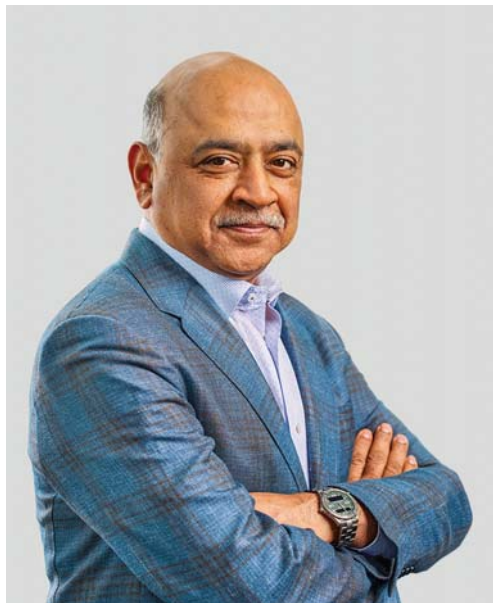


Let's Create



2022 Annual Report



Arvind Krishna
Chairman and Chief Executive Officer

Dear IBM Investor:

In 2022 we took decisive steps to build a stronger IBM, executing against a sound strategy with speed, focus, and consistency. Our growth is accelerating, our confidence is growing, and our company is gaining momentum.

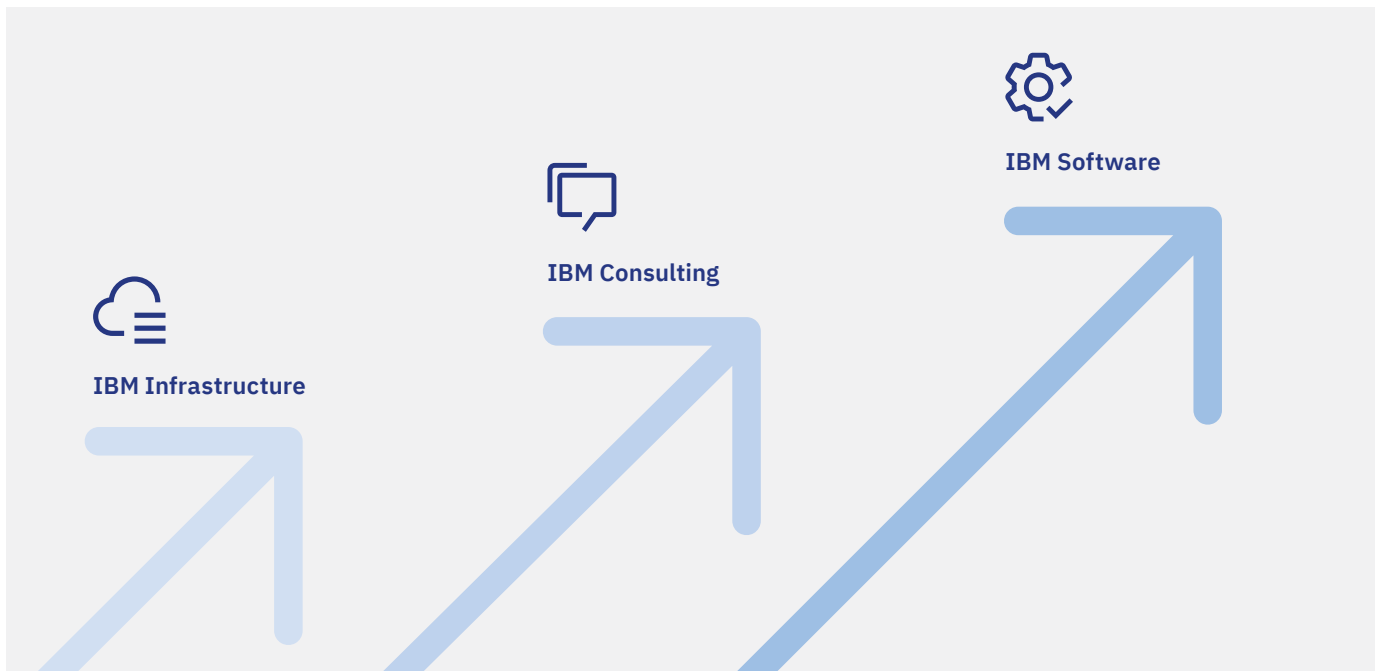
The reasons for this are clear. Our clients and partners are facing a series of specific business challenges: inflation, supply chain disruption, tight labor markets, sustainability requirements, and an ever-evolving cybersecurity threat landscape. They recognize technology as a source of competitive advantage, capable of addressing these immediate issues and future-proofing their businesses by increasing productivity, reducing costs, driving innovation, and fueling growth.

To that end, we have sharpened our focus on IBM's unique ability to integrate technology and business expertise for our clients and our partners. Our portfolio is built around hybrid cloud and artificial intelligence (AI), the two most transformational technologies of our time. And our go-to-market approach brings together the necessary software, consulting, and infrastructure our clients require, from across our expanding ecosystem of partners.

This is today's IBM.

2022 Performance

For the year, IBM generated \$60.5 billion in revenue and \$9.3 billion of free cash flow. Our focus on delivering client value fueled revenue growth of 12% at constant currency in 2022, including about four points from incremental external sales to Kyndryl. Our solid and growing recurring revenue base now represents more than 50% of IBM's total revenue. And today, more than 70% of our annual revenue is in Software and Consulting.



IBM Software revenues were up 12% at constant currency, including about 6 points from incremental sales to Kyndryl. Red Hat, which allows clients to harness the power of open-source software innovations, continues to grow at a healthy rate. Our automation, data and AI and security software have been optimized for this platform and delivered solid growth.

IBM Consulting revenues were up 15% at constant currency, driven by clients’ strong demand for our extensive technical and business expertise to accelerate their digital transformation journeys.

IBM Infrastructure revenues were up 14% at constant currency, including about 6 points from incremental sales to Kyndryl. Clients continue to leverage IBM zSystems and Distributed Infrastructure platforms as foundational elements of their hybrid cloud infrastructure.

This revenue growth and cash generation allowed for both continued investment in the business and shareholder returns. In 2022, we spent more than \$2 billion to acquire eight companies and returned nearly \$6 billion to stockholders through dividends.

Technology and expertise

Our perspective on technology is clear and consistent: hybrid cloud and AI are helping to usher in a new era of greater productivity, faster insights, better decision-making, and enhanced employee and customer experiences. That is why we have designed our products and services to maximize the business value of hybrid cloud and AI for our clients.

Hybrid cloud has become the leading architecture for enterprises because it offers more value than relying on a single, public cloud. This value takes the form of scale, security, ease of use, flexibility, seamless experiences, and faster innovation cycles. Companies continue to adopt hybrid cloud to unify their data and applications across multiple clouds, on premise, and at the edge.

Containers are the preferred destination for hybrid cloud applications and IBM’s container platform, with Red Hat at the core, continues to gain clients. For example, the Canadian Imperial Bank of Commerce (CIBC) adopted a hybrid cloud approach that uses Red Hat technology to manage and scale its infrastructure with greater speed and flexibility. As a result, they delivered hundreds of new applications while reducing provisioning time by 95% and deployment time by 50%. They join organizations like Bharti Airtel, Charles Schwab, Samsung Electronics, and the U.S. Department of Education in working with IBM to realize the value of hybrid cloud.

These powerful, hybrid cloud environments also allow clients to infuse AI across their business operations. AI is expected to unlock \$16 trillion in value from the global economy by 2030 – including massive boosts in productivity – by scaling data-driven insight and automating business workflows in everything from IT operations and financial reporting to human resources and customer service.

Examples include IBM’s work with McDonald’s to automate the drive-thru experience with AI at scale. We also partnered with the U.S. Department of Veterans Affairs to automate the

delivery of pension benefits, accelerating the claims process, and freeing up VA staff to focus on higher value work. And BBC Studios is now using our AIOps software to automate the management of its IT infrastructure.

To help power hybrid cloud environments, and the AI that runs on them, IBM introduced the z16 platform with an integrated on-chip AI accelerator specifically designed to process and analyze real-time transactions at scale. We also unveiled IBM's next generation LinuxONE servers, which help clients dramatically reduce data center energy consumption in support of their sustainability goals.

IBM Consulting's business and industry expertise brings these offerings to life for our clients, helping them modernize and manage their applications in a hybrid cloud environment, automate their workflows with data and AI, and meet their security and regulatory requirements. IBM Consulting has strengthened its commitment to be a trusted partner for digital transformation and expanded its use of the IBM Garage – an agile approach to co-creating with clients – with more than 6,700 IBM Garage engagements during the year.

For example, IBM Consulting is co-creating with Discover, developing solutions for migrating its systems and applications to an open and flexible hybrid cloud architecture with Red Hat OpenShift. As a result, Discover can automate key business processes and deliver solutions more quickly, improving its customer experience and advancing its overall digital transformation.

To complement these offerings, IBM made eight acquisitions in 2022. We added software and consulting capabilities to address specific client challenges, including environmental performance management software (Envizi), cybersecurity attack surface management (Randori), and digital transformation services for the U.S. federal government (Octo).

Client engagement: Partnership and co-creation

IBM continues to embrace our partner ecosystem as a strategic advantage in delivering value to our clients. In 2022, we made significant progress in bolstering these partnerships, including the introduction of a new skills program to equip partners with the same training and enablement as IBMers, at no cost.

The increasing value of our partner ecosystem – to our company, our clients, and the partners themselves – is evident. Business with our strategic partners continues to grow with SAP, Microsoft and AWS all over \$1 billion in revenue for the year. We partnered with Amazon Web Services to deliver IBM software as a service on the AWS Marketplace. Our partnership with Microsoft expanded in 2022, with 30

IBM solutions now available on the Microsoft Marketplace and deployable on Microsoft Azure. Meanwhile, Adobe and Salesforce are now leveraging open-source innovation based on Red Hat technologies in their offerings.

To ensure clients engage with IBM and its partners simply and efficiently, we made significant changes to our go-to-market model in 2022 and improved our sales productivity. The IBM Sales and IBM Ecosystem functions joined together to create a single, coordinated unit focused on a distinct set of sales plays, deeper technical engagement, and a more experiential approach to selling built around IBM Garages, Innovation Studios, and Client Engineering teams.

Exploratory research and applied science

IBM Research is driven by our longstanding mission to define the future of computing. Our investments span multiple time horizons and range across all of IBM's businesses, maintaining a careful balance between exploratory research and applied science.

In 2022, IBM Research focused its talent and resources on innovation with practical application, particularly in the areas of hybrid cloud, data and AI, automation, security, semiconductors, and quantum computing. For example, the IBM Telum Processor features on-chip acceleration for AI inferencing in real-time. Today it powers the AI capabilities of the IBM z16, allowing clients to identify fraud at scale in milliseconds.

We also pioneered breakthrough innovation in the AI field of large language and foundational models. Project Wisdom for Red Hat Ansible uses foundational AI models to enable developers to generate high-quality code, using plain English, across multiple clouds.

IBM Research – like the rest of the company – has embraced partnership and open innovation as it works to solve the most urgent problems of business and society. While we continue to build and maintain a valuable portfolio of intellectual property, we understand that open collaboration with clients, partners, and even competitors can accelerate the realization of value.

IBM's work in quantum computing is a good example of how we blend proprietary and open innovation. In November, we again advanced the fundamental science of quantum computing, unveiling the 433-qubit IBM Osprey processor. This will help us move forward on our roadmap to deliver a 1,000-plus qubit system this year, and a 4,000-plus qubit system in 2025. Our IBM Quantum Network has more than 200 members, with companies like Boeing, HSBC, and Mitsubishi Chemical pursuing potentially industry-changing research. Meanwhile, we continue to provide access to

quantum capability through the cloud. More than 1.5 million people have downloaded the free Qiskit software development kit, and an ecosystem of more than 450,000 registered users have developed applications and published papers based on our quantum technology.

Environmental, equitable, and ethical impact

Both internally, and in our work with clients, IBM aspires to make a lasting, positive impact on the world by protecting the environment, advocating for inclusion, and fostering trust and transparency in both technology and business.

In 2022, we announced IBM Impact, a new framework that reflects our approach to creating a more sustainable, equitable, and ethical future. Using this framework, we will continue to set goals, measure progress, and report our results as part of our culture of accountability.

We continued to make progress towards our goal of net-zero operational greenhouse gas emissions by 2030. In fact, we have reduced those emissions by 61% since 2010. We are using IBM Sustainability solutions to simplify and automate our sustainability reporting processes. During the year, we were recognized by Boston Consulting Group and TIME Magazine for helping clients turn their sustainability ambitions into actions.

IBM demonstrates its commitment to diversity, equity, and inclusivity by creating space and opportunity for everyone at IBM and in society at large. Our diversity practices have resulted in a year-over-year increase of representation for women globally and Black and Hispanic employees in the U.S. We are collaborating with more than 20 Historically Black Colleges and Universities on IBM Cybersecurity Centers to advance STEM-based opportunities. We also continue to narrow the STEM skills gap with our IBM SkillsBuild initiative, adding to our network of 170 partners in our effort to provide access to education and training to 30 million people worldwide by 2030.

IBM continues to develop innovation, policy, and practices that prioritize ethics, trust, transparency, and above all, accountability. In 2022, we exceeded our goal to train 1,000 partners in technology ethics. IBM was named to Ethisphere's list of the most ethical companies in the world for the fourth time.

Why the world needs IBM (and IBMers)

Today's IBM is more closely aligned with the needs of our clients. Our engagement model is simpler and more effective. And we have expanded our ecosystem by strengthening existing relationships and forging new, productive partnerships.

There is, of course, more to be done. Increasing our levels of productivity will be paramount. To get there, we are infusing our own technology into workflows and processes that span from HR, to finance, to sales and more. We are prioritizing speed and simplicity in our execution while cultivating a high-performance culture designed to ensure every activity is tied to a clear and tangible business outcome.

I am proud of the progress we have made as a company and the results we have delivered. And I am especially proud of the IBMers who have made it possible. Because the performance of our business depends entirely on a workforce that is smart, committed, and inspired.

That inspiration comes from our belief in the fundamental promise of technology: that when we apply innovation to real-world problems, we drive progress, for both business and society. IBMers deliver on that promise every day. When we help a pharmacy administer more vaccines. When we help reduce the carbon footprint of a retailer. Or when we help prevent a cyberattack on a bank.

Today's IBM is not simply a technology company. We are a problem-solving company and a convener of capability that brings together our colleagues, our clients, and our partners with a simple, open invitation: Let's create.

We do this because we believe that IBM is the catalyst that makes the world work better. And as we have learned over the last several years, the world needs to work better. That is why the world needs IBM, today more than ever.



Arvind Krishna
Chairman and Chief Executive Officer

In an effort to provide additional and useful information regarding the company's financial results and other financial information, as determined by generally accepted accounting principles (GAAP), these materials contain non-GAAP financial measures on a continuing operations basis, including revenue growth rates adjusted for constant currency. Free cash flow is presented on a consolidated basis, which includes activity from discontinued operations. The rationale for management's use of this non-GAAP information is included on page 6 and 34 of the company's 2022 Annual Report, which is Exhibit 13 to the Form 10-K submitted with the SEC on February 28, 2023. For reconciliation of these non-GAAP financial measures to GAAP and other information, please refer to pages 17 and 34 of the company's 2022 Annual Report.

Report of Financials

International Business Machines Corporation and Subsidiary Companies

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Public Accounting Firm****CONSOLIDATED FINANCIAL STATEMENTS**

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OVERVIEW

The financial section of the International Business Machines Corporation (IBM or the company) 2022 Annual Report includes the Management Discussion, the Consolidated Financial Statements and the Notes to Consolidated Financial Statements. This Overview is designed to provide the reader with some perspective regarding the information contained in the financial section.

Organization of Information

- The Management Discussion is designed to provide readers with an overview of the business and a narrative on our financial results and certain factors that may affect our future prospects from the perspective of management. The “Management Discussion Snapshot” presents an overview of the key performance drivers in 2022.
- Beginning with the “Year in Review,” the Management Discussion contains the results of operations for each reportable segment of the business, a discussion of our financial position and a discussion of cash flows as reflected in the Consolidated Statement of Cash Flows. Other key sections within the Management Discussion include: “Looking Forward” and “Liquidity and Capital Resources,” the latter of which includes a description of management’s definition and use of free cash flow.
- The Consolidated Financial Statements provide an overview of income and cash flow performance and financial position.
- The Notes follow the Consolidated Financial Statements. Among other items, the Notes contain our accounting policies, revenue information, acquisitions and divestitures, certain commitments and contingencies and retirement-related plans information.
- On November 3, 2021, we completed the separation of our managed infrastructure services unit into a new public company with the distribution of 80.1 percent of the outstanding common stock of Kyndryl Holdings, Inc. (Kyndryl) to IBM stockholders on a pro rata basis. To effect the separation, IBM stockholders received one share of Kyndryl common stock for every five shares of IBM common stock held at the close of business on October 25, 2021, the record date for the distribution. IBM retained 19.9 percent of the shares of Kyndryl common stock immediately following the separation. During 2022, we fully disposed of our retained interest in Kyndryl common stock pursuant to exchange agreements with a third-party financial institution, which were completed within twelve months of separation. Refer to note J, “Financial Assets & Liabilities,” for additional information. At December 31, 2022, we no longer held an ownership interest in Kyndryl.
- The accounting requirements for reporting the separation of Kyndryl as a discontinued operation were met when the separation was completed. Accordingly, the historical results of Kyndryl are presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. Refer to note C, “Separation of Kyndryl,” for additional information.
- In the first quarter of 2022, we realigned our management structure to reflect the planned divestiture of our healthcare software assets which was completed in the second quarter of 2022. This change impacted our Software segment and Other—divested businesses category, but did not impact our Consolidated Financial Statements. Refer to note E, “Segments,” for additional information on our reportable segments. The segments presented in this Annual Report are reported on a comparable basis for all periods.
- In September 2022, the IBM Qualified Personal Pension Plan (Qualified PPP) purchased two separate nonparticipating single premium group annuity contracts from The Prudential Insurance Company of America and Metropolitan Life Insurance Company (collectively, the Insurers) and irrevocably transferred to the Insurers approximately \$16 billion of the Qualified PPP’s defined benefit pension obligations and related plan assets, thereby reducing our pension obligations and assets by the same amount. The group annuity contracts were purchased using assets of the Qualified PPP and no additional funding contribution was required from IBM. The transaction resulted in no changes to the benefits to be received by the plan participants. As a result of this transaction we recognized a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion (\$4.4 billion net of tax) in the third quarter of 2022, primarily related to the accelerated recognition of accumulated actuarial losses of the Qualified PPP. Refer to note V, “Retirement-Related Benefits,” for additional information.
- The references to “adjusted for currency” or “at constant currency” in the Management Discussion do not include operational impacts that could result from fluctuations in foreign currency rates. When we refer to growth rates at constant currency or adjust such growth rates for currency, it is done so that certain financial results can be viewed without the impact of fluctuations in foreign currency exchange rates, thereby facilitating period-to-period comparisons of business performance. Financial results adjusted for currency are calculated by translating current period activity in local currency using the comparable prior-year period’s currency conversion rate. This approach is used for countries where the functional currency is the local currency. Generally, when the dollar either strengthens or weakens against other currencies, the growth at constant currency rates or adjusting for currency will be higher or lower than growth reported at actual exchange rates. Refer to “Currency Rate Fluctuations” for additional information.
- To provide useful decision-making information for management and shareholders, we define and measure hybrid cloud revenue as end-to-end cloud capabilities within hybrid cloud environments, which includes technology (software and hardware), services and solutions to enable clients to implement cloud solutions across public, private and multi-clouds. This spans across IBM’s Consulting, Software and Infrastructure segments. Examples include (but are not limited to) Red Hat Enterprise Linux (RHEL), Red Hat OpenShift, Cloud Paks, as-a-service offerings, service engagements related to cloud deployment of technology and applications, and infrastructure used in cloud deployments.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

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- Within the financial statements and tables in this Annual Report, certain columns and rows may not add due to the use of rounded numbers for disclosure purposes. Percentages reported are calculated from the underlying whole-dollar numbers. Certain prior-year amounts have been reclassified to conform to the current year presentation. This is annotated where applicable.

Operating (non-GAAP) Earnings

In an effort to provide better transparency into the operational results of the business, supplementally, management separates business results into operating and non-operating categories. Operating earnings from continuing operations is a non-GAAP measure that excludes the effects of certain acquisition-related charges, intangible asset amortization, expense resulting from basis differences on equity method investments, retirement-related costs, certain impacts from the Kyndryl separation and their related tax impacts. Due to the unique, non-recurring nature of the enactment of the U.S. Tax Cuts and Jobs Act (U.S. tax reform), management characterizes the one-time provisional charge recorded in the fourth quarter of 2017 and adjustments to that charge as non-operating. Adjustments primarily include true-ups, accounting elections and any changes to regulations, laws, audit adjustments that affect the recorded one-time charge. Management characterizes direct and incremental charges incurred related to the Kyndryl separation as non-operating given their unique and non-recurring nature. These charges primarily relate to any net gains or losses on the Kyndryl common stock and the related cash-settled swap with a third-party financial institution, which are recorded in other (income) and expense in the Consolidated Income Statement. For acquisitions, operating (non-GAAP) earnings exclude the amortization of purchased intangible assets and acquisition-related charges such as in-process research and development, transaction costs, applicable retention, restructuring and related expenses, tax charges related to acquisition integration and pre-closing charges, such as financing costs. These charges are excluded as they may be inconsistent in amount and timing from period to period and are significantly impacted by the size, type and frequency of our acquisitions. All other spending for acquired companies is included in both earnings from continuing operations and in operating (non-GAAP) earnings. For retirement-related costs, management characterizes certain items as operating and others as non-operating, consistent with GAAP. We include defined benefit plan and nonpension postretirement benefit plan service costs, multi-employer plan costs and the cost of defined contribution plans in operating earnings. Non-operating retirement-related costs include defined benefit plan and nonpension postretirement benefit plan amortization of prior service costs, interest cost, expected return on plan assets, amortized actuarial gains/losses, the impacts of any plan curtailments/settlements including the one-time, non-cash, pre-tax settlement charge of \$5.9 billion (\$4.4 billion, net of tax) in the third quarter of 2022 and pension insolvency costs and other costs. Non-operating retirement-related costs are primarily related to changes in pension plan assets and liabilities which are tied to financial market performance, and we consider these costs to be outside of the operational performance of the business.

Overall, management believes that supplementally providing investors with a view of operating earnings as described above provides increased transparency and clarity into both the operational results of the business and the performance of our pension plans; improves visibility to management decisions and their impacts on operational performance; enables better comparison to peer companies; and allows us to provide a long-term strategic view of the business going forward. In addition, these non-GAAP measures provide a perspective consistent with areas of interest we routinely receive from investors and analysts. Our reportable segment financial results reflect pre-tax operating earnings from continuing operations, consistent with our management and measurement system.

FORWARD-LOOKING AND CAUTIONARY STATEMENTS

Certain statements contained in this Annual Report may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Any forward-looking statement in this Annual Report speaks only as of the date on which it is made; IBM assumes no obligation to update or revise any such statements except as required by law. Forward-looking statements are based on IBM's current assumptions regarding future business and financial performance; these statements, by their nature, address matters that are uncertain to different degrees. Forward-looking statements involve a number of risks, uncertainties and other factors that could cause actual results to be materially different, as discussed more fully elsewhere in this Annual Report and in the company's filings with the Securities and Exchange Commission (SEC), including IBM's 2022 Form 10-K filed on February 28, 2023.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

MANAGEMENT DISCUSSION SNAPSHOT

(\$ and shares in millions except per share amounts)

For year ended December 31:	2022 *	2021	Yr.-to-Yr. Percent/Margin Change
Revenue	\$ 60,530	\$ 57,350	5.5 %**
Gross profit margin	54.0 %	54.9 %	(0.9)pts.
Total expense and other (income)	\$ 31,531	\$ 26,649	18.3 %
Income from continuing operations before income taxes	\$ 1,156	\$ 4,837	(76.1)%
Provision for/(benefit from) income taxes from continuing operations	\$ (626)	\$ 124	NM
Income from continuing operations	\$ 1,783	\$ 4,712	(62.2)%
Income from continuing operations margin	2.9 %	8.2 %	(5.3)pts.
Income/(loss) from discontinued operations, net of tax	\$ (143)	\$ 1,030	NM
Net income	\$ 1,639	\$ 5,743	(71.5)%
Earnings per share from continuing operations—assuming dilution	\$ 1.95	\$ 5.21	(62.6)%
Consolidated earnings per share—assuming dilution	\$ 1.80	\$ 6.35	(71.7)%
Weighted-average shares outstanding—assuming dilution	912.3	904.6	0.8 %
Assets ⁺	\$127,243	\$132,001	(3.6)%
Liabilities ⁺	\$105,222	\$113,005	(6.9)%
Equity ⁺	\$ 22,021	\$ 18,996	15.9 %

* Includes a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion (\$4.4 billion net of tax) resulting in an impact of (\$4.84) to diluted earnings per share from continuing operations and an impact of (\$4.83) to consolidated diluted earnings per share. See note V, "Retirement-Related Benefits," for additional information.

** 11.6 percent adjusted for currency.

+ At December 31.

NM—Not meaningful

The following table provides the company's operating (non-GAAP) earnings for 2022 and 2021. See page 29 for additional information.

(\$ in millions except per share amounts)

For year ended December 31:	2022	2021	Yr.-to-Yr. Percent Change
Net income as reported	\$1,639 *	\$5,743	(71.5)%
Income/(loss) from discontinued operations, net of tax	(143)	1,030	NM
Income from continuing operations	\$1,783 *	\$4,712	(62.2)%
Non-operating adjustments (net of tax)			
Acquisition-related charges	1,329	1,424	(6.7)
Non-operating retirement-related costs/(income)	4,933 *	1,031	NM
U.S. tax reform impacts	(70)	89	NM
Kyndryl-related impacts	351	(81)	NM
Operating (non-GAAP) earnings	\$8,326	\$7,174	16.0 %
Diluted operating (non-GAAP) earnings per share	\$ 9.13	\$ 7.93	15.1 %

* Includes a one-time, non-cash pension settlement charge of \$4.4 billion net of tax.

NM—Not meaningful

Macroeconomic Environment

Our business profile positions us well in challenging times. Our diversification across geographies, industries, clients and business mix provides some stability in revenue, profit and cash generation.

Throughout 2022, we experienced escalating labor and component costs and a strong U.S. dollar. While those dynamics have put pressure on our margin profile, we are seeing progress in the actions we have taken to mitigate the impacts of these higher costs. Consulting, which makes up well over half of IBM's workforce, is most impacted by the labor cost inflation. We have begun to see improved utilization and priced margin improvements year over year, and our acquisitions have become more accretive, all of which will benefit our margin profile going forward. Our Consulting pre-tax margin of 8.8 percent increased 0.7 points in 2022 versus the prior year and improved 3.2 points in the second half of 2022 compared to the first half reflecting the benefit of these actions. Additionally, across all of our product-based businesses, we have executed price increases above our historical level of increases to be more reflective of the labor and component costs we are incurring due to the inflationary environment. This includes price increases in our maintenance and support agreements for our hardware and software portfolios. Additionally, despite the many global supply chain disruptions throughout 2022, our supply chain has demonstrated resiliency and the ability to proactively respond to potential disruptions in order to meet our clients' needs. The strengthening of the U.S. dollar impacted our reported revenue and gross profit dollars in 2022. We execute hedging programs which defer but do not eliminate the impact of currency. The gains from these hedging programs are reflected primarily in other income and expense. With the rate and magnitude of

Management Discussion

International Business Machines Corporation and Subsidiary Companies

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movements, and because we do not hedge all currencies, this did have a currency impact to our overall profit and cash flows in 2022. See “Currency Rate Fluctuations,” for additional information.

The geopolitical situation in Eastern Europe intensified in February 2022, with Russia’s invasion of Ukraine. The safety and security of our employees and their families in the impacted regions has been our primary focus. The sanctions placed on numerous Russian entities, specific Russian-controlled entities, as well as Belarus and other measures that have been and continue to be imposed as a result of the war have increased the level of economic and political uncertainty. In the second quarter of 2022, we made the decision to carry out an orderly wind-down of our Russian operations. As such, we assessed certain accounting-related matters that generally require consideration of current information reasonably available to us and forecasted financial data in the context of unknown future impacts to IBM that resulted in certain immaterial asset and restructuring charges in 2022. These charges, together with the year-to-year lost business due to the wind-down, impacted our pre-tax income by approximately \$230 million for the year ended December 31, 2022. The long-term impacts of the Russian war in Ukraine remain uncertain; however, we do not expect a significant impact on the company’s future results of operations or financial position. Historically, Russia, Ukraine and Belarus made up less than one percent of the company’s full-year revenue. While the revenue impact is not material to total consolidated IBM revenue, the business in Russia has historically been high margin and therefore, is a more significant headwind to our profit and cash flows.

Financial Performance Summary

In 2022, we reported \$60.5 billion in revenue, income from continuing operations of \$1.8 billion, including a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion (\$4.4 billion net of tax), and operating (non-GAAP) earnings of \$8.3 billion, which excludes the impact of the settlement charge. The pension settlement charge was the result of the transfer to Insurers of a portion of our U.S. benefit pension obligations, an action we took to further reduce the risk profile of our retirement-related plans. Diluted earnings per share from continuing operations was \$1.95 as reported, including an impact of \$4.84 from the pension settlement charge, and diluted earnings per share was \$9.13 on an operating (non-GAAP) basis. On a consolidated basis, we generated \$10.4 billion in cash from operations and \$9.3 billion in free cash flow and returned \$5.9 billion to shareholders in dividends. We are pleased with the fundamentals of our business and the progress we have made in executing our strategy. Our 2022 performance demonstrates that we are now a higher-growth, higher-value company with the ability to generate strong cash from operations and a growing free cash flow.

