Sales and usage-based taxes are excluded from revenue.

(in millions)	Year ended December 31		
	2022	2021	2020
License-based	\$ 1,331.7	\$ 1,131.7	\$ 934.9
Asset-based	269.4	264.9	223.8
Transaction-based	269.5	302.7	230.8
Consolidated revenue	\$ 1,870.6	\$ 1,699.3	\$ 1,389.5

License-based performance obligations are generally satisfied over time as the customer has access to the product or service during the term of the subscription license and the level of service is consistent during the contract period. License-based agreements typically have a term of 1 to 3 years and are accounted for as subscription services available to customers and not as a license under the accounting guidance. License-based revenue is generated from the sale of PitchBook, Morningstar Data, Morningstar Direct, Morningstar Sustainalytics, Morningstar Advisor Workstation, and other similar products.

Asset-based performance obligations are satisfied over time as the customer receives continuous access to a service for the term of the agreement. Asset-based arrangements typically have a term of 1 to 3 years. Asset-based fees represent variable consideration, and the customer does not make separate purchasing decisions that result in additional performance obligations. The timing of client asset reporting and the structure of certain contracts can result in a one-quarter lag between market movements and the impact on earned revenue. Significant changes in the underlying fund assets and significant disruptions in the market are evaluated to determine whether estimates of earned asset-based fees need to be revised for the current quarter. An estimate of variable consideration is included in the initial transaction price only to the extent it is probable that a significant reversal in the amount of the revenue recognized will not occur. Estimates of asset-based fees are based on the most recently completed quarter and, as a result, it is unlikely a significant reversal of revenue would occur. Asset-based revenue is generated by Investment Management, Workplace Solutions, and Morningstar Indexes.

Transaction-based performance obligations are satisfied when the product or service is completed or delivered. Transaction-based revenue is generated by DBRS Morningstar, Internet advertising, and Morningstar-sponsored conferences. DBRS Morningstar revenue includes revenue from surveillance services, which is recognized over time, as the customer has access to the service during the surveillance period.

Contract liabilities

Our contract liabilities represent deferred revenue. We record contract liabilities when cash payments are received or due in advance of our performance, including amounts which may be refundable. The contract liabilities balance as of December 31, 2022 had a net increase of \$75.3 million, primarily driven by cash payments received or payable in advance of satisfying our performance obligations. We recognized \$309.2 million of revenue in 2022 that was included in the contract liabilities balance as of December 31, 2021.

We expect to recognize revenue related to our contract liabilities, including future billings, for 2023 and subsequent years as follows:

(in millions)	As of December 31, 2022
2023	\$ 790.2
2024	176.3
2025	58.5
2026	14.6
2027	5.9
Thereafter	28.2
Total	\$ 1,073.7

The aggregate amount of revenue we expect to recognize for 2023 and subsequent years is higher than our contract liability balance of \$489.1 million as of December 31, 2022. The difference represents the value of future obligations for signed contracts that have yet to be billed.

The table above does not include variable consideration for unsatisfied performance obligations related to certain of our licensed-based, asset-based, and transaction-based contracts as of December 31, 2022. We are applying the optional exemption available under ASC Topic 606, as the variable consideration relates to these unsatisfied performance obligations being fulfilled as a series. The performance obligations related to these contracts are expected to be satisfied over the next 1 to 3 years as services are provided to the client. For license-based contracts, the consideration received for services performed is based on the number of future users, which is not known until the services are performed. The variable consideration for this revenue can be affected by the number of user licenses, which cannot be reasonably estimated. For asset-based contracts, the consideration received for services performed is based on future asset values, which are not known until the services are performed. The variable consideration for this revenue can be affected by changes in the underlying value of fund assets due to client redemptions, additional investments, or movements in the market. For transaction-based contracts for Internet advertising, the consideration received for services performed is based on the number of impressions, which is not known until the impressions are created. The variable consideration for this revenue can be affected by the timing and quantity of impressions in any given period and cannot be reasonably estimated.

As of December 31, 2022, the table above also does not include revenue for unsatisfied performance obligations related to certain of our license-based and transaction-based contracts with durations of one year or less since we are applying the optional exemption under ASC Topic 606. For certain license-based contracts, the remaining performance obligation is expected to be less than one year based on the corresponding subscription terms or the existence of cancellation terms that may be exercised causing the contract term to be less than one year from December 31, 2022. For transaction-based contracts, such as new credit rating issuances and Morningstar-sponsored conferences, the related performance obligations are expected to be satisfied within the next 12 months.

Contract Assets

Our contract assets represent accounts receivable, less allowance for credit losses, and deferred commissions.

The following table summarizes our contract assets balance:

(in millions)	As of December 31	
	2022	2021
Accounts receivable, less allowance for credit losses	\$ 307.9	\$ 268.9
Deferred commissions	76.1	62.3
Total contract assets	\$ 384.0	\$ 331.2

6. Segment and Geographical Area Information

Segment Information

We report our results in a single reportable segment, which reflects how our chief operating decision maker allocates resources and evaluates our financial results. Because we have a single reportable segment, all required financial segment information can be found directly in the Consolidated Financial Statements. The accounting policies for our reportable segment are the same as those described in Note 2. We evaluate the performance of our reporting segment based on revenue and operating income.

Geographical Area Information

The tables below summarize our revenue, long-lived assets, which includes property, equipment, and capitalized software, net, and operating lease assets, by geographical area:

Revenue by geographical area

(in millions)	Year ended December 31		
	2022	2021	2020
United States	\$ 1,353.9	\$ 1,184.3	\$ 970.8
Asia	44.8	41.1	33.6
Australia	55.8	56.9	45.6
Canada	109.8	112.9	101.5
Continental Europe	162.9	159.1	113.8
United Kingdom	133.6	135.7	117.5
Other	9.8	9.3	6.7
Total International	516.7	515.0	418.7
Consolidated revenue	\$ 1,870.6	\$ 1,699.3	\$ 1,389.5

Property, equipment, and capitalized software, net by geographical area

(in millions)	As of December 31	
	2022	2021
United States	\$ 165.6	\$ 139.3
Asia	12.8	8.8
Australia	2.3	3.1
Canada	4.5	3.8
Continental Europe	8.5	10.1
United Kingdom	5.4	6.4
Other	0.3	0.3
Total International	33.8	32.5
Consolidated property, equipment, and capitalized software, net	\$ 199.4	\$ 171.8

Operating lease assets by geographical area

(in millions)	As of December 31	
	2022	2021
United States	\$ 120.0	\$ 82.7
Asia	22.6	24.1
Australia	3.9	4.6
Canada	5.5	7.1
Continental Europe	18.5	15.8
United Kingdom	20.6	14.4
Other	0.5	0.5
Total International	71.6	66.5
Consolidated operating lease assets	\$ 191.6	\$ 149.2

7. Investments and Fair Value Measurements

We classify our investments into two categories: equity investments and debt securities. We further classify our debt securities into available-for-sale and held-to-maturity. Our investment portfolio consists of stocks, bonds, options, mutual funds, money market funds, or exchange-traded products that replicate the model portfolios and strategies created by Morningstar. These investment accounts may also include exchange-traded products where Morningstar is an index provider. Except for the convertible note described below, all investments in our investment portfolio have valuations based on quoted prices in active markets for identical assets or liabilities that we have the ability to access, and, therefore, are classified as Level 1 within the fair value hierarchy. We classify our investment portfolio as shown below:

(in millions)	As of December 31	
	2022	2021
Equity investments	\$ 32.7	\$ 46.8
Available-for-sale	2.3	12.3
Held-to-maturity	3.0	3.2
Total	\$ 38.0	\$ 62.3

The following table shows the cost, unrealized gains, and fair values related to investments classified as equity investments, available-for-sale, and held-to-maturity:

(in millions)	As of December 31, 2022				As of December 31, 2021			
	Cost	Unrealized Gain	Unrealized Loss	Fair Value	Cost	Unrealized Gain	Unrealized Loss	Fair Value
Equity investments:								
Marketable equity investments, exchange traded funds, and mutual funds	\$ 30.7	\$ 2.5	\$ (0.5)	\$ 32.7	\$ 39.6	\$ 8.2	\$ (1.0)	\$ 46.8
Available-for-sale:								
Marketable debt securities	2.2	0.1	—	2.3	5.5	—	—	5.5
Convertible note	—	—	—	—	5.0	1.8	—	6.8
Held-to-maturity:								
Certificates of deposit	3.0	—	—	3.0	3.2	—	—	3.2
Total	\$ 35.9	\$ 2.6	\$ (0.5)	\$ 38.0	\$ 53.3	\$ 10.0	\$ (1.0)	\$ 62.3

As of December 31, 2022 and 2021, debt securities with unrealized losses for greater than a 12-month period were not material to the Consolidated Balance Sheets and were not deemed to have other than temporary declines in value.

The table below shows the cost and fair value of investments classified as held-to-maturity based on their contractual maturities as of December 31, 2022 and 2021.

(in millions)	As of December 31, 2022		As of December 31, 2021	
	Cost	Fair Value	Cost	Fair Value
Held-to-maturity:				
Due in one year or less	\$ 3.0	\$ 3.0	\$ 3.2	\$ 3.2
Due in one to three years	—	—	—	—
Total	\$ 3.0	\$ 3.0	\$ 3.2	\$ 3.2

The following table shows the realized gains and losses arising from sales of our investments classified as equity investments and available-for-sale recorded in our Consolidated Statements of Income:

(in millions)	2022	2021	2020
Realized gains	\$ 1.0	\$ 5.0	\$ 2.1
Realized losses	(3.1)	—	—
Realized gains (losses), net	\$ (2.1)	\$ 5.0	\$ 2.1

We determine realized gains and losses using the specific identification method.

The following table shows the net unrealized gains (losses) on the convertible note and equity securities as recorded in our Consolidated Statements of Income:

(in millions)	2022	2021	2020
Unrealized gains (losses), net	\$ 5.4	\$ 1.8	\$ (0.4)

The table below shows the fair value of our assets and liabilities subject to fair value measurements that are measured at fair value on a recurring basis using the fair value hierarchy:

(in millions)	Fair Value as of December 31, 2022	Level Within the Fair Value Hierarchy as of December 31, 2022		
		Level 1	Level 2	Level 3
Financial assets:				
Marketable equity investments, exchange-traded funds, and mutual funds	\$ 32.7	\$ 32.7	\$ —	\$ —
Marketable debt securities	2.3	2.3	—	—
Convertible note	—	—	—	—
Cash equivalents	0.2	0.2	—	—
Financial liabilities:				
Contingent consideration	50.0	—	—	50.0
Total	\$ 85.2	\$ 35.2	\$ —	\$ 50.0

(in millions)	Fair Value as of December 31, 2021	Level Within the Fair Value Hierarchy as of December 31, 2021		
		Level 1	Level 2	Level 3
Financial assets:				
Marketable equity investments, exchange-traded funds, and mutual funds	\$ 46.8	\$ 46.8	\$ —	\$ —
Marketable debt securities	5.5	5.5	—	—
Convertible note	6.8	—	—	6.8
Cash equivalents	0.6	0.6	—	—
Financial liabilities:				
Contingent consideration	17.3	—	—	17.3
Total	\$ 77.0	\$ 52.9	\$ —	\$ 24.1

We measure the fair value of money market funds, mutual funds, marketable equity securities, marketable debt securities, and exchange-traded funds based on quoted prices in active markets for identical assets or liabilities. We did not hold any securities categorized as Level 2 as of December 31, 2022 and 2021.

As of December 31, 2022, financial assets and liabilities that are classified as Level 3 within the fair value hierarchy include a contingent consideration liability of \$50.0 million, which represents the acquisition date fair value of \$45.5 million plus changes due to fair value remeasurement in subsequent reporting periods.

The contingent consideration reflects potential future payments that are contingent upon the achievement of certain conditions related to the separation of LCD's contractual relationships from S&P Global (S&P) contracts that include other S&P products and services. This additional purchase consideration, for which the amount is contingent, is recognized at fair value at the date of acquisition, which was calculated as the weighted average of the estimated contingent payment scenarios. The contingent consideration is remeasured each reporting period until the contingency is resolved with any changes in fair value recorded in current period earnings. As of the balance sheet date, the maximum amount of the contingent consideration related to the LCD acquisition has been accrued as December 31, 2022.

As of December 31, 2021, financial assets and liabilities that were classified as Level 3 within the fair value hierarchy included a contingent consideration liability of \$17.3 million and a convertible note recorded as an available-for-sale investment of \$6.8 million.

As of December 31, 2021, the contingent consideration liability reflected potential future payments that were contingent upon the achievement of certain revenue metrics related to our acquisition of Sustainalytics that were paid on June 30, 2022. This additional purchase consideration, for which the amount was contingent, was recognized at fair value at the date of acquisition using a Monte Carlo simulation, which required the use of management assumptions and inputs, such as projected financial information related to revenue growth and expected margin percentage, among other valuation related items, and was remeasured each reporting period until the contingency was resolved with any changes in fair value recorded in current period earnings. At December 31, 2021, the fair value of the contingent consideration liability was impacted by foreign currency translations and not by adjustments to key assumptions used in our fair value estimates compared to the assumptions used in the acquisition date fair value estimates. In the second quarter of 2022, we made the third and final cash payment of \$56.2 million, resolving our contingent consideration liability related to our acquisition of Sustainalytics. The payment was based on the achievement of certain revenue metrics for the year ended December 31, 2021.

The convertible note purchased in the second quarter of 2021 was remeasured at fair value each reporting period until it was converted, with any gains or losses recorded in our Consolidated Statements of Income. During the second quarter of 2022, we converted our convertible note, which was previously recorded as an available-for-sale investment, into shares of preferred stock of SmartX Advisory Solutions, which are now accounted for as an investment in equity securities. The preferred stock was initially measured at fair value and any subsequent remeasurement may occur upon impairment or an observable price change via a transaction with identical or similar instruments of the same issuer. The preferred stock is classified as an "Investment in unconsolidated entities" on our Consolidated Balance Sheet as of December 31, 2022.

8. Acquisitions, Goodwill, and Other Intangible Assets

2022 Acquisitions

Leveraged Commentary & Data (LCD)

On June 1, 2022, we completed our acquisition of LCD, a market leader in news, research, data, insights, and indexes for the leveraged finance market, from S&P for an initial cash payment of \$600.0 million plus a contingent payment of up to \$50.0 million. We began consolidating the financial results of LCD in our consolidated financial statements as of June 1, 2022.

The total consideration transferred has been recorded as \$645.5 million, comprised of a \$600.0 million cash payment plus contingent consideration with an acquisition date fair value of \$45.5 million.

The acquisition was accounted for as a business combination under the acquisition method of accounting pursuant to ASC 805, which requires that assets acquired and liabilities assumed be recognized at fair value as of the acquisition date. We did not record any adjustments to the purchase price allocation during the fourth quarter of 2022 compared with the preliminary estimates recorded in the second quarter of 2022.

The acquisition date fair value of certain assets and liabilities, including intangible assets acquired and related weighted average expected life calculations, are provisional and subject to revision within one year of the acquisition date. Any changes in the fair values of the assets acquired and liabilities assumed during the measurement period may result in adjustments to goodwill.

The final contingent consideration was determined based upon the achievement of certain conditions related to the separation of LCD's contractual relationships from S&P contracts that include other S&P products and services during the six-month period following closing. To estimate the fair value of the contingent consideration at the acquisition date, we calculated the weighted average of the estimated contingent payment scenarios. At subsequent balance sheet dates, the contingent consideration was measured at fair value and any changes in the estimate were recorded in earnings unless the change in fair value was the result of facts and circumstances that existed as of the acquisition date. During the third and fourth quarters of 2022, the contingent consideration was remeasured and increased by \$0.9 million and \$3.6 million, respectively, for total consideration of \$50.0 million as of December 31, 2022. The contingent consideration is classified as "Contingent consideration liabilities" on our Consolidated Balance Sheet.

The following table summarizes our allocation of the estimated fair values of the assets acquired and liabilities assumed at the acquisition date:

	(in millions)
Fair value of consideration	\$ 645.5
Accounts receivable and other current assets	\$ 9.7
Intangible assets, net	275.6
Deferred revenue	(25.8)
Total fair value of net assets acquired	\$ 259.5
Goodwill	\$ 386.0

Acquired accounts receivable were recorded at gross contractual amounts receivable, which approximates fair value. We expect to collect substantially all of the gross contractual amounts receivable within a reasonable period of time after the acquisition date.

The preliminary allocation of the estimated fair values of the assets acquired and liabilities assumed includes \$275.6 million of acquired intangible assets, as follows:

	(in millions)	Weighted average useful life (years)
Customer-related assets	\$ 197.3	20
Technology-based assets	65.7	10
Intellectual property	12.6	10
Total intangible assets	\$ 275.6	

Goodwill of \$386.0 million represents the excess over the fair value of the net tangible and intangible assets acquired. Since LCD was an asset acquisition, goodwill is deductible for income tax purposes for that transaction.

Praemium Portfolio Services Limited

On June 30, 2022, we completed our acquisition of Praemium Portfolio Services Limited (Praemium), a U.K.-based global provider of digital-first financial services, with \$44.9 million in cash paid at closing, subject to post-closing adjustments. Praemium and its subsidiaries offer several investment platforms and customer relationship management services to their financial planning and wealth management clients across the U.K. and international markets. We began consolidating the financial results of Praemium in our consolidated financial statements as of June 30, 2022.

The acquisition was accounted for as a business combination under the acquisition method of accounting pursuant to ASC 805. We did not record any significant adjustments to the purchase price allocation during the fourth quarter of 2022 compared with the preliminary estimates recorded in the second quarter of 2022.

The acquisition date fair value of certain assets and liabilities, including intangible assets acquired and related weighted average expected life calculations, are provisional and subject to revision within one year of the acquisition date. Any changes in the fair values of the assets acquired and liabilities assumed during the measurement period may result in adjustments to goodwill.

The following table summarizes our allocation of the estimated fair values of the assets acquired and liabilities assumed at the acquisition date:

	(in millions)
Fair value of consideration transferred	\$ 44.9
Cash and cash equivalents	\$ 5.5
Accounts receivable and other current and non-current assets	3.3
Intangible assets, net	22.1
Deferred revenue	(0.3)
Deferred tax liability, net	(5.4)
Other current and non-current liabilities	(2.2)
Total fair value of net assets acquired	\$ 23.0
Goodwill	\$ 21.9

Acquired accounts receivable were recorded at gross contractual amounts receivable, which approximates fair value. We expect to collect substantially all of the gross contractual amounts receivable within a reasonable period of time after the acquisition date.

The preliminary allocation of the estimated fair values of the assets acquired and liabilities assumed includes \$22.1 million of acquired intangible assets, as follows:

	(in millions)	Weighted average useful life (years)
Customer-related assets	\$ 2.9	10
Technology-based assets	19.2	10
Total intangible assets	\$ 22.1	

Goodwill of \$21.9 million represents the excess over the fair value of the net tangible and intangible assets acquired. Goodwill is not deductible for income tax purposes for that transaction.

We recognized a preliminary net deferred tax liability of \$5.4 million primarily because the amortization expense related to certain intangible assets is not deductible for income tax purposes.

2021 Acquisitions

Moorgate Benchmarks

On September 3, 2021, we acquired Moorgate Benchmarks (Moorgate), a privately held European-based global provider of index design, calculation, and administration. We began consolidating the financial results of Moorgate in our consolidated financial statements on September 3, 2021.

The transaction has been accounted for as a business combination using the acquisition method of accounting, which requires that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date. We finalized the purchase price allocation related to our acquisition of Moorgate during the fourth quarter of 2021 and did not record any significant adjustments compared to the preliminary estimates at the date of acquisition.

The allocation of the estimated fair values of the assets acquired and liabilities assumed includes \$14.9 million of goodwill and \$13.4 million of acquired intangible assets, as follows:

	(in millions)	Weighted average useful life (years)
Technology-based assets	\$ 12.1	7
Customer-related assets	1.3	5
Total intangible assets	\$ 13.4	

We recognized a net deferred tax liability of \$3.2 million primarily because the amortization expense related to certain intangible assets is not deductible for income tax purposes.

2020 Acquisitions

Hueler Analytics

On January 31, 2020, we acquired Hueler Analytics' Stable Value Fund Comparative Universe Data and Stable Value Index (Hueler Analytics). We began consolidating the financial results of Hueler Analytics in our consolidated financial statements on January 31, 2020.

Plan Plus Global

On April 3, 2020, we acquired PlanPlus Global, a financial-planning, risk-profiling, and portfolio tracking software firm. The acquisition expands our financial-planning capabilities for advisors. We began consolidating the financial results of PlanPlus Global in our consolidated financial statements on April 3, 2020.