Total revenue grew 5.5 percent as reported and 12 percent adjusted for currency compared to the prior year, including approximately 4 points from incremental sales to Kyndryl. Over 70 percent of current-year revenue was in our growth areas of Software and Consulting and approximately half of our revenue is recurring. Software revenue increased 6.9 percent as reported and 12 percent adjusted for currency, including approximately 6 points of growth from incremental sales to Kyndryl. There was continued momentum in our recurring revenue stream in both Hybrid Platform & Solutions and Transaction Processing. Hybrid Platform & Solutions grew 4.9 percent as reported and 9 percent adjusted for currency, led by strong double-digit revenue growth in Red Hat. Transaction Processing increased 12.2 percent as reported and 19 percent adjusted for currency, including approximately 19 points of growth from incremental sales to Kyndryl. Consulting revenue increased 7.1 percent as reported and 15 percent adjusted for currency as we help clients with their digital transformations. Infrastructure revenue increased 7.8 percent year to year as reported and 14 percent adjusted for currency, reflecting strong double-digit growth in Hybrid Infrastructure driven by our z16 program, which launched in the second quarter of 2022. The Infrastructure revenue performance also includes approximately 6 points of growth from incremental sales to Kyndryl. Across the segments, total hybrid cloud revenue of \$22.4 billion in 2022 grew 11 percent as reported and 17 percent adjusted for currency, and represents 37 percent of IBM’s revenue.

From a geographic perspective, Americas revenue grew 9.7 percent year to year as reported (10 percent adjusted for currency). Europe/Middle East/Africa (EMEA) increased 2.9 percent (14 percent adjusted for currency). Asia Pacific declined 0.7 percent as reported, but grew 11 percent adjusted for currency.

The gross margin of 54.0 percent decreased 0.9 points year to year, however, gross profit dollars increased 3.8 percent compared to the prior year. Overall, gross margin was impacted by the investments we are making to drive our hybrid cloud and artificial intelligence (AI) strategy, higher labor and component costs and the impacts of currency, while the mitigating hedging benefits and operational productivity and efficiency we have realized are primarily reflected in expense. The operating (non-GAAP) gross margin of 55.1 percent decreased 1.0 points versus the prior year.

Total expense and other (income) increased 18.3 percent in 2022 versus the prior year primarily driven by the pension settlement charge of \$5.9 billion, higher spending reflecting continued investment in our offerings, technical talent and ecosystem, and year-to-year impacts related to Kyndryl retained shares, partially offset by the effects of currency and benefits from the actions taken to streamline our operations and go-to-market model. Total operating (non-GAAP) expense and other (income) decreased 3.2 percent year to year, driven primarily by the effects of currency and benefits from the actions taken to streamline our operations and go-to-market model, partially offset by higher spending to drive our hybrid cloud and AI strategy.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

Pre-tax income from continuing operations of \$1.2 billion decreased 76.1 percent and the pre-tax margin was 1.9 percent, a decrease of 6.5 points versus 2021. These declines were primarily driven by the \$5.9 billion pension settlement charge. The continuing operations effective tax rate for 2022 was (54.2) percent compared to 2.6 percent in 2021. The current-year effective tax rate was primarily driven by the pension settlement charge. The prior-year effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. Net income from continuing operations of \$1.8 billion decreased 62.2 percent and the net income from continuing operations margin was 2.9 percent, down 5.3 points year to year. Operating (non-GAAP) pre-tax income from continuing operations of \$9.8 billion increased 24.6 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations increased 2.5 points to 16.2 percent. These profit dynamics reflect our portfolio shift toward higher value, driven by Software and Consulting. Our pre-tax profit includes the contribution from incremental sales to Kyndryl and the negative impacts of currency primarily due to the strengthening of the U.S. dollar. The operating (non-GAAP) effective tax rate for 2022 was 15.2 percent compared to 9.0 percent in 2021. The lower prior-year operating (non-GAAP) effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. Operating (non-GAAP) income from continuing operations of \$8.3 billion increased 16.0 percent and the operating (non-GAAP) income margin from continuing operations of 13.8 percent was up 1.2 points year to year.

Diluted earnings per share from continuing operations of \$1.95 in 2022 decreased 62.6 percent, which included an impact of \$4.84 from the pension settlement charge. Operating (non-GAAP) diluted earnings per share of \$9.13 increased 15.1 percent versus 2021.

At December 31, 2022, the balance sheet remained strong with the flexibility to support and invest in the business. Cash and cash equivalents, restricted cash and marketable securities at year end were \$8.8 billion, an increase of \$1.3 billion from December 31, 2021. During 2022, we continued to invest in acquisitions and provide a solid and modestly growing dividend to shareholders. Total debt of \$50.9 billion at December 31, 2022 decreased \$0.8 billion driven by currency impacts, partially offset by net debt issuances.

Total assets decreased \$4.8 billion (\$1.3 billion adjusted for currency) from December 31, 2021 primarily driven by decreases in prepaid pension assets, intangible assets, deferred taxes, and prepaid expenses and other; partially offset by an increase in cash and restricted cash. Total liabilities decreased \$7.8 billion (\$4.3 billion adjusted for currency) from December 31, 2021 primarily driven by a decrease in retirement and postretirement benefit obligations. Total equity of \$22.0 billion increased \$3.0 billion from December 31, 2021 as a result of a decrease in accumulated other comprehensive losses, 2022 net income and common stock issuances, partially offset by dividends paid.

Our cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows, include the cash flows of discontinued operations. On a consolidated basis, cash provided by operating activities was \$10.4 billion in 2022, a decrease of \$2.4 billion compared to 2021, driven by financing receivables. Net cash used in investing activities of \$4.2 billion decreased \$1.8 billion compared to the prior year and net cash used in financing activities of \$5.0 billion decreased \$8.4 billion compared to 2021.

DESCRIPTION OF BUSINESS

Please refer to IBM's Annual Report on Form 10-K filed with the SEC on February 28, 2023, for Item 1A. entitled "Risk Factors."

IBM is addressing the hybrid cloud and AI opportunity with a platform-centric approach, focused on providing client value through a combination of technology and business expertise. We provide integrated solutions and products that leverage: data, information technology, deep expertise in industries and business processes, with trust and security and a broad ecosystem of partners and alliances. Our hybrid cloud platform and AI technology and services capabilities support clients' digital transformations and help them engage with their customers and employees in new ways. These solutions draw from an industry-leading portfolio of capabilities in software, consulting services and a deep incumbency in mission-critical systems, all bolstered by one of the world's leading research organizations.

IBM Strategy

IBM continues to execute its Hybrid Cloud and AI strategy, the two most transformative technologies for business today. Over the last couple of years, we have driven deep change within the company to deliver this platform-centric strategy. We have continually delivered innovation in our software and infrastructure offerings and scaled and enhanced the capabilities of our consulting practices. We have expanded our partner ecosystem, simplified our go-to-market model, and pursued strategic acquisitions and divestitures.

Our strategy aligns with the needs of our clients

Our clients are accelerating their digital transformations as they face economic uncertainties, skill shortages, supply chain instability, security breaches and heightened sustainability goals. These market realities confirm the following convictions that have shaped our strategy:

- **Technology is crucial to address business challenges:** Our clients see digital capabilities fostering efficiency, revenue growth and scale in their organizations. High tech adopters gain a revenue growth premium over their peers of 7 percentage points, according to an IBM Institute for Business Value survey. International Data Corporation (IDC) forecasts that spending on digital transformation technologies will grow at nearly 17 percent in 2023 versus 2 percent global GDP growth;
- **AI accelerates enterprise productivity:** Businesses urgently want to optimize end-to-end processes. Most now recognize AI will be a critical technology to rapidly adopt to realize that goal. According to IDC, today 45 percent of organizations have not yet expanded AI beyond a few isolated projects, while by 2026, 75 percent of large organizations will rely on AI driven processes for digital-first operations;
- **Digital transformation necessitates heterogeneous environments:** Enterprises need digital workloads to be deployed across all their multiple clouds, data centers and distributed locations where their business runs. Seventy-two percent of the decision makers interviewed in a Harris Poll survey have their company workloads running across private infrastructure and public cloud;
- **Open-source catalyzes innovative outcomes:** Operating on a common open-source platform reduces the cost of managing that heterogeneity. It also enables enterprises to holistically accelerate developers' productivity and innovation time-to-market. Sixty-eight percent of the decision makers interviewed in a Harris Poll survey indicated they are using containers most or all of the time;
- **With Red Hat OpenShift, IBM delivers the new essential platform:** Over decades, IBM has delivered industry-shaping and enduring IT platforms, such as mainframe and middleware. Building on this heritage, Red Hat OpenShift is the leading open-source hybrid cloud platform to help enterprises realize their digital transformation goals.

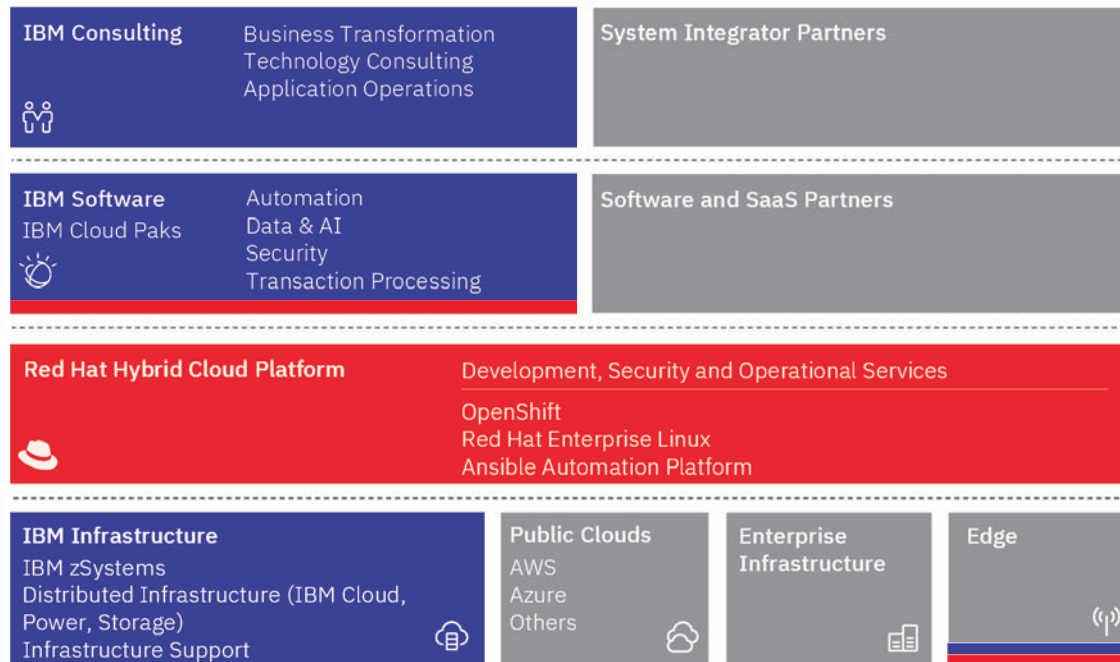
IBM's differentiated value proposition

Our differentiated value proposition encompasses our integrated competencies across software, consulting and infrastructure, leveraging our open hybrid cloud platform. We draw upon five core capabilities to address our clients' hybrid cloud and AI needs: (1) build and modernize for the hybrid cloud environments that operate with speed, consistency and agility, (2) create AI-infused, data-driven business insights regardless of where data lives, while maintaining enterprise grade data governance, privacy and trust, (3) automate the end-to-end enterprise processes for efficacy with AI-driven decision-making, (4) secure everywhere, with consistent governance and compliance across environments, and (5) bring it together by transforming our clients' businesses and processes into sustainable best-in-class industry practices.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

Our full technology stack helps us meet clients where they are in their digital transformations, and we offer the consulting expertise to help guide and implement the best solutions for that journey. Our rapidly growing ecosystem of cloud, independent software vendors (ISVs), hardware, network and services partners enhance the client experience and drive the value and innovation derived from IBM technologies. Our focus on hybrid cloud accelerates our open and collaborative approach to partnership.



Our hybrid cloud platform strategy drives sustained growth and financial performance: on average, every \$1 of platform spend results in \$3 to \$5 of software revenue, \$6 to \$8 of services and \$1 to \$2 of enterprise infrastructure. The hybrid cloud opportunity represents over a \$1 trillion market across software, consulting and infrastructure.

IBM's integrated value is amplified by ensuring our existing businesses all advance the hybrid cloud value proposition to our clients. We strategically embed the Red Hat platform with our offerings: (1) IBM Software's growing portfolio runs on Red Hat OpenShift Container Platform (OCP), (2) IBM Infrastructure solutions are optimized hybrid cloud deployments for mission-critical workloads, and (3) IBM Consulting is the leading market system integrator with hybrid cloud and Red Hat expertise to help clients transform their business and technology.

IBM Software extends the value of our hybrid cloud platform with four critical capabilities: (1) "Modernize" for agility and speed from legacy to hybrid cloud architecture, (2) "Data-driven", predicting outcomes from distributed data and applying AI to empower predictive decision-making, real-time digital intelligence and sustainable operations, (3) "Automate" at scale to make experiences and tasks more productive and impactful, and (4) "Secure" all touchpoints, all the time, employing real-time threat insights, automated detection and orchestrated response. **Red Hat**, reported in our Software segment, delivers the leading open-source hybrid cloud platform and enables clients to build, secure, operate and manage any application, anywhere, from on-premises environments to multiple clouds and the edge. One hundred percent of commercial banks, telecommunication, media and technology companies in the Fortune Global 500 rely on Red Hat. Red Hat collaborates with a broad ecosystem of partners and communities comprised of millions of developers. These capabilities allow our clients to "write once, deploy anywhere" for cloud native application development and modernization. We embed the Red Hat platform with our offerings, to advance the hybrid cloud value proposition to our clients.

IBM Consulting delivers business transformation for our clients through hybrid cloud and AI technologies. Our 160,000+ professionals together with our open ecosystem of partners help clients advance digital transformation, build open hybrid cloud architectures, orchestrate critical applications across environments, and optimize key workflows and business processes. IBM Consulting drives transformative projects across different industries with its IBM Garage method. IBM Consulting has dedicated talent in practices to support IBM technology and continues to invest in the industry's largest Red Hat practice to make hybrid cloud a foundation for innovation and business growth, enabling clients to get more value from investments. IBM Consulting has deepened its hybrid cloud consulting offerings and scaled cloud capability to 40,000+ cloud platform certifications, while accelerating the transformation journeys for its clients in 2022. IBM Consulting also captures growth by investing in practices with a wide ecosystem of partners, including AWS, Azure and major ISVs.

IBM Infrastructure solutions provide unmatched performance, security and resiliency for mission-critical, trusted, or regulated applications running in a hybrid environment. We drive customer adoption and leading DevOps experience for IBM hybrid cloud at scale, deeply integrating with Red Hat and IBM Software offerings. We delivered major breakthroughs in 2022, with next generation z16, Power10 servers and new storage offerings. Forty-five of the world's top 50 banks are running on IBM zSystems, which excel at transaction processing with integrated AI and unmatched throughput, availability and advanced security for the era of quantum computing. Power, Storage, and IBM Cloud help to accelerate enterprise digital transformation with secure, scalable and resilient solutions built for hybrid cloud agility and application modernization. Infrastructure Support provides lifecycle services and support to optimize and maintain hybrid cloud environments, with visibility and automated diagnosis and remediation.

IBM Research continues to help define the evolution of computing. In 2022, our focused research agenda provided a pipeline of innovations, including automated container-driven environments, AI models, security management, sustainability and many others. Our published Technology Atlas illustrates strategic goals and detailed plans for the next three years of research. We continued to develop technology to harness the potential of the paradigm-shifting inflection point in AI represented by foundation models. We outlined a pioneering vision for quantum-centric supercomputing and announced new breakthrough advancements in quantum software and hardware, including the 433 qubit Osprey processor. We continue to monetize our unparalleled IP and to leverage our world-class skills in semiconductors to innovate in hardware and collaborate with industry-leading partners.

In addition to our organic investments in R&D, **our inorganic investments** foster our strategy by adding critical competencies to our software and consulting businesses. Our acquisitions of Databand.ai, Randori and Envizi expanded our growing portfolio of AI-driven software, bringing capabilities to help our clients gain better observability into their data, protect against cybersecurity breaches across their various exposure points and manage their environmental performance. We expanded our consulting expertise in data, AI, digital, and cloud through the acquisitions of Sentaca, Neudesic, Dialexa and Octo. These investments also facilitate growth by deepening our industry expertise and consulting capabilities with government and telco clients. In 2022, IBM successfully completed eight acquisitions in total.

Expanding client engagements and our ecosystem

During 2022, we helped clients harness the power of hybrid cloud and AI technologies to address current challenges and opportunities. We invested in experiential selling, client engineering, customer success management, expert lab services and deep technical expertise to show clients the value of technology as a fundamental source of competitive advantage. We engaged clients in digital transformations using automation and security and other solutions to increase growth, productivity, resilience and responsiveness. We introduced a product-led growth initiative under our new global "Let's create" campaign, illustrating how technology can be brought to life to solve the biggest challenges in business.

When IBM and our partners work together to solve clients' most complex business challenges, everyone wins. We opened access to software technology on the AWS marketplace to provide flexibility through an open ecosystem. IBM customers can purchase 30 IBM products through the Azure Marketplace and deploy these IBM technologies on Azure. We gave partners access to the same training, and deep technical and product expertise as IBMers to foster a consistent client experience. We deepened our partnership with cloud hyperscalers, large independent software vendors and global system integrators, making it easier for partners and clients to embrace hybrid cloud. Our commitment to the IBM ecosystem gives partners and clients the flexibility and market access they need to run workloads seamlessly in any environment.

In 2022, IBM's execution and innovation of our hybrid cloud and AI strategy improved the trajectory of our business. We see the core convictions that have shaped our strategy continue to resonate in the market. As we enter 2023, we will continue to advance our R&D innovation, inorganic investment and fast-growing ecosystem, positioning IBM as a leader in a world where hybrid cloud and AI are central to enterprise success.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

Business Segments and Capabilities

IBM operates in more than 175 countries around the world. Our platform-centric hybrid cloud and AI strategy is executed through our operations and consists of four business segments: Software, Consulting, Infrastructure and Financing.

Software

Software provides software solutions that address client needs for a hybrid cloud platform, data and AI, automation, and security on their journey to hybrid cloud. It includes all software, except operating system software reported in the Infrastructure segment.

Software comprises two business areas – Hybrid Platform & Solutions and Transaction Processing, which have the following capabilities:

Hybrid Platform & Solutions: includes software, infused with AI, to help clients operate, manage and optimize their IT resources and business processes within hybrid, multi-cloud environments. It includes the following:

Red Hat: provides enterprise open-source solutions, for hybrid, multi-cloud environments, which includes Red Hat Enterprise Linux (RHEL), OpenShift, our hybrid cloud platform, as well as Ansible.

Automation: optimizes processes from business workflows to IT operations with AI-powered automation. Automation includes software for business automation, IT automation, integration and application runtimes.

Data & AI: accelerates data-driven agendas by infusing AI throughout the enterprise, empowering intelligent decision making. The portfolio includes capabilities that simplify data consumption through data fabric with data management, optimize lifecycle management, and make better predictions through business analytics. Data & AI capabilities facilitate sustainable, resilient businesses and enable intelligent management of enterprise assets and supply chains with environmental intelligence and the world's most accurate weather forecast data.

Security: creates a risk-aware, secure business by gaining real-time threat insights, orchestrating actions and automating responses across all touchpoints, in line with a zero-trust security strategy. Security includes software and services for threat management, data security, and identity and access management.

Transaction Processing: the software that supports clients' mission-critical, on-premise workloads in industries such as banking, airlines and retail. This includes transaction processing software such as Customer Information Control System and storage software, as well as the analytics and integration software running on IBM operating systems such as DB2 and WebSphere running on z/OS.

Consulting

Consulting provides deep industry expertise and market-leading capabilities in business transformation and technology implementation. Consulting designs, builds and operates technology and business processes based on open, hybrid cloud architectures with IBM technology and ecosystem partner technologies. Consulting uses its IBM Garage method to convene experts to co-create solutions with clients to accelerate their digital transformations through AI and automation.

Consulting comprises three business areas – Business Transformation, Technology Consulting and Application Operations, which have the following capabilities:

Business Transformation: provides strategy, process design, system implementation and operations services to improve and transform key business processes. These services deploy AI and automation in business processes to exploit the value of data and include an ecosystem of partners alongside IBM technology, including strategic partnerships with Adobe, Oracle, Salesforce and SAP, among others.

Technology Consulting: helps clients architect and implement solutions across cloud platforms, including Amazon, Microsoft and IBM, and strategies to transform the enterprise experience and enable innovation, including application modernization for hybrid cloud with Red Hat OpenShift.

Application Operations: focuses on application and cloud platform services required to operationalize and run cloud platforms. It facilitates clients' efforts to manage, optimize and orchestrate application and data workloads across platforms and environments through both custom applications and ISV packages.

Infrastructure

Infrastructure provides trusted, agile and secure solutions for hybrid cloud and is the foundation of the hybrid cloud stack. Infrastructure is optimized for infusing AI into mission-critical transactions and tightly integrated with IBM Software including Red Hat for accelerated hybrid cloud benefits.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

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Infrastructure comprises two business areas – Hybrid Infrastructure and Infrastructure Support, which have the following capabilities:

Hybrid Infrastructure: provides clients with innovative infrastructure platforms to help meet the new requirements of hybrid multi-cloud and enterprise AI workloads leveraging flexible and as-a-service consumption models. Hybrid Infrastructure includes zSystems and Distributed Infrastructure.

zSystems: the premier transaction processing platform with leading security, resilience and scale, highly optimized for mission-critical, high-volume transaction workloads. It includes zSystems and LinuxONE, with a range of high-performance systems designed to address computing capacity, security and performance needs of businesses. zSystems operating system software environments include z/OS, a security-rich, high-performance enterprise operating system, as well as Linux and other platforms that are enabled with enterprise AI and are hybrid cloud ready.

Distributed Infrastructure: the portfolio is uniquely positioned for hybrid cloud, meeting client demands for scalability, security and capacity. Distributed Infrastructure includes Power, Storage and IBM Cloud Infrastructure-as-a-Service (IaaS). Power consists of high-performance servers, designed and engineered for big data and AI-enabled workloads and are optimized for hybrid cloud and Linux. The Storage portfolio consists of a broad range of storage hardware and software-defined offerings, including Z-attach and distributed flash, tape solutions, software-defined storage controllers, data protection software and network-attach storage. IBM Cloud IaaS is built on enterprise-grade hardware with an open architecture and is specifically designed for regulated industries with leading security and compliance capabilities. IBM Cloud IaaS offers flexible computing options across x86, Power, Storage and zSystems as a service to meet client workload needs.

Hybrid Infrastructure also includes remanufacturing and remarketing of used equipment with a focus on sustainable recovery services.

Infrastructure Support: works across hybrid cloud environments providing a uniquely integrated services experience for clients. Infrastructure Support delivers comprehensive, proactive and AI-enabled services to maintain and improve the availability and value of clients' IT infrastructure (hardware and software) both on-premises and in the cloud. These offerings include maintenance for IBM products and other technology platforms, as well as open-source and cross-vendor software and solution support.

Financing

Financing facilitates IBM clients' acquisition of information technology systems, software and services through its financing solutions. The financing arrangements are predominantly for products or services that are critical to the end users' business operations and support IBM's hybrid cloud and AI strategy. Financing conducts a comprehensive credit evaluation of its clients prior to extending financing. As a captive financier, Financing has the benefit of both deep knowledge of its client base and a clear insight into the products and services financed. These factors allow the business to effectively manage two of the primary risks associated with financing, credit and residual value, while generating strong returns on equity.

Financing comprises the following two business areas – Client Financing and Commercial Financing:

Client Financing: lease, installment payment plan and loan financing to end-user clients for terms up to seven years, and internal loan financing in support of IBM IaaS service arrangements. Assets financed are primarily new and used IT hardware, software and services where we have expertise.

Commercial Financing: short-term working capital financing to distributors and resellers primarily of IBM products. The company has an existing agreement with a third-party investor to sell IBM short-term commercial financing receivables on a revolving basis.

Human Capital

Employees and Related Workforce

(In thousands)

For the year ended December 31:	2022
IBM/wholly owned subsidiaries	288.3
Less-than-wholly owned subsidiaries	8.2
Complementary*	14.8

* The complementary workforce is an approximation of equivalent full-time employees hired under temporary, part-time and limited-term employment arrangements to meet specific business needs in a flexible and cost-effective manner.

As a globally integrated enterprise, IBM operates in more than 175 countries and is continuing to shift our business to the higher value segments of enterprise IT. Our highly skilled global workforce is reflective of the work we do for clients in support of their digital transformations and mission-critical operations through our focus on hybrid cloud and AI. Our employees are among the world's leading experts in hybrid cloud, AI, quantum computing, cybersecurity and industry-specific solutions. We believe our success depends on the caliber of our talent and the engagement and inclusion of IBMers in the workplace.

Management Discussion

International Business Machines Corporation and Subsidiary Companies

Talent and Culture

We attract, develop, engage and retain talent in a dynamic and competitive environment. IBM provides a compelling employee value proposition, offering professionals competitive compensation and attractive career opportunities in the development and delivery of innovative technologies for clients whose businesses the world relies on. Our value proposition and talent strategy help to retain talent. During 2022, voluntary attrition decreased consistent with the overall labor market.

We are continuously transforming and developing our talent, both through learning and hiring. In 2022, we added skills in consulting and key technical areas and invested in scaling our capacity in strategically important markets. We are expanding our ability to deliver best-in-class customer experiences by investing in talent to facilitate garages, client engineering centers and customer success management. We continue to invest in upskilling and reskilling our workforce. Our digital learning and career platforms are examples of this commitment to provide employees access to the resources needed to build strategic skills and grow their careers. These digital platforms utilize Watson AI to generate personalized recommendations for employees and include peer-to-peer collaboration and internal social sharing functionality. Helping employees learn and apply new skills is important for retention and critical to our ability to transform and evolve.

Employee engagement is an indicator of employee well-being and their dedication to the company's mission, purpose and values. We conduct an annual engagement survey to assess the health of the company's culture and employee sentiment. More than 185,000 employees globally participated in the 2022 engagement survey, providing actionable data-driven insights to managers and leaders around factors such as workplace experience, inclusion, pride and propensity to recommend IBM as an employer. More than eight out of ten employees that participated in the survey responded that they felt engaged at work, a testament to our industry-leading talent practices.

Diversity and Inclusion

IBM has a long, proud history as a pioneer in diversity and inclusion. We work to ensure employees from diverse backgrounds are engaged, can be their authentic selves, build skills and grow their careers. Nearly nine out of ten employees feel empowered to be their authentic selves at work. We believe a diverse and inclusive workplace leads to greater innovation, agility, performance and engagement, enabling both business growth and societal impact. Our focus on creating a diverse and inclusive workplace has led to increased levels of inclusion for women, Black and Hispanic employees. Women make up more than one-third of our workforce. In addition, executive representation of women globally, and Hispanic and Black executives in the U.S. improved by 0.3 points, 0.4 points and 0.6 points, respectively, in 2022. Our executive compensation program metrics include a diversity modifier to reinforce our focus and continued accountability for improving the diverse representation of our workforce. Globally, our executives are measured on the improvement of diversity and inclusion for women. In the U.S., executives are also measured on improvement of diversity and inclusion for U.S. underrepresented minorities.

We believe in pay equity whereby employees should be compensated fairly for their work and performance, regardless of their gender, race or other personal characteristics. We have a long-standing practice of maintaining pay equity, which has been part of our global policy since 1935 and we remain firmly committed to equal pay for equal work. To this end, we conduct statistical pay equity assessments across all countries with IBM employees. We also empower employees to understand their pay by providing comprehensive compensation education. Employees can also directly access information about their pay, including a comparison against their market pay range, through the HR system or their direct managers.

Health, Safety and Well-Being

IBM has a long-standing commitment to the health, safety and well-being of our employees. This commitment is embodied in our health and safety policy which is implemented through our externally certified Health and Safety Management System (HSMS). Objectives of our HSMS include providing a safe and healthy workplace, preventing work-related injuries and illnesses, enhancing worker health and productivity and providing resources to fulfill these commitments.

We feel that our employees perform best at work, at home and in the communities where they live and work when their well-being is supported. We believe in not taking a one-size-fits-all approach when it comes to health, safety and well-being. We strive to provide programs that are culturally relevant and inclusive to address the needs of a diverse employee population. We have taken our experience from the pandemic and created an environment to support our employees' needs on flexibility. Access to well-being services and resources are offered through onsite activities, partnerships with external vendors, amongst other methods of delivery.

We offer a wide range of evidence-based health promotion services and programs, covering all aspects of employee well-being: physical, mental and financial health. In 2022, programs were focused on cardiovascular, musculoskeletal and mental health, addressing some of the medical issues that were exacerbated during the COVID-19 pandemic. All IBMers worldwide have confidential, 24/7 access to critical mental health support through employee assistance programs and supplemental resources. Other programs include additional paid time off for working parents and caregivers experiencing life events, training for employees on resilience, as well as financial counseling offerings. Employees are supported with around-the-clock access to IBM's world-class Health and Safety team, education, timely updates and forums to ask questions and raise concerns.

YEAR IN REVIEW

Results of Continuing Operations

As discussed in the "Organization of Information" section, with the completion of the separation on November 3, 2021, the results of Kyndryl are reported as discontinued operations and as such, have been excluded from continuing operations and segment results for all periods presented.

Segment Details

In the first quarter of 2022, we realigned our management structure to reflect the planned divestiture of our healthcare software assets which was completed in the second quarter of 2022. This change impacted our Software segment and Other—divested businesses category, but did not impact our Consolidated Financial Statements. Prior-year results have been recast to reflect this change. The table below presents each reportable segment's revenue and gross margin results, followed by an analysis of the 2022 versus 2021 reportable segment results.