Increased Ownership Interest in Sustainalytics Holding B.V. (Sustainalytics)

On July 2, 2020, we completed the acquisition of the remaining 60% interest in Sustainalytics, a globally recognized leader in environmental, social, and governance (ESG) ratings and research, for an initial cash payment of \$61.2 million. The acquisition was accounted for as a business combination with July 2, 2020 as the date of acquisition, and the company was determined to be the acquirer. Accordingly, we began consolidating the financial results of Sustainalytics in our consolidated financial statements on July 2, 2020. We previously held an approximately 40% ownership interest in Sustainalytics, which had an estimated fair value of \$75.4 million at the date of the acquisition and a book value of \$24.5 million immediately prior to the acquisition and resulted in a holding gain of \$50.9 million.

The transaction was accounted for as a business combination using the acquisition method of accounting, which requires that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date.

We finalized the purchase price allocation related to our acquisition of Sustainalytics during 2021 and did not record any significant adjustments compared to the preliminary estimates at the date of acquisition. Subsequent measurement changes for certain contingent liabilities were recognized in the company's earnings.

Consideration related to the acquisition consisted of an initial cash payment of \$61.2 million and contingent payments with an acquisition date fair value of \$75.2 million, a portion of which is treated as additional purchase consideration and the remainder, which is sometimes referred to as an earn-out, is accounted for and described as compensation expense for purpose of the following discussion and disclosure. The acquisition date fair values of the additional purchase consideration and compensation were \$47.4 million and \$27.8 million, respectively. The contingent payments are due on June 30, 2021 and 2022, and each payment is determined based on a multiple of Sustainalytics' revenues for the years ended December 31, 2020 and 2021, respectively, which are also the measurement periods for determining the final payments. In the second quarter of 2021, we made the second cash payment of \$47.5 million, which resulted in a decrease of \$34.4 million to the contingent consideration liability balance. The payment was based on the achievement of certain revenue metrics for the year ended December 31, 2020.

We used a Monte Carlo simulation to arrive at the estimated fair values of the contingent payments at the acquisition date. At subsequent balance sheet dates, the additional purchase consideration, including contingent payments, will continue to be measured at fair value and is classified as "Contingent consideration liability" on our Consolidated Balance Sheet as of December 31, 2021 and as "Contingent consideration liability" and "Other long-term liabilities" on our Consolidated Balance Sheet as of December 31, 2020. The compensation component is measured based on probability weighted future benefits expected to be paid, and is reflected in "Current liabilities—Accrued compensation" on our Consolidated Balance Sheet as of December 31, 2021 and in "Current liabilities—Accrued compensation" and "Accrued Compensation" on our Consolidated Balance Sheet as of December 31, 2020. At December 31, 2021 and 2020, the fair value of the contingent consideration liability was impacted by foreign currency translations and not by adjustments to key assumptions used in our fair value estimates compared to the assumptions used in the acquisition date fair value estimates. As of December 31, 2021, the compensation component of the final payment was determined using final recorded revenue consistent with the measurement period which ended at December 31, 2021.

The book value of our 40% ownership interest immediately prior to the acquisition date was \$24.5 million, and we recorded a \$50.9 million non-cash holding gain for the difference between the fair value and the book value of our previously held equity interest. The acquisition of the additional 60% interest was considered an acquisition achieved in stages and resulted in the remeasurement of the previously held equity interest to fair value. The company determined the fair value of the previously held equity interest using a discounted cash flow analysis (an income approach) based on projected cash flows for Sustainalytics combined with other valuation approaches and considerations to estimate total purchase consideration, which was divided by fully diluted outstanding shares to determine the fair value per share. The fair value per share was then applied to the shares of Sustainalytics held by the company to derive the acquisition date fair value of the previously held equity interest. The gain is classified as "Holding gain on previously held equity interest" in our Consolidated Statement of Income for the year ended December 31, 2020.

The following table summarizes our allocation of the estimated fair values of the assets acquired and liabilities assumed at the acquisition date:

	(in millions)
Fair value of consideration transferred	\$ 108.6
Fair value of the previously held equity interest	75.4
Cash and cash equivalents	\$ 9.8
Accounts receivable	6.2
Intangible assets, net	79.5
Operating lease assets	5.2
Other current and non-current assets	7.4
Deferred revenue	(21.2)
Operating lease liability	(5.2)
Deferred tax liability, net	(16.9)
Other current and non-current liabilities	(15.5)
Total fair value of net assets acquired	\$ 49.3
Goodwill	\$ 134.7

At July 2, 2020, acquired accounts receivable were recorded at gross contractual amounts receivable, which approximates fair value. At December 31, 2020, substantially all amounts were collected.

The allocation of the estimated fair values of the assets acquired and liabilities assumed includes \$79.5 million of acquired intangible assets, as follows:

	(in millions)	Weighted average useful life (years)
Customer-related assets	\$ 22.9	20
Technology-based assets	46.7	10
Intellectual property	9.9	10
Total intangible assets	\$ 79.5	

Goodwill of \$134.7 million represents the excess over the fair value of the net tangible and intangible assets acquired. Goodwill is not deductible for income tax purposes.

We recognized a net deferred tax liability of \$16.9 million primarily because the amortization expense related to certain intangible assets is not deductible for income tax purposes.

Goodwill

The following table shows the changes in our goodwill balances from January 1, 2021 to December 31, 2022:

	(in millions)
Balance as of January 1, 2021	\$ 1,205.0
Acquisition of Moorgate	14.9
Other, primarily foreign currency translation	(12.9)
Balance as of December 31, 2021	\$ 1,207.0
Acquisition of LCD	386.0
Acquisition of Praemium	21.9
Other primarily foreign currency translation	(43.2)
Balance as of December 31, 2022	\$ 1,571.7

We did not record any impairment losses in 2022, 2021, or 2020 as the estimated fair value of our reporting unit exceeded its carrying value and we did not note any indicators of impairment. We perform our annual impairment testing during the fourth quarter of each year.

Intangible Assets

The following table summarizes our intangible assets:

(in millions)	As of December 31, 2022				As of December 31, 2021			
	Gross	Accumulated Amortization	Net	Weighted Average Useful Life (years)	Gross	Accumulated Amortization	Net	Weighted Average Useful Life (years)
Customer-related assets	\$ 595.1	\$ (221.3)	\$ 373.8	14	\$ 413.7	\$ (192.8)	\$ 220.9	11
Technology-based assets	312.8	(173.8)	139.0	8	232.3	(157.7)	74.6	7
Intellectual property & other	92.1	(56.3)	35.8	8	83.0	(50.3)	32.7	8
Total intangible assets	\$ 1,000.0	\$ (451.4)	\$ 548.6	12	\$ 729.0	\$ (400.8)	\$ 328.2	10

The following table summarizes our amortization expense related to intangible assets:

(in millions)	2022	2021	2020
Amortization expense	\$ 66.7	\$ 62.0	\$ 58.8

We did not record any impairment losses involving intangible assets in 2022, 2021, or 2020. We amortize intangible assets using the straight-line method over their expected economic useful lives.

Based on acquisitions completed through December 31, 2022, we expect intangible amortization expense for 2023 and subsequent years to be as follows:

	(in millions)
2023	\$ 70.3
2024	64.4
2025	56.2
2026	52.4
2027	45.3
Thereafter	260.0
Total	\$ 548.6

Our estimates of future amortization expense for intangible assets may be affected by additional acquisitions, divestitures, changes in the estimated useful lives, impairments, and foreign currency translation.

9. Investments in Unconsolidated Entities

Our investments in unconsolidated entities consist primarily of the following:

(in millions)	As of December 31,	
	2022	2021
Investment in SmartX Advisory Solutions	\$ 35.0	\$ —
Investment in MJKK	18.7	18.7
Equity method investments	26.6	31.4
Other investments in unconsolidated entities	15.7	13.2
Total investments in unconsolidated entities	\$ 96.0	\$ 63.3

Morningstar Japan K.K. Morningstar Japan K.K. (MJKK) develops and markets financial information products and services customized for the Japanese market. MJKK's shares are traded on the Tokyo Stock Exchange under the ticker 4765. We account for our investment in MJKK using the equity method. The following table summarizes our ownership percentage in MJKK and the market value of this investment based on MJKK's publicly quoted share price:

	As of December 31,	
	2022	2021
Morningstar's approximate ownership of MJKK	22.1%	22.1%
Approximate market value of Morningstar's ownership in MJKK (unaudited):		
Japanese yen (¥ in millions)	¥ 9,010.2	¥ 12,781.0
Equivalent U.S. dollars (\$ in millions)	\$ 68.7	\$ 111.1

10. Property, Equipment, and Capitalized Software, net

The following table shows our property, equipment, and capitalized software, net summarized by major category:

(in millions)	As of December 31,	
	2022	2021
Capitalized software	\$ 545.5	\$ 464.5
Computer equipment	103.2	85.7
Furniture and fixtures	38.9	36.9
Leasehold improvements	106.5	100.7
Telephone equipment	2.3	2.2
Construction in progress	13.7	11.0
Property, equipment, and capitalized software, at cost	810.1	701.0
Less: accumulated depreciation	(610.7)	(529.2)
Property, equipment, and capitalized software, net	\$ 199.4	\$ 171.8

The following table summarizes our depreciation expense:

(in millions)	2022	2021	2020
Depreciation expense	\$ 97.8	\$ 87.0	\$ 80.1

11. Leases

We lease office space and certain equipment under various operating and finance leases, with most of our lease portfolio consisting of operating leases for office space.

We determine whether an arrangement is, or includes, an embedded lease at contract inception. Operating lease assets and lease liabilities are recognized at the commencement date and initially measured using the present value of lease payments over the defined lease term. Lease expense is recognized on a straight-line basis over the lease term. For finance leases, we also recognize a finance lease asset and finance lease liability at inception, with lease expense recognized as interest expense and amortization.

A contract is or contains an embedded lease if the contract meets all of the below criteria:

- ▷ there is an identified asset;
- ▷ we obtain substantially all the economic benefits of the asset; and
- ▷ we have the right to direct the use of the asset.

For initial measurement of the present value of lease payments and for subsequent measurement of lease modifications, we are required to use the rate implicit in the lease, if available. However, as most of our leases do not provide an implicit rate, we use our incremental borrowing rate, which is a collateralized rate. To apply the incremental borrowing rate, we used a portfolio approach and grouped leases based on similar lease terms in a manner whereby we reasonably expect that the application does not differ materially from a lease-by-lease approach.

Our leases have remaining lease terms of approximately 1 year to 12 years, which may include the option to extend the lease when it is reasonably certain we will exercise that option. We do not have lease agreements with residual value guarantees, sale leaseback terms, or material restrictive covenants.

Leases with an initial term of 12 months or less are not recognized on the balance sheet. We recognize lease expense for these leases on a straight-line basis over the lease term.

Our operating lease expense for the years ended December 31, 2022, 2021, and 2020 was \$41.6 million, \$42.5 million, and \$42.4 million, respectively. Charges related to our operating leases that are variable and, therefore, not included in the measurement of the lease liabilities were \$16.9 million and \$16.2 million for the years ended December 31, 2022 and 2021, respectively. We made lease payments of \$42.6 million and \$47.4 million during the years ended December 31, 2022 and 2021, respectively.

The following table shows our minimum future lease commitments due in each of the next five years and thereafter for operating leases:

Minimum Future Lease Commitments (in millions)	
2023	\$ 44.1
2024	42.4
2025	33.0
2026	36.7
2027	28.4
Thereafter	53.2
Total minimum lease commitments	237.8
Adjustment for discount to present value	23.8
Present value of lease liabilities	\$ 214.0

The following table summarizes the weighted-average remaining lease terms and weighted-average discount rates for our operating leases:

As of December 31, 2022

Weighted-average remaining lease term (in years)	6.2
Weighted-average discount rate	3.2%

12. Stock-Based Compensation

Stock-Based Compensation Plans

Our shareholders approved the Morningstar Amended and Restated 2011 Stock Incentive Plan (the 2021 Plan) on May 14, 2021 and authorized an additional 1,050,000 shares for issuance under the 2021 Plan. As of that date, we stopped granting awards under the Morningstar 2011 Stock Incentive Plan (the 2011 Plan). The 2021 Plan amended and restated the 2011 Plan, which itself had amended and restated the 2004 Stock Incentive Plan (the 2004 Plan). The 2004 Plan amended and restated the Morningstar 1993 Stock Option Plan, the Morningstar 2000 Stock Option Plan, and the Morningstar 2001 Stock Option Plan.

The 2021 Plan provides for a variety of equity-based awards, including, among other things, restricted stock units, restricted stock, performance share awards, market stock units, and stock options. Under the 2011 Plan, we primarily granted restricted stock units, stock options, and market stock unit awards. We granted restricted stock units, restricted stock, and stock options under the 2004 Plan.

All officers, other employees, non-employee directors, and consultants or other independent contractors of the company and its subsidiaries and persons expected to become the same are eligible to receive awards under the 2021 Plan.

Shares delivered under the 2021 Plan may be authorized but unissued shares, or authorized but issued shares that we reacquired and held as treasury shares or otherwise, or any combination of the foregoing. The 2021 Plan no longer permits the replenishment of its share reserve with shares withheld by the company to pay the exercise price of an option or to pay tax withholdings on any award. Further, the 2021 Plan prohibits the replenishment of the share reserve with shares that are not issued as a result of the net settlement of a stock option or stock appreciation right (SAR) or shares that are repurchased on the open market using proceeds from the exercise of a stock option.

The following table summarizes the number of shares available for future grants under our 2021 Plan:

(in millions)	As of December 31	
	2022	
Shares available for future grants	2.9	

Accounting for Stock-Based Compensation Awards

The following table summarizes our stock-based compensation expense and the related income tax benefit we recorded in the past three years:

(in millions)	Year ended December 31		
	2022	2021	2020
Restricted stock units	\$ 35.9	\$ 25.8	\$ 22.2
Performance share awards	37.2	10.6	10.2
Market stock units	10.1	5.5	4.2
Total stock-based compensation expense	\$ 83.2	\$ 41.9	\$ 36.6
Income tax benefit related to the stock-based compensation expense	\$ 18.3	\$ 8.9	\$ 6.7

The following table summarizes the stock-based compensation expense included in each of our operating expense categories for the past three years:

(in millions)	Year ended December 31		
	2022	2021	2020
Cost of revenue	\$ 21.6	\$ 16.5	\$ 13.5
Sales and marketing	8.5	4.4	4.6
General and administrative	53.1	21.0	18.5
Total stock-based compensation expense	\$ 83.2	\$ 41.9	\$ 36.6

The following table summarizes the amount of unrecognized stock-based compensation expense as of December 31, 2022 and the expected number of months over which the expense will be recognized:

	Unrecognized stock-based compensation expense (in millions)	Weighted average expected amortization period (months)
Restricted stock units	\$ 65.4	31
Performance share awards	0.6	41
Market stock units	18.1	27
Total unrecognized stock-based compensation expense	\$ 84.1	30

In accordance with FASB ASC 718, we estimate forfeitures of employee stock-based awards and recognize compensation cost only for those awards expected to vest.

Restricted Stock Units

Restricted stock units (RSUs) represent the right to receive a share of Morningstar common stock when that unit vests. RSUs granted to employees typically vest ratably over a four-year period. RSUs granted to non-employee directors vest ratably over a three-year period.

We measure the fair value of our RSUs on the grant date based on the closing market price of the underlying common stock on the day prior to grant. We amortize that value to stock-based compensation expense, net of estimated forfeitures, ratably over the vesting period.

The following table summarizes restricted stock unit activity during the past three years:

Restricted Stock Units (RSUs)	Total	Weighted Average Grant Date Fair Value
RSUs Outstanding—December 31, 2019	459,445	\$ 108.61
Granted	245,078	153.01
Vested	(240,297)	108.94
Forfeited	(27,459)	119.22
RSUs Outstanding—December 31, 2020	436,767	\$ 132.68
Granted	187,916	246.85
Vested	(229,063)	141.04
Forfeited	(23,910)	166.99
RSUs Outstanding—December 31, 2021	371,710	\$ 183.04
Granted	275,106	254.93
Vested	(234,971)	205.42
Forfeited	(21,978)	213.69
RSUs Outstanding—December 31, 2022	389,867	\$ 218.55

Market Stock Units

Beginning in May 2017, executive officers, other than Joe Mansueto, and certain other employees, were granted market stock units (MSUs). These MSUs represent the right to receive a target number of shares that will vest at the end of a three-year performance period depending on the company's total shareholder return over that three-year period. The MSUs granted to the executive officers and certain other employees also have a feature that will provide an increased number of shares that can be earned at the vesting date, if certain revenue metrics are exceeded or other performance goals are met as determined at the discretion of the board of directors.

We measure the fair value of our MSUs on the grant date using a Monte Carlo valuation model. We amortize that value to stock-based compensation expense ratably over the vesting period.

We used the following assumptions to estimate the fair value of our MSUs:

Grant Date	Assumptions for Monte Carlo Valuation Model		
	Expected volatility	Dividend yield	Risk-free interest rate
May 15, 2019	20.3%	0.84%	2.17%
November 15, 2019	21.0%	0.72%	1.59%
May 15, 2020	25.4%	0.83%	0.20%
November 15, 2020	26.9%	0.58%	0.23%
May 15, 2021	28.0%	0.51%	0.33%
November 15, 2021	26.9%	0.40%	0.85%
May 15, 2022	29.6%	0.59%	2.79%
November 15, 2022	31.8%	0.60%	4.24%

The table below shows MSUs granted and outstanding as of December 31, 2022:

	As of December 31, 2022
MSUs granted during 2022	83,309
Weighted average grant date fair value	\$ 220.73
Number of MSUs outstanding	133,341

PitchBook Bonus Plan

We have a management bonus sub-plan under the 2011 Plan (or any successor Morningstar plan including the 2021 Plan) for certain employees of PitchBook (the PitchBook Plan).

We renewed the PitchBook Plan for the 2020-2022 period. Pursuant to the terms of this renewal, awards having an aggregate target value equal to \$30.0 million will be available for issuance with annual grants of \$7.5 million for 2020, \$7.5 million in 2021, and \$15.0 million in 2022.

We also renewed the PitchBook Plan for the 2023-2025 period. Pursuant to the terms of this renewal, awards having an aggregate target value equal to \$28.6 million will be available for issuance with annual grants of \$7.15 million for 2023, \$7.15 million in 2024, and \$14.3 million in 2025.

Each grant will consist of performance-based share unit awards, which will typically vest over a one-year period and will be measured primarily based on the achievement of certain annual revenue targets specifically related to PitchBook's business. Upon achievement of these targets, earned performance units will be settled in shares of our common stock on a one-for-one basis. If PitchBook exceeds certain performance conditions, the PitchBook Plan participants will receive additional performance units in excess of the aggregate target values described above. If PitchBook fails to meet threshold performance conditions, the PitchBook Plan participants will not be entitled to receive payment for any performance units.

The table below shows performance share awards granted and outstanding as of December 31, 2022:

	As of December 31, 2022
Performance share awards granted during 2022	76,445
Weighted average grant date fair value	\$ 296.68
Number of performance share awards outstanding	63,087

13. Defined-Contribution Plan

We sponsor a defined-contribution 401(k) plan, which allows our U.S.-based employees to voluntarily contribute pretax dollars up to a maximum amount allowable by the U.S. Internal Revenue Service. In 2022, 2021, and 2020, we made matching contributions to our 401(k) plan in an amount equal to 75 cents for every dollar of an employee's contribution, up to a maximum of 7% of the employee's compensation in the pay period.

The following table summarizes our matching contributions:

(in millions)	2022	2021	2020
401(k) matching contributions	\$ 19.7	\$ 16.2	\$ 14.5

14. Income Taxes

Income Tax Expense and Effective Tax Rate

The following table shows our income tax expense and our effective tax rate for the years ended December 31, 2022, 2021, and 2020:

(in millions)	2022	2021	2020
Income before income taxes and equity in net income (loss) of unconsolidated entities	\$ 130.6	\$ 250.5	\$ 283.0
Equity in net income (loss) of unconsolidated entities	(3.6)	5.4	0.3
Total	\$ 127.0	\$ 255.9	\$ 283.3
Income tax expense	\$ 56.5	\$ 62.6	\$ 59.7
Effective tax rate	44.5%	24.5%	21.1%

Our effective tax rate for the year ended December 31, 2022 was 44.5%, an increase of 20.0 percentage points, compared with 24.5% in the prior year. The increase was primarily attributable to minimum taxes, non-deductible expenses, and additional reserves for uncertain tax positions.