(\$ in millions)

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent/ Margin Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Revenue				
Software	\$25,037	\$23,426 *	6.9 %	11.9 %
Gross margin	79.6 %	79.6 %*	0.0 pts.	
Consulting	19,107	17,844	7.1 %	14.9 %
Gross margin	25.5 %	28.0 %	(2.5)pts.	
Infrastructure	15,288	14,188	7.8 %	13.5 %
Gross margin	52.8 %	55.3 %	(2.6)pts.	
Financing	645	774	(16.6)%	(13.0)%
Gross margin	38.3 %	31.7 %	6.6 pts.	
Other	453	1,119 *	(59.6)%	(56.2)%
Gross margin	(95.3)%	(22.3)%*	(73.0)pts.	
Total revenue	\$60,530	\$57,350	5.5 %	11.6 %
Total gross profit	\$32,687	\$31,486	3.8 %	
Total gross margin	54.0 %	54.9 %	(0.9)pts.	
Non-operating adjustments				
Amortization of acquired intangible assets	682	719	(5.1)%	
Operating (non-GAAP) gross profit	\$33,370	\$32,205	3.6 %	
Operating (non-GAAP) gross margin	55.1 %	56.2 %	(1.0)pts.	

* Recast to reflect segment change.

Software

(\$ in millions)

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Software revenue	\$25,037	\$23,426 *	6.9 %	11.9 %
Hybrid Platform & Solutions	\$17,866	\$17,036 *	4.9 %	9.4 %
Red Hat			12.6	17.5
Automation			2.1	6.6
Data & AI			1.5	5.5
Security			2.2	7.3
Transaction Processing	7,171	6,390	12.2	18.7

* Recast to reflect segment change.

Software revenue of \$25,037 million increased 6.9 percent as reported (12 percent adjusted for currency) in 2022 compared to the prior year, driven by growth in both Hybrid Platform & Solutions and Transaction Processing. This includes incremental sales to Kyndryl which contributed approximately 6 points to Software revenue growth. Software concluded 2022 with seasonally strong transactional performance in the fourth quarter and a solid and growing recurring revenue base. Within Software, hybrid cloud revenue of \$9,321 million grew 11 percent as reported (16 percent adjusted for currency) year to year. Our platform-based approach to hybrid cloud and AI is resonating with clients. We have modernized and optimized our software capabilities to run on this platform across Automation, Data & AI and Security for the platform.

Hybrid Platform & Solutions revenue of \$17,866 million increased 4.9 percent as reported (9 percent adjusted for currency) in 2022 compared to the prior year. Incremental sales to Kyndryl contributed approximately 1 point to revenue growth. Within Hybrid Platform & Solutions, we had revenue growth across all of our business areas. Red Hat revenue increased 12.6 percent as reported (17 percent

Management Discussion

International Business Machines Corporation and Subsidiary Companies

adjusted for currency) led by double-digit growth in OpenShift and Ansible, both of which gained market share in 2022. OpenShift had \$1.0 billion in annual recurring revenue exiting 2022. Revenue in RHEL also had strong growth and gained share in 2022 compared to the prior year. Red Hat continues to be a leader in open-source technology and its hybrid cloud offerings continue to transform enterprise IT. Automation revenue increased 2.1 percent as reported (7 percent adjusted for currency), led by Integration and AIOps and Management as clients look to automate business workflows and improve applications. Data & AI revenue increased 1.5 percent as reported (6 percent adjusted for currency), reflecting demand in areas such as Data Management, Data Fabric, Information Exchange, and Asset and Supply Chain Management. In addition, our offerings such as Envizi and Environmental Intelligence Suite are resonating with clients as they continue to prioritize sustainability efforts. Security revenue increased 2.2 percent as reported (7 percent adjusted for currency), led by strength across our offerings such as Threat Management, Data Security and Identity. We continue to help clients detect, prevent and respond to security incidents as they adopt zero-trust security strategies.

Across Hybrid Platform & Solutions, our annual recurring revenue (ARR) was \$13.3 billion exiting 2022. ARR is a key performance metric management uses to assess the health and growth trajectory of our Hybrid Platform & Solutions business within the Software segment. ARR is calculated by estimating the current quarter's recurring, committed value for certain types of active contracts as of the period-end date and then multiplying that value by four. This value is based on each arrangement's contract value and start date, mitigating fluctuations during the contract term, and includes the following consumption models: (1) software subscription agreements, including committed term licenses, (2) as-a-service arrangements such as SaaS and PaaS, (3) maintenance and support contracts, and (4) security managed services contracts. ARR should be viewed independently of revenue as this performance metric and its inputs may not represent the amount of revenue recognized in the period and therefore is not intended to represent current period revenue or revenue that will be recognized in future periods. ARR is calculated at estimated constant currency.

Transaction Processing revenue of \$7,171 million increased 12.2 percent as reported (19 percent adjusted for currency) in 2022 compared to the prior year. This includes incremental sales to Kyndryl which contributed approximately 19 points of revenue growth in 2022. Client demand for this mission-critical software has followed increases in zSystems installed capacity over the last two product cycles and consistently strong renewal rates during 2022 are evidence of the importance of this software in a hybrid cloud environment.

(\$ in millions)

	2022	2021 *	Yr.-to-Yr. Percent/ Margin Change
For the year ended December 31:			
Software			
Gross profit	\$19,941	\$18,648	6.9 %
Gross profit margin	79.6 %	79.6 %	0.0 pts.
Pre-tax income	\$ 6,162	\$ 4,849	27.1 %
Pre-tax margin	24.6 %	20.7 %	3.9 pts.

* Recast to reflect segment change.

The Software gross profit margin of 79.6 percent in 2022 was flat compared to the prior year. Pre-tax income of \$6,162 million increased 27.1 percent compared to the prior year with a pre-tax margin expansion of 3.9 points to 24.6 percent. The improvements year to year in pre-tax income and pre-tax margin were driven primarily by the higher gross profit contribution from our strong revenue growth including the Kyndryl commercial relationship, which reflects the demand for our products, as well as portfolio mix.

Consulting

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
For the year ended December 31:				
Consulting revenue	\$19,107	\$17,844	7.1 %	14.9 %
Business Transformation	\$ 8,834	\$ 8,284	6.6 %	14.0 %
Technology Consulting	3,765	3,466	8.6	16.8
Application Operations	6,508	6,095	6.8	15.0

Consulting revenue of \$19,107 million increased 7.1 percent as reported (15 percent adjusted for currency) in 2022 compared to the prior year, with strong growth across all three business areas. Clients are leveraging IBM's hybrid cloud leadership and deep industry expertise to navigate the complexity of their digital transformation journeys. Strong demand for our Consulting offerings led to signings growth of 6.9 percent as reported (14 percent adjusted for currency) in 2022. We had our best quarterly book-to-bill for 2022 in the fourth quarter and had a book-to-bill ratio of 1.1 for the year. Book-to-bill represents the ratio of IBM Consulting signings to its revenue over the same period and is a useful indicator of the demand for our business over time. Clients are partnering with IBM Consulting as they decide which applications to modernize and how to migrate these applications across hybrid, multi-cloud environments. Within Consulting, hybrid cloud revenue of \$9,019 million grew 15 percent as reported (23 percent adjusted for currency) year to year with both our Red Hat practice and strategic partnerships contributing to the growth.

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Business Transformation revenue of \$8,834 million increased 6.6 percent as reported (14 percent adjusted for currency) compared to the prior year. We had strong demand for our Business Transformation solutions, with growth across our service line offerings such as data and client experience transformations, supply chain and finance optimizations. Our partnerships with key ISVs including SAP, Salesforce and Adobe enabled us to help clients transform their critical workloads at scale and improve the way they engage with their customers.

Technology Consulting revenue of \$3,765 million increased 8.6 percent as reported (17 percent adjusted for currency), led by our cloud development and cloud modernization practices which architect and implement clients' cloud platforms and strategies. Our Red Hat engagements as well as strategic hyperscaler partnerships also contributed to the year-to-year revenue growth.

Application Operations revenue of \$6,508 million increased 6.8 percent as reported (15 percent adjusted for currency). We help clients optimize their operations and reduce costs by taking over the management of applications in hybrid and multi-cloud environments. Our incumbency and understanding of clients' applications are key differentiators which helped to contribute to this growth.

(\$ in millions)

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent/ Margin Change
Consulting			
Gross profit	\$4,864	\$4,994	(2.6)%
Gross profit margin	25.5 %	28.0 %	(2.5)pts.
Pre-tax income	\$1,677	\$1,449	15.7 %
Pre-tax margin	8.8 %	8.1 %	0.7 pts.

The Consulting gross profit margin decreased 2.5 points to 25.5 percent compared to the prior year. Pre-tax income of \$1,677 million increased 15.7 percent compared to the prior year and the pre-tax margin increased 0.7 points to 8.8 percent. The decline in gross profit margin reflects labor cost inflation which put pressure on the margin profile in 2022, however, the gross profit margin improved 2.4 points in the second half of 2022 compared to the first half reflecting the benefit from pricing actions and productivity. The year-to-year improvement in pre-tax income and pre-tax margin reflects the benefits of productivity within our workforce, a more streamlined operating and go-to-market structure as well as our acquisitions which have become more accretive.

Consulting Signings

(\$ in millions)

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Total Consulting signings	\$20,485	\$19,163	6.9 %	14.3 %

Signings are management's initial estimate of the value of a client's commitment under a services contract within IBM Consulting. There are no third-party standards or requirements governing the calculation of signings. The calculation used by management involves estimates and judgments to gauge the extent of a client's commitment, including the type and duration of the agreement and the presence of termination charges or wind-down costs.

Contract extensions and increases in scope are treated as signings only to the extent of the incremental new value. Total signings can vary over time due to a variety of factors including, but not limited to, the timing of signing a small number of larger contracts. Signings associated with an acquisition will be recognized on a prospective basis.

Management believes the estimated values of signings disclosed provide an indication of our forward-looking revenue. Signings are used to monitor the performance of the business and viewed as useful information for management and shareholders. The conversion of signings into revenue may vary based on the types of services and solutions, contract duration, customer decisions, and other factors, which may include, but are not limited to, the macroeconomic environment.

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Infrastructure

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
For the year ended December 31:				
Infrastructure revenue	\$15,288	\$14,188	7.8 %	13.5 %
Hybrid Infrastructure	\$ 9,451	\$ 8,167	15.7 %	21.0 %
zSystems			30.6	36.0
Distributed Infrastructure			6.6	11.9
Infrastructure Support	5,837	6,021	(3.1)	3.3

Infrastructure revenue of \$15,288 million increased 7.8 percent as reported (14 percent adjusted for currency) year to year driven by strong double-digit growth in Hybrid Infrastructure. Incremental sales to Kyndryl contributed approximately 6 points to the Infrastructure revenue growth. Within Infrastructure, hybrid cloud revenue of \$3,895 million increased 7 percent as reported (11 percent adjusted for currency) year to year, driven by the product cycle dynamics of z16 and Storage in the current year.

Hybrid Infrastructure revenue of \$9,451 million increased 15.7 percent as reported (21 percent adjusted for currency). Incremental sales to Kyndryl contributed approximately 6 points to the revenue growth. Within Hybrid Infrastructure, zSystems revenue grew 30.6 percent as reported (36 percent adjusted for currency) on a year-to-year basis, reflecting strong execution around our new z16 program. The z16 capabilities include cyber-resilient security, embedded AI at scale and cloud-native development for hybrid cloud. Clients are leveraging cyber-resiliency to comply with business regulations and proactively avoid outages in their operations. The new on-chip AI accelerator has been helping mitigate and detect fraud in credit card application processing. The z16 is also the industry's first quantum-safe system, delivering 25 billion encrypted transactions per day for clients. In the third quarter of 2022, we also introduced our newest LinuxONE server, a highly scalable Linux and Kubernetes-based platform with capabilities to reduce clients' energy consumption. IBM zSystems remains an enduring platform, now playing an important role in a hybrid cloud environment. Distributed Infrastructure revenue increased 6.6 percent as reported (12 percent adjusted for currency). This performance was led by strength in Power Systems with the extension of our Power10 innovation throughout the Power Systems product lines. The Power10 server platform is designed to deliver flexible and secure infrastructure for hybrid cloud environments. In addition, recent innovation within our Storage product lines included a refresh to our flash storage solutions which contributed to Storage performance in 2022.

Infrastructure Support revenue of \$5,837 million decreased 3.1 percent as reported, but grew 3 percent adjusted for currency year to year. This includes incremental sales to Kyndryl which contributed approximately 6 points of revenue growth in 2022. Infrastructure Support performance in 2022 was impacted by client adoption of new hardware with the launch of the z16 program. In the first year of a new hardware cycle, product is under standard warranty which results in a cyclical decline in maintenance revenue.

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent/ Margin Change
For the year ended December 31:			
Infrastructure			
Gross profit	\$8,066	\$7,848	2.8 %
Gross profit margin	52.8 %	55.3 %	(2.6)pts.
Pre-tax income	\$2,262	\$2,025	11.7 %
Pre-tax margin	14.8 %	14.3 %	0.5 pts.

The Infrastructure gross profit margin decreased 2.6 points to 52.8 percent in 2022 compared to the prior year driven by Infrastructure Support. The gross profit margin decline in Infrastructure Support was primarily driven by portfolio mix. Hybrid Infrastructure profit margin reflected declines in zSystems and Distributed Infrastructure profit margins in line with product cycle dynamics, offset by product mix primarily toward zSystems. Pre-tax income of \$2,262 million increased 11.7 percent, primarily driven by the revenue growth from the z16 product cycle and an increase in IP income year to year from a joint development and licensing agreement signed in the fourth quarter of 2022. The pre-tax margin increased 0.5 points year to year to 14.8 percent, primarily driven by portfolio mix.

Financing

See pages 40 through 42 for a discussion of Financing's segment results.

Geographic Revenue

In addition to the revenue presentation by reportable segment, we also measure revenue performance on a geographic basis.

(\$ in millions)

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Total revenue	\$60,530	\$57,350	5.5 %	11.6 %
Americas	\$31,057	\$28,299	9.7 %	10.2 %
Europe/Middle East/Africa	17,950	17,447	2.9	13.9
Asia Pacific	11,522	11,604	(0.7)	11.4

Total revenue of \$60,530 million in 2022 increased 5.5 percent year to year as reported and 12 percent adjusted for currency, which includes approximately 4 points of revenue growth from incremental sales to Kyndryl.

Americas revenue increased 9.7 percent as reported and 10 percent adjusted for currency, which includes approximately 3 points of revenue growth from incremental sales to Kyndryl. Within North America, the U.S. increased 9.2 percent and Canada increased 3.3 percent as reported and 7 percent adjusted for currency. Latin America increased 18.4 percent as reported and 19 percent adjusted for currency. Within Latin America, Brazil revenue increased 17.6 percent as reported and 14 percent adjusted for currency.

EMEA revenue increased 2.9 percent as reported and 14 percent adjusted for currency, which includes approximately 5 points of revenue growth from incremental sales to Kyndryl. France, the UK and Italy increased 9.6 percent, 5.3 percent and 3.2 percent, respectively, as reported, and increased 22 percent, 17 percent and 15 percent, respectively, adjusted for currency. Germany decreased 4.7 percent as reported, but grew 6 percent adjusted for currency. The orderly wind-down of our Russian operations in the second quarter of 2022 negatively impacted the revenue growth rate in EMEA by 1.7 points as reported and 2 points adjusted for currency.

Asia Pacific revenue decreased 0.7 percent as reported, but grew 11 percent adjusted for currency, which includes approximately 5 points of revenue growth from incremental sales to Kyndryl. Japan revenue decreased 3.5 percent as reported, but grew 15 percent adjusted for currency. India increased 20.3 percent as reported and 28 percent adjusted for currency. Australia increased 7.3 percent as reported and 16 percent adjusted for currency. China decreased 22.7 percent as reported and 20 percent adjusted for currency, driven primarily by large transactions in the financial sector in the prior year related to our zSystems products.

Total Expense and Other (Income)

(\$ in millions)

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent/ Margin Change
Total expense and other (income)	\$31,531 *	\$26,649	18.3 %
Non-operating adjustments			
Amortization of acquired intangible assets	(1,065)	(1,119)	(4.8)
Acquisition-related charges	(18)	(43)	(58.6)
Non-operating retirement-related (costs)/income	(6,548)*	(1,282)	NM
Kyndryl-related impacts	(351)	118	NM
Operating (non-GAAP) expense and other (income)	\$23,549	\$24,324	(3.2)%
Total expense-to-revenue ratio	52.1 %	46.5 %	5.6 pts.
Operating (non-GAAP) expense-to-revenue ratio	38.9 %	42.4 %	(3.5)pts.

* Includes a one-time, non-cash pension settlement charge of \$5.9 billion. See note V, "Retirement-Related Benefits," for additional information.

NM—Not meaningful

Our expense dynamics in 2022 reflect our continued investment in innovation, skills and our ecosystem, both organically and through acquisitions, as we accelerate and execute our hybrid cloud and AI strategy. Our work to digitally transform our operations provides flexibility to continue to invest in innovation and in talent.

Total expense and other (income) increased 18.3 percent in 2022 versus the prior year primarily driven by the one-time, non-cash pension settlement charge of \$5.9 billion, higher spending reflecting our continuing focus on our portfolio and investment in our offerings, technical talent and ecosystem, and year-to-year impacts related to Kyndryl retained shares, partially offset by the effects of currency and benefits from the actions taken to streamline operations and our go-to-market model.

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Total operating (non-GAAP) expense and other (income) decreased 3.2 percent year to year, driven primarily by the effects of currency and benefits from the actions taken to streamline operations and our go-to-market model, partially offset by higher spending reflecting our continuing focus on our portfolio and investment in our offerings, technical talent and ecosystem.

For additional information regarding total expense and other (income) for both expense presentations, see the following analyses by category.

Selling, General and Administrative Expense

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Selling, general and administrative expense			
Selling, general and administrative—other	\$15,537	\$15,550	(0.1)%
Advertising and promotional expense	1,330	1,413	(5.9)
Workforce rebalancing charges	50	181	(72.4)
Amortization of acquired intangible assets	1,062	1,116	(4.8)
Stock-based compensation	566	555	1.9
Provision for/(benefit from) expected credit loss expense	64	(71)	NM
Total selling, general and administrative expense	\$18,609	\$18,745	(0.7)%
Non-operating adjustments			
Amortization of acquired intangible assets	(1,062)	(1,116)	(4.8)
Acquisition-related charges	(17)	(43)	(60.4)
Kyndryl-related impacts	0	(8)	(95.5)
Operating (non-GAAP) selling, general and administrative expense	\$17,529	\$17,577	(0.3)%

NM—Not meaningful

Total selling, general and administrative (SG&A) expense decreased 0.7 percent in 2022 versus 2021, driven primarily by the following factors:

- The effects of currency (4 points); and
- Lower workforce rebalancing charges (1 point); partially offset by
- Higher spending (3 points) reflecting our continuing investment to drive our hybrid cloud and AI strategy, expenses of acquired businesses and higher travel and commission expense, partially offset by benefits from the actions taken to transform our operations and lower spending for shared services transferred to Kyndryl; and
- A provision for expected credit loss expense in the current year compared to a benefit in the prior year (1 point).

Operating (non-GAAP) SG&A expense decreased 0.3 percent year to year primarily driven by the same factors.

Provisions for expected credit loss expense was \$64 million in 2022 as compared to a benefit of \$71 million in 2021. The year-to-year change was primarily driven by an increase in specific reserves in the current year compared to decreases in both general and specific reserves in the prior year. The prior-year decreases were primarily driven by improvement in customer credit quality and some emergence from bankruptcies as economies began to reopen after the global pandemic shutdowns. The receivables provision coverage was 2.4 percent at December 31, 2022, an increase of 30 basis points from December 31, 2021 driven by an increase in specific reserves and, to a lesser extent, a decrease in receivables.

Research, Development and Engineering Expense

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Total research, development and engineering	\$6,567	\$6,488	1.2 %

Research, development and engineering (RD&E) expense increased 1.2 percent in 2022 versus 2021, reflecting our continuing investment to deliver innovation in AI, hybrid cloud and emerging areas such as quantum. The year-to-year increase was primarily driven by higher spending (3 points), partially offset by the effects of currency (2 points).

Management Discussion

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Intellectual Property and Custom Development Income

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Licensing of intellectual property including royalty-based fees	\$397	\$306	29.7 %
Custom development income	246	272	(9.4)
Sales/other transfers of intellectual property	21	35	(40.1)
Total	\$663	\$612	8.4 %

Total Intellectual Property and Custom Development Income increased 8.4 percent in 2022 compared to 2021. In the fourth quarter of 2022, we signed a three-year joint development and licensing agreement with a Japanese consortium to leverage our intellectual property and expertise on advanced semiconductors which resulted in income of approximately \$100 million in 2022.

The timing and amount of licensing, sales or other transfers of IP may vary significantly from period to period depending upon the timing of licensing agreements, economic conditions, industry consolidation and the timing of new patents and know-how development.

Other (Income) and Expense

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Other (income) and expense			
Foreign currency transaction losses/(gains)	\$ (643)	\$ (204)	214.7 %
(Gains)/losses on derivative instruments	225	205	9.9
Interest income	(162)	(52)	211.1
Net (gains)/losses from securities and investment assets	278	(133)	NM
Retirement-related costs/(income)	6,548 *	1,282	NM
Other	(443)	(225)	97.0
Total other (income) and expense	\$ 5,803	\$ 873	NM
Non-operating adjustments			
Amortization of acquired intangible assets	(2)	(2)	—
Acquisition-related charges	(1)	—	NM
Non-operating retirement-related costs/(income)	(6,548)*	(1,282)	NM
Kyndryl-related impacts	(351)	126	NM
Operating (non-GAAP) other (income) and expense	\$(1,099)	\$ (285)	285.2 %

* Includes a one-time, non-cash pension settlement charge of \$5.9 billion.

NM—Not meaningful

Total other (income) and expense was \$5,803 million of expense in 2022 compared to \$873 million in 2021. The year-to-year increase was primarily driven by:

- Higher non-operating retirement-related costs (\$5,266 million) driven by the third-quarter 2022 pension settlement charge. Refer to note V, "Retirement-Related Benefits," for additional information; and
- Net losses related to Kyndryl retained shares in the current year versus a net gain in the prior year (\$393 million); partially offset by
- Net exchange gains (including foreign exchange derivative instruments) in the current year versus net exchange losses in the prior year (\$418 million). The current-year (gains)/losses on derivative instruments includes a loss on the cash-settled swap related to the Kyndryl retained shares (\$83 million);
- Higher gains on divestitures year to year (\$234 million) primarily driven by the divestiture of our healthcare software assets (included in "Other"); and
- Higher interest income (\$110 million) driven by higher average interest rates in the current year.

Operating (non-GAAP) other (income) and expense was \$1,099 million of income in 2022 and increased \$814 million compared to the prior year. The year-to-year increase was driven primarily by the effects of currency, higher gains on divestitures and higher interest income described above.

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Interest Expense

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Total interest expense	\$1,216	\$1,155	5.3 %

Interest expense increased \$61 million compared to 2021. Interest expense is presented in cost of financing in the Consolidated Income Statement only if the related external borrowings are to support the Financing external business. Overall interest expense (excluding capitalized interest) in 2022 was \$1,562 million, an increase of \$14 million year to year primarily driven by higher average interest rates, partially offset by a lower average debt balance in the current year.

Stock-Based Compensation

Pre-tax stock-based compensation cost of \$987 million increased \$68 million compared to 2021. This was primarily due to a current-year change in our Employee Stock Purchase Plan which is considered compensatory beginning second-quarter 2022 (\$43 million), an increase from performance share units (\$21 million), grants of stock options in the current year (\$19 million) and an increase from restricted stock units (\$17 million), partially offset by a decrease associated with options previously issued by acquired entities (\$31 million). Stock-based compensation cost, and the year-to-year change, was reflected in the following categories: Cost: \$164 million, up \$18 million; SG&A expense: \$566 million, up \$10 million; and RD&E expense: \$258 million, up \$40 million.

Retirement-Related Plans

The following table provides the total pre-tax cost for all retirement-related plans. Total operating costs/(income) are included in the Consolidated Income Statement within the caption (e.g., Cost, SG&A, RD&E) relating to the job function of the plan participants.

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Retirement-related plans—cost			
Service cost	\$ 245	\$ 312	(21.3)%
Multi-employer plans	15	17	(12.9)
Cost of defined contribution plans	924	992	(6.8)
Total operating costs/(income)	\$ 1,184	\$ 1,320	(10.3)%
Interest cost	\$ 1,731	\$ 1,626	6.4 %
Expected return on plan assets	(2,747)	(2,920)	(5.9)
Recognized actuarial losses	1,568	2,454	(36.1)
Amortization of prior service costs/(credits)	12	9	31.1
Curtailments/settlements	5,970 *	94	NM
Other costs	15	18	(19.2)
Total non-operating costs/(income)	\$ 6,548 *	\$ 1,282	NM
Total retirement-related plans—cost	\$ 7,732 *	\$ 2,601	197.2 %

* Includes a one-time, non-cash pension settlement charge of \$5.9 billion.

NM—Not meaningful

Total pre-tax retirement-related plan cost increased by \$5,131 million compared to 2021, primarily due to an increase in curtailment/settlements (\$5,875 million) driven by the \$5.9 billion third-quarter pension settlement charge, lower expected returns on plan assets (\$174 million) and higher interest costs (\$105 million), partially offset by a decrease in recognized actuarial losses (\$886 million), lower cost of defined contribution plans (\$67 million) and lower service cost (\$66 million).

As discussed in the “Operating (non-GAAP) Earnings” section, we characterize certain retirement-related costs as operating and others as non-operating. Utilizing this characterization, operating retirement-related costs in 2022 were \$1,184 million, a decrease of \$136 million compared to 2021. These operating cost decreases were primarily driven by lower cost of defined contribution plans and lower service cost. Non-operating costs of \$6,548 million in 2022 increased \$5,267 million year to year, driven primarily by the pension settlement charge, lower expected returns on plan assets and higher interest costs, partially offset by a decrease in recognized actuarial losses.

Income Taxes

The continuing operations effective tax rate for 2022 was (54.2) percent compared to 2.6 percent in 2021. The current-year effective tax rate was primarily driven by the transfer of a portion of the Qualified PPP's defined benefit pension obligations and related plan assets. The prior-year effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions.

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The operating (non-GAAP) effective tax rate for 2022 was 15.2 percent compared to 9.0 percent in 2021. The prior-year operating (non-GAAP) effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. For more information, see note H, "Taxes."

Earnings Per Share

Basic earnings per share is computed on the basis of the weighted-average number of shares of common stock outstanding during the period. Diluted earnings per share is computed on the basis of the weighted-average number of shares of common stock outstanding plus the effect of dilutive potential common shares outstanding during the period using the treasury stock method. Dilutive potential common shares include outstanding stock options and stock awards.

For the year ended December 31:	2022	2021	Yr.-to-Yr. Percent Change
Earnings per share of common stock from continuing operations			
Assuming dilution	\$1.95 *	\$5.21	(62.6)%
Basic	\$1.97 *	\$5.26	(62.5)%
Diluted operating (non-GAAP)	\$9.13	\$7.93	15.1 %
Weighted-average shares outstanding (in millions)			
Assuming dilution	912.3	904.6	0.8 %
Basic	902.7	896.0	0.7 %

* The \$5.9 billion one-time, non-cash, pre-tax pension settlement charge resulted in an impact of (\$4.84) to diluted earnings per share from continuing operations and an impact of (\$4.89) to basic earnings per share from continuing operations.

Actual shares outstanding at December 31, 2022 and 2021 were 906.1 million and 898.1 million, respectively. The year-to-year increase was primarily the result of the common stock issued under employee plans. The average number of common shares outstanding assuming dilution was 7.6 million shares higher in 2022 versus 2021.

Financial Position

Dynamics

Our balance sheet at December 31, 2022 remained strong and continues to provide us with flexibility to support and invest in the business.

Cash, restricted cash and marketable securities at December 31, 2022 were \$8,840 million, an increase of \$1,283 million compared to prior year end. Total debt of \$50,949 million decreased \$755 million from prior year end primarily driven by currency impacts. We continue to manage our debt levels while being acquisitive and without sacrificing investments in our business or our solid and growing dividend.

Our cash flow is presented on a consolidated basis and includes discontinued operations. Refer to note C, "Separation of Kyndryl," for additional information. During 2022, we generated \$10,435 million in cash from operating activities, a decrease of \$2,361 million compared to 2021 driven by a decline in financing receivables. Our free cash flow for 2022 was \$9,291 million, an increase of \$2,784 million versus the prior year. See pages 34 and 35 for additional information on free cash flow. We invested \$2,348 million in acquisitions to accelerate our hybrid cloud and AI capabilities, generated \$1,272 million from the divestiture of certain businesses, and returned \$5,948 million to shareholders through dividends in 2022. There was no cash flow impact from the U.S. pension settlement charge. Our cash generation supports investment and deployment of capital to areas with the most attractive long-term opportunities.

Consistent with accounting standards, the company remeasured the funded status of our retirement and postretirement plans at December 31. As a result of higher discount rates, partially offset by negative asset returns of 14.3 percent and 15.7 percent on our U.S. and global qualified plans, respectively, the remeasurement resulted in a significant reduction to our pension plan benefit obligations and an improvement in our overall funded status. In addition, as discussed in the Overview section, we transferred \$16 billion of our U.S. Qualified PPP obligations and related plan assets to Insurers in 2022 to further reduce the risk profile of our plans. The overall net underfunded position at December 31, 2022 was \$2,151 million, a decrease of \$3,299 million from the prior year end. At December 31, 2022, the U.S. Qualified PPP was 125 percent funded and the qualified defined benefit plans worldwide were 114 percent funded. The required contributions related to these plans and multi-employer plans are expected to be approximately \$200 million in 2023.

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IBM Working Capital

(\$ in millions)

At December 31:	2022	2021
Current assets	\$29,118	\$29,539
Current liabilities	31,505	33,619
Working capital	\$ (2,387)	\$ (4,080)
Current ratio	0.92:1	0.88:1

Working capital increased \$1,693 million from the year-end 2021 position. Current assets decreased \$421 million (increased \$589 million adjusted for currency) due to a decline in prepaid expenses and other current assets primarily from the disposition of our investment in Kyndryl of \$807 million, and a decrease in accounts receivable driven by currency; partially offset by a net increase in cash and restricted cash. Current liabilities decreased \$2,114 million (\$1,133 million adjusted for currency) due to a decrease in short-term debt mainly due to maturities; partially offset by reclassifications from long-term debt to reflect upcoming maturities.

Receivables and Allowances**Roll Forward of Total IBM Receivables Allowance for Credit Losses**

(\$ in millions)

January 1, 2022	Additions/ (Releases) *	Write-offs **	Foreign currency and other †	December 31, 2022
\$ 443	\$65	\$(55)	\$43	\$495

* Additions/(Releases) for allowance for credit losses are recorded in expense.

** Refer to note A, "Significant Accounting Policies," for additional information regarding allowance for credit losses write-offs.

† Other includes reserve additions/(releases) related to discontinued operations.

Excluding receivables classified as held for sale, the total IBM receivables provision coverage was 2.4 percent at December 31, 2022, an increase of 30 basis points compared to December 31, 2021. The increase in coverage was primarily driven by an increase in specific reserves and, to a lesser extent, a decrease in receivables. The majority of the write-offs during the year related to receivables which had been previously reserved.

Financing Segment Receivables and Allowances

The following table presents external Financing segment receivables excluding receivables classified as held for sale, and immaterial miscellaneous receivables.

(\$ in millions)

At December 31:	2022	2021
Amortized cost*	\$12,843	\$12,859
Specific allowance for credit losses	127	159
Unallocated allowance for credit losses	46	42
Total allowance for credit losses	173	201
Net financing receivables	\$12,670	\$12,658
Allowance for credit losses coverage	1.3 %	1.6 %

* Includes deferred initial direct costs which are expensed in IBM's consolidated financial results.

The percentage of Financing segment receivables reserved decreased from 1.6 percent at December 31, 2021, to 1.3 percent at December 31, 2022, primarily driven by write-offs of previously reserved receivables.

Roll Forward of Financing Segment Receivables Allowance for Credit Losses (included in Total IBM)

(\$ in millions)

January 1, 2022	Additions/ (Releases) *	Write-offs **	Foreign currency and other	December 31, 2022
\$201	\$(3)	\$(25)	\$1	\$173

* Additions/(Releases) for allowance for credit losses are recorded in expense.

** Refer to note A, "Significant Accounting Policies," for additional information regarding allowance for credit loss write-offs.

Financing's expected credit loss expense (including reserves for off-balance sheet commitments which are recorded in other liabilities) was a net release of \$5 million and \$54 million at December 31, 2022 and 2021, respectively. The prior-year net release was primarily driven by lower unallocated reserve requirements in Americas and EMEA due to sales of receivables.

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Noncurrent Assets and Liabilities

(\$ in millions)

At December 31:	2022	2021
Noncurrent assets	\$98,125	\$102,462
Long-term debt	\$46,189	\$ 44,917
Noncurrent liabilities (excluding debt)	\$27,528	\$ 34,469

The decrease in noncurrent assets of \$4,337 million (\$1,912 million adjusted for currency) was driven by a decrease in prepaid pension assets and associated deferred taxes mainly driven by plan remeasurements, amortization of intangibles, and derecognition of goodwill and intangible assets related to the divestiture of our healthcare software assets.

Long-term debt increased \$1,272 million (\$2,329 million adjusted for currency) primarily driven by issuances; partially offset by reclassifications to short-term debt to reflect upcoming maturities and currency impacts.

Noncurrent liabilities (excluding debt) decreased \$6,942 million (\$5,515 million adjusted for currency) primarily driven by a decrease in retirement and postretirement benefit obligations and deferred taxes driven by plan remeasurements.

Debt

Our funding requirements are continually monitored and we execute our strategies to manage the overall asset and liability profile. Additionally, we maintain sufficient flexibility to access global funding sources as needed.

(\$ in millions)

At December 31:	2022	2021
Total debt	\$50,949	\$51,703
Financing segment debt*	\$12,872	\$13,929
Non-Financing debt	\$38,077	\$37,775

* Financing segment debt includes debt of \$918 million in 2022 and \$1,345 million in 2021 to support intercompany financing receivables and other intercompany assets. Refer to Financing's "Financial Position" on page 41 for additional details.

Total debt of \$50,949 million decreased \$755 million (increased \$296 million adjusted for currency) from December 31, 2021, primarily driven by maturities of \$6,984 million and currency impacts; partially offset by issuances of \$7,971 million.

Non-Financing debt of \$38,077 million increased \$302 million (\$983 million adjusting for currency) from December 31, 2021, primarily due to new debt issuances.

Financing segment debt of \$12,872 million decreased \$1,057 million (\$687 million adjusting for currency) from December 31, 2021, primarily due to lower funding requirements associated with financing assets.

Financing provides financing solutions predominantly for IBM's external client assets, and the debt used to fund Financing assets is primarily composed of intercompany loans. Total debt changes generally correspond with the level of client and commercial financing receivables, the level of cash and cash equivalents, the change in intercompany and external payables and the change in intercompany investment from IBM. The terms of the intercompany loans are set by the company to substantially match the term, currency and interest rate variability underlying the financing receivable. The Financing debt-to-equity ratio remained at 9.0 to 1 at December 31, 2022.

We measure Financing as a stand-alone entity, and accordingly, interest expense relating to debt supporting Financing's external client and internal business is included in the "Financing Results of Operations" and in note E, "Segments." In the Consolidated Income Statement, the external debt-related interest expense supporting Financing's internal financing to the company is classified as interest expense.

Equity

Total equity increased \$3,025 million from December 31, 2021 as a result of:

- A decrease in accumulated other comprehensive loss of \$6,494 million driven by retirement-related benefit plans, primarily due to the pension settlement charge of \$4,411 million, net of tax;
- Net income of \$1,639 million, which includes the pension settlement charge of \$4,411 million net of tax; and
- Common stock issuances of \$962 million; partially offset by
- Dividends paid of \$5,948 million.

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Cash Flow

Our cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows on page 49, are summarized in the table below and include the cash flows of discontinued operations. These amounts also include the cash flows associated with the Financing business.

(\$ in millions)

For the year ended December 31:	2022	2021
Net cash provided by/(used in)		
Operating activities	\$10,435	\$ 12,796
Investing activities	(4,202)	(5,975)
Financing activities	(4,958)	(13,354)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(244)	(185)
Net change in cash, cash equivalents and restricted cash	\$ 1,032	\$ (6,718)

Net cash provided by operating activities decreased \$2,361 million in 2022. This was due to a decrease in cash provided by financing receivables of \$4,623 million primarily driven by higher prior-year sales of financing receivables and current-year z16 product cycle dynamics, partially offset by an increase in cash from sales cycle working capital of \$2,027 million primarily due to efficiencies in our collections, and a decrease in payments for structural actions and Kyndryl separation-related charges.

Net cash used in investing activities decreased \$1,773 million driven by an increase in cash provided by divestitures, and a decrease in cash used in acquisitions.

Net cash used in financing activities decreased \$8,397 million. Total debt was a net source of cash of \$1,221 million in 2022 as compared to a net use of cash of \$8,116 million in 2021. The year-to-year change was driven by higher issuances offsetting maturities in the current year, compared to net higher maturities in the prior year.

Discontinued Operations

Pre-tax loss from discontinued operations was \$20 million in 2022 compared to pre-tax income of \$1,744 million in the prior year. As the separation of Kyndryl occurred on November 3, 2021, the discontinued operations results for 2021 included ten months of Kyndryl operations. The loss in 2022 primarily reflects the net impact of changes in separation-related estimates, the settlement of assets and liabilities in accordance with the separation and distribution agreement and a gain on sale of a joint venture historically managed by Kyndryl, which transferred to Kyndryl in the first quarter of 2022 upon receiving regulatory approval. The discontinued operations provision for income taxes in 2022 was \$124 million compared with \$714 million in 2021. The discontinued operations provision for income taxes for the year ended December 31, 2022, primarily reflects the impact of provision to return adjustments on the Kyndryl-related taxes. See note C, "Separation of Kyndryl," for additional information.

GAAP Reconciliation

The tables below provide a reconciliation of our income statement results as reported under GAAP to our operating earnings presentation which is a non-GAAP measure. Management's calculation of operating (non-GAAP) earnings, as presented, may differ from similarly titled measures reported by other companies. Please refer to the "Operating (non-GAAP) Earnings" section for management's rationale for presenting operating earnings information.

(\$ in millions except per share amounts)

	GAAP	Acquisition-Related Adjustments	Retirement-Related Adjustments *	U.S. Tax Reform Impacts	Kyndryl-Related Impacts	Operating (non-GAAP)
For the year ended December 31, 2022:						
Gross profit	\$32,687	\$ 682	\$ —	\$ —	\$ —	\$33,370
Gross profit margin	54.0 %	1.1 pts.	— pts.	— pts.	— pts.	55.1 %
SG&A	\$18,609	\$(1,080)	\$ —	\$ —	\$ 0	\$17,529
Other (income) and expense	5,803	(3)	(6,548)	—	(351)	(1,099)
Total expense and other (income)	31,531	(1,083)	(6,548)	—	(351)	23,549
Pre-tax income from continuing operations	1,156	1,765	6,548	—	351	9,821
Pre-tax margin from continuing operations	1.9 %	2.9 pts.	10.8 pts.	— pts.	0.6 pts.	16.2 %
Provision for/(benefit from) income taxes**	\$ (626)	\$ 436	\$ 1,615	\$ 70	\$ —	\$ 1,495
Effective tax rate	(54.2)%	14.2 pts.	52.6 pts.	0.7 pts.	1.9 pts.	15.2 %
Income from continuing operations	\$ 1,783	\$ 1,329	\$ 4,933	\$ (70)	\$ 351	\$ 8,326
Income margin from continuing operations	2.9 %	2.2 pts.	8.1 pts.	(0.1)pts.	0.6 pts.	13.8 %
Diluted earnings per share from continuing operations	\$ 1.95	\$ 1.46	\$ 5.41	\$(0.08)	\$0.38	\$ 9.13

* Retirement-Related Adjustments includes a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion (\$4.4 billion after tax). See note V "Retirement-Related Benefits," for additional information.

** The tax impact on operating (non-GAAP) pre-tax income is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

(\$ in millions except per share amounts)

	GAAP	Acquisition-Related Adjustments	Retirement-Related Adjustments	U.S. Tax Reform Impacts	Kyndryl-Related Impacts	Operating (non-GAAP)
For the year ended December 31, 2021:						
Gross profit	\$31,486	\$ 719	\$ —	\$ —	\$ —	\$32,205
Gross profit margin	54.9 %	1.3 pts.	— pts.	— pts.	— pts.	56.2 %
SG&A	\$18,745	\$(1,160)	\$ —	\$ —	\$ (8)	\$17,577
Other (income) and expense	873	(2)	(1,282)	—	126	(285)
Total expense and other (income)	26,649	(1,162)	(1,282)	—	118	24,324
Pre-tax income from continuing operations	4,837	1,881	1,282	—	(118)	7,881
Pre-tax margin from continuing operations	8.4 %	3.3 pts.	2.2 pts.	— pts.	(0.2)pts.	13.7 %
Provision for income taxes*	\$ 124	\$ 457	\$ 251	\$ (89)	\$ (37)	\$ 706
Effective tax rate	2.6 %	5.2 pts.	2.8 pts.	(1.1)pts.	(0.4)pts.	9.0 %
Income from continuing operations	\$ 4,712	\$ 1,424	\$ 1,031	\$ 89	\$ (81)	\$ 7,174
Income margin from continuing operations	8.2 %	2.5 pts.	1.8 pts.	0.2 pts.	(0.1)pts.	12.5 %
Diluted earnings per share from continuing operations	\$ 5.21	\$ 1.57	\$ 1.14	\$0.10	\$(0.09)	\$ 7.93

* The tax impact on operating (non-GAAP) pre-tax income is calculated under the same accounting principles applied to the GAAP pre-tax income which employs an annual effective tax rate method to the results.

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PRIOR YEAR IN REVIEW

This section provides a summary of our segment results and year-to-year comparisons between 2021 and 2020. These results have been recast to conform to our segment change effective first-quarter 2022 which impacted the Software segment and the Other—divested businesses category. The recast results are presented below. There was no change to the Consulting, Infrastructure or Financing segments, and there was no change to our consolidated results. Refer to “Year in Review” pages 17 to 29 of the “Management Discussion” section of our 2021 Annual Report for other details of our financial performance in 2021 compared to 2020.

Segment Details

The table below presents each reportable segment’s revenue and gross margin results. Prior-year results have been recast to conform with the segment change effective first-quarter 2022.

(\$ in millions)

For the year ended December 31:	2021	2020	Yr.-to-Yr. Percent/ Margin Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Revenue				
Software	\$23,426 *	\$22,124 *	5.9 %	4.7 %
Gross margin	79.6 %*	79.3 %*	0.3 pts.	
Consulting	17,844	16,257	9.8 %	8.3 %
Gross margin	28.0 %	29.3 %	(1.3)pts.	
Infrastructure	14,188	14,533	(2.4)%	(3.4)%
Gross margin	55.3 %	57.5 %	(2.2)pts.	
Financing	774	975	(20.6)%	(21.9)%
Gross margin	31.7 %	41.6 %	(9.9)pts.	
Other	1,119 *	1,291 *	(13.3)%	(14.4)%
Gross margin	(22.3)%*	(16.0)%*	(6.2)pts.	
Total revenue	\$57,350	\$55,179	3.9 %	2.7 %
Total gross profit	\$31,486	\$30,865	2.0 %	
Total gross margin	54.9 %	55.9 %	(1.0)pts.	
Non-operating adjustments				
Amortization of acquired intangible assets	719	726	(1.0)%	
Operating (non-GAAP) gross profit	\$32,205	\$31,591	1.9 %	
Operating (non-GAAP) gross margin	56.2 %	57.3 %	(1.1)pts.	

* Recast to reflect segment change.

Software

(\$ in millions)

For the year ended December 31:	2021	2020	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Software revenue	\$23,426 *	\$22,124 *	5.9 %	4.7 %
Hybrid Platform & Solutions	\$17,036 *	\$15,518 *	9.8 %	8.5 %
Red Hat			30.6	29.6
Automation			6.1	4.8
Data & AI			0.0	(1.2)
Security			6.8	5.0
Transaction Processing	6,390	6,606	(3.3)	(4.2)

* Recast to reflect segment change.

Software revenue of \$23,426 million increased 5.9 percent as reported (5 percent adjusted for currency) in 2021 compared to the prior year. In the fourth quarter of 2021, we had incremental sales to Kyndryl, representing approximately 2 points of full-year revenue growth. We had strong double-digit growth in Software hybrid cloud revenue as reported and adjusted for currency. There was strong growth in Hybrid Platform & Solutions, as reported and at constant currency, driven primarily by Red Hat, Security and Automation, as our strategy around hybrid cloud and AI solutions continued to resonate with our clients. Transaction Processing revenue decreased year to year as reported and adjusted for currency. Although a significant portion of the revenue in this area is annuity based, the timing of larger transactions is tied to client buying cycles and their preference for more consumption-like models which impacted sales of perpetual licenses.

Hybrid Platform & Solutions revenue of \$17,036 million increased 9.8 percent as reported (9 percent adjusted for currency) in 2021 compared to the prior year. The incremental sales from Kyndryl in the fourth quarter of 2021 in Hybrid Platform & Solutions were not material to the full-year revenue growth. Red Hat revenue increased 30.6 percent as reported (30 percent adjusted for currency), with strong growth across infrastructure software and application development and emerging technologies, as RHEL and OpenShift address

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enterprises' critical hybrid cloud requirements. Automation revenue increased 6.1 percent as reported (5 percent adjusted for currency), reflecting solid performance in AIOps and Management as we help our clients address resource management and observability. We are building our capabilities both organically and inorganically, and clients are realizing rapid time to value from our acquisitions including Instana and Turbonomic. Security revenue increased 6.8 percent as reported (5 percent adjusted for currency) with year-to-year growth across security software and services. Security innovation is an integral part of our strategy and, in the fourth quarter of 2021, we launched a new data security solution, Guardium Insights, and completed the acquisition of ReaQta. Data & AI revenue was flat year to year and declined 1 percent adjusted for currency. Within Data & AI, we had solid year-to-year growth in Data Fabric as well as our Business Analytics and Weather offerings.

Transaction Processing revenue of \$6,390 million decreased 3.3 percent as reported (4 percent adjusted for currency) in 2021 compared to the prior year. Incremental sales from Kyndryl in the fourth quarter of 2021 contributed approximately 5 points of full-year revenue growth. In 2021, clients continued their preference for operating expenses over capital expenditures, which continued to put pressure on perpetual licenses, in favor of more consumption-like models. Our subscription and support renewal rate was stronger in 2021 compared to the prior year, reflecting our clients' commitment to our infrastructure platform and our high-value software offerings.

Within Software, hybrid cloud revenue of \$8.4 billion grew 29 percent as reported and 27 percent adjusted for currency year to year, driven by Red Hat as well as our software that has been optimized for our hybrid cloud platform which helps our clients apply AI, automation and security across their environments to transform and improve their business workflows.

(\$ in millions)

	2021 *	2020 *	Yr.-to-Yr. Percent/ Margin Change
For the year ended December 31:			
Software			
Gross profit	\$18,648	\$17,548	6.3 %
Gross profit margin	79.6 %	79.3 %	0.3 pts.
Pre-tax income	\$ 4,849	\$ 3,423	41.7 %
Pre-tax margin	20.7 %	15.5 %	5.2 pts.

* Recast to reflect segment change.

The Software gross profit margin increased 0.3 points to 79.6 percent in 2021 compared to the prior year. Pre-tax income of \$4,849 million increased 41.7 percent compared to the prior year with a pre-tax margin expansion of 5.2 points to 20.7 percent. The increase in pre-tax income and margin reflects the lower workforce rebalancing charges year to year, which resulted in a 3.3 point improvement in the pre-tax margin compared to 2020.

OTHER INFORMATION**Looking Forward**

As technology remains a fundamental source of competitive advantage, we continue to see strong demand for our hybrid cloud and AI solutions. It is clear that technology is playing a significant role in today's environment as clients continue to navigate several challenges including inflation and demographic shifts, supply chain issues and heightened sustainability efforts. We are helping our clients seize new business opportunities, overcome today's challenges and emerge stronger. We are building a stronger, more focused company that is closely aligned to the needs of our clients. We have continued to focus our portfolio in hybrid cloud and AI, invest in our offerings, technical talent and ecosystem and streamline our go-to-market model.

Hybrid Cloud and AI Progress

We believe hybrid cloud and AI are the two most transformational enterprise technologies of our time. These technologies work together to drive business outcomes. Hybrid cloud is where the world is going and containers are the preferred destination for applications. Our platform, built on Red Hat, is the leading container platform. It allows our clients to harness the power of open-source software innovations. Our software and infrastructure technologies have been optimized to run on that platform and include advanced data and AI, automation and the security capabilities our clients need. Our global team of consultants leverage their extensive technical and business expertise to accelerate clients' digital transformation journeys. Companies are eager to deploy AI and automation capabilities to boost their levels of productivity. We have been co-creating with clients to deploy AI at scale. We are investing in large language or foundation models, that will allow our clients to deploy AI with greater speed and less resources and we have infused these capabilities across our AI portfolio.

Our partner ecosystem is a key element of our strategy. We continue to expand and extend the work we do with partners to serve our joint clients through strategic collaboration agreements. In 2023, we are expanding and better enabling our broader ecosystem. In January, we launched PartnerPlus, a new, simplified program that increases our reach and scale through new and existing IBM partners.

We continue to invest, both organically and inorganically, to deliver innovation for our clients and shape the technologies of the future. Throughout 2022, we delivered significant innovations in Infrastructure with our z16 and Power platforms. Quantum is an example of our commitment to shape the future of technology. We unveiled Osprey, a 433-qubit quantum processor that brings us closer to delivering our goal of building a 1,000+ qubit system in 2023. We also formed a collaboration with a Japanese consortium to leverage the depth of our intellectual property on advanced semiconductors. We completed eight acquisitions in 2022 to complement our organic innovation, adding capabilities in areas like hybrid cloud services, security, data observability and sustainability and expanded our footprint in the U.S. Federal market with our acquisition of Octo. Additionally, as sustainability becomes more of a priority, companies need digital technologies to create a baseline, analyze data and improve the way they operate. We have been building a portfolio of solutions to help companies make progress on this journey.

We remain confident in the strategy that we are executing and in the fundamentals of our business. Our balance sheet and liquidity position remain strong. At December 31, 2022 we had \$8.8 billion of cash and cash equivalents, restricted cash and marketable securities and we continue to manage our debt levels while being acquisitive and without sacrificing investments in our business or our solid dividend policy. We also took actions in 2022 to further reduce the risk profile of our retirement-related plans.

Our 2022 performance demonstrates that we are now a higher-growth, higher-value company. Our strategy continues to strongly resonate with clients and partners. We enter 2023 as a more capable and nimble company, well-equipped to meet our clients' needs. We expect to continue our progress as a leading hybrid cloud and AI company with a focus on revenue growth and cash generation while maintaining our solid and modestly growing dividend policy.

We expect a few dynamics to impact our profit in 2023. Currency was a significant headwind in 2022, impacting our revenue by approximately \$3.5 billion. At mid-January spot rates, currency translation would be fairly neutral to revenue in 2023, with a headwind in the first-half changing to a tailwind in the second-half 2023. However, we recognized over \$650 million of hedging gains in 2022 which will not repeat in 2023, resulting in an impact to our profit and cash on a year-to-year basis.

With the significant portfolio actions we have taken over the last couple of years, we have some remaining stranded costs in our business. We expect to address these remaining stranded costs early in the year and anticipate a charge of approximately \$300 million in the first quarter of 2023. We would expect to generate savings in the second half and pay back by the end of the year.

Lastly, after completion of our annual review of useful lives of our property, plant and equipment assets, due to advances in technology, we have made an accounting change to extend the useful life of our server and network equipment, effective the first of January. Based on our year-end asset base, we expect this change to benefit 2023 pre-tax profit by over \$200 million, primarily in our Infrastructure segment. Given this is a change to depreciation expense, there is no benefit to cash.

Retirement-Related Plans

The combination of higher discount rates and the U.S. pension risk transfer, partially offset by negative asset returns, improved the overall funded status of our plans. In aggregate, our worldwide-tax qualified plans are funded at 114 percent, with the U.S. at 125 percent. Contributions for all retirement-related plans are expected to be approximately \$2.1 billion in 2023, an increase of approximately \$100 million compared to 2022, of which \$0.2 billion generally relates to legally required contributions to non-U.S. defined benefit and multi-employer plans. We expect 2023 pre-tax retirement-related plan cost to be approximately \$1.2 billion. This estimate reflects current pension plan assumptions at December 31, 2022. Within total retirement-related plan cost, operating retirement-related plan cost is expected to be approximately \$1.2 billion in 2023, approximately flat versus 2022. Non-operating retirement-related plan cost is expected to be approximately \$0.1 billion, a decrease of approximately \$6.5 billion compared to 2022, primarily driven by the \$5.9 billion settlement charge resulting from the U.S. pension risk transfer, lower recognized actuarial losses, partially offset by higher interest cost.

Liquidity and Capital Resources

We have generated solid cash flow from operations allowing us to invest and deploy capital to areas with the most attractive long-term opportunities. We provide for additional liquidity through several sources: maintaining an adequate cash balance, access to global funding sources, committed global credit facilities and other committed and uncommitted lines of credit worldwide. The following table provides a summary of the major sources of liquidity for the years ended December 31, 2020 through 2022.

Cash Flow and Liquidity Trends

(\$ in billions)

	2022	2021	2020
Net cash from operating activities*	\$10.4	\$12.8 **	\$18.2
Cash and cash equivalents, restricted cash and short-term marketable securities	\$ 8.8	\$ 7.6	\$14.3
Committed global credit facilities [†]	\$10.0	\$10.0	\$15.3

* Includes cash flows of discontinued operations of \$1.6 billion and \$4.4 billion in 2021 and 2020, respectively.

** Includes 10 months of Kyndryl operations, and reflects cash paid in 2021 for separation charges and structural actions initiated in the fourth-quarter 2020.

[†] See note P, "Borrowings," for additional information.

The indenture governing our debt securities and our various credit facilities each contain significant covenants which obligate the company to promptly pay principal and interest, limit the aggregate amount of secured indebtedness and sale and leaseback transactions to 10 percent of IBM's consolidated net tangible assets, and restrict our ability to merge or consolidate unless certain conditions are met. The credit facilities also include a covenant on our consolidated net interest expense ratio, which cannot be less than 2.20 to 1.0, as well as a cross default provision with respect to other defaulted indebtedness of at least \$500 million.

We are in compliance with all of our significant debt covenants and provide periodic certification to our lenders. The failure to comply with debt covenants could constitute an event of default with respect to our debt to which such provisions apply. If certain events of default were to occur, the principal and interest on the debt to which such event of default applied would become immediately due and payable.

We do not have "ratings trigger" provisions in our debt covenants or documentation, which would allow the holders to declare an event of default and seek to accelerate payments thereunder in the event of a change in credit rating. Our debt covenants are well within the required levels. Our contractual agreements governing derivative instruments contain standard market clauses which can trigger the termination of the agreement if IBM's credit rating were to fall below investment grade. At December 31, 2022, the fair value of those instruments that were in a liability position was \$1,034 million, before any applicable netting, and this position is subject to fluctuations in fair value period to period based on the level of our outstanding instruments and market conditions. We have no other contractual arrangements that, in the event of a change in credit rating, would result in a material adverse effect on our financial position or liquidity.

The major ratings agencies' ratings on our debt securities at December 31, 2022 were as follows and remain unchanged from December 31, 2021.

IBM Ratings	Standard and Poor's	Moody's Investors Service
Senior long-term debt	A-	A3
Commercial paper	A-2	Prime-2

IBM has ample financial flexibility, supported by our strong liquidity position and cash flows, to operate at a single A credit rating. We issued debt in 2022 to further improve our liquidity and plan for our 2023 debt maturities. Debt levels have decreased \$0.8 billion from

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December 31, 2021 primarily driven by currency, partially offset by net debt issuances. In the first quarter of 2023, we issued \$9.5 billion of debt primarily to plan for our debt maturity obligations in 2024. See note W, “Subsequent Events,” for additional information.

Effective December 31, 2021, the use of LIBOR was substantially eliminated for purposes of any new financial contract executions. The UK’s Financial Conduct Authority (FCA) extended the phase out of LIBOR in the case of U.S. dollar settings for certain tenors until the end of June 2023. Any legacy USD LIBOR based financial contracts are expected to be addressed using the LIBOR rates published through the June 2023 extension period. The replacement of the LIBOR benchmark within the company’s risk management activities did not have a material impact in the consolidated financial results.

We prepare our Consolidated Statement of Cash Flows in accordance with applicable accounting standards for cash flow presentation on page 49 and highlight causes and events underlying sources and uses of cash in that format on page 28. For the purpose of running its business, IBM manages, monitors and analyzes cash flows in a different manner.

Management uses free cash flow as a measure to evaluate its operating results, plan shareholder return levels, strategic investments and assess its ability and need to incur and service debt. The entire free cash flow amount is not necessarily available for discretionary expenditures. We define free cash flow as net cash from operating activities less the change in Financing receivables and net capital expenditures, including the investment in software. A key objective of the Financing business is to generate strong returns on equity, and our Financing receivables are the basis for that growth. Accordingly, management considers Financing receivables as a profit-generating investment, not as working capital that should be minimized for efficiency. Therefore, management includes presentations of both free cash flow and net cash from operating activities that exclude the effect of Financing receivables.

The following is management’s view of cash flows for 2022, 2021 and 2020 prepared in a manner consistent with the description above and is presented on a consolidated basis, including cash flows of discontinued operations.

(\$ in billions)

For the year ended December 31:	2022	2021	2020
Net cash from operating activities per GAAP*	\$ 10.4	\$ 12.8	\$18.2
Less: the change in Financing receivables	(0.7)	3.9	4.3
Net cash from operating activities, excluding Financing receivables	11.2	8.9	13.8
Capital expenditures, net	(1.9)	(2.4)	(3.0)
Free cash flow (FCF)	9.3	6.5 **	10.8
Acquisitions	(2.3)	(3.3)	(0.3)
Divestitures	1.3	0.1	0.5
Dividends	(5.9)	(5.9)	(5.8)
Non-Financing debt	1.9	(1.2)	0.2
Other (includes Financing receivables and Financing debt) ⁺	(2.9)	(3.0) ⁺⁺	(0.1)
Change in cash, cash equivalents, restricted cash and short-term marketable securities	\$ 1.3	\$ (6.7)	\$ 5.3

* Includes cash flows of discontinued operations of \$1.6 billion and \$4.4 billion in 2021 and 2020, respectively.

** Includes cash impacts of approximately \$1.4 billion for Kyndryl-related structural actions and separation charges.

⁺ Recast to conform to 2022 presentation.

⁺⁺ Includes the distribution from Kyndryl of \$0.9 billion.

From the perspective of how management views cash flow, in 2022, after investing \$1.9 billion in capital investments, we generated free cash flow of \$9.3 billion, an increase of \$2.8 billion versus the prior year. The year-to-year increase in consolidated free cash flow reflects prior year Kyndryl-related activity including the impact of separation-related charges and capital expenditures, current year working capital improvements driven by efficiencies in collections and mainframe cycle dynamics, higher cash tax payments and payments for structural actions in 2021, partially offset by an increase in capital expenditures in 2022 to drive our strategy. In 2022, we continued to return value to shareholders with \$5.9 billion in dividends and invested \$2.3 billion in eight acquisitions.