Our effective tax rate for the year ended December 31, 2021 was 24.5%, an increase of 3.4 percentage points, compared with 21.1% in 2020. The increase was primarily attributable to minimum taxes and non-deductible expenses.

The amount of accumulated undistributed earnings of our foreign subsidiaries was \$240.1 million as of December 31, 2022. We generally consider our U.S. directly-owned foreign subsidiary earnings to be permanently reinvested. We have not recorded deferred income taxes on the \$240.1 million primarily because most of these earnings were previously subject to the one-time deemed mandatory repatriation tax under the Tax Cuts and Jobs Act of 2017 (Tax Reform Act). We maintain a deferred tax liability for foreign withholding taxes on certain foreign affiliate parent companies that are not indefinitely reinvested.

The following table reconciles our income tax expense at the U.S. federal income tax rate to income tax expense as recorded:

(in millions, except percentages)	2022		2021		2020	
	Amount	%	Amount	%	Amount	%
Income tax expense at U.S. federal rate	\$ 26.7	21.0%	\$ 53.7	21.0%	\$ 59.5	21.0%
State income taxes, net of federal income tax benefit	6.4	5.0	10.7	4.2	9.5	3.4
Stock-based compensation activity	(1.5)	(1.2)	(7.2)	(2.8)	(4.9)	(1.7)
Equity in net income (loss) of unconsolidated subsidiaries (including holding gains upon acquisition)	1.0	0.8	0.2	0.1	(13.8)	(4.9)
Acquisition earn-out	1.8	1.4	5.1	2.0	7.6	2.7
Net change in valuation allowance related to non-U.S. deferred tax assets, including net operating losses	7.7	6.1	0.1	—	2.7	1.0
Difference between U.S. federal statutory and foreign tax rates and other impacts of foreign operations	(1.9)	(1.5)	(2.6)	(1.0)	(0.1)	—
Change in unrecognized tax benefits	14.1	11.1	(0.2)	(0.1)	1.2	0.4
Credits and incentives	(3.8)	(3.0)	(2.1)	(0.8)	(2.2)	(0.8)
Foreign tax provisions (GILTI, FDII, and BEAT)(1)	(4.6)	(3.6)	(0.7)	(0.3)	(2.7)	(1.0)
Non-deductible expenses and other, net	10.6	8.4	5.6	2.2	2.9	1.0
Total income tax expense	\$ 56.5	44.5%	\$ 62.6	24.5%	\$ 59.7	21.1%

(1) The Tax Reform Act established the Global Intangible Low-Tax Income (GILTI) provision, which taxes U.S. allocated expenses and certain income from foreign operations; the Foreign-Derived Intangible Income (FDII) provision, which allows a deduction against certain types of U.S. taxable income resulting in a lower effective U.S. tax rate on such income; and the Base Erosion Anti-Abuse Tax (BEAT), which is a minimum tax based on cross-border service payments by U.S. entities.

The following table shows the components of our income tax expense:

(in millions)	Year ended December 31		
	2022	2021	2020
Current tax expense:			
U.S.			
Federal	\$ 49.1	\$ 38.3	\$ 31.5
State	14.9	13.6	11.7
Non-U.S.	30.1	23.0	23.0
Current tax expense	94.1	74.9	66.2
Deferred tax expense (benefit):			
U.S.			
Federal	(20.8)	(2.8)	1.2
State	(6.8)	(0.3)	0.4
Non-U.S.	(10.0)	(9.2)	(8.1)
Deferred tax expense, net	(37.6)	(12.3)	(6.5)
Income tax expense	\$ 56.5	\$ 62.6	\$ 59.7

The following table provides our income before income taxes and equity in net income (loss) of unconsolidated entities, generated by our U.S. and non-U.S. operations:

(in millions)	Year ended December 31		
	2022	2021	2020
U.S.	\$ 82.4	\$ 218.3	\$ 197.4
Non-U.S.	48.2	32.2	85.6
Income before income taxes and equity in net income (loss) of unconsolidated entities	\$ 130.6	\$ 250.5	\$ 283.0

Deferred Tax Assets and Liabilities

We recognize deferred income taxes for the temporary differences between the carrying amount of assets and liabilities for financial statement purposes and their tax basis. The tax effects of the temporary differences that give rise to the deferred income tax assets and liabilities are as follows:

(in millions)	As of December 31,	
	2022	2021
Deferred tax assets:		
Stock-based compensation expense	\$ 10.0	\$ 3.7
Accrued liabilities	25.8	24.8
Deferred revenue	9.2	7.9
Net operating loss carryforwards—U.S.	0.1	0.3
Net operating loss carryforwards—Non-U.S.	15.8	8.1
Capitalized expenses	34.5	1.3
Deferred royalty revenue	0.1	0.2
Allowance for doubtful accounts	1.9	1.5
Lease liabilities	39.7	29.7
Other	0.1	0.7
Total deferred tax assets	137.2	78.2
Deferred tax liabilities:		
Acquired intangible assets	(75.4)	(84.7)
Property, equipment, and capitalized software	(36.2)	(30.8)
Lease right-of-use assets	(33.1)	(23.4)
Unrealized exchange gains, net	(0.1)	(1.4)
Prepaid expenses	(19.5)	(16.5)
Investments in unconsolidated entities	(7.7)	(5.3)
Withholding tax—foreign dividends	(0.4)	(0.4)
Total deferred tax liabilities	(172.4)	(162.5)
Net deferred tax liability before valuation allowance	(35.2)	(84.3)
Valuation allowance	(16.9)	(4.6)
Deferred tax liabilities, net	\$ (52.1)	\$ (88.9)

The net increase in our valuation allowance, from \$4.6 million at December 31, 2021 to \$16.9 million at December 31, 2022, was primarily attributable to non-U.S. net operating loss carryforwards from a 2022 acquisition, which reflect a full valuation allowance (for which our estimates are provisional and subject to revision within one year of the acquisition date) and the impairment of deferred tax assets related to the reduction and shift of our China operations.

The deferred tax assets and liabilities are presented in our Consolidated Balance Sheets as follows:

(in millions)	As of December 31,	
	2022	2021
Deferred tax asset, net	\$ 10.8	\$ 12.8
Deferred tax liability, net	(62.9)	(101.7)
Deferred tax liability, net	\$ (52.1)	\$ (88.9)

The following table summarizes our U.S. net operating loss (NOL) carryforwards:

(in millions)	2022		As of December 31, 2021	
	Expiration Dates		Expiration Dates	
U.S. federal NOLs subject to expiration dates	\$ 0.1	2023	\$ 0.3	2023
U.S. federal NOLs with no expiration dates	—	—	0.9	—
Total	\$ 0.1		\$ 1.2	

The net decrease in the U.S. federal NOL carryforwards as of December 31, 2022 compared with 2021 reflects NOLs utilized in 2022. We have not recorded a valuation allowance against the U.S. federal NOLs of \$0.1 million because we expect the benefit of the U.S. federal NOLs to be fully utilized.

The following table summarizes our NOL carryforwards for our non-U.S. operations:

(in millions)	As of December 31,	
	2022	2021
Non-U.S. NOLs subject to expiration dates from 2024 through 2042	\$ 9.6	\$ 10.2
Non-U.S. NOLs with no expiration date	52.9	21.6
Total	\$ 62.5	\$ 31.8
Non-U.S. NOLs not subject to valuation allowances	\$ 12.2	\$ 14.2

The increase in non-U.S. NOL carryforwards as of December 31, 2022 compared with the same period in 2021 primarily reflects NOLs from 2022 acquisitions offset by NOLs utilized in 2022.

In assessing the realizability of our deferred tax assets, we consider whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. We recorded a valuation allowance against approximately \$50.3 million of the non-U.S. NOLs, reflecting the likelihood that the benefit of these NOLs will not be realized.

Unrecognized Tax Benefits

We conduct business globally and, as a result, we file income tax returns in U.S. federal, state, local, and foreign jurisdictions. In the normal course of business, we are subject to examination by tax authorities throughout the world. The open tax years for our U.S. Federal tax returns and most state tax returns include the years 2016 to the present.

We are currently under audit by federal, state, and local tax authorities in the U.S. as well as tax authorities in certain non-U.S. jurisdictions. It is likely that the examination phase of some of these federal, state, local, and non-U.S. audits will conclude in 2023. It is not possible to estimate the effect of current audits on previously recorded unrecognized tax benefits.

As of December 31, 2022, our Consolidated Balance Sheet included a current liability of \$18.3 million and a non-current liability of \$6.0 million for unrecognized tax benefits. As of December 31, 2021, our Consolidated Balance Sheet included a current liability of \$7.2 million and a non-current liability of \$5.2 million for unrecognized tax benefits. These amounts include interest and penalties, less any associated tax benefits.

The table below reconciles the beginning and ending amount of the gross unrecognized tax benefits as follows:

(in millions)	2022	2021
Gross unrecognized tax benefits—beginning of the year	\$ 11.4	\$ 11.8
Increases as a result of tax positions taken during a prior-year period	11.3	0.2
Decreases as a result of tax positions taken during a prior-year period	—	(0.2)
Increases as a result of tax positions taken during the current period	7.7	1.1
Decreases relating to settlements with tax authorities	(3.1)	—
Decreases as a result of lapse of the applicable statute of limitations	(0.8)	(1.5)
Gross unrecognized tax benefits—end of the year	\$ 26.5	\$ 11.4

In 2022, we recorded a net increase of \$19.0 million of gross unrecognized tax benefits before settlements and lapses of statutes of limitations, of which \$19.0 million increased our income tax expense by \$18.8 million.

Of the \$19.0 million net increase in our gross unrecognized tax benefits, \$13.7 million is related to a tax election that was filed but for which approval is required by a taxing authority before we can recognize the tax benefits of our election in our Consolidated Statements of Income. We recorded the \$13.7 million as a current liability in our reserves for uncertain tax positions since it is likely that we will receive a response from the taxing authority in 2023.

In addition, we reduced our unrecognized tax benefits by \$3.9 million for settlements and lapses of statutes of limitations, of which \$1.8 million decreased our income tax expense by \$1.8 million.

As of December 31, 2022, we had \$26.5 million of gross unrecognized tax benefits, which if recognized, would decrease our income tax expense by \$26.1 million and reduce our effective income tax rate.

We record interest and penalties related to uncertain tax positions as part of our income tax expense. The following table summarizes our gross liability for interest and penalties:

(in millions)	As of December 31,	
	2022	2021
Liabilities for interest and penalties	\$ 1.7	\$ 1.4

We recorded the increase in the liabilities for penalties and interest, net of any tax benefits, to income tax expense in our Consolidated Statements of Income in 2022.