IBM’s Board of Directors considers the dividend payment on a quarterly basis. In the second quarter of 2022, the Board of Directors increased the company’s quarterly common stock dividend from \$1.64 to \$1.65 per share.

Events that could temporarily change the historical cash flow dynamics discussed previously include significant changes in operating results, material changes in geographic sources of cash, unexpected adverse impacts from litigation, future pension funding requirements during periods of severe downturn in the capital markets or the timing of tax payments. Whether any litigation has such an adverse impact will depend on a number of variables, which are more completely described in note R, “Commitments & Contingencies.” With respect to pension funding, in 2022, we contributed \$118 million to our non-U.S. defined benefit plans compared to \$103 million in 2021. As highlighted in the Contractual Obligations table, we expect to make legally mandated pension plan contributions to certain non-U.S. plans of approximately \$1.1 billion in the next five years. The 2023 contributions are currently expected to be approximately \$200 million. Contributions related to all retirement-related plans are expected to be approximately

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\$2.1 billion in 2023, an increase of approximately \$100 million compared to 2022. Financial market performance could increase the legally mandated minimum contributions in certain non-U.S. countries that require more frequent remeasurement of the funded status. We are not quantifying any further impact from pension funding because it is not possible to predict future movements in the capital markets or pension plan funding regulations.

In 2023, we are not legally required to make any contributions to the U.S. defined benefit pension plans.

Our cash flows are sufficient to fund our current operations and obligations, including investing and financing activities such as dividends and debt service. When additional requirements arise, we have several liquidity options available. These options may include the ability to borrow additional funds at reasonable interest rates and utilizing our committed global credit facilities. With our share repurchase program suspended since the close of the Red Hat acquisition, our overall shareholder payout remains at a comfortable level and we remain fully committed to our long-standing dividend policy.

Contractual Obligations

(\$ in millions)

	Total Contractual Payment Stream	Payments Due In			
		2023	2024-25	2026-27	After 2027
Long-term debt obligations	\$51,747	\$4,679	\$11,131	\$ 9,368	\$26,570
Interest on long-term debt obligations	16,305	1,492	2,536	1,906	10,371
Finance lease obligations*	239	75	111	37	15
Operating lease obligations*	3,331	960	1,343	715	313
Purchase obligations	2,771	1,223	1,351	176	21
Other long-term liabilities:					
Minimum defined benefit plan pension funding (mandated)**	1,100	200	500	400	
Excess 401(k) Plus Plan	1,528	221	472	512	323
Long-term termination benefits	853	168	153	98	434
Tax reserves ⁺	5,636	143			
Other	576	164	111	43	258
Total	\$84,086	\$9,324	\$17,708	\$13,256	\$38,306

* Finance lease obligations are presented on a discounted cash flow basis, whereas operating lease obligations are presented on an undiscounted cash flow basis.

** As funded status on plans will vary, obligations for mandated minimum pension payments after 2027 could not be reasonably estimated.

+ These amounts represent the liability for unrecognized tax benefits. We estimate that approximately \$143 million of the liability is expected to be settled within the next 12 months. The settlement period for the noncurrent portion of the income tax liability cannot be reasonably estimated as the timing of the payments will depend on the progress of tax examinations with the various tax authorities; however, it is not expected to be due within the next 12 months.

Certain contractual obligations reported in the previous table exclude the effects of time value and therefore, may not equal the amounts reported in the Consolidated Balance Sheet. Certain noncurrent liabilities are excluded from the previous table as their future cash outflows are uncertain. This includes deferred taxes, derivatives, deferred income, disability benefits and other sundry items. Certain obligations related to our divestitures are included.

Purchase obligations include all commitments to purchase goods or services of either a fixed or minimum quantity that meet any of the following criteria: (1) they are noncancelable, (2) we would incur a penalty if the agreement was canceled, or (3) we must make specified minimum payments even if we do not take delivery of the contracted products or services (take-or-pay). If the obligation to purchase goods or services is noncancelable, the entire value of the contract is included in the previous table. If the obligation is cancelable, but we would incur a penalty if canceled, the dollar amount of the penalty is included as a purchase obligation. Contracted minimum amounts specified in take-or-pay contracts are also included in the table as they represent the portion of each contract that is a firm commitment.

In the ordinary course of business, we enter into contracts that specify that we will purchase all or a portion of our requirements of a specific product, commodity or service from a supplier or vendor. These contracts are generally entered into in order to secure pricing or other negotiated terms. They do not specify fixed or minimum quantities to be purchased and, therefore, we do not consider them to be purchase obligations.

Interest on floating-rate debt obligations is calculated using the effective interest rate at December 31, 2022, plus the interest rate spread associated with that debt, if any.

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Off-Balance Sheet Arrangements

In the normal course of business, we may enter into off-balance sheet arrangements such as client financing commitments and guarantees. At December 31, 2022, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources. See the table above for our contractual obligations, and note R, "Commitments & Contingencies," for detailed information about our guarantees, financial commitments and indemnification arrangements. We do not have retained interests in assets transferred to unconsolidated entities or other material off-balance sheet interests or instruments.

Critical Accounting Estimates

The application of GAAP requires IBM to make estimates and assumptions about certain items and future events that directly affect its reported financial condition. The accounting estimates and assumptions discussed in this section are those that we consider to be the most critical to our financial statements. An accounting estimate is considered critical if both (a) the nature of the estimate or assumption is material due to the levels of subjectivity and judgment involved, and (b) the impact within a reasonable range of outcomes of the estimate and assumption is material to IBM's financial condition. Senior management has discussed the development, selection and disclosure of these estimates with the Audit Committee of IBM's Board of Directors. Our significant accounting policies are described in note A, "Significant Accounting Policies."

A quantitative sensitivity analysis is provided where that information is reasonably available, can be reliably estimated and provides material information to investors. The amounts used to assess sensitivity (e.g., 1 percent, 10 percent, etc.) are included to allow users of the financial statements to understand a general direction cause and effect of changes in the estimates and do not represent management's predictions of variability. For all of these estimates, it should be noted that future events rarely develop exactly as forecasted, and estimates require regular review and adjustment.

Pension Assumptions

For our defined benefit pension plans, the measurement of the benefit obligation to plan participants and net periodic pension (income)/cost requires the use of certain assumptions, including, among others, estimates of discount rates and expected return on plan assets.

Changes in the discount rate assumptions would impact the (gain)/loss amortization and interest cost components of the net periodic pension (income)/cost calculation and the projected benefit obligation (PBO). The discount rate assumption for the IBM Personal Pension Plan (PPP), a U.S.-based defined benefit plan, increased by 270 basis points to 5.30 percent on December 31, 2022. This change will decrease pre-tax income recognized in 2023 by an estimated \$89 million. A 25 basis point increase or decrease in the discount rate assumption for the PPP would cause a corresponding decrease or increase, respectively, in the pre-tax income recognized in 2023 of an estimated \$5 million. Further changes in the discount rate assumptions would impact the PBO which, in turn, may impact our funding decisions if the PBO exceeds plan assets. A 25 basis point increase or decrease in the discount rate would cause a corresponding decrease or increase, respectively, in the PPP's PBO of an estimated \$0.4 billion based upon December 31, 2022 data.

The expected long-term return on plan assets assumption is used in calculating the net periodic pension (income)/cost. Expected returns on plan assets are calculated based on the market-related value of plan assets, which recognizes changes in the fair value of plan assets systematically over a five-year period in the expected return on plan assets line in net periodic pension (income)/cost. The differences between the actual return on plan assets and the expected long-term return on plan assets are recognized over five years in the expected return on plan assets line in net periodic pension (income)/cost and also as a component of actuarial (gains)/losses, which are recognized over the service lives or life expectancy of the participants, depending on the plan, provided such amounts exceed thresholds which are based upon the benefit obligation or the value of plan assets, as provided by accounting standards.

To the extent the outlook for long-term returns changes such that management changes its expected long-term return on plan assets assumption, each 50 basis point change in the expected long-term return on PPP plan assets assumption would have an estimated impact of \$139 million on the following year's pre-tax net periodic pension (income)/cost (based upon the PPP's plan assets at December 31, 2022 and assuming no contributions are made in 2023).

We may voluntarily make contributions or be required, by law, to make contributions to our pension plans. Actual results that differ from the estimates may result in more or less future IBM funding into the pension plans than is planned by management. Impacts of these types of changes on our pension plans in other countries worldwide would vary depending upon the status of each respective plan.

In addition to the above, we evaluate other pension assumptions involving demographic factors, such as retirement age and mortality, and update these assumptions to reflect experience and expectations for the future. Actual results in any given year can differ from actuarial assumptions because of economic and other factors.

For additional information on our pension plans and the development of these assumptions, see note V, "Retirement-Related Benefits."

Revenue Recognition

Application of GAAP related to the measurement and recognition of revenue requires us to make judgments and estimates. Specifically, complex arrangements with nonstandard terms and conditions may require significant contract interpretation to determine the appropriate accounting, including whether promised goods and services specified in an arrangement are distinct performance obligations. Other significant judgments include determining the standalone selling price (SSP), determining whether IBM or a reseller is acting as the principal in a transaction and whether separate contracts should be combined and considered part of one arrangement.

Revenue recognition is also impacted by our ability to determine when a contract is probable of collection and to estimate variable consideration, including, for example, rebates, volume discounts, service-level penalties and performance bonuses. We consider various factors when making these judgments, including a review of specific transactions, historical experience and market and economic conditions. Evaluations are conducted each quarter to assess the adequacy of the estimates. If the estimates were changed by 10 percent in 2022, the impact on net income would have been \$65 million.

Costs to Complete Service Contracts

We enter into numerous service contracts through our services businesses. During the contractual period, revenue, cost and profits may be impacted by estimates of the ultimate profitability of each contract, especially contracts for which we use cost-to-cost measures of progress. For those contracts, if at any time these estimates indicate the contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately in cost. We perform ongoing profitability analyses of these services contracts in order to determine whether the latest estimates require updating. Key factors reviewed to estimate the future costs to complete each contract are future labor costs and product costs and expected productivity efficiencies. Contract loss provisions recorded as a component of other accrued expenses and liabilities were immaterial at December 31, 2022 and 2021.

Income Taxes

We are subject to income taxes in the U.S. and numerous foreign jurisdictions. Significant judgments are required in determining the consolidated provision for income taxes.

During the ordinary course of business, there are many transactions and calculations for which the ultimate tax determination is uncertain. As a result, we recognize tax liabilities based on estimates of whether additional taxes and interest will be due. These tax liabilities are recognized when, despite our belief that our tax return positions are supportable, we believe that certain positions may not be fully sustained upon review by tax authorities. We believe that our accruals for tax liabilities are adequate for all open audit years based on our assessment of many factors, including past experience and interpretations of tax law. This assessment relies on estimates and assumptions and may involve a series of complex judgments about future events. To the extent that new information becomes available which causes us to change our judgment regarding the adequacy of existing tax liabilities, such changes to tax liabilities will impact income tax expense in the period in which such determination is made.

Significant judgment is also required in determining any valuation allowance recorded against deferred tax assets. In assessing the need for a valuation allowance, management considers all available evidence for each jurisdiction including past operating results, estimates of future taxable income and the feasibility of ongoing tax planning strategies/actions. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust the valuation allowance with a corresponding impact to income tax expense in the period in which such determination is made.

The consolidated provision for income taxes will change period to period based on nonrecurring events, such as the settlement of income tax audits and changes in tax laws, as well as recurring factors including the geographic mix of income before taxes, state and local taxes and the effects of various global income tax strategies.

To the extent that the provision for income taxes increases/decreases by 1 percent of income from continuing operations before income taxes, consolidated net income would have decreased/improved by \$12 million in 2022.

Valuation of Assets

The application of business combination and impairment accounting requires the use of significant estimates and assumptions. The acquisition method of accounting for business combinations requires us to estimate the fair value of assets acquired including separately identifiable intangible assets, liabilities assumed, and any noncontrolling interest in the acquiree to properly allocate purchase price consideration. Impairment testing for assets, other than goodwill, requires the allocation of cash flows to those assets or group of assets and if required, an estimate of fair value for the assets or group of assets. Our estimates are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable. These valuations require the use of management's assumptions, which would not reflect unanticipated events and circumstances that may occur.

Valuation of Goodwill

We review goodwill for impairment annually and whenever events or changes in circumstances indicate the carrying value of goodwill may not be recoverable. We first assess qualitative factors in each of our reporting units that carry goodwill including relevant events and circumstances that affect the fair value of the reporting units to determine whether it is more likely than not that the fair value of a

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reporting unit is less than its carrying amount. Judgment in the assessment of qualitative factors of impairment include entity specific factors, industry, market and other macroeconomic conditions, legal and regulatory actions, as well as other individual factors impacting each reporting unit such as loss of key personnel and overall financial performance. If we do not perform a qualitative assessment, or if the qualitative assessment indicates it is more likely than not that the fair value of a reporting unit is less than its carrying amount, we perform a quantitative test.

In the quantitative test, we compare the fair value of each reporting unit to its carrying amount. Estimating the fair value of a reporting unit is judgmental in nature and involves the use of significant estimates and assumptions. We estimate the fair value of our reporting units using the income approach. When circumstances warrant, we may also use a combination of the income approach and certain market approaches. Under the income approach, we estimate the fair value of a reporting unit based on the present value of estimated discounted future cash flows. The discounted cash flow methodology includes the use of projections, which require the use of significant estimates and assumptions specific to the reporting unit as well as those based on general economic conditions. Factors specific to each reporting unit include revenue growth rates, gross margins, discount rates, terminal value growth rates, capital expenditures projections, assumed tax rates and other assumptions deemed reasonable by management.

After performing the annual goodwill impairment qualitative analysis during the fourth quarter of 2022, the company determined it was not necessary to perform the quantitative goodwill impairment test. In 2021, as a result of the separation of Kyndryl and the segment changes that occurred immediately prior to the separation, we performed the quantitative test for all reporting units which resulted in no impairment as the estimated fair value of each reporting unit exceeded its carrying value.

Loss Contingencies

We are currently involved in various claims and legal proceedings. At least quarterly, we review the status of each significant matter and assess our potential financial exposure. If the potential loss from any claim or legal proceeding is considered probable and the amount can be reasonably estimated, we accrue a liability for the estimated loss. Significant judgment is required in both the determination of probability and the determination as to whether an exposure is reasonably estimable. Because of uncertainties related to these matters, accruals are based only on the best information available at the time. As additional information becomes available, we reassess the potential liability related to our pending claims and litigation, and may revise our estimates. These revisions in the estimates of the potential liabilities could have a material impact on our results of operations and financial position.

Financing Receivables Allowance for Credit Losses

The Financing business reviews its financing receivables portfolio on a regular basis in order to assess collectibility and records adjustments to the allowance for credit losses at least quarterly. A description of the methods used by management to estimate the amount of uncollectible receivables is included in note A, "Significant Accounting Policies." Factors that could result in actual receivable losses that are materially different from the estimated reserve include significant changes in the economy, or a sudden change in the economic health of a client that represents a significant concentration in Financing's receivables portfolio.

To the extent that actual collectibility differs from management's estimates currently provided for by 10 percent, Financing's segment pre-tax income and our income from continuing operations before income taxes would be higher or lower by an estimated \$17 million depending upon whether the actual collectibility was better or worse, respectively, than the estimates.

Change in Accounting Estimate

In the fourth quarter of 2022, we completed our annual assessment of the useful lives of our property, plant and equipment. Due to advances in technology, we determined we should increase the estimated useful lives of our server and network equipment from five to six years for new assets and from three to four years for used assets. This change in accounting estimate will be effective beginning January 1, 2023 and applied on a prospective basis to the assets on our balance sheet as of December 31, 2022, as well as future asset purchases. Based on the carrying amount of server and network equipment included in property, plant and equipment-net in our Consolidated Balance Sheet as of December 31, 2022, we estimate this change to this existing asset class will increase income from continuing operations before income taxes for 2023 by over \$200 million.

Currency Rate Fluctuations

Throughout 2022, there has been significant strengthening of the U.S. dollar (USD) as compared to most other currencies. Changes in the relative values of non-U.S. currencies to the USD affect our financial results and financial position. At December 31, 2022, currency changes resulted in assets and liabilities denominated in local currencies being translated into fewer dollars than at year-end 2021. We use financial hedging instruments to limit specific currency risks related to foreign currency-based transactions.

The combination of the rate, breadth and magnitude of movements in currency, and the fact that we do not hedge 100 percent of our currency exposures, resulted in a currency impact to our profit and cash flows in 2022. We execute a hedging program which defers, versus eliminates, the volatility of currency impacts on our financial results. During periods of sustained movements in currency, the marketplace and competition adjust to the changing rates over time.

We translate revenue, cost and expense in our non-U.S. operations at current exchange rates in the reported period. References to "adjusted for currency" or "constant currency" reflect adjustments based upon a simple mathematical formula. However, this constant currency methodology that we utilize to disclose this information does not incorporate any operational actions that management could

take to mitigate fluctuating currency rates, such as updates to pricing and sourcing. Currency movements impacted our year-to-year revenue and earnings per share results in 2022. Based on the currency rate movements in 2022, total revenue increased 5.5 percent as reported and 11.6 percent at constant currency versus 2021. On an income from continuing operations before income taxes basis, these translation impacts mitigated by the net impact of hedging activities resulted in a theoretical maximum (assuming no pricing or sourcing actions) decrease of approximately \$335 million in 2022 on an as-reported basis and a decrease of approximately \$455 million on an operating (non-GAAP) basis. The same mathematical exercise resulted in an increase of approximately \$70 million in 2021 on an as-reported basis and an increase of approximately \$100 million on an operating (non-GAAP) basis. We view these amounts as a theoretical maximum impact to our as-reported financial results. Considering the operational responses mentioned above, movements of exchange rates, and the nature and timing of hedging instruments, it is difficult to predict future currency impacts on any particular period.

For non-U.S. subsidiaries and branches that operate in U.S. dollars or whose economic environment is highly inflationary, translation adjustments are reflected in results of operations. Generally, we manage currency risk in these entities by linking prices and contracts to U.S. dollars.

Market Risk

In the normal course of business, our financial position is routinely subject to a variety of risks, including the market risk associated with interest rate and currency movements on outstanding debt and non-U.S. dollar denominated assets and liabilities, and other risks such as collectibility of accounts receivable.

We regularly assess these risks and have established policies and business practices to protect against the adverse effects of these and other potential exposures. As a result, we do not anticipate any material losses from these risks.

Our debt, in support of the Financing business and the geographic breadth of our operations, contains an element of market risk from changes in interest and currency rates. We manage this risk, in part, through the use of a variety of financial instruments including derivatives, as described in note T, "Derivative Financial Instruments."

To meet disclosure requirements, we perform a sensitivity analysis to determine the effects that market risk exposures may have on the fair values of our debt and other financial instruments.

The financial instruments that are included in the sensitivity analysis are comprised of our cash and cash equivalents, marketable securities, short-term and long-term loans, commercial financing and installment payment receivables, investments, long-term and short-term debt and derivative financial instruments. Our derivative financial instruments generally include interest rate swaps, foreign currency swaps and forward contracts.

To perform the sensitivity analysis, we assess the risk of loss in fair values from the effect of hypothetical changes in interest rates and foreign currency exchange rates on market-sensitive instruments. The market values for interest and foreign currency exchange risk are computed based on the present value of future cash flows as affected by the changes in rates that are attributable to the market risk being measured. The discount rates used for the present value computations were selected based on market interest and foreign currency exchange rates in effect at December 31, 2022 and 2021. The differences in this comparison are the hypothetical losses associated with each type of risk.

Information provided by the sensitivity analysis does not necessarily represent the actual changes in fair value that we would incur under normal market conditions because, due to practical limitations, all variables other than the specific market risk factor are held constant. In addition, the results of the model are constrained by the fact that certain items are specifically excluded from the analysis, while the financial instruments relating to the financing or hedging of those items are included by definition. Excluded items include short-term and long-term receivables from sales-type and direct financing leases, forecasted foreign currency cash flows and the company's net investment in foreign operations. As a consequence, reported changes in the values of some of the financial instruments impacting the results of the sensitivity analysis are not matched with the offsetting changes in the values of the items that those instruments are designed to finance or hedge.

The results of the sensitivity analysis at December 31, 2022 and 2021, are as follows:

Interest Rate Risk

A hypothetical 10 percent adverse change in the levels of interest rates, with all other variables held constant, would result in a decrease in the fair value of our financial instruments of approximately \$0.2 billion and \$0.4 billion at December 31, 2022 and 2021, respectively. Changes in the relative sensitivity of the fair value of our financial instrument portfolio for these theoretical changes in the level of interest rates are primarily driven by changes in debt maturities, interest rate profile and amount.

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Foreign Currency Exchange Rate Risk

A hypothetical 10 percent adverse change in the levels of foreign currency exchange rates relative to the U.S. dollar, with all other variables held constant, would result in a decrease in the fair value of our financial instruments of approximately \$1.4 billion at December 31, 2022 and 2021. The theoretical changes are primarily driven by changes in foreign currency activities related to long-term debt and derivatives.

Financing Risks

See the “Description of Business” on page 15 for a discussion of the financing risks associated with the Financing business and management’s actions to mitigate such risks.

Cybersecurity

While cybersecurity risk can never be completely eliminated, our approach draws on the depth and breadth of our global capabilities, both in terms of our offerings to clients and our internal approaches to risk management. We offer commercial security solutions that deliver capabilities in areas such as identity and access management, data security, application security, network security and endpoint security. These solutions include pervasive encryption, threat intelligence, analytics, cognitive and artificial intelligence, and forensic capabilities that analyze client security events, yielding insights about attacks, threats, and vulnerabilities facing the client. We also offer professional consulting and technical services solutions for security from assessment and incident response to deployment and resource augmentation. In addition, we offer managed and outsourced security solutions from multiple security operations centers around the world. Finally, security is embedded in a multitude of our products and offerings through secure engineering and operations, and by critical functions (e.g., encryption, access control) in servers, storage, software, services and other solutions.

From an enterprise perspective, we implement a multi-faceted risk-management approach based on the National Institute of Standards and Technology Cybersecurity Framework to identify and address cybersecurity risks. In addition, we have established policies and procedures that provide the foundation upon which IBM’s infrastructure and data are managed. We regularly assess and adjust our technical controls and methods to identify and mitigate emerging cybersecurity risks. We use a layered approach with overlapping controls to defend against cybersecurity attacks and threats on networks, end-user devices, servers, applications, data and cloud solutions. We draw heavily on our own commercial security solutions and services to mitigate cybersecurity risks. We also have threat intelligence and security monitoring programs, as well as a global incident response process to respond to cybersecurity threats and attacks. In addition, we utilize a combination of online training, educational tools, videos and other awareness initiatives to foster a culture of security awareness and responsibility among our workforce.

FINANCING

Financing is a reportable segment that is measured as a stand-alone entity. Financing facilitates IBM clients’ acquisition of information technology systems, software and services by providing financing solutions in the areas where the company has the expertise, while generating solid returns on equity.

Results of Operations

(\$ in millions)

	2022	2021	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Revenue	\$ 645	\$ 774	(16.6)%
Pre-tax income	\$ 340	\$ 441	(22.9)%

Our Financing business is focused on IBM’s products and services. Financing revenue decreased 16.6 percent (13 percent adjusted for currency) to \$645 million compared to the prior year, primarily driven by the strategic actions taken in the prior year including selling certain client lease and loan financing receivables to third parties. While these strategic actions impact revenue and pre-tax income on a year-to-year basis, our repositioning of the Financing business has strengthened our liquidity position, improved the quality of our portfolio, and lowered our debt needs.

Financing pre-tax income decreased 22.9 percent to \$340 million compared to the prior year and the pre-tax margin of 52.6 percent decreased 4.4 points year to year. The decrease in pre-tax income in 2022 was primarily driven by the strategic actions described above.

Financial Position

(\$ in millions)

At December 31:	2022	2021
Cash and cash equivalents	\$ 699	\$ 1,359
Client financing receivables		
Net investment in sales-type and direct financing leases ⁽¹⁾	4,047	3,396
Client loans	8,329	8,818
Total client financing receivables	\$12,376	\$12,215
Commercial financing receivables		
Held for investment	293	444
Held for sale	939	793
Other receivables	66	61
Total external receivables ⁽²⁾	\$13,674	\$13,512
Intercompany financing receivables ⁽³⁾⁽⁴⁾	602	778
Other assets ⁽⁵⁾	781	1,231
Total assets	\$15,757	\$16,880
Intercompany payables ⁽³⁾	\$ 637	\$ 467
Debt ⁽⁶⁾	12,872	13,929
Other liabilities	814	937
Total liabilities	\$14,323	\$15,333
Total equity	\$ 1,433	\$ 1,547
Total liabilities and equity	\$15,757	\$16,880

⁽¹⁾ Includes deferred initial direct costs which are expensed in IBM's consolidated financial results.

⁽²⁾ The difference between the decrease in total external receivables of \$0.2 billion (from \$13.5 billion in 2021 to \$13.7 billion in 2022) and the \$0.7 billion change in Financing segment's receivables disclosed in the free cash flow presentation on page 34 is primarily attributable to currency impacts.

⁽³⁾ The entire amount is eliminated for purposes of IBM's consolidated financial results and therefore does not appear in the Consolidated Balance Sheet.

⁽⁴⁾ These assets, along with all other financing assets in this table, are leveraged at the value in the table using Financing segment debt.

⁽⁵⁾ Includes \$0.4 billion of other intercompany assets in 2022 and \$0.7 billion in 2021.

⁽⁶⁾ Financing segment debt is primarily composed of intercompany loans.

At December 31, 2022, we continue to apply our rigorous credit policies. Approximately 73 percent of the total external portfolio was with investment-grade clients with no direct exposure to consumers, an increase of 6 points year to year and an increase of 1 point compared to September 30, 2022. This investment grade percentage is based on the credit ratings of the companies in the portfolio and reflects certain mitigating actions taken to reduce the risk to IBM.

We have a long-standing practice of taking mitigation actions, in certain circumstances, to transfer credit risk to third parties. These actions may include credit insurance, financial guarantees, nonrecourse secured borrowings, transfers of receivables recorded as true sales in accordance with accounting guidance or sales of equipment under operating lease. Sale of receivables arrangements are also utilized in the normal course of business as part of our cash and liquidity management.

The company has an existing agreement with a third-party investor to sell IBM short-term commercial financing receivables on a revolving basis. The company has expanded this agreement to other countries and geographies since commencement in the U.S. and Canada in 2020. In addition, the company enters into agreements with third-party financial institutions to sell certain of its client financing receivables, including both loan and lease receivables, for cash proceeds. In 2022, sales of client financing receivables were largely focused on credit mitigation. During 2021, sales of client financing receivables were utilized as part of the company's cash and liquidity management as well as for credit mitigation.

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The following table presents the total amount of commercial and client financing receivables transferred:

(\$ in millions)		
For the year ended December 31:	2022	2021
Commercial financing receivables		
Receivables transferred during the period	\$9,029	\$7,359
Receivables uncollected at end of period*	\$1,561	\$1,653
Client financing receivables		
Lease receivables	\$ 15	\$ 819
Loan receivables	2	2,224
Total client financing receivables transferred	\$ 17	\$3,043

* Of the total amount of commercial financing receivables sold and derecognized from the Consolidated Balance Sheet, the amounts presented remained uncollected from business partners as of December 31, 2022 and 2021.

For additional information relating to financing receivables refer to note L, "Financing Receivables." Refer to pages 26 to 27 for additional information related to Financing segment receivables, allowance for credit losses and debt.

Return on Equity Calculation

(\$ in millions)		
At December 31:	2022	2021
Numerator		
Financing after-tax income ^{(1) *}	\$ 279	\$ 374
Denominator		
Average Financing equity ^{(2) **}	\$1,389	\$1,935
Financing return on equity ^{(1)/(2)}	20.1 %	19.3 %

* Calculated based upon an estimated tax rate principally based on Financing's geographic mix of earnings as IBM's provision for income taxes is determined on a consolidated basis.

** Average of the ending equity for Financing for the last five quarters.

Return on equity was 20.1 percent compared to 19.3 percent for the years ended December 31, 2022 and 2021, respectively. The increase was driven by a lower average equity balance, partially offset by a decrease in net income, which reflects the strategic actions taken in the prior year to reposition the Financing business.

Residual Value

The estimated residual value represents the estimated fair value of the equipment under lease at the end of the lease. The company estimates the future fair value of leased equipment by using historical models, analyzing the current market for new and used equipment and obtaining forward-looking product information such as marketing plans and technology innovations.

The company optimizes the recovery of residual values by extending lease arrangements with, or selling leased equipment to existing clients and periodically reassesses the realizable value of its lease residual values.

The following table presents the recorded amount of unguaranteed residual value for sales-type and direct financing leases at December 31, 2022 and 2021. In addition, the table presents the run out of when the unguaranteed residual value assigned to equipment on leases at December 31, 2022, is expected to be returned to the company. The unguaranteed residual value for operating leases at December 31, 2022 and 2021 was not material.

Unguaranteed Residual Value

(\$ in millions)						
	At December 31, 2021	At December 31, 2022	Estimated Run Out of December 31, 2022 Balance			
			2023	2024	2025	2026 and Beyond
Sales-type and direct financing leases	\$335	\$422	\$84	\$68	\$147	\$123

Report of Management

International Business Machines Corporation and Subsidiary Companies

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Management Responsibility for Financial Information

Responsibility for the integrity and objectivity of the financial information presented in this Annual Report rests with IBM management. The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America, applying certain estimates and judgments as required.

IBM maintains an effective internal control structure. It consists, in part, of organizational arrangements with clearly defined lines of responsibility and delegation of authority, and comprehensive systems and control procedures. An important element of the control environment is an ongoing internal audit program. Our system also contains self-monitoring mechanisms, and actions are taken to correct deficiencies as they are identified.

To assure the effective administration of internal controls, we carefully select and train our employees, develop and disseminate written policies and procedures, provide appropriate communication channels and foster an environment conducive to the effective functioning of controls. We believe that it is essential for the company to conduct its business affairs in accordance with the highest ethical standards, as set forth in the IBM Business Conduct Guidelines. These guidelines, translated into numerous languages, are distributed to employees throughout the world, and reemphasized through internal programs to assure that they are understood and followed.

The Audit Committee of the Board of Directors is composed solely of independent, non-management directors, and is responsible for recommending to the Board the independent registered public accounting firm to be retained for the coming year, subject to stockholder ratification. The Audit Committee meets regularly and privately with the independent registered public accounting firm, with the company's internal auditors, as well as with IBM management, to review accounting, auditing, internal control structure and financial reporting matters.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting of the company. 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 accounting principles generally accepted in the United States of America.

The company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an evaluation of the effectiveness of internal control over financial reporting based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, management concluded that the company's internal control over financial reporting was effective as of December 31, 2022.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, is retained to audit IBM's Consolidated Financial Statements and the effectiveness of the internal control over financial reporting. Its accompanying report is based on audits conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States).



Arvind Krishna
Chairman and Chief Executive Officer
February 28, 2023



James J. Kavanaugh
Senior Vice President and Chief Financial Officer
February 28, 2023

Report of Independent Registered Public Accounting Firm
International Business Machines Corporation and Subsidiary Companies

To the Board of Directors and Stockholders of International Business Machines Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of International Business Machines Corporation and its subsidiaries (the "Company") as of December 31, 2022 and 2021, and the related consolidated statements of income, of comprehensive income, of equity and of cash flows for each of the three years in the period ended December 31, 2022, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited 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 (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are

material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Income Taxes—Uncertain Tax Positions

As described in Notes A and H to the consolidated financial statements, the Company is subject to income taxes in the United States and numerous foreign jurisdictions. As disclosed by management, during the ordinary course of business there are many transactions and calculations for which the ultimate tax determination is uncertain. As a result, management recognizes tax liabilities based on estimates of whether additional taxes and interest will be due. As further described by management, these tax liabilities are recognized when, despite management's belief that the tax return positions are supportable, management believes that certain positions may not be fully sustained upon review by tax authorities. Management bases its assessment of the accruals for tax liabilities on many factors, including past experience and interpretations of tax law. This assessment relies on estimates and assumptions and may involve a series of complex judgments about future events. As of December 31, 2022, unrecognized tax benefits were \$8.7 billion.

The principal considerations for our determination that performing procedures relating to uncertain tax positions is a critical audit matter are the significant judgment by management when estimating the uncertain tax positions, including applying complex tax laws, and a high degree of estimation uncertainty based on potential for significant adjustments as a result of audits by tax authorities or other forms of tax settlement. This in turn led to a high degree of auditor judgment, effort, and subjectivity in performing procedures to evaluate management's timely identification and measurement of uncertain tax positions. Also, the evaluation of audit evidence available to support the uncertain tax positions is complex and required significant auditor judgment as the nature of the evidence is often inherently subjective, and the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the identification and recognition of the uncertain tax positions, and controls addressing completeness of the uncertain tax positions, as well as controls over measurement of the amount recorded. These procedures also included, among others (i) testing the information used in the calculation of the uncertain tax positions, including intercompany agreements and international, federal, and state filing positions; (ii) testing the calculation of the uncertain tax positions by jurisdiction, including management's assessment of the technical merits of tax positions and estimates of the amount of tax benefit expected to be sustained; (iii) testing the completeness of management's assessment of both the identification of uncertain tax positions and possible outcomes of each uncertain tax position; and (iv) evaluating the status and results of income tax audits pending in various tax jurisdictions. Professionals with specialized skill and knowledge were used to assist in the evaluation of the completeness and measurement of the Company's uncertain tax positions, including evaluating the reasonableness of management's assessment of whether tax positions are more-likely-than-not of being sustained and the amount of potential benefit to be realized.



PricewaterhouseCoopers LLP
New York, New York
February 28, 2023

We, or firms that we have ultimately acquired, have served as the Company's auditor since 1923. For the period from 1923 to 1958, the Company was audited by firms that a predecessor firm to PricewaterhouseCoopers LLP ultimately acquired.

Consolidated Income Statement

International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts)

For the year ended December 31:	Notes	2022	2021	2020
Revenue				
Services		\$30,206	\$29,225	\$27,626
Sales		29,673	27,346	26,569
Financing		651	780	984
Total revenue	D	60,530	57,350	55,179
Cost				
Services		21,062	19,147	17,689
Sales		6,374	6,184	6,048
Financing		406	534	577
Total cost		27,842	25,865	24,314
Gross profit		32,687	31,486	30,865
Expense and other (income)				
Selling, general and administrative		18,609	18,745	20,561
Research, development and engineering	G	6,567	6,488	6,262
Intellectual property and custom development income		(663)	(612)	(620)
Other (income) and expense	A	5,803	873	802
Interest expense	P&T	1,216	1,155	1,288
Total expense and other (income)		31,531	26,649	28,293
Income from continuing operations before income taxes		1,156	4,837	2,572
Provision for/(benefit from) income taxes	H	(626)	124	(1,360)
Income from continuing operations		1,783	4,712	3,932
Income/(loss) from discontinued operations, net of tax	C	(143)	1,030	1,658
Net income		\$ 1,639 *	\$ 5,743	\$ 5,590
Earnings/(loss) per share of common stock				
Assuming dilution				
Continuing operations	I	\$ 1.95	\$ 5.21	\$ 4.38
Discontinued operations	I	(0.16)	1.14	1.85
Total	I	\$ 1.80	\$ 6.35	\$ 6.23
Basic				
Continuing operations	I	\$ 1.97	\$ 5.26	\$ 4.42
Discontinued operations	I	(0.16)	1.15	1.86
Total	I	\$ 1.82	\$ 6.41	\$ 6.28
Weighted-average number of common shares outstanding				
Assuming dilution		912,269,062	904,641,001	896,563,971
Basic		902,664,190	895,990,771	890,348,679

* Includes the impact of a one-time, non-cash pension settlement charge. Refer to note V, "Retirement-Related Benefits," for additional information.

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

Consolidated Statement of Comprehensive Income
International Business Machines Corporation and Subsidiary Companies

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(\$ in millions)

For the year ended December 31:	Notes	2022	2021 *	2020 *
Net income		\$ 1,639	\$ 5,743	\$ 5,590
Other comprehensive income/(loss), before tax				
Foreign currency translation adjustments	S	176	987	(1,500)
Net changes related to available-for-sale securities	S			
Unrealized gains/(losses) arising during the period		(1)	0	(1)
Reclassification of (gains)/losses to net income		—	—	—
Total net changes related to available-for-sale securities		(1)	0	(1)
Unrealized gains/(losses) on cash flow hedges	S			
Unrealized gains/(losses) arising during the period		241	344	(349)
Reclassification of (gains)/losses to net income		(400)	243	(21)
Total unrealized gains/(losses) on cash flow hedges		(158)	587	(370)
Retirement-related benefit plans	S			
Prior service costs/(credits)		463	(51)	(37)
Net (losses)/gains arising during the period		878	2,433	(1,678)
Curtailments and settlements		5,970	94	52
Amortization of prior service (credits)/costs		12	9	13
Amortization of net (gains)/losses		1,596	2,484	2,314
Total retirement-related benefit plans		8,919	4,969	664
Other comprehensive income/(loss), before tax	S	8,936	6,542	(1,206)
Income tax (expense)/benefit related to items of other comprehensive income	S	(2,442)	(1,703)	466
Other comprehensive income/(loss)	S	6,494	4,839	(740)
Total comprehensive income		\$ 8,134	\$ 10,582	\$ 4,850

* Amounts presented have not been recast to exclude discontinued operations.

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

Consolidated Balance Sheet

International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts)

At December 31:	Notes	2022	2021
Assets			
Current assets			
Cash and cash equivalents		\$ 7,886	\$ 6,650
Restricted cash		103	307
Marketable securities	J	852	600
Notes and accounts receivable—trade (net of allowances of \$233 in 2022 and \$218 in 2021)		6,541	6,754
Short-term financing receivables	L		
Held for investment (net of allowances of \$145 in 2022 and \$176 in 2021)		6,851	7,221
Held for sale		939	793
Other accounts receivable (net of allowances of \$89 in 2022 and \$24 in 2021)		817	1,002
Inventory	K	1,552	1,649
Deferred costs	D	967	1,097
Prepaid expenses and other current assets		2,611	3,466
Total current assets		29,118	29,539
Property, plant and equipment	M	18,695	20,085
Less: Accumulated depreciation	M	13,361	14,390
Property, plant and equipment—net	M	5,334	5,694
Operating right-of-use assets—net	N	2,878	3,222
Long-term financing receivables (net of allowances of \$28 in 2022 and \$25 in 2021)	L	5,806	5,425
Prepaid pension assets	V	8,236	9,850
Deferred costs	D	866	924
Deferred taxes	H	6,256	7,370
Goodwill	O	55,949	55,643
Intangible assets—net	O	11,184	12,511
Investments and sundry assets		1,617	1,823
Total assets		\$ 127,243	\$ 132,001
Liabilities and equity			
Current liabilities			
Taxes	H	\$ 2,196	\$ 2,289
Short-term debt	J&P	4,760	6,787
Accounts payable		4,051	3,955
Compensation and benefits		3,481	3,204
Deferred income		12,032	12,518
Operating lease liabilities	N	874	974
Other accrued expenses and liabilities		4,111	3,892
Total current liabilities		31,505	33,619
Long-term debt	J&P	46,189	44,917
Retirement and nonpension postretirement benefit obligations	V	9,596	14,435
Deferred income		3,499	3,577
Operating lease liabilities	N	2,190	2,462
Other liabilities	Q	12,243	13,996
Total liabilities		105,222	113,005
Commitments and Contingencies	R		
Equity	S		
IBM stockholders' equity			
Common stock, par value \$.20 per share, and additional paid-in capital		58,343	57,319
Shares authorized: 4,687,500,000			
Shares issued (2022—2,257,116,920; 2021—2,248,577,848)			
Retained earnings		149,825	154,209
Treasury stock, at cost (shares: 2022—1,351,024,943; 2021—1,350,509,249)		(169,484)	(169,392)
Accumulated other comprehensive income/(loss)		(16,740)	(23,234)
Total IBM stockholders' equity		21,944	18,901
Noncontrolling interests	A	77	95
Total equity		22,021	18,996
Total liabilities and equity		\$ 127,243	\$ 132,001

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

Consolidated Statement of Cash Flows
International Business Machines Corporation and Subsidiary Companies

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(\$ in millions)			
For the year ended December 31:	2022	2021	2020
Cash flows from operating activities			
Net income	\$ 1,639	\$ 5,743	\$ 5,590
Adjustments to reconcile net income to cash provided by operating activities			
Pension settlement charge	5,894	—	—
Depreciation	2,407	3,888	4,227
Amortization of intangibles	2,395	2,529	2,468
Stock-based compensation	987	982	937
Deferred taxes	(2,726)	(2,001)	(3,203)
Net (gain)/loss on asset sales and other	(122)	(307)	(70)
Change in operating assets and liabilities, net of acquisitions/divestitures			
Receivables (including financing receivables)	(539)	1,372	5,297
Retirement related	331	1,038	936
Inventory	71	138	(209)
Other assets/other liabilities	(115)	(671)	2,087
Accounts payable	213	85	138
Net cash provided by operating activities	10,435	12,796	18,197
Cash flows from investing activities			
Payments for property, plant and equipment	(1,346)	(2,062)	(2,618)
Proceeds from disposition of property, plant and equipment	111	387	188
Investment in software	(626)	(706)	(612)
Purchases of marketable securities and other investments	(5,930)	(3,561)	(6,246)
Proceeds from disposition of marketable securities and other investments	4,665	3,147	5,618
Non-operating finance receivables—net	0	0	475
Acquisition of businesses, net of cash acquired	(2,348)	(3,293)	(336)
Divestiture of businesses, net of cash transferred	1,272	114	503
Net cash provided by/(used in) investing activities	(4,202)	(5,975)	(3,028)
Cash flows from financing activities			
Proceeds from new debt	7,804	522	10,504
Payments to settle debt	(6,800)	(8,597)	(13,365)
Short-term borrowings/(repayments) less than 90 days—net	217	(40)	(853)
Common stock repurchases for tax withholdings	(407)	(319)	(302)
Financing—other	176	70	92
Distribution from Kyndryl	—	879 *	—
Cash dividends paid	(5,948)	(5,869)	(5,797)
Net cash provided by/(used in) financing activities	(4,958)	(13,354)	(9,721)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(244)	(185)	(87)
Net change in cash, cash equivalents and restricted cash	1,032	(6,718)	5,361
Cash, cash equivalents and restricted cash at January 1	6,957	13,675	8,314
Cash, cash equivalents and restricted cash at December 31	\$ 7,988	\$ 6,957	\$ 13,675
Supplemental data			
Income taxes paid—net of refunds received	\$ 1,865	\$ 2,103	\$ 2,253
Interest paid on debt	\$ 1,401	\$ 1,512	\$ 1,830

* Represents \$879 million net cash proceeds from Kyndryl dividend payments to IBM, funded from the proceeds of \$2.9 billion of debt issued and retained by Kyndryl.

Cash flows above are presented on an IBM consolidated basis. Refer to note C, "Separation of Kyndryl," for additional information related to cash flows from Kyndryl discontinued operations.

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

Consolidated Statement of Equity

International Business Machines Corporation and Subsidiary Companies

(\$ in millions except per share amounts)

	Common Stock and Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income/(Loss)	Total IBM Stockholders' Equity	Non- Controlling Interests	Total Equity
2020							
Equity, January 1, 2020	\$55,895	\$162,954	\$(169,413)	\$(28,597)	\$20,841	\$144	\$20,985
Cumulative effect of change in accounting principle*		(66)			(66)		(66)
Net income plus other comprehensive income/(loss)							
Net income		5,590			5,590		5,590
Other comprehensive income/(loss)				(740)	(740)		(740)
Total comprehensive income/(loss)					\$ 4,850		\$ 4,850
Cash dividends paid—common stock (\$6.51 per share)		(5,797)			(5,797)		(5,797)
Common stock issued under employee plans (4,972,028 shares)	661				661		661
Purchases (2,363,966 shares) and sales (2,934,907 shares) of treasury stock under employee plans—net		36	74		110		110
Changes in noncontrolling interests						(15)	(15)
Equity, December 31, 2020	\$56,556	\$162,717	\$(169,339)	\$(29,337)	\$20,597	\$129	\$20,727

* Reflects the adoption of the FASB guidance on current expected credit losses.

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

(\$ in millions except per share amounts)

	Common Stock and Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income/(Loss)	Total IBM Stockholders' Equity	Non- Controlling Interests	Total Equity
2021							
Equity, January 1, 2021	\$56,556	\$162,717	\$(169,339)	\$(29,337)	\$20,597	\$129	\$20,727
Net income plus other comprehensive income/(loss)							
Net income		5,743			5,743		5,743
Other comprehensive income/(loss)				4,839	4,839		4,839
Total comprehensive income/(loss)					\$10,582		\$10,582
Cash dividends paid—common stock (\$6.55 per share)		(5,869)			(5,869)		(5,869)
Common stock issued under employee plans (5,608,845 shares)	762				762		762
Purchases (2,286,912 shares) and sales (2,093,243 shares) of treasury stock under employee plans—net		22	(53)		(31)		(31)
Separation of Kyndryl*		(8,404)		1,264	(7,140)	(62)	(7,203)
Changes in noncontrolling interests						28	28
Equity, December 31, 2021	\$57,319	\$154,209	\$(169,392)	\$(23,234)	\$18,901	\$ 95	\$18,996

* Refer to note C, "Separation of Kyndryl," for additional information.

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

Consolidated Statement of Equity

International Business Machines Corporation and Subsidiary Companies

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(\$ in millions except per share amounts)

	Common Stock and Additional Paid-in Capital	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income/(Loss)	Total IBM Stockholders' Equity	Non- Controlling Interests	Total Equity
2022							
Equity, January 1, 2022	\$57,319	\$154,209	\$(169,392)	\$(23,234)	\$18,901	\$ 95	\$18,996
Net income plus other comprehensive income/(loss)							
Net income		1,639			1,639		1,639
Other comprehensive income/(loss)				6,494	6,494		6,494
Total comprehensive income/(loss)					\$ 8,134		\$ 8,134
Cash dividends paid—common stock (\$6.59 per share)		(5,948)			(5,948)		(5,948)
Common stock issued under employee plans (8,539,072 shares)	962				962		962
Purchases (3,027,994 shares) and sales (2,512,300 shares) of treasury stock under employee plans—net		(12)	(92)		(104)		(104)
Other equity	63	(63)			0		0
Changes in noncontrolling interests						(18)	(18)
Equity, December 31, 2022	\$58,343	\$149,825	\$(169,484)	\$(16,740)	\$21,944	\$ 77	\$22,021

Amounts may not add due to rounding.

The accompanying notes are an integral part of the financial statements.

NOTE A. SIGNIFICANT ACCOUNTING POLICIES**Basis of Presentation**

The accompanying Consolidated Financial Statements and footnotes of the International Business Machines Corporation (IBM or the company) have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP).

Within the financial statements and tables presented, certain columns and rows may not add due to the use of rounded numbers for disclosure purposes. Percentages presented are calculated from the underlying whole-dollar amounts. Certain prior-year amounts have been reclassified to conform to the current year presentation. This is annotated where applicable. In addition, in the first quarter of 2022, an adjustment of \$63 million was recorded between common stock and retained earnings related to the issuance of treasury stock in connection with certain previously issued stock-based compensation awards and is reflected in the Consolidated Balance Sheet and Consolidated Statement of Equity at December 31, 2022.

On November 3, 2021, the company completed the separation of its managed infrastructure services unit into a new public company with the distribution of 80.1 percent of the outstanding common stock of Kyndryl Holdings, Inc. (Kyndryl) to IBM stockholders on a pro rata basis. To effect the separation, IBM stockholders received one share of Kyndryl common stock for every five shares of IBM common stock held at the close of business on October 25, 2021, the record date for the distribution. The company retained 19.9 percent of the shares of Kyndryl common stock immediately following the separation. During 2022, the company fully disposed of its retained interest in Kyndryl common stock pursuant to exchange agreements with a third-party financial institution, which were completed within twelve months of separation. Refer to note J, "Financial Assets & Liabilities," for additional information. At December 31, 2022, the company no longer held an ownership interest in Kyndryl.

The accounting requirements for reporting the separation of Kyndryl as a discontinued operation were met when the separation was completed. Accordingly, the historical results of Kyndryl are presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. Refer to note C, "Separation of Kyndryl," for additional information.

In the first quarter of 2022, the company realigned its management structure to reflect the planned divestiture of its healthcare software assets which was completed in the second quarter of 2022. This change impacted the company's Software segment and Other-divested businesses category, but did not impact the company's Consolidated Financial Statements. Refer to note E, "Segments," for additional information on the company's reportable segments. The segments presented in this Annual Report are reported on a comparable basis for all periods.

In September 2022, the IBM Qualified Personal Pension Plan (Qualified PPP) purchased two separate nonparticipating single premium group annuity contracts from The Prudential Insurance Company of America and Metropolitan Life Insurance Company (collectively, the Insurers) and irrevocably transferred to the Insurers approximately \$16 billion of the Qualified PPP's defined benefit pension obligations and related plan assets, thereby reducing the company's pension obligations and assets by the same amount. The group annuity contracts were purchased using assets of the Qualified PPP and no additional funding contribution was required from the company. As a result of this transaction the company recognized a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion (\$4.4 billion net of tax) in the third quarter of 2022, primarily related to the accelerated recognition of accumulated actuarial losses of the Qualified PPP. Refer to note V, "Retirement-Related Benefits," for additional information.

The company reported a benefit from income taxes of \$626 million for the year ended December 31, 2022. This tax benefit was primarily due to the transfer of a portion of the Qualified PPP's defined benefit pension obligations and related plan assets, as described above. The benefit from income taxes for the year ended December 31, 2020 was primarily due to the tax impacts of an intra-entity sale of certain of the company's intellectual property. Refer to note H, "Taxes," for additional information.

Noncontrolling interest amounts of \$20 million, \$19 million and \$13 million, net of tax, for the years ended December 31, 2022, 2021 and 2020, respectively, are included as a reduction within other (income) and expense in the Consolidated Income Statement.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of IBM and its controlled subsidiaries, which are primarily majority owned. Any noncontrolling interest in the equity of a subsidiary is reported as a component of total equity in the Consolidated Balance Sheet. Net income and losses attributable to the noncontrolling interest is reported as described above in the Consolidated Income Statement. The accounts of variable interest entities (VIEs) are included in the Consolidated Financial Statements, if required. Investments in business entities in which the company does not have control but has the ability to exercise significant influence over operating and financial policies, are accounted for using the equity method and the company's proportionate share of income or loss is recorded in other (income) and expense. The accounting policy for other investments in equity securities is described within the "Marketable Securities" section of this note. Equity investments in non-publicly traded entities lacking controlling financial interest or significant influence are primarily measured at cost, absent other indicators of fair value, net of impairment, if any. All intercompany transactions and accounts have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect amounts that are reported in the Consolidated Financial Statements and accompanying disclosures. Estimates are made for the following, among others: revenue, costs to complete service contracts, income taxes, pension assumptions, valuation of assets including goodwill and intangible assets, loss contingencies, allowance for credit losses and other matters. These estimates are based on management's best knowledge of current events, historical experience, actions that the company may undertake in the future and on various other assumptions that are believed to be reasonable under the circumstances. Actual results may be different from these estimates.

In the fourth quarter of 2022, the company completed its annual assessment of the useful lives of its information technology equipment. Due to advances in technology, the company determined it should increase the estimated useful lives of its server and network equipment from five to six years for new assets and from three to four years for used assets. This change in accounting estimate will be effective beginning January 1, 2023 and applied on a prospective basis to these assets on the company's balance sheet as of December 31, 2022, as well as future asset purchases. Based on the carrying amount of server and network equipment included in property, plant and equipment-net in the company's Consolidated Balance Sheet as of December 31, 2022, the company estimates this change will increase income from continuing operations before income taxes for 2023 by over \$200 million.

Revenue

The company accounts for a contract with a client when it has written approval, the contract is committed, the rights of the parties, including payment terms, are identified, the contract has commercial substance and consideration is probable of collection.

Revenue is recognized when, or as, control of a promised product or service transfers to a client, in an amount that reflects the consideration to which the company expects to be entitled in exchange for transferring those products or services. If the consideration promised in a contract includes a variable amount, the company estimates the amount to which it expects to be entitled using either the expected value or most likely amount method. The company's contracts may include terms that could cause variability in the transaction price, including, for example, rebates, volume discounts, service-level penalties, and performance bonuses or other forms of contingent revenue.

The company only includes estimated amounts in the transaction price to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved. The company may not be able to reliably estimate contingent revenue in certain long-term arrangements due to uncertainties that are not expected to be resolved for a long period of time or when the company's experience with similar types of contracts is limited. The company's arrangements infrequently include contingent revenue. Changes in estimates of variable consideration are included in note D, "Revenue Recognition."

The company's standard billing terms are that payment is due upon receipt of invoice, payable within 30 days. Invoices are generally issued as control transfers and/or as services are rendered. Additionally, in determining the transaction price, the company adjusts the promised amount of consideration for the effects of the time value of money if the billing terms are not standard and the timing of payments agreed to by the parties to the contract provide the client or the company with a significant benefit of financing, in which case the contract contains a significant financing component. As a practical expedient, the company does not account for significant financing components if the period between when the company transfers the promised product or service to the client and when the client pays for that product or service will be one year or less. Most arrangements that contain a financing component are financed through the company's Financing business and include explicit financing terms.

The company may include subcontractor services or third-party vendor equipment or software in certain integrated services arrangements. In these types of arrangements, revenue from sales of third-party vendor products or services is recorded net of costs when the company is acting as an agent between the client and the vendor, and gross when the company is the principal for the transaction. To determine whether the company is an agent or principal, the company considers whether it obtains control of the products or services before they are transferred to the customer. In making this evaluation, several factors are considered, most notably whether the company has primary responsibility for fulfillment to the client, as well as inventory risk and pricing discretion.

The company recognizes revenue on sales to solution providers, resellers and distributors (herein referred to as resellers) when the reseller has economic substance apart from the company and the reseller is considered the principal for the transaction with the end-user client.

The company reports revenue net of any revenue-based taxes assessed by governmental authorities that are imposed on and concurrent with specific revenue-producing transactions.

In addition to the aforementioned general policies, the following are the specific revenue recognition policies for arrangements with multiple performance obligations and for each major category of revenue.

Arrangements with Multiple Performance Obligations

The company's global capabilities as a hybrid cloud platform and AI company include services, software, hardware and related financing. The company enters into revenue arrangements that may consist of any combination of these products and services based on the needs of its clients.

The company continues to develop new products and offerings and their associated consumption and delivery methods, including the use of cloud and as-a-Service models. These are not separate businesses; they are offerings across the segments that address market opportunities in areas such as analytics, data, cloud, security and sustainability. Revenue from these offerings follows the specific revenue recognition policies for arrangements with multiple performance obligations and for each major category of revenue, depending on the type of offering, which are comprised of services, software and/or hardware.

To the extent that a product or service in multiple performance obligation arrangements is subject to other specific accounting guidance, such as leasing guidance, that product or service is accounted for in accordance with such specific guidance. For all other products or services in these arrangements, the company determines if the products or services are distinct and allocates the consideration to each distinct performance obligation on a relative standalone selling price basis.

When products and services are not distinct, the company determines an appropriate measure of progress based on the nature of its overall promise for the single performance obligation.

The revenue policies in the Services, Hardware and/or Software sections below are applied to each performance obligation, as applicable.

Services

The company's primary services offerings include consulting services, including business transformation; technology consulting and application operations including the design and development of complex IT environments to a client's specifications (e.g., design and build); cloud services; business process outsourcing; and infrastructure support. Many of these services can be delivered entirely or partially through cloud or as-a-Service delivery models. The company's services are provided on a time-and-material basis, as a fixed-price contract or as a fixed-price per measure of output contract and the contract terms generally range from less than one year to 5 years.

In services arrangements, the company typically satisfies the performance obligation and recognizes revenue over time. In design and build arrangements, the performance obligation is satisfied over time either because the client controls the asset as it is created (e.g., when the asset is built at the customer site) or because the company's performance does not create an asset with an alternative use and the company has an enforceable right to payment plus a reasonable profit for performance completed to date. In most other services arrangements, the performance obligation is satisfied over time because the client simultaneously receives and consumes the benefits provided as the company performs the services.

Revenue from time-and-material contracts is recognized on an output basis as labor hours are delivered and/or direct expenses are incurred. Revenue from as-a-Service type contracts, such as Infrastructure-as-a-Service, is recognized either on a straight-line basis or on a usage basis, depending on the terms of the arrangement (such as whether the company is standing ready to perform or whether the contract has usage-based metrics). If an as-a-Service contract includes setup activities, those promises in the arrangement are evaluated to determine if they are distinct.

In areas such as application management, business process outsourcing and other cloud-based services arrangements, the company determines whether the services performed during the initial phases of the arrangement, such as setup activities, are distinct. In most cases, the arrangement is a single performance obligation comprised of a series of distinct services that are substantially the same and that have the same pattern of transfer (i.e., distinct days of service). The company applies a measure of progress (typically time-based) to any fixed consideration and allocates variable consideration to the distinct periods of service based on usage. As a result, revenue is generally recognized over the period the services are provided on a usage basis. This results in revenue recognition that corresponds with the value to the client of the services transferred to date relative to the remaining services promised.

Revenue related to maintenance and technology lifecycle support and extended warranty is recognized on a straight-line basis over the period of performance because the company is standing ready to provide services.

In design and build contracts, revenue is recognized based on progress toward completion of the performance obligation using a cost-to-cost measure of progress. Revenue is recognized based on the labor costs incurred to date as a percentage of the total estimated labor costs to fulfill the contract. Due to the nature of the work performed in these arrangements, the estimation of cost at completion is complex, subject to many variables and requires significant judgment. Key factors reviewed by the company to estimate costs to complete each contract are future labor and product costs and expected productivity efficiencies. Changes in original estimates are reflected in revenue on a cumulative catch-up basis in the period in which the circumstances that gave rise to the revision become

known by the company. Refer to note D, "Revenue Recognition," for the amount of revenue recognized in the reporting period on a cumulative catch-up basis (i.e., from performance obligations satisfied, or partially satisfied, in previous periods).

The company performs ongoing profitability analyses of its design and build services contracts accounted for using a cost-to-cost measure of progress in order to determine whether the latest estimates of revenues, costs and profits require updating. If at any time these estimates indicate that the contract will be unprofitable, the entire estimated loss for the remainder of the contract is recorded immediately. For other types of services contracts, any losses are recorded as incurred.

In some services contracts, the company bills the client prior to recognizing revenue from performing the services. Deferred income of \$3,241 million and \$3,460 million at December 31, 2022 and 2021, respectively, is included in the Consolidated Balance Sheet. In other services contracts, the company performs the services prior to billing the client. When the company performs services prior to billing the client in design and build contracts, the right to consideration is typically subject to milestone completion or client acceptance and the unbilled accounts receivable is classified as a contract asset. At December 31, 2022 and 2021, contract assets for services contracts of \$426 million and \$430 million, respectively, are included in prepaid expenses and other current assets in the Consolidated Balance Sheet. The remaining amount of unbilled accounts receivable of \$788 million and \$723 million at December 31, 2022 and 2021, respectively, is included in notes and accounts receivable—trade in the Consolidated Balance Sheet.

Billings usually occur in the month after the company performs the services or in accordance with specific contractual provisions.