15. Contingencies

We record accrued liabilities for litigation, regulatory, and other business matters when those matters represent loss contingencies that are both probable and estimable. In these cases, there may be an exposure to loss in excess of any amounts accrued. Unless a loss contingency is both probable and estimable, we do not establish an accrued liability. As litigation, regulatory, or other business matters develop, we evaluate on an ongoing basis whether such matters present a loss contingency that is probable and estimable.

Data Audits and Reviews

In our global data business, we include in our products, or directly redistribute to our customers, data and information licensed from third-party vendors. Our compliance with the terms of these licenses is reviewed internally and is also subject to audit by the third-party vendors. At any given time, we may be undergoing several such internal reviews and third-party vendor audits and the results and findings may indicate that we may be required to make a payment for prior data usage. Due to a lack of available information and data, as well as potential variations of any audit or internal review findings, we generally are not able to reasonably estimate a possible loss, or range of losses, for these matters. In situations where more information or specific areas subject to audit are available, we may be able to estimate a potential range of losses. While we cannot predict the outcome of these processes, we do not anticipate they will have a material adverse effect on our business, operating results, or financial position. Our financial results as of December 31, 2022 include an immaterial accrual related to certain in-progress audits and reviews.

Ratings and Regulatory Matters

Our ratings and related research activities, including credit ratings, ESG ratings, managed investment and equity ratings, are or may in the future become subject to regulation or increased scrutiny from executive, legislative, regulatory and private parties. Accordingly, those activities may be subject to governmental, regulatory, and legislative investigations, regulatory examinations in the ordinary course of business, subpoenas and other forms of legal process, and ultimately claims and litigation brought by governmental and private parties that are based on ratings assigned or research issued in connection with these activities or that are otherwise incidental to these activities. Our regulated businesses are generally subject to periodic reviews, inspections, examinations, and investigations by regulators in the jurisdictions in which they operate, any of which may result in claims, legal proceedings, assessments, fines, penalties, disgorgement, or restrictions on business activities. While it is difficult to predict the outcome of any particular investigation or proceeding, we do not believe the result of any of these matters will have a material adverse effect on our business, operating results, or financial position.

Other Matters

We are involved from time to time in commercial disputes and legal proceedings that arise in the normal course of our business. While it is difficult to predict the outcome of any particular dispute or proceeding, we do not believe the result of any of these matters will have a material adverse effect on our business, operating results, or financial position.

16. Share Repurchase Program

In December 2020, the board of directors approved a share repurchase program that authorized the company to repurchase up to \$400.0 million in shares of the company's outstanding common stock. As of December 31, 2022, we repurchased a total of 887,774 shares for \$227.3 million under this authorization.

On December 6, 2022, the board of directors approved a new share repurchase program that authorizes the company to repurchase up to \$500.0 million in shares of the company's outstanding common stock, effective January 1, 2023. The new program will replace the existing program and the new authorization expires on December 31, 2025.

Under this authorization, we may repurchase shares from time to time at prevailing market prices on the open market or in private transactions in amounts that we deem appropriate.

17. Recent Accounting Pronouncements

Recently adopted accounting pronouncements

Current Expected Credit Losses: On June 16, 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU No. 2016-13), which requires that expected credit losses relating to financial assets measured on an amortized cost basis and available-for-sale debt securities be recorded through an allowance for credit losses. ASU No. 2016-13 limits the amount of credit losses to be recognized for available-for-sale debt securities to the amount by which carrying value exceeds fair value and requires the reversal of previously recognized credit losses if fair value increases. On April 25, 2019, the FASB issued ASU No. 2019-04, *Codification Improvements* (ASU No. 2019-04), which clarifies certain aspects of accounting for credit losses. On May 15, 2019, the FASB issued ASU No. 2019-05, *Financial Instruments—Credit Losses (Topic 326): Targeted Transition Relief* (ASU No. 2019-05), which allows entities to elect the fair value option on certain financial instruments. The new standard became effective for us on January 1, 2020 and was applied prospectively. As a result of the adoption of these standards, we made changes to our processes for the assessment of the adequacy of our allowance for credit losses on certain types of financial instruments, including accounts receivable. The adoption of ASU No. 2016-13, ASU No. 2019-04, and ASU No. 2019-05 did not have a material impact on the consolidated financial statements, related disclosures, or results of operations.

Cloud Computing: On August 29, 2018, the FASB issued ASU No. 2018-15, *Customer's Accounting for Fees Paid in a Cloud Computing Arrangement* (ASU No. 2018-15), which helps entities evaluate the accounting for fees paid by a customer in a cloud computing arrangement (CCA) by providing guidance for determining when an arrangement includes a software license and when an arrangement is solely a hosted CCA service. The company adopted this guidance prospectively beginning on January 1, 2020. Upon adoption, fees paid in a CCA will be evaluated for capitalization as a prepaid asset and expensed within the results of operations in the same financial statement line item as software license fees instead of depreciation and amortization expense. The adoption of ASU No. 2018-15 did not have a material impact on the consolidated financial statements, related disclosures, or results of operations.

Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement: On August 28, 2018, the FASB issued ASU No. 2018-13, *Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* (ASU No. 2018-13), which eliminates, adds, and modifies certain disclosure requirements around items such as transfers between Level 1 and 2, policy of timing of transfers, and valuation process for Level 3. The new standard became effective for us on January 1, 2020. Except for limited additions to related disclosures, the adoption of ASU No. 2018-13 did not have a material impact on our consolidated financial statements.

Income Taxes: On December 18, 2019, the FASB issued ASU No. 2019-12, *Simplifying the Accounting for Income Taxes* (ASU No. 2019-12), which is intended to simplify the accounting for income taxes by removing certain exceptions to the general principles of ASC 740, *Income Taxes*, and providing for simplification in several other areas. The new standard became effective for us on January 1, 2021. The adoption of ASU No. 2019-12 did not have a material impact on our consolidated financial statements, related disclosures, or results of operations.

Reference Rate Reform: On March 12, 2020, the FASB issued ASU No. 2020-04: *Facilitation of the Effects of Reference Rate Reform on Financial Reporting* (Topic 848) (ASU No. 2020-04), which provides temporary optional expedients and exceptions for applying generally accepted accounting principles to contract modifications resulting from reference rate reform initiatives. The intention of

the standard is to ease the potential accounting and financial reporting burden associated with transitioning away from the expiring London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative benchmark rates. The amendments in this update are applicable to contract modifications that replace a reference LIBOR rate beginning on March 12, 2020 through December 31, 2022. On May 6, 2022, we terminated our 2019 Credit Agreement and entered into the 2022 Credit Agreement in connection with the acquisition of LCD. As we entered into the 2022 Credit Agreement for reasons unrelated to reference rate reform, ASU No. 2020-04 is not applicable. See Note 3 for additional information on our 2022 Credit Agreement and Note 8 for additional information on our acquisition of LCD.

Business Combinations: On October 28, 2021, the FASB issued ASU No. 2021-08: *Business Combinations: Accounting for Contract Assets and Contract Liabilities from Contracts with Customers* (Topic 805) (ASU No. 2021-08), which requires contract assets and contract liabilities (i.e., deferred revenue) acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with ASC 606, *Revenue from Contracts with Customers*. Generally, the new standard will result in the acquirer recognizing contract assets and contract liabilities at the same amounts recorded by the acquiree. Under current U.S. GAAP, contract assets and contract liabilities acquired in a business combination are recorded by the acquirer at fair value. ASU No. 2021-08 creates an exception to the general recognition and measurement principles of ASC 805, *Business Combinations* (ASC 805). The new standard is effective for us on January 1, 2023. Early adoption is permitted, including in an interim period, for any period for which financial statements have not yet been issued. Entities should apply the new guidance on a prospective basis to all business combinations with an acquisition date on or after the effective date. We elected to early adopt ASU No. 2021-08 during the second quarter of 2022 and the adoption did not have a material effect on our consolidated financial statements, related disclosures, and results of operations.

18. Subsequent Events

Morningstar Japan K.K.

On January 27, 2023, we entered into a Termination Agreement (the Termination Agreement) with MJKK, and a Tender Offer Agreement (the Tender Offer Agreement) with SBI Global Asset Management Co., Ltd. (SBI).

Pursuant to the Termination Agreement, MJKK will cease use of the Morningstar brand and Morningstar and MJKK agreed to terminate the License Agreement originally entered into in 1998. As consideration for the transaction, Morningstar agreed to pay MJKK 8 billion Japanese yen (approximately \$60.0 million), comprised of 6 billion Japanese yen (approximately \$45.0 million), paid upon termination of the License Agreement on March 30, 2023, and a contingent payment of 2 billion Japanese yen (approximately \$15.0 million), paid upon the achievement of certain conditions related primarily to the termination of the use of the Morningstar brand by MJKK's customers.

As part of such transaction, pursuant to the Tender Offer Agreement, Morningstar agreed to tender up to 10 million shares in MJKK to SBI. The tender period is expected to conclude on February 28, 2023.

LCD Contingent Consideration

On February 6, 2023, we made a cash payment of \$50.0 million, resolving our contingent consideration liability related to our acquisition of LCD. See Note 8 for additional information on our acquisition of LCD.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

We design disclosure controls and procedures to reasonably assure that information required to be disclosed in the reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to reasonably assure that information required to be disclosed in the reports filed under the Exchange Act is accumulated and communicated to management, including the chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

We completed an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act, as of December 31, 2022. Management, including our chief executive officer and chief financial officer, participated in and supervised this evaluation. Based on that evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures are effective to provide reasonable assurance that information required to be disclosed in the reports we file or submit under the Exchange Act meets the requirements listed above.

(b) Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our 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 U.S. generally accepted accounting principles.

We carried out an evaluation, under the supervision and with the participation of our management, including our chief executive officer and chief financial officer, of the effectiveness of our internal control over financial reporting based on the framework set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on that evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

On June 1, 2022, we completed our acquisition of Leveraged Commentary & Data (LCD), and, on June 30, 2022, we completed our acquisition of Praemium Portfolio Services Limited (Praemium) (See Note 8 of the Notes to the Consolidated Financial Statements for more information). We are currently integrating LCD and Praemium into our internal control framework and processes and, pursuant to the SEC's guidance that an assessment of a recently acquired business may be omitted from the scope of an assessment in the year of acquisition, the scope of our assessment of the effectiveness of our internal control over financial reporting as of December 31, 2022 will not include LCD and Praemium. The operations of LCD are 0.5% of our consolidated assets and 1.8% of our consolidated revenue as of and for the year ended December 31, 2022, respectively. The operations of Praemium are 0.4% of our consolidated assets, and 0.3% of our consolidated revenue as of and for the year ended December 31, 2022, respectively.