Hardware

The company's hardware offerings include the sale or lease of Hybrid Infrastructure solutions including zSystems as well as Distributed Infrastructure solutions such as Power and storage solutions. The capabilities of these products can also be delivered through as-a-Service or cloud delivery models, such as Infrastructure-as-a-Service and Storage-as-a-Service. The company also offers installation services for its more complex hardware products. Hardware offerings are often sold with distinct maintenance services, described in the Services section above.

Revenue from hardware sales is recognized when control has transferred to the customer which typically occurs when the hardware has been shipped to the client, risk of loss has transferred to the client and the company has a present right to payment for the hardware. In limited circumstances when a hardware sale includes client acceptance provisions, revenue is recognized either when client acceptance has been obtained, client acceptance provisions have lapsed, or the company has objective evidence that the criteria specified in the client acceptance provisions have been satisfied. Revenue from hardware sales-type leases is recognized at the beginning of the lease term. Revenue from rentals and operating leases is recognized on a straight-line basis over the term of the rental or lease.

Revenue from as-a-Service arrangements is recognized either on a straight-line basis or on a usage basis as described in the Services section above. Installation services are accounted for as distinct performance obligations with revenue recognized as the services are performed. Shipping and handling activities that occur after the client has obtained control of a product are accounted for as an activity to fulfill the promise to transfer the product rather than as an additional promised service and, therefore, no revenue is deferred and recognized over the shipping period.

Software

The company's software offerings include hybrid platform software solutions, which contain many of the company's strategic areas including Red Hat, automation, data and AI, security and sustainability; transaction processing, which primarily supports mission-critical systems for clients; and distributed infrastructure software, which provides operating systems for zSystems and Power Systems hardware. These offerings include proprietary software and open-source software, and many can be delivered entirely or partially through as-a-Service or cloud delivery models, while others are delivered as on-premise software licenses.

Revenue from proprietary perpetual (one-time charge) license software is recognized at a point in time at the inception of the arrangement when control transfers to the client, if the software license is distinct from the post-contract support (PCS) offered by the company.

Revenue from proprietary term license software is recognized at a point in time for the committed term of the contract, unless consideration depends on client usage, in which case revenue is recognized when the usage occurs.

Proprietary term licenses often have a one-month contract term due to client termination rights, in which case, revenue would be recognized in that month for both the license and PCS. Clients may contract to convert their existing IBM term license software into perpetual license software plus PCS. When proprietary term license software is converted to perpetual license software, the consideration becomes fixed with no cancellability and, therefore, revenue for the perpetual license is recognized upon conversion, consistent with the accounting for other perpetual licenses, as described above. PCS revenue is recognized as described below.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

The company also has open-source software offerings. Since open-source software is offered under an open-source licensing model and therefore, the license is available for free, the standalone selling price is zero. As such, when the license is sold with PCS or other products and services, no consideration is allocated to the license when it is a distinct performance obligation and therefore no revenue is recognized when control of the license transfers to the client. Revenue is recognized over the PCS period. In certain cases, open-source software is bundled with proprietary software and, if the open-source software is not considered distinct, the software bundle (e.g., Cloud Pak) is accounted for under a proprietary software model. Cloud Paks can be sold either as perpetual or committed-term software licenses, both of which are described above.

Revenue from PCS is recognized over the contract term on a straight-line basis because the company is providing a service of standing ready to provide support, when-and-if needed, and is providing unspecified software upgrades on a when-and-if available basis over the contract term.

Revenue from software hosting or Software-as-a-Service (SaaS) arrangements is recognized either on a straight-line basis or on a usage basis as described in the Services section above. In software hosting arrangements, the rights provided to the client (e.g., ownership of a license, contract termination provisions and the feasibility of the client to operate the software) are considered in determining whether the arrangement includes a license. In arrangements that include a software license, the associated revenue is recognized in accordance with the software license recognition policy above rather than over time as a service.

Financing

Financing income attributable to sales-type leases, direct financing leases and loans is recognized on the accrual basis using the effective interest method. Operating lease income is recognized on a straight-line basis over the term of the lease.

Standalone Selling Price

The company allocates the transaction price to each performance obligation on a relative standalone selling price basis. The standalone selling price (SSP) is the price at which the company would sell a promised product or service separately to a client. In most cases, the company is able to establish SSP based on the observable prices of products or services sold separately in comparable circumstances to similar clients. The company typically establishes SSP ranges for its products and services which are reassessed on a periodic basis or when facts and circumstances change.

In certain instances, the company may not be able to establish a SSP range based on observable prices, and as a result, the company estimates SSP. The company estimates SSP by considering multiple factors including, but not limited to, overall market conditions, including geographic or regional specific factors, internal costs, profit objectives and pricing practices. Additionally, in certain circumstances, the company may estimate SSP for a product or service by applying the residual approach. Estimating SSP is a formal process that includes review and approval by the company's management.

Services Costs

Recurring operating costs for services contracts are recognized as incurred. For fixed-price design and build contracts, the costs of external hardware and software accounted for under the cost-to-cost measure of progress are deferred and recognized based on the labor costs incurred to date (i.e., the measure of progress), as a percentage of the total estimated labor costs to fulfill the contract as control transfers over time for these performance obligations. Certain eligible, nonrecurring costs (i.e., setup costs) incurred in the initial phases of business process outsourcing contracts and other cloud-based services contracts, including Software-as-a-Service arrangements, are capitalized when the costs relate directly to the contract, the costs generate or enhance resources of the company that will be used in satisfying the performance obligation in the future, and the costs are expected to be recovered. These costs consist of transition and setup costs related to the provisioning, configuring, implementation and training and other deferred fulfillment costs, including, for example, prepaid assets used in services contracts (i.e., prepaid software or prepaid maintenance). Capitalized costs are amortized on a straight-line basis over the expected period of benefit, which includes anticipated contract renewals or extensions, consistent with the transfer to the client of the services to which the asset relates. Additionally, fixed assets associated with these contracts are capitalized and depreciated on a straight-line basis over the expected useful life of the asset. If an asset is contract specific, then the depreciation period is the shorter of the useful life of the asset or the contract term. Amounts paid to clients in excess of the fair value of acquired assets used in business process outsourcing arrangements are deferred and amortized on a straight-line basis as a reduction of revenue over the expected period of benefit. The company performs periodic reviews to assess the recoverability of deferred contract transition and setup costs. If the carrying amount is deemed not recoverable, an impairment loss is recognized. Refer to note D, "Revenue Recognition," for the amount of deferred costs to fulfill a contract at December 31, 2022 and 2021.

In situations in which a business process outsourcing or other cloud-based services contract is terminated, the terms of the contract may require the client to reimburse the company for the recovery of unbilled accounts receivable, unamortized deferred contract costs and additional costs incurred by the company to transition the services.

Software Costs

Costs that are related to the conceptual formulation and design of licensed software programs are expensed as incurred to research, development and engineering expense; costs that are incurred to produce the finished product after technological feasibility has been established are capitalized as an intangible asset. Capitalized amounts are amortized on a straight-line basis over periods ranging up to three years and are recorded in software cost within cost of sales. The company performs periodic reviews to ensure that unamortized program costs remain recoverable from future revenue. Costs to support or service licensed programs are charged to software cost within cost of sales as incurred.

The company capitalizes certain costs that are incurred to purchase or develop internal-use software. Internal-use software programs also include software used by the company to deliver Software-as-a-Service when the client does not receive a license to the software and the company has no substantive plans to market the software externally. Capitalized costs are amortized on a straight-line basis over periods ranging up to three years and are recorded in selling, general and administrative expense or cost of sales, depending on whether the software is used by the company in revenue generating transactions. Additionally, the company may capitalize certain types of implementation costs and amortize them over the term of the arrangement when the company is a customer in a cloud-computing arrangement.

Incremental Costs of Obtaining a Contract

Incremental costs of obtaining a contract (e.g., sales commissions) are capitalized and amortized on a straight-line basis over the expected customer relationship period if the company expects to recover those costs. The expected customer relationship period, determined based on the average customer relationship period, including expected renewals, for each offering type, is three years. Expected renewal periods are only included in the expected customer relationship period if commission amounts paid upon renewal are not commensurate with amounts paid on the initial contract. Incremental costs of obtaining a contract include only those costs the company incurs to obtain a contract that it would not have incurred if the contract had not been obtained. The company has determined that certain commissions programs meet the requirements to be capitalized. Some commission programs are not subject to capitalization as the commission expense is paid and recognized as the related revenue is recognized. Additionally, as a practical expedient, the company expenses costs to obtain a contract as incurred if the amortization period would have been a year or less. These costs are included in selling, general and administrative expenses.

Product Warranties

The company offers warranties for its hardware products that generally range up to three years, with the majority being either one or three years. Any cost of standard warranties is accrued when the corresponding revenue is recognized. The company estimates its standard warranty costs for products based on historical warranty claim experience and estimates of future spending and applies this estimate to the revenue stream for products under warranty. Estimated future costs for warranties applicable to revenue recognized in the current period are charged to cost of sales. The warranty liability is reviewed quarterly to verify that it properly reflects the remaining obligation based on the anticipated expenditures over the balance of the obligation period. Adjustments are made when actual warranty claim experience differs from estimates. Costs from fixed-price support or maintenance contracts, including extended warranty contracts, are recognized as incurred.

Revenue from extended warranty contracts is initially recorded as deferred income and subsequently recognized on a straight-line basis over the delivery period because the company is providing a service of standing ready to provide services over such term.

Refer to note R, "Commitments & Contingencies," for additional information.

Shipping and Handling

Costs related to shipping and handling are recognized as incurred and included in cost in the Consolidated Income Statement.

Expense and Other Income

Selling, General and Administrative

Selling, general and administrative (SG&A) expense is charged to income as incurred, except for certain sales commissions, which are capitalized and amortized. For further information regarding capitalizing sales commissions, see "Incremental Costs of Obtaining a Contract" above. Expenses of promoting and selling products and services are classified as selling expense and, in addition to sales commissions, include such items as compensation, advertising and travel. General and administrative expense includes such items as compensation, legal costs, office supplies, non-income taxes, insurance and office rental. In addition, general and administrative expense includes other operating items such as an allowance for credit losses, workforce rebalancing charges for contractually obligated payments to employees terminated in the ongoing course of business, acquisition costs related to business combinations, amortization of certain intangible assets and environmental remediation costs.

Advertising and Promotional Expense

The company expenses advertising and promotional costs as incurred. Cooperative advertising reimbursements from vendors are recorded net of advertising and promotional expense in the period in which the related advertising and promotional expense is incurred.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

Advertising and promotional expense, which includes media, agency and promotional expense, was \$1,330 million, \$1,413 million and \$1,509 million in 2022, 2021 and 2020, respectively, and is recorded in SG&A expense in the Consolidated Income Statement.

Research, Development and Engineering

Research, development and engineering (RD&E) costs are expensed as incurred. Software costs that are incurred to produce the finished product after technological feasibility has been established are capitalized as an intangible asset.

Intellectual Property and Custom Development Income

The company licenses and sells the rights to certain of its intellectual property (IP) including internally developed patents, trade secrets and technological know-how. Certain IP transactions to third parties are licensing/royalty-based and others are transaction-based sales/other transfers. Income from licensing arrangements is recognized at the inception of the license term if the nature of the company's promise is to provide a right to use the company's intellectual property as it exists at that point in time (i.e., the license is functional intellectual property) and control has transferred to the client. Income is recognized over time if the nature of the company's promise is to provide a right to access the company's intellectual property throughout the license period (i.e., the license is symbolic intellectual property), such as a trademark license. Income from royalty-based fee arrangements is recognized at the later of when the subsequent sale or usage occurs or the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). The company also enters into cross-licensing arrangements of patents, and income from these arrangements is recognized when control transfers to the customer. In addition, the company earns income from certain custom development projects with strategic technology partners and specific clients. The company records the income from these projects over time as the company satisfies the performance obligation if the fee is nonrefundable and is not dependent upon the ultimate success of the project.

Other (Income) and Expense

Components of other (income) and expense are as follows:

(\$ in millions)			
For the year ended December 31:	2022	2021	2020
Other (income) and expense			
Foreign currency transaction losses/(gains)*	\$ (643)	\$ (204)	\$ 114
(Gains)/losses on derivative instruments	225	205	(101)
Interest income	(162)	(52)	(105)
Net (gains)/losses from securities and investment assets	278	(133)	(22)
Retirement-related costs/(income)	6,548 **	1,282	1,073
Other [†]	(443)	(225)	(156)
Total other (income) and expense	\$5,803	\$ 873	\$ 802

* The company uses financial hedging instruments to limit specific currency risks related to foreign currency-based transactions. The hedging program does not hedge 100 percent of currency exposures and defers, versus eliminates, the impact of currency. Refer to note T, "Derivative Financial Instruments," for additional information on foreign exchange risk.

** Includes a one-time, non-cash pension settlement charge of \$5.9 billion. Refer to note V, "Retirement-Related Benefits," for additional information.

[†] Other primarily consists of (gains)/losses from divestitures, dispositions of land/buildings and other.

Government Assistance

The company receives grants from governments and government agencies (government) in support of certain of the company's business activities, primarily related to research, job creation, or job training. Grants are generally received in the form of cash as either a recovery for expenses incurred or as an incentive for meeting certain requirements as agreed to in the grant, with terms ranging from one to five years. Grants are recorded as credits against Cost, SG&A and RD&E in the Consolidated Income Statement based on the nature of the grant and the expense being offset once the conditions and restrictions of the grant have been met and payment has been received from the government. When a grant is received before conditions of the grant have been met, the grant is recorded in other accrued expenses and liabilities or other liabilities in the Consolidated Balance Sheet. For the year ended December 31, 2022, grants recorded in the company's Consolidated Financial Statements were not material.

Business Combinations and Intangible Assets Including Goodwill

The company accounts for business combinations using the acquisition method and accordingly, the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree are generally recorded at their acquisition date fair values. Contract assets and contract liabilities are measured in accordance with the guidance on revenue recognition. Goodwill represents the excess of the purchase price over the fair value of net assets, including the amount assigned to identifiable intangible assets. The primary drivers that generate goodwill are the value of synergies between the acquired entities and the company and the acquired assembled workforce, neither of which qualifies as a separately identifiable intangible asset. Goodwill recorded in an acquisition is assigned to applicable reporting units based on expected revenues or expected cash flows. Identifiable intangible assets with finite lives are amortized over their useful lives. Amortization of completed technology is recorded in cost, and amortization of all other intangible assets is recorded in SG&A expense. Acquisition-related costs, including advisory, legal, accounting, valuation and pre-close and other

costs, are typically expensed in the periods in which the costs are incurred and are recorded in SG&A expense. The results of operations of acquired businesses are included in the Consolidated Financial Statements from the acquisition date.

Impairment

Long-lived assets, other than goodwill, are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The impairment test is typically based on undiscounted cash flows and, if impaired, the asset is written down to fair value based on either discounted cash flows or appraised values. Goodwill is tested for impairment at least annually, in the fourth quarter and whenever changes in circumstances indicate an impairment may exist. The goodwill impairment test is performed at the reporting unit level, which is generally at the level of or one level below an operating segment.

Depreciation and Amortization

Property, plant and equipment are carried at cost and depreciated over their estimated useful lives using the straight-line method. The estimated useful lives of certain depreciable assets are as follows: buildings, 30 to 50 years; building equipment, 10 to 20 years; land improvements, 20 years; production, engineering, office and other equipment, 2 to 20 years; and information technology equipment, 1.5 to 5 years. Leasehold improvements are amortized over the shorter of their estimated useful lives or the related lease term, rarely exceeding 25 years. Refer to the "Use of Estimates" section above for additional information about the useful lives of information technology equipment.

As noted within the "Software Costs" section of this note, capitalized software costs are amortized on a straight-line basis over periods ranging up to 3 years. Other intangible assets are amortized over periods between 1 and 20 years.

Environmental

The cost of internal environmental protection programs that are preventative in nature are expensed as incurred. When a cleanup program becomes likely, and it is probable that the company will incur cleanup costs and those costs can be reasonably estimated, the company accrues remediation costs for known environmental liabilities.

Asset Retirement Obligations

Asset retirement obligations (ARO) are legal obligations associated with the retirement of long-lived assets and the liability is initially recorded at fair value. The related asset retirement costs are capitalized by increasing the carrying amount of the related assets by the same amount as the liability. Asset retirement costs are subsequently depreciated over the useful lives of the related assets. Subsequent to initial recognition, the company records period-to-period changes in the ARO liability resulting from the passage of time in interest expense and revisions to either the timing or the amount of the original expected cash flows to the related assets.

Defined Benefit Pension and Nonpension Postretirement Benefit Plans

The funded status of the company's defined benefit pension plans and nonpension postretirement benefit plans (retirement-related benefit plans) is recognized in the Consolidated Balance Sheet. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation at December 31, the measurement date. For defined benefit pension plans, the benefit obligation is the projected benefit obligation (PBO), which represents the actuarial present value of benefits expected to be paid upon retirement based on employee services already rendered and estimated future compensation levels. For the nonpension postretirement benefit plans, the benefit obligation is the accumulated postretirement benefit obligation (APBO), which represents the actuarial present value of postretirement benefits attributed to employee services already rendered. The fair value of plan assets represents the current market value of assets held in an irrevocable trust fund, held for the sole benefit of participants, which are invested by the trust fund. Overfunded plans, with the fair value of plan assets exceeding the benefit obligation, are aggregated and recorded as a prepaid pension asset equal to this excess. Underfunded plans, with the benefit obligation exceeding the fair value of plan assets, are aggregated and recorded as a retirement and nonpension postretirement benefit obligation equal to this excess.

The current portion of the retirement and nonpension post-retirement benefit obligations represents the actuarial present value of benefits payable in the next 12 months exceeding the fair value of plan assets, measured on a plan-by-plan basis. This obligation is recorded in compensation and benefits in the Consolidated Balance Sheet.

Net periodic pension and nonpension postretirement benefit cost/(income) is recorded in the Consolidated Income Statement and includes service cost, interest cost, expected return on plan assets, amortization of prior service costs/(credits) and (gains)/losses previously recognized as a component of other comprehensive income/(loss) (OCI) and amortization of the net transition asset remaining in accumulated other comprehensive income/(loss) (AOCI). The service cost component of net benefit cost is recorded in Cost, SG&A and RD&E in the Consolidated Income Statement (unless eligible for capitalization) based on the employees' respective functions. The other components of net benefit cost are presented separately from service cost within other (income) and expense in the Consolidated Income Statement.

(Gains)/losses and prior service costs/(credits) are recognized as a component of OCI in the Consolidated Statement of Comprehensive Income as they arise. Those (gains)/losses and prior service costs/(credits) are subsequently recognized as a component of net periodic

Notes to Consolidated Financial Statements

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cost/(income) pursuant to the recognition and amortization provisions of applicable accounting guidance. (Gains)/losses arise as a result of differences between actual experience and assumptions or as a result of changes in actuarial assumptions. Prior service costs/(credits) represent the cost of benefit changes attributable to prior service granted in plan amendments.

The measurement of benefit obligations and net periodic cost/(income) is based on estimates and assumptions approved by the company's management. These valuations reflect the terms of the plans and use participant-specific information such as compensation, age and years of service, as well as certain assumptions, including estimates of discount rates, expected return on plan assets, rate of compensation increases, interest crediting rates and mortality rates.

Defined Contribution Plans

The company's contribution for defined contribution plans is recorded when the employee renders service to the company. The charge is recorded in Cost, SG&A and RD&E in the Consolidated Income Statement based on the employees' respective functions.

Stock-Based Compensation

Stock-based compensation represents the cost related to stock-based awards granted to employees. The company measures stock-based compensation cost at the grant date, based on the estimated fair value of the award and recognizes the cost on a straight-line basis (net of estimated forfeitures) over the employee requisite service period. The company grants its employees Restricted Stock Units (RSUs), including Retention Restricted Stock Units (RRSUs); Performance Share Units (PSUs); and stock options. RSUs are stock awards granted to employees that entitle the holder to shares of common stock as the award vests, typically over a one- to four-year period. PSUs are stock awards where the number of shares ultimately received by the employee depends on performance against specified targets and typically vest over a three-year period. Over the performance period, the number of shares that will be issued is adjusted based upon the probability of achievement of performance targets. The ultimate number of shares issued and the related compensation cost recognized as expense will be based on a comparison of the final performance metrics to the specified targets. Dividend equivalents are not paid on the stock awards described above. The fair value of the awards is determined and fixed on the grant date based on the company's stock price, adjusted for the exclusion of dividend equivalents where applicable and for PSUs assumes that performance targets will be achieved. The company estimates the fair value of stock options using a Black-Scholes valuation model. Stock-based compensation cost is recorded in Cost, SG&A, and RD&E in the Consolidated Income Statement based on the employees' respective functions.

The company records deferred tax assets for awards that result in deductions on the company's income tax returns, based on the amount of compensation cost recognized and the relevant statutory tax rates. The differences between the deferred tax assets recognized for financial reporting purposes and the actual tax deduction reported on the income tax return are recorded as a benefit or expense to the provision for income taxes in the Consolidated Income Statement.

Income Taxes

Income tax expense is based on reported income before income taxes. Deferred income taxes reflect the tax effect of temporary differences between asset and liability amounts that are recognized for financial reporting purposes and the amounts that are recognized for income tax purposes. These deferred taxes are measured by applying currently enacted tax laws. The company includes Global Intangible Low-Taxed Income (GILTI) in measuring deferred taxes. Valuation allowances are recognized to reduce deferred tax assets to the amount that will more likely than not be realized. In assessing the need for a valuation allowance, management considers all available evidence for each jurisdiction including past operating results, estimates of future taxable income and the feasibility of ongoing tax planning strategies/actions. When the company changes its determination as to the amount of deferred tax assets that can be realized, the valuation allowance is adjusted with a corresponding impact to income tax expense in the period in which such determination is made.

The company recognizes additional tax liabilities when the company believes that certain positions may not be fully sustained upon review by tax authorities. Benefits from tax positions are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement. The noncurrent portion of tax liabilities is included in other liabilities in the Consolidated Balance Sheet. To the extent that new information becomes available which causes the company to change its judgment regarding the adequacy of existing tax liabilities, such changes to tax liabilities will impact income tax expense in the period in which such determination is made. Interest and penalties, if any, related to accrued liabilities for potential tax assessments are included in income tax expense.

Translation of Non-U.S. Currency Amounts

Assets and liabilities of non-U.S. subsidiaries that have a local functional currency are translated to U.S. dollars at year-end exchange rates. Translation adjustments are recorded in OCI. Income and expense items are translated at weighted-average rates of exchange prevailing during the year.

Inventory, property, plant and equipment—net and other non-monetary assets and liabilities of non-U.S. subsidiaries and branches that operate in U.S. dollars are translated at the approximate exchange rates prevailing when the company acquired the assets or

liabilities. All other assets and liabilities denominated in a currency other than U.S. dollars are translated at year-end exchange rates with the transaction gain or loss recognized in other (income) and expense. Income and expense items are translated at the weighted-average rates of exchange prevailing during the year. These translation gains and losses are included in net income for the period in which exchange rates change.

Derivative Financial Instruments

The company uses derivative financial instruments primarily to manage foreign currency and interest rate risk, and to a lesser extent, equity and credit risk. The company does not use derivative financial instruments for trading or speculative purposes. Derivatives that qualify for hedge accounting can be designated as either cash flow hedges, net investment hedges, or fair value hedges. The company may enter into derivative contracts that economically hedge certain of its risks, even when hedge accounting does not apply, or the company elects not to apply hedge accounting.

Derivatives are recognized in the Consolidated Balance Sheet at fair value on a gross basis as either assets or liabilities and classified as current or noncurrent based upon whether the maturity of the instrument is less than or greater than 12 months.

Changes in the fair value of derivatives designated as a cash flow hedge are recorded, net of applicable taxes, in OCI and subsequently reclassified into the same income statement line as the hedged exposure when the underlying hedged item is recognized in earnings. Effectiveness for net investment hedging derivatives is measured on a spot-to-spot basis. Changes in the fair value of highly effective net investment hedging derivatives and other non-derivative financial instruments designated as net investment hedges are recorded as foreign currency translation adjustments in AOCI. Changes in the fair value of the portion of a net investment hedging derivative excluded from the assessment of effectiveness are recorded in interest expense and cost of financing. Changes in the fair value of interest rate derivatives designated as a fair value hedge and the offsetting changes in the fair value of the underlying hedged exposure are recorded in interest expense and cost of financing. Changes in the fair value of derivatives not designated as hedges are reported in earnings primarily in other (income) and expense. See note T, "Derivative Financial Instruments," for further information.

The cash flows associated with derivatives designated as fair value and cash flow hedges are reported in cash flows from operating activities in the Consolidated Statement of Cash Flows. Cash flows from derivatives designated as net investment hedges and derivatives not designated as hedges are reported in cash flows from investing activities in the Consolidated Statement of Cash Flows. Cash flows from derivatives designated as hedges of foreign currency denominated debt directly associated with the settlement of the principal are reported in payments to settle debt in cash flows from financing activities in the Consolidated Statement of Cash Flows.

Financial Instruments

In determining the fair value of its financial instruments, the company uses a variety of methods and assumptions that are based on market conditions and risks existing at each balance sheet date. See note J, "Financial Assets & Liabilities," for further information. All methods of assessing fair value result in a general approximation of value, and such value may never actually be realized.

Fair Value Measurement

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 at the measurement date. The company classifies certain assets and liabilities based on the following fair value hierarchy:

- Level 1—Quoted prices (unadjusted) in active markets for identical assets or liabilities that can be accessed at the measurement date;
- Level 2—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3—Unobservable inputs for the asset or liability.

When available, the company uses unadjusted quoted market prices in active markets to measure the fair value and classifies such items as Level 1. If quoted market prices are not available, fair value is based upon internally developed models that use current market-based or independently sourced market parameters such as interest rates and currency rates. Items valued using internally generated models are classified according to the lowest level input or value driver that is significant to the valuation.

The determination of fair value considers various factors including interest rate yield curves and time value underlying the financial instruments. For derivatives and debt securities, the company uses a discounted cash flow analysis using discount rates commensurate with the duration of the instrument.

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In determining the fair value of financial instruments, the company considers certain market valuation adjustments to the “base valuations” calculated using the methodologies described below for several parameters that market participants would consider in determining fair value:

- Counterparty credit risk adjustments are applied to financial instruments, taking into account the actual credit risk of a counterparty as observed in the credit default swap market to determine the true fair value of such an instrument.
- Credit risk adjustments are applied to reflect the company’s own credit risk when valuing all liabilities measured at fair value. The methodology is consistent with that applied in developing counterparty credit risk adjustments, but incorporates the company’s own credit risk as observed in the credit default swap market.

The company holds investments primarily in time deposits, certificates of deposit, and U.S. government debt that are designated as available-for-sale. The primary objective of the company’s cash and debt investment portfolio is to maintain principal by investing in very liquid and highly rated investment grade securities.

Available-for-sale securities are measured for impairment on a recurring basis by comparing the security’s fair value with its amortized cost basis. If the fair value of the security falls below its amortized cost basis, the change in fair value is recognized in the period the impairment is identified when the loss is due to credit factors. The change in fair value due to non-credit factors is recorded in other comprehensive income when the company does not intend to sell and has the ability to hold the investment. The company’s standard practice is to hold all of its debt security investments classified as available-for-sale until maturity. There were no impairments for credit losses and no material non-credit impairments recognized for the years ended December 31, 2022, 2021 and 2020.

Certain nonfinancial assets such as property, plant and equipment, land, goodwill and intangible assets are subject to nonrecurring fair value measurements if they are deemed to be impaired. The impairment models used for nonfinancial assets depend on the type of asset. There were no material impairments of nonfinancial assets for the years ended December 31, 2022, 2021 and 2020.

Cash Equivalents

All highly liquid investments with maturities of three months or less at the date of purchase are considered to be cash equivalents.

Marketable Securities

The company measures equity investments at fair value with changes recognized in net income.

Debt securities included in current assets represent securities that are expected to be realized in cash within one year of the balance sheet date. Long-term debt securities and alliance equity securities are included in investments and sundry assets. At December 31, 2022 and 2021, alliance equity securities were \$142 million and \$159 million, respectively. Debt securities are considered available-for-sale and are reported at fair value with unrealized gains and losses, net of applicable taxes, in OCI. The realized gains and losses on available-for-sale debt securities are included in other (income) and expense in the Consolidated Income Statement. Realized gains and losses are calculated based on the specific identification method.

Inventory

Raw materials, work in process and finished goods are stated at the lower of average cost or net realizable value.

Notes and Accounts Receivable—Trade and Contract Assets

The company classifies the right to consideration in exchange for products or services transferred to a client as either a receivable or a contract asset. A receivable is a right to consideration that is unconditional as compared to a contract asset which is a right to consideration that is conditional upon factors other than the passage of time. The majority of the company’s contract assets represent unbilled amounts related to design and build services contracts when the cost-to-cost method of revenue recognition is utilized, revenue recognized exceeds the amount billed to the client, and the right to consideration is subject to milestone completion or client acceptance. Contract assets are generally classified as current and are recorded on a net basis with deferred income (i.e., contract liabilities) at the contract level.

Financing Receivables

Financing receivables primarily consist of client loan and installment payment receivables (loans) and investment in sales-type and direct financing leases (collectively referred to as client financing receivables) and commercial financing receivables. Leases are accounted for in accordance with lease accounting standards. Loans, which are generally unsecured, are primarily for software and services. Commercial financing receivables are primarily for working capital financing to distributors and resellers of IBM products and services. Financing receivables are classified as either held for sale or held for investment, depending on the company’s intent and ability to hold the underlying contract for the foreseeable future or until maturity or payoff. Loans and commercial financing receivables are recorded at amortized cost, which approximates fair value.