KPMG LLP, an independent registered public accounting firm, issued its report on the effectiveness of our internal control over financial reporting, which is included in Part II, Item 8 of this report under the caption “Financial Statements and Supplementary Data” and incorporated herein by reference.

(c) Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the fiscal quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

There is no information that was required to be disclosed in a report on Form 8-K during the fourth quarter of the year covered by this report that was not reported.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

Part III

Item 10. Directors, Executive Officers, and Corporate Governance

The information contained under the headings Proposal 1—Election of Directors, Board of Directors and Corporate Governance—Independent Directors, Board of Directors and Corporate Governance—Board Committees and Charters, and Delinquent Section 16(a) Reports in the definitive proxy statement for our 2023 Annual Meeting of Shareholders (the Proxy Statement) and the information contained under the heading Executive Officers in Part I of this report is incorporated herein by reference in response to this item.

We have adopted a code of ethics, which is posted in the Investor Relations area of our corporate website at <https://shareholders.morningstar.com> in the Governance section. We intend to include on our website any amendments to, or waivers from, a provision of the code of ethics that apply to our principal executive officer, principal financial officer, principal accounting officer, or controller that relates to any element of the code of ethics definition contained in Item 406(b) of SEC Regulation S-K. Shareholders may request a free copy of these documents by sending an e-mail to investors@morningstar.com.

Item 11. Executive Compensation

The information contained under the headings Director Compensation, Compensation Discussion and Analysis, Compensation Committee Report, and Executive Compensation in the Proxy Statement is incorporated herein by reference in response to this item.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information contained under the headings Security Ownership of Certain Beneficial Owners and Equity Compensation Plan Information in the Proxy Statement is incorporated herein by reference in response to this item.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information contained under the headings Certain Relationships and Related Party Transactions and Director Independence in the Proxy Statement is incorporated herein by reference in response to this item.

Item 14. Principal Accountant Fees and Services

The information contained under the headings Audit Committee Report and Principal Accounting Firm Fees in the Proxy Statement is incorporated herein by reference in response to this item.

Part IV

Item 15. Exhibits and Financial Statement Schedules

(a)

1. Consolidated Financial Statements

The following documents are filed as part of this Annual Report on Form 10-K under Item 8—Financial Statements and Supplementary Data:

Report of KPMG LLP, Independent Registered Public Accounting Firm

Financial Statements:

- Consolidated Statements of Income—Years ended December 31, 2022, 2021, and 2020
- Consolidated Statements of Comprehensive Income—Years ended December 31, 2022, 2021, and 2020
- Consolidated Balance Sheets—December 31, 2022 and 2021
- Consolidated Statements of Equity—Years ended December 31, 2022, 2021, and 2020
- Consolidated Statements of Cash Flows—Years ended December 31, 2022, 2021, and 2020
- Notes to Consolidated Financial Statements

2. Financial Statement Schedules

Report of Independent Registered Public Accounting Firm

The report of KPMG LLP dated February 24, 2023 concerning the Financial Statement Schedule II, Morningstar, Inc., and subsidiaries Valuation and Qualifying Accounts, is included at the beginning of Part II, Item 8 of this Annual Report on Form 10-K for the years ended December 31, 2022, December 31, 2021, and December 31, 2020.

The following financial statement schedule is filed as part of this Annual Report on Form 10-K:

Schedule II: Valuation and Qualifying Accounts

All other schedules have been omitted as they are not required, not applicable, or the required information is otherwise included.

(in millions)	Balance at Beginning of Year	Charged (Credited) to Costs & Expenses	Additions (Deductions) Including Currency Translations	Balance at End of Year
Allowance for doubtful accounts: Year ended December 31,				
2022	\$ 4.5	\$ 3.8	\$ (1.7)	\$ 6.6
2021	4.2	1.9	(1.6)	4.5
2020	4.1	2.8	(2.7)	4.2

3. Exhibits

Exhibit	Description
2.1	Agreement and Plan of Merger, dated May 28, 2019, by and among Morningstar, Alpine Merger Co., Ratings Acquisition Corp and Shareholder Representative Services LLC is incorporated by reference to Exhibit 2.1 to our Current Report on Form 8-K that we filed with the SEC on June 3, 2019.
2.2	Asset Purchase Agreement, by and between S&P Global Inc. and Morningstar, Inc., dated as of April 3, 2022, is incorporated by reference to Exhibit 2.1 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.
2.3	Amendment to the Asset Purchase Agreement, by and between S&P Global Inc. and Morningstar, Inc., dated as of June 1, 2022, is incorporated by reference to Exhibit 2.2 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.
3.1	Amended and Restated Articles of Incorporation of Morningstar are incorporated by reference to Exhibit 3.1 to our Registration Statement on Form S-1, as amended, Registration No. 333-115209 (the Registration Statement).
3.2	By-laws of Morningstar, as in effect on February 27, 2018, are incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K that we filed with the SEC on February 28, 2018.
4.1	Specimen Common Stock Certificate is incorporated by reference to Exhibit 4.1 to the Registration Statement.
4.2	Description of Morningstar's Securities is incorporated by reference to Exhibit 4.2 to our Annual Report on Form 10-K for the year ended December 31, 2019.
10.1*	Form of Indemnification Agreement is incorporated by reference to Exhibit 10.1 to the Registration Statement.
10.2*	Morningstar Incentive Plan, as amended and restated effective January 1, 2014, is incorporated by reference to Exhibit 10.2 to our Annual Report on Form 10-K for the year ended December 31, 2013.
10.3*	Morningstar 2011 Stock Incentive Plan is incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K that we filed with the SEC on May 18, 2011.
10.4*	Morningstar Amended and Restated 2011 Stock Incentive Plan is incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K that we filed with the SEC on May 20, 2021.
10.5*	Form of Morningstar 2011 Stock Incentive Plan Director Restricted Stock Unit Award Agreement, as amended and restated effective December 3, 2015, is incorporated by reference to Exhibit 10.12 to our Annual Report on Form 10-K for the year ended December 31, 2015.
10.6*	Form of Morningstar 2011 Stock Incentive Plan CEO Restricted Stock Unit Award Agreement, for awards made on January 3, 2017, is incorporated by reference to Exhibit 10.11 to our Annual Report on Form 10-K for the year ended December 31, 2016.
10.7*	Form of Morningstar 2011 Stock Incentive Plan Market Stock Unit Award Agreement, for awards made on and after November 15, 2017 and prior to May 15, 2019, is incorporated by reference to Exhibit 10.12 to our Annual Report on Form 10-K for the year ended December 31, 2017 (the 2017 10-K).
10.8*	Form of Morningstar 2011 Stock Incentive Plan Restricted Stock Unit Award Agreement, for awards made on and after November 15, 2017 and prior to May 15, 2019, is incorporated by reference to Exhibit 10.13 to the 2017 10-K.
10.9*	Form of Morningstar 2011 Stock Incentive Plan CFO Restricted Stock Unit Award Agreement, for awards made on November 15, 2017, is incorporated by reference to Exhibit 10.14 to the 2017 10-K.
10.10*	Form of Morningstar 2011 Stock Incentive Plan Restricted Stock Unit Award Agreement, for awards made on and after May 15, 2019 and prior to May 15, 2020, is incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019.
10.11*	Form of Morningstar 2011 Stock Incentive Plan Market Stock Unit Award Agreement, for awards made on and after May 15, 2019 and prior to May 15, 2020, is incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019.
10.12*	Form of Morningstar 2011 Stock Incentive Plan Market Stock Unit with Revenue Kicker Award Agreement, for awards made on and after May 15, 2019 and prior to May 15, 2020, is incorporated by reference to Exhibit 10.3 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019.
10.13*	Form of Morningstar 2011 Stock Incentive Plan Market Stock Unit Award Agreement, for awards made on and after May 15, 2020 and prior to May 15, 2021, is incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2020.
10.14*	Form of Morningstar 2011 Stock Incentive Plan Market Stock Unit with Performance Kicker Award Agreement for awards made on and after May 15, 2020 and prior to May 15, 2021 is incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2020.
10.15*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan Restricted Stock Unit Award Agreement, for awards made on and after May 15, 2021, is incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2021.
10.16*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan Director Restricted Stock Unit Award Agreement, for awards made on and after May 15, 2021, is incorporated by reference to Exhibit 10.3 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2021.

Exhibit	Description
10.17*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan Market Stock Unit Award Agreement, for awards made on and after May 15, 2021, is incorporated by reference to Exhibit 10.4 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2021.
10.18*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan Market Stock Unit with Performance Kicker Award Agreement, for awards made on and after May 15, 2021 and prior to May 15, 2022, is incorporated by reference to Exhibit 10.5 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2021.
10.19*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan CEO Restricted Stock Unit Award Agreement, for awards made on and after May 15, 2021, is incorporated by reference to Exhibit 10.6 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2021.
10.20*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan Bonus Restricted Stock Unit Award Agreement, for awards made on and after May 15, 2022, is incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.
10.21*	Form of Morningstar Amended and Restated 2011 Stock Incentive Plan Market Stock Unit with Revenue Kicker Award Agreement, for awards made on and after May 15, 2022, is incorporated by reference to Exhibit 10.3 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.
10.22*	Contract Services Agreement dated as of February 1, 2023, between Morningstar, Inc. and Bevin Desmond, is incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K that we filed with the SEC on February 2, 2023.
10.23*	Separation Agreement and General Release dated as of February 1, 2023, between Morningstar, Inc. and Bevin Desmond, is incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K that we filed with the SEC on February 2, 2023.
10.24	Credit Agreement dated as of May 6, 2022, among Morningstar, Inc., certain subsidiaries of Morningstar, Inc., and Bank of America, N.A., is incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2022.
10.25	Amendment No. 1 to the Credit Agreement dated as of September 13, 2022, among Morningstar, Inc., certain subsidiaries of Morningstar, Inc., Bank of America, N.A. and the other lenders party thereto, is incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2022.
10.26	Amendment No. 2 to the Credit Agreement dated as of September 30, 2022, among Morningstar, Inc., certain subsidiaries of Morningstar, Inc., Bank of America, N.A. and the other lenders party thereto, is incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2022.
10.27	Note Purchase Agreement, dated as of October 26, 2020, among Morningstar and each of the purchasers signatory thereto, is incorporated by reference to our Current Report on Form 8-K filed with the SEC on October 26, 2020.
21.1†	Subsidiaries of Morningstar.
23.1†	Consent of KPMG LLP.
31.1†	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
31.2†	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.
32.1†	Certification of Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2†	Certification of Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101†	The following financial information from Morningstar's Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on February 24, 2023, formatted in Inline XBRL: (i) Cover Page, (ii) Consolidated Statements of Income, (iii) Consolidated Statements of Comprehensive Income, (iv) Consolidated Balance Sheets, (v) Consolidated Statements of Equity, (vi) Consolidated Statements of Cash Flows and (vii) the Notes to Consolidated Financial Statements.
104†	Cover Page Interactive Data File (the cover page XBRL tags are embedded in the Inline XBRL document).

* Management contract with a director or executive officer or a compensatory plan or arrangement in which directors or executive officers are eligible to participate.

† Filed or furnished herewith.

Item 16. Form 10-K Summary

None.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized on February 24, 2023.

Morningstar, Inc.

By: /s/ Kunal Kapoor

Kunal Kapoor

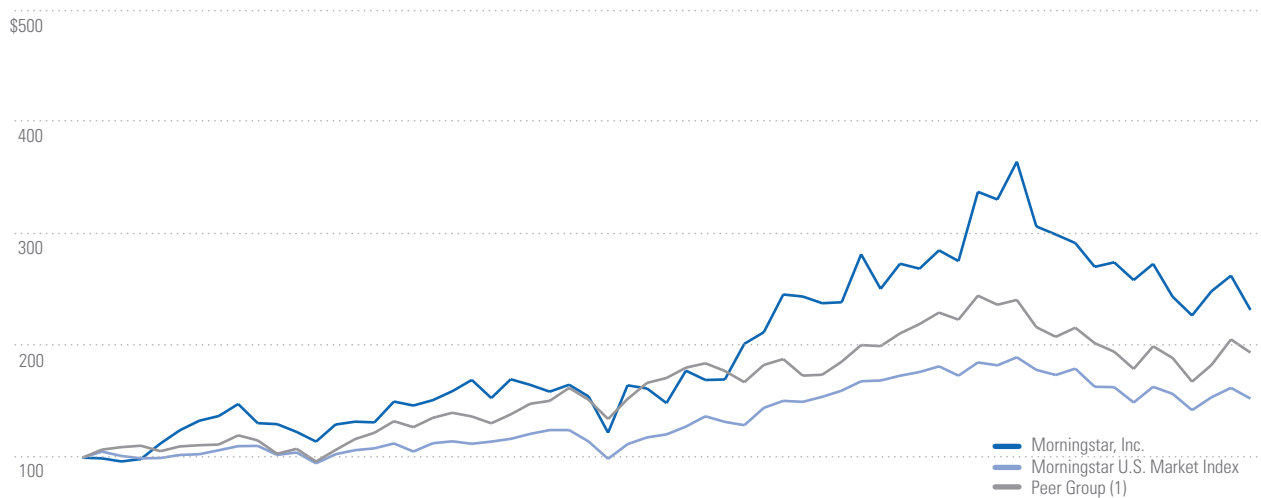
Title: Chief Executive Officer

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 and on the dates indicated.

Signature	Title	Date
/s/ Kunal Kapoor Kunal Kapoor	Chief Executive Officer (principal executive officer) and Director	February 24, 2023
/s/ Jason Dubinsky Jason Dubinsky	Chief Financial Officer (principal financial officer)	February 24, 2023
/s/ Kimberly McGarry Kimberly McGarry	Chief Accounting Officer (principal accounting officer)	February 24, 2023
/s/ Joe Mansueto Joe Mansueto	Executive Chairman and Chairman of the Board	February 24, 2023
/s/ Robin Diamonte Robin Diamonte	Director	February 24, 2023
/s/ Cheryl Francis Cheryl Francis	Director	February 24, 2023
/s/ Stephen Joynt Stephen Joynt	Director	February 24, 2023
/s/ Steven Kaplan Steven Kaplan	Director	February 24, 2023
/s/ Gail Landis Gail Landis	Director	February 24, 2023
/s/ Bill Lyons Bill Lyons	Director	February 24, 2023
/s/ Doniel Sutton Doniel Sutton	Director	February 24, 2023
/s/ Caroline Tsay Caroline Tsay	Director	February 24, 2023

Stock Price Performance Graph

The graph below shows a comparison of cumulative total return for our common stock, the Morningstar U.S. Market Index, and a group of peer companies, which are listed below the graph. The graph assumes an investment of \$100 beginning on December 31, 2017, in our common stock, the Morningstar U.S. Market Index, and the peer group, including reinvestment of dividends. The returns shown are based on historical results and are not intended to suggest future performance.



As of December 31

	2017	2018	2019	2020	2021	2022
—	\$100.00	\$114.32	\$158.83	\$245.43	\$363.82	\$231.70
—	\$100.00	\$94.95	\$124.60	\$150.64	\$189.48	\$152.66
—	\$100.00	\$96.55	\$150.66	\$187.88	\$240.61	\$193.67

(1) Our peer group consists of the following companies: Envestnet Inc., FactSet Research System Inc., Moody's Corporation, MSCI Inc., SEI Investments Company, and S&P Global Inc. The peer group is rebalanced monthly.

Corporate Headquarters

Morningstar, Inc., 22 West Washington Street, Chicago, Illinois 60602, +1 312 696-6000

Transfer Agent and Registrar

Computershare Investor Services LLC, 2 North LaSalle Street, Chicago, Illinois 60602, +1 866 303-0659 (toll free)

Ethics Hotline

Morningstar has established a confidential Ethics Hotline that anyone may use to report complaints or concerns about ethics violations, including accounting irregularities, financial misstatements, problems with internal accounting controls, or noncompliance with external rules and regulations.

The Morningstar Ethics Hotline is operated by NAVEX Global, an independent company that is not affiliated with Morningstar. The hotline is available 24 hours a day, seven days a week.

Anyone may make a confidential, anonymous report by calling the hotline toll free at: +1 800 555-8316.

Annual Meeting

Morningstar's annual meeting of shareholders will be held at 9 a.m. Central on Friday May 12, 2023.

Investor Questions

We encourage all interested parties—including securities analysts, potential shareholders, and others—to submit questions to us in writing. We publish responses to selected questions on our website and in Form 8-Ks furnished to the SEC on a regular basis. If you have a question about our business, please send it to investors@morningstar.com.

Board of Directors

- ▲ Robin Diamonte
Chief Investment Officer of
Raytheon Technologies Corp.
- Cheryl Francis
Co-Chair, Corporate Leadership
Center
- ▲■ Steve Joynt
Former Chief Executive Officer,
DBRS, Inc.
- ▲■ Steve Kaplan
Neubauer Family Distinguished
Service Professor of
Entrepreneurship and Finance,
University of Chicago Booth
School of Business
- Kunal Kapoor
Chief Executive Officer,
Morningstar, Inc.
- ▲ Gail Landis
Founding Partner of Evercore
Asset Management, LLC
- ▲■ William Lyons
Former President and Chief
Executive Officer, American
Century Companies, Inc.
- Joe Mansueto
Executive Chairman and Chairman
of the Board, Morningstar, Inc.
- Daniel Sutton
Chief People Officer, Alteryx
- ▲ Caroline Tsay
Former Chief Executive Officer of
Compute Software, Inc.

Executive Officers

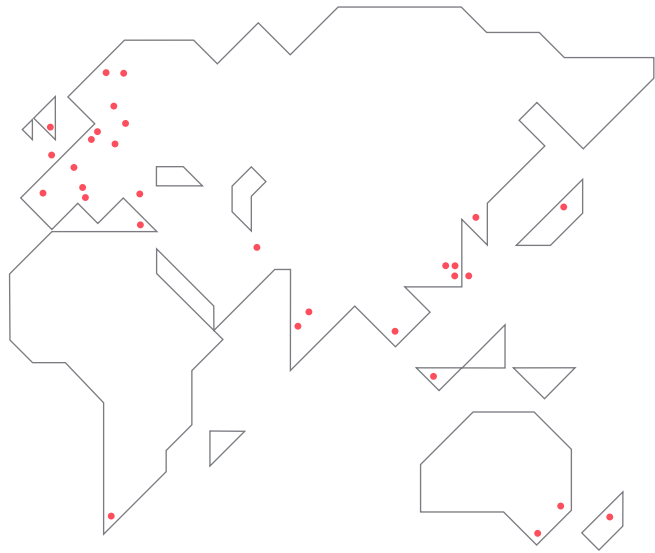
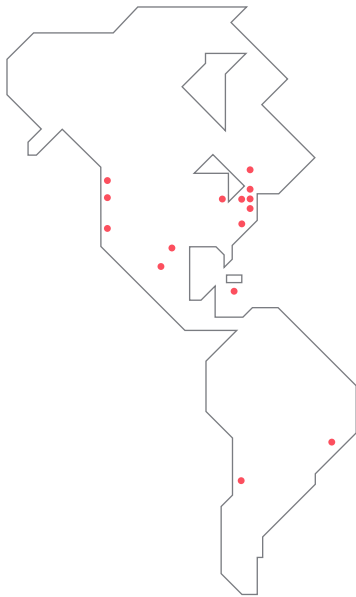
- Bevin Desmond*
Chief Talent and Culture
Officer
- Jason Dubinsky
Chief Financial Officer
- Danny Dunn
Chief Revenue Officer
- Kunal Kapoor
Chief Executive Officer
- Joe Mansueto
Executive Chairman and
Chairman of the Board

● Member of audit committee

■ Member of compensation committee

▲ Member of nominating and corporate governance committee

* During 2022, Desmond announced her retirement. Her last day of employment at Morningstar was January 31, 2023.



Canada
 Cayman Islands
 United States
 Mexico

Brazil
 Chile

Cyprus
 Denmark
 France
 Germany
 Italy
 Jersey
 Luxembourg
 The Netherlands
 Norway
 Poland
 Romania
 South Africa
 Spain
 Sweden
 Switzerland
 United Kingdom

Australia
 China
 Hong Kong
 India
 Japan
 New Zealand
 Singapore
 South Korea
 Thailand
 United Arab Emirates