Transfers of Financial Assets

The company enters into arrangements to sell certain financial assets (primarily notes and accounts receivable—trade and financing receivables) to third-party financial institutions. For a transfer of financial assets to be considered a sale, the asset must be legally

isolated from the company and the purchaser must have control of the asset. Determining whether all the requirements have been met includes an evaluation of legal considerations, the extent of the company's continuing involvement with the assets transferred and any other relevant consideration. When the true sale criteria are met, the company derecognizes the carrying value of the financial asset transferred and recognizes a net gain or loss on the sale. The proceeds from these arrangements are reflected as cash provided by operating activities in the Consolidated Statement of Cash Flows. If the true sale criteria are not met, the transfer is considered a secured borrowing and the financial asset remains on the Consolidated Balance Sheet with proceeds from the sale recognized as debt and recorded as cash flows from financing activities in the Consolidated Statement of Cash Flows.

Arrangements to sell notes and accounts receivable—trade are used in the normal course of business as part of the company's cash and liquidity management. Facilities primarily in the U.S. and several countries in Europe enable the company to sell certain notes and accounts receivable—trade, without recourse, to third parties in order to manage credit, collection, concentration and currency risk. The gross amounts sold (the gross proceeds) under these arrangements were \$3.3 billion, \$1.8 billion and \$2.2 billion for the years ended December 31, 2022, 2021 and 2020, respectively. Within the notes and accounts receivables—trade sold and derecognized from the Consolidated Balance Sheet, \$1.0 billion, \$0.7 billion, and \$0.4 billion remained uncollected from customers at December 31, 2022, 2021 and 2020, respectively. The fees and the net gains and losses associated with the transfer of receivables were not material for any of the periods presented. Refer to note L, "Financing Receivables," for more information on transfers of financing receivables.

Allowance for Credit Losses

Receivables are recorded concurrent with billing and shipment of a product and/or delivery of a service to customers. An allowance for uncollectible trade receivables and contract assets, if needed, is estimated based on specific customer situations, current and future expected economic conditions, past experiences of losses, as well as an assessment of potential recoverability of the balance due.

The company estimates its allowances for expected credit losses for financing receivables by considering past events, including any historical default, historical concessions and resulting troubled debt restructurings, current economic conditions, any non-freestanding mitigating credit enhancements, and certain forward-looking information, including reasonable and supportable forecasts. The methodologies that the company uses to calculate its financing receivables reserves, which are applied consistently to its different portfolios, are as follows:

Individually Evaluated—The company reviews all financing receivables considered at risk quarterly, and performs an analysis based upon current information available about the client, such as financial statements, news reports, published credit ratings, current market-implied credit analysis, as well as collateral net of repossession cost, prior collection history and current and future expected economic conditions. For loans that are collateral dependent, impairment is measured using the fair value of the collateral when foreclosure is probable. Using this information, the company determines the expected cash flow for the receivable and calculates an estimate of the potential loss and the probability of loss. For those accounts in which the loss is probable, the company records a specific reserve.

Collectively Evaluated—The company determines its allowances for credit losses for collectively evaluated financing receivables (unallocated) based on two portfolio segments: client financing receivables and commercial financing receivables. The company further segments the portfolio into three classes: Americas, Europe/Middle East/Africa (EMEA) and Asia Pacific.

For client financing receivables, the company uses a credit loss model to calculate allowances based on its internal loss experience and current conditions and forecasts, by class of financing receivable. The company records an unallocated reserve that is calculated by applying a reserve rate to its portfolio, excluding accounts that have been individually evaluated and specifically reserved. This reserve rate is based upon credit rating, probability of default, term and loss history. The allowance is adjusted quarterly for expected recoveries of amounts that were previously written off or are expected to be written off. Recoveries cannot exceed the aggregated amount of the previous write-off or expected write-off.

The company considers forward-looking macroeconomic variables such as gross domestic product, unemployment rates, equity prices and corporate profits when quantifying the impact of economic forecasts on its client financing receivables allowance for expected credit losses. Macroeconomic variables may vary by class of financing receivables based on historical experiences, portfolio composition and current environment. The company also considers the impact of current conditions and economic forecasts relating to specific industries, geographical areas, and client credit ratings, in addition to performing a qualitative review of credit risk factors across the portfolio. Under this approach, forecasts of these variables over two years are considered reasonable and supportable. Beyond two years, the company reverts to long-term average loss experience. Forward-looking estimates require the use of judgment, particularly in times of economic uncertainty.

The portfolio of commercial financing receivables is short term in nature and any allowance for these assets is estimated based on a combination of write-off history and current economic conditions, excluding any individually evaluated accounts.

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Other Credit-Related Policies

Past Due—The company views receivables as past due when payment has not been received after 90 days, measured from the original billing date.

Non-Accrual—Non-accrual assets include those receivables (impaired loans or nonperforming leases) with specific reserves and other accounts for which it is likely that the company will be unable to collect all amounts due according to original terms of the lease or loan agreement. Interest income recognition is discontinued on these receivables. Cash collections are first applied as a reduction to principal outstanding. Any cash received in excess of principal payments outstanding is recognized as interest income. Receivables may be removed from non-accrual status, if appropriate, based upon changes in client circumstances, such as a sustained history of payments.

Write-Off—Receivable losses are charged against the allowance in the period in which the receivable is deemed uncollectible. Subsequent recoveries, if any, are credited to the allowance. Write-offs of receivables and associated reserves occur to the extent that the customer is no longer in operation and/or there is no reasonable expectation of additional collections or repossession.

Leases

The company conducts business as both a lessee and a lessor. In its ordinary course of business, the company enters into leases as a lessee for property, plant and equipment. The company is also the lessor of certain equipment, mainly through its Financing segment.

When procuring goods or services, or upon entering into a contract with its clients, the company determines whether an arrangement contains a lease at its inception. As part of that evaluation, the company considers whether there is an implicitly or explicitly identified asset in the arrangement and whether the company, as the lessee, or the client, if the company is the lessor, has the right to control the use of that asset.

Accounting for Leases as a Lessee

When the company is the lessee, all leases with a term of more than 12 months are recognized as right-of-use (ROU) assets and associated lease liabilities in the Consolidated Balance Sheet. The lease liabilities are measured at the lease commencement date and determined using the present value of the lease payments not yet paid and the company's incremental borrowing rate, which approximates the rate at which the company would borrow on a secured basis in the country where the lease was executed. The interest rate implicit in the lease is generally not determinable in transactions where the company is the lessee. The ROU asset equals the lease liability adjusted for any initial direct costs (IDCs), prepaid rent and lease incentives. The company's variable lease payments generally relate to payments tied to various indexes, non-lease components and payments above a contractual minimum fixed amount.

Operating leases are included in operating right-of-use assets—net, current operating lease liabilities and operating lease liabilities in the Consolidated Balance Sheet. Finance leases are included in property, plant and equipment, short-term debt and long-term debt in the Consolidated Balance Sheet. The lease term includes options to extend or terminate the lease when it is reasonably certain that the company will exercise that option.

The company made a policy election to not recognize leases with a lease term of 12 months or less in the Consolidated Balance Sheet.

For all asset classes, the company has elected the lessee practical expedient to combine lease and non-lease components (e.g., maintenance services) and account for the combined unit as a single lease component. A significant portion of the company's lease portfolio is real estate, which are mainly accounted for as operating leases, and are primarily used for corporate offices and data centers. The average term of the real estate leases is approximately five years. The company also has equipment leases, such as IT equipment and vehicles, which have lease terms that range from two to five years. For certain of these operating and finance leases, the company applies a portfolio approach to account for the lease assets and lease liabilities.

Accounting for Leases as a Lessor

The company typically enters into leases as an alternative means of realizing value from equipment that it would otherwise sell. Assets under lease primarily include new and used IBM equipment. IBM equipment generally consists of zSystems, Power and Storage products.

Lease payments due to IBM are typically fixed and paid in equal installments over the lease term. The majority of the company's leases do not contain variable payments that are dependent on an index or a rate. Variable lease payments that do not depend on an index or a rate (e.g., property taxes), that are paid directly by the company and are reimbursed by the client, are recorded as revenue, along with the related cost, in the period in which collection of these payments is probable. Payments that are made directly by the client to a third party, including certain property taxes and insurance, are not considered part of variable payments and therefore are not recorded by the company. The company has made a policy election to exclude from consideration in contracts all collections from sales and other similar taxes.

The company's payment terms for leases are typically unconditional. Therefore, in an instance when the client requests to terminate the lease prior to the end of the lease term, the client would typically be required to pay the remaining lease payments in full. At the end of the lease term, the company allows the client to either return the equipment, purchase the equipment at the then-current fair market value or at a pre-stated purchase price, or renew the lease based on mutually agreed upon terms.

When lease arrangements include multiple performance obligations, the company allocates the consideration in the contract between the lease components and the non-lease components on a relative standalone selling price basis.

Sales-Type and Direct Financing Leases

For a sales-type or direct financing lease, the carrying amount of the asset is derecognized from inventory and a net investment in the lease is recorded. For a sales-type lease, the net investment in the lease is measured at commencement date as the sum of the lease receivable and the estimated residual value of the equipment less unearned income and allowance for credit losses. Any selling profit or loss arising from a sales-type lease is recorded at lease commencement. Selling profit or loss is presented on a gross basis when the company enters into a lease to realize value from a product that it would otherwise sell in its ordinary course of business. For segment reporting, the net investment in sales-type leases excluding the allowance for credit losses is recognized as hardware revenue in the Infrastructure segment, while the estimated residual value less related unearned income is recognized as a reduction in revenue in the Other revenue category and represents the portion of fair value retained by the company. In transactions where the company enters into a lease for the purpose of generating revenue by providing financing, the selling profit or loss is presented on a net basis. Under a sales-type lease, initial direct costs are expensed at lease commencement. Over the term of the lease, the company recognizes finance income on the net investment in the lease and any variable lease payments, which are not included in the net investment in the lease.

For a direct financing lease, the net investment in the lease is measured similarly to a sales-type lease, however, the net investment in the lease is reduced by any selling profit. In a direct financing lease, the selling profit and initial direct costs are deferred at commencement and recognized over the lease term. The company rarely enters into direct financing leases.

The estimated residual value represents the estimated fair value of the equipment under lease at the end of the lease. The company estimates the future fair value of leased equipment by using historical models, analyzing the current market for new and used equipment and obtaining forward-looking product information such as marketing plans and technology innovations. The company optimizes the recovery of residual values by extending lease arrangements with, or selling leased equipment to existing clients, and periodically reassesses the realizable value of its lease residual values. Anticipated decreases in specific future residual values that are considered to be other-than-temporary are recognized immediately upon identification and are recorded as adjustments to the residual value estimate and unearned income, which reduces current period and future period financing income, respectively.

Common Stock

Common stock refers to the \$.20 par value per share capital stock as designated in the company's Certificate of Incorporation. Treasury stock is accounted for using the cost method. When treasury stock is reissued, the value is computed and recorded using a weighted-average basis.

Earnings Per Share of Common Stock

Earnings per share (EPS) is computed using the two-class method, which determines EPS for each class of common stock and participating securities according to dividends and dividend equivalents and their respective participation rights in undistributed earnings. Basic EPS of common stock is computed by dividing net income by the weighted-average number of common shares outstanding for the period. Diluted EPS of common stock is computed on the basis of the weighted-average number of shares of common stock plus the effect of dilutive potential common shares outstanding during the period using the treasury stock method. Dilutive potential common shares include outstanding stock awards, convertible notes and stock options.

NOTE B. ACCOUNTING CHANGES

New Standards to be Implemented

Disclosures of Supplier Finance Program Obligations

Standard/Description—Issuance date: September 2022. This guidance requires an entity to provide certain interim and annual disclosures about the use of supplier finance programs in connection with the purchase of goods or services.

Effective Date and Adoption Considerations—The guidance was effective January 1, 2023 with certain annual disclosures required beginning in 2024 and early adoption was permitted. The company adopted the guidance as of the effective date.

Effect on Financial Statements or Other Significant Matters—As the guidance is a change to disclosures only, the company does not expect it to have a material impact in the consolidated financial results. The company's use of supplier finance programs as of December 31, 2022 was not material.

Troubled Debt Restructurings and Vintage Disclosures

Standard/Description—Issuance date: March 2022. This eliminates the accounting guidance for troubled debt restructurings and requires an entity to apply the general loan modification guidance to all loan modifications, including those made to customers experiencing financial difficulty, to determine whether the modification results in a new loan or a continuation of an existing loan. The guidance also requires presenting current period gross write-offs by year of origination for financing receivables and net investment in leases.

Effective Date and Adoption Considerations—The amendment was effective January 1, 2023 and early adoption was permitted. The company adopted the guidance as of the effective date.

Effect on Financial Statements or Other Significant Matters—The guidance is not expected to have a material impact in the consolidated financial results.

Standards Implemented**Disclosures about Government Assistance**

Standard/Description—Issuance date: November 2021. This guidance requires an entity to provide certain annual disclosures about government assistance received and accounted for by applying a grant or contribution accounting model by analogy.

Effective Date and Adoption Considerations—The guidance was effective for annual disclosures beginning in 2022 and early adoption was permitted. The company adopted the guidance as of the effective date.

Effect on Financial Statements or Other Significant Matters—The guidance did not have a material impact in the consolidated financial results. Refer to note A, “Significant Accounting Policies,” for additional information.

Lessors—Certain Leases with Variable Lease Payments

Standard/Description—Issuance date: July 2021. This guidance modifies a lessor’s accounting for certain leases with variable lease payments that resulted in the recognition of a day-one loss even if the lessor expected the arrangement to be profitable overall. The amendment requires these types of lease contracts to be classified as operating leases which eliminates any recognition of a day-one loss.

Effective Date and Adoption Considerations—The amendment was effective January 1, 2022 and early adoption was permitted. The company adopted the guidance on a prospective basis as of the effective date.

Effect on Financial Statements or Other Significant Matters—The guidance did not have a material impact in the consolidated financial results.

Revenue Contracts with Customers Acquired in a Business Combination

Standard/Description—Issuance date: October 2021. This guidance requires that an acquirer recognize and measure contract assets and contract liabilities acquired in a business combination in accordance with revenue guidance, as if it had originated the contracts. Deferred revenue acquired in a business combination is no longer required to be measured at its fair value, but rather will generally be recognized at the same basis as the acquiree.

Effective Date and Adoption Considerations—The amendment was effective January 1, 2023 and early adoption was permitted, including adoption in an interim period. The company adopted the guidance as of October 1, 2021 using the retrospective transition method whereby the new guidance was applied to all business combinations that occurred on or after January 1, 2021.

Effect on Financial Statements or Other Significant Matters—The guidance did not have a material impact in the consolidated financial results. The impact of the guidance in IBM’s future financial results will be dependent on the nature and size of its acquisitions.

Simplifying the Accounting for Income Taxes

Standard/Description—Issuance date: December 2019. This guidance simplifies various aspects of income tax accounting by removing certain exceptions to the general principle of the guidance and also clarifies and amends existing guidance to improve consistency in application.

Effective Date and Adoption Considerations—The guidance was effective January 1, 2021 and early adoption was permitted. The company adopted the guidance on a prospective basis as of the effective date.

Effect on Financial Statements or Other Significant Matters—The guidance did not have a material impact in the consolidated financial results.

For all other standards that the company adopted in the periods presented, there was no material impact in the consolidated financial results.

NOTE C. SEPARATION OF KYNDRYL

As discussed in note A, "Significant Accounting Policies," on November 3, 2021, the company completed the separation of its managed infrastructure services unit into a new public company, Kyndryl.

The historical results of Kyndryl have been presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. The company's presentation of discontinued operations excludes general corporate overhead costs which were historically allocated to Kyndryl, consistent with the company's management system, that did not meet the requirements to be presented in discontinued operations. Such allocations include labor and non-labor expenses related to IBM's corporate support functions (e.g., finance, accounting, tax, treasury, IT, HR, legal, among others) that historically provided support to Kyndryl and transferred to Kyndryl at separation. In addition, discontinued operations excludes the historical intercompany purchases and sales between IBM and Kyndryl that were eliminated in consolidation.

IBM will provide transition services to Kyndryl predominantly consisting of information technology services for a period no longer than two years after the separation. The impact of these transition services on the company's Consolidated Financial Statements for the year ended December 31, 2022 was not material.

At separation, IBM and Kyndryl entered into various commercial agreements pursuant to which Kyndryl will purchase hardware, software and services from IBM and under which IBM will receive hosting and information infrastructure services from Kyndryl. As part of the separation, IBM has also committed to provide upgraded hardware at no cost to Kyndryl over a two-year period after the separation. An estimate of the remaining obligation under the agreement is recorded in other accrued expenses and liabilities in the Consolidated Balance Sheet.

The total net impact to stockholder's equity from the separation was a reduction of \$7,203 million, which was reflected as a reduction of \$8,404 million, \$1,264 million and \$62 million to retained earnings, accumulated other comprehensive income/(loss) and noncontrolling interest, respectively, in the Consolidated Statement of Equity as of December 31, 2021.

The following table presents the major categories of income/(loss) from discontinued operations, net of tax.

(\$ in millions)			
For the year ended December 31:	2022	2021 *	2020 *
Revenue	\$ 7	\$14,994	\$18,441
Cost of sales	24	11,270	13,651
Selling, general and administrative expense	86	1,869 **	1,641 **
Kyndryl-related workforce rebalancing charges	—	31 **	884 **
RD&E and Other (income) and expense	(84)	80	124
Income/(loss) from discontinued operations before income taxes	\$ (20)	\$ 1,744	\$ 2,142
Provision for income taxes	124	714 +	484
Income/(loss) from discontinued operations, net of tax⁺⁺	\$(143)	\$ 1,030	\$ 1,658

* Excludes intercompany transactions between IBM and Kyndryl and general corporate overhead costs transferred to Kyndryl as discussed above.

** Recast to conform to 2022 presentation.

+ Includes tax charges related to the Kyndryl separation.

++ Includes \$(1) million and \$89 million in 2021 and 2020, respectively, related to discontinued operations of Microelectronics, divested in 2015.

Loss from discontinued operations before income taxes for the year ended December 31, 2022 primarily reflects the net impact of changes in separation-related estimates, the settlement of assets and liabilities in accordance with the separation and distribution agreement and a gain on sale of a joint venture historically managed by Kyndryl, which transferred to Kyndryl in the first quarter of 2022 upon receiving regulatory approval. The discontinued operations provision for income taxes for the year ended December 31, 2022, primarily reflects the impact of provision to return adjustments on the Kyndryl-related taxes.

Separation costs of \$5 million, \$1,042 million and \$21 million incurred during the years ended December 31, 2022, 2021 and 2020, respectively, are included in income/(loss) from discontinued operations, net of tax, in the Consolidated Income Statement. These charges primarily relate to transaction and third-party support costs, business separation and applicable employee retention fees, pension settlement charges and related tax charges.

The following table presents selected financial information related to cash flows from discontinued operations.

(\$ in millions)			
For the year ended December 31:	2022	2021	2020
Net cash provided by/(used in) operating activities	\$ —	\$1,612 *	\$4,403
Net cash provided by/(used in) investing activities	48	(380)	(935)

* Excludes intercompany transactions between IBM and Kyndryl and general corporate overhead costs transferred to Kyndryl as discussed above.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

NOTE D. REVENUE RECOGNITION**Disaggregation of Revenue**

The following tables provide details of revenue by major products/service offerings, hybrid cloud revenue, and revenue by geography.

Revenue by Major Products/Service Offerings

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Hybrid Platform & Solutions	\$17,866	\$17,036 *	\$15,518 *
Transaction Processing	7,171	6,390	6,606
Total Software	\$25,037	\$23,426 *	\$22,124 *
Business Transformation	\$ 8,834	\$ 8,284	\$ 7,193
Application Operations	6,508	6,095	5,931
Technology Consulting	3,765	3,466	3,133
Total Consulting	\$19,107	\$17,844	\$16,257
Hybrid Infrastructure	\$ 9,451	\$ 8,167	\$ 8,415
Infrastructure Support	5,837	6,021	6,118
Total Infrastructure	\$15,288	\$14,188	\$14,533
Financing**	\$ 645	\$ 774	\$ 975
Other	\$ 453	\$ 1,119 *	\$ 1,291 *
Total Revenue	\$60,530	\$57,350	\$55,179

* Recast to reflect segment change.

** Contains lease and loan financing arrangements which are not subject to the guidance on revenue from contracts with customers.

Hybrid Cloud Revenue by Segment

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Software	\$ 9,321	\$ 8,386 *	\$ 6,517 *
Consulting	9,019	7,852	5,861
Infrastructure	3,895	3,645	4,039
Other	142	328 *	422 *
Total	\$22,377	\$20,210	\$16,838

* Recast to reflect segment change.

Revenue by Geography

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Americas	\$31,057	\$28,299	\$27,119
Europe/Middle East/Africa	17,950	17,447	16,767
Asia Pacific	11,522	11,604	11,293
Total	\$60,530	\$57,350	\$55,179

Remaining Performance Obligations

The remaining performance obligation (RPO) disclosure provides the aggregate amount of the transaction price yet to be recognized as of the end of the reporting period and an explanation as to when the company expects to recognize these amounts in revenue. It is intended to be a statement of overall work under contract that has not yet been performed and does not include contracts in which the customer is not committed, such as certain as-a-Service, governmental, term software license and services offerings. The customer is not considered committed when they are able to terminate for convenience without payment of a substantive penalty. The disclosure includes estimates of variable consideration, except when the variable consideration is a sales-based or usage-based royalty promised in exchange for a license of intellectual property. Additionally, as a practical expedient, the company does not include contracts that have an original duration of one year or less. RPO estimates are subject to change and are affected by several factors, including terminations, changes in the scope of contracts, periodic revalidations, adjustment for revenue that has not materialized and adjustments for currency.

At December 31, 2022, the aggregate amount of the transaction price allocated to RPO related to customer contracts that are unsatisfied or partially unsatisfied was \$59 billion. Approximately 72 percent of the amount is expected to be recognized as revenue in the subsequent two years, approximately 26 percent in the subsequent three to five years and the balance thereafter.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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Revenue Recognized for Performance Obligations Satisfied (or Partially Satisfied) in Prior Periods

For the year ended December 31, 2022, revenue was reduced by \$55 million for performance obligations satisfied or partially satisfied in previous periods mainly due to changes in estimates on contracts with cost-to-cost measures of progress. Refer to note A, "Significant Accounting Policies," for additional information on these contracts and estimates of costs to complete.

Reconciliation of Contract Balances

The following table provides information about notes and accounts receivable—trade, contract assets and deferred income balances.

(\$ in millions)		
At December 31:	2022	2021
Notes and accounts receivable — trade (net of allowances of \$233 in 2022 and \$218 in 2021)	\$ 6,541	\$ 6,754
Contract assets*	464	471
Deferred income (current)	12,032	12,518
Deferred income (noncurrent)	3,499	3,577

* Included within prepaid expenses and other current assets in the Consolidated Balance Sheet.

The amount of revenue recognized during the year ended December 31, 2022 that was included within the deferred income balance at December 31, 2021 was \$10.2 billion and primarily related to services and software.

The following table provides roll forwards of the notes and accounts receivable—trade allowance for expected credit losses for the years ended December 31, 2022 and 2021.

(\$ in millions)				
January 1, 2022	Additions/(Releases)	Write-offs	Foreign currency and Other	December 31, 2022
\$218	\$ 59	\$ (31)	\$ (14)	\$233
January 1, 2021	Additions/(Releases)	Write-offs	Foreign currency and Other	December 31, 2021
\$260	\$ (15)	\$ (28)	\$ 1	\$218

The contract assets allowance for expected credit losses was not material in the years ended December 31, 2022 and 2021.

Deferred Costs

(\$ in millions)		
At December 31:	2022	2021
Capitalized costs to obtain a contract	\$ 563	\$ 476
Deferred costs to fulfill a contract		
Deferred setup costs	456	546
Other deferred fulfillment costs	814	1,000
Total deferred costs*	\$1,833	\$2,022

* Of the total deferred costs, \$967 million was current and \$866 million was noncurrent at December 31, 2022 and \$1,097 million was current and \$924 million was noncurrent at December 31, 2021.

The amount of total deferred costs amortized during the year ended December 31, 2022 was \$1,609 million and there were no material impairment losses incurred. Refer to note A, "Significant Accounting Policies," for additional information on deferred costs to fulfill a contract and capitalized costs of obtaining a contract.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

NOTE E. SEGMENTS

In January 2022, IBM announced the divestiture of its healthcare software assets which closed in the second quarter of 2022. Refer to note F, "Acquisitions & Divestitures," for additional information. The company re-aligned its management structure to manage these assets outside of the Software segment prior to the divestiture. Beginning in the first quarter of 2022, the financial results of these assets are presented in Other—divested businesses. This change impacted the company's reportable segments, but did not impact its Consolidated Financial Statements. The prior-year periods have been recast to reflect this segment change.

The segments represent components of the company for which separate financial information is available that is utilized on a regular basis by the chief operating decision maker (the chief executive officer) in determining how to allocate resources and evaluate performance. The segments are determined based on several factors, including client base, homogeneity of products, technology, delivery channels and similar economic characteristics.

Certain transactions between the segments are recorded to other (income) and expense and are reflected in segment pre-tax income. These transactions predominately represent loans between Financing and Infrastructure segments to facilitate the acquisition of equipment and software used in IBM IaaS services arrangements.

The company utilizes globally integrated support organizations to realize economies of scale and efficient use of resources. As a result, a considerable amount of expense is shared by all of the segments. This shared expense includes sales coverage, certain marketing functions and support functions such as Accounting, Treasury, Procurement, Legal, Human Resources, Chief Information Office, and Billing and Collections. Where practical, shared expenses are allocated based on measurable drivers of expense, e.g., headcount. When a clear and measurable driver cannot be identified, shared expenses are allocated on a financial basis that is consistent with the company's management system, e.g., advertising expense is allocated based on the gross profits of the segments. A portion of the shared expenses, which are recorded in net income, are not allocated to the segments. These expenses are associated with the elimination of internal transactions and other miscellaneous items.

The following tables reflect the results of continuing operations of the company's segments consistent with the management and measurement system utilized within the company. Performance measurement is based on pre-tax income from continuing operations. These results are used by the chief operating decision maker, both in evaluating the performance of, and in allocating resources to, each of the segments.

Management System Segment View

(\$ in millions)

For the year ended December 31:	Software	Consulting	Infrastructure	Financing	Total Segments
2022					
Revenue	\$25,037	\$19,107	\$15,288	\$ 645	\$60,077
Pre-tax income from continuing operations	6,162	1,677	2,262	340	10,441
Revenue year-to-year change	6.9 %	7.1 %	7.8 %	(16.6)%	6.8 %
Pre-tax income year-to-year change	27.1 %	15.7 %	11.7 %	(22.9)%	19.1 %
Pre-tax income margin	24.6 %	8.8 %	14.8 %	52.6 %	17.4 %
2021*					
Revenue	\$23,426	\$17,844	\$14,188	\$ 774	\$56,231
Pre-tax income from continuing operations	4,849	1,449	2,025	441	8,765
Revenue year-to-year change	5.9 %	9.8 %	(2.4)%	(20.6)%	4.3 %
Pre-tax income year-to-year change	41.7 %	40.1 %	22.4 %	(1.8)%	33.6 %
Pre-tax income margin	20.7 %	8.1 %	14.3 %	57.0 %	15.6 %
2020*					
Revenue	\$22,124	\$16,257	\$14,533	\$ 975	\$53,888
Pre-tax income from continuing operations**	3,423	1,034	1,654	449	6,561

* Recast to reflect segment change.

** Includes the impact of a \$1.5 billion pre-tax charge for structural actions in the fourth quarter of 2020. The impact by segment was as follows: Software (\$0.6 billion), Consulting (\$0.4 billion) and Infrastructure (\$0.4 billion). The impact to Financing was immaterial.

Reconciliations of IBM as Reported

(\$ in millions)

For the year ended December 31:	2022	2021 ⁽¹⁾	2020 ⁽¹⁾
Revenue			
Total reportable segments	\$60,077	\$56,231	\$53,888
Other—divested businesses	318	785	904
Other revenue	135	335	387
Total revenue	\$60,530	\$57,350	\$55,179

(\$ in millions)

For the year ended December 31:	2022	2021 ⁽¹⁾	2020 ⁽¹⁾
Pre-tax income from continuing operations			
Total reportable segments	\$10,441	\$ 8,765	\$ 6,561 ⁽²⁾
Amortization of acquired intangible assets	(1,747)	(1,838)	(1,832)
Acquisition-related charges	(18)	(43)	(13)
Non-operating retirement-related (costs)/income	(6,548) ⁽³⁾	(1,282)	(1,073)
Kyndryl-related impacts ⁽⁴⁾	(351)	118	—
Elimination of internal transactions	(10)	(7)	(28)
Other—divested businesses	91 ⁽⁵⁾	(102)	(70)
Unallocated corporate amounts and other	(702)	(774)	(973)
Total pre-tax income from continuing operations	\$ 1,156	\$ 4,837	\$ 2,572

⁽¹⁾ Recast to reflect segment change.

⁽²⁾ Includes the impact of a \$1.5 billion pre-tax charge for structural actions in the fourth quarter of 2020.

⁽³⁾ Includes a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion. See note V, "Retirement-Related Benefits," for additional information.

⁽⁴⁾ Refer to note J, "Financial Assets & Liabilities," for additional information.

⁽⁵⁾ Includes a gain on the sale of the company's healthcare software assets. Refer to note F, "Acquisitions & Divestitures," for additional information.

Immaterial Items

Investment in Equity Alliances and Equity Alliances Gains/(Losses)

The investments in equity alliances and the resulting gains and (losses) from these investments that are attributable to the segments did not have a material effect on the financial position or the financial results of the segments.

Segment Assets and Other Items

Software assets are mainly goodwill, acquired intangible assets and accounts receivable. Consulting assets are primarily goodwill and accounts receivable. Infrastructure assets are primarily goodwill, plant, property and equipment, manufacturing inventory and accounts receivable. Financing assets are primarily financing receivables, and cash and marketable securities.

To ensure the efficient use of the company's space and equipment, several segments may share leased or owned plant, property and equipment assets. Where assets are shared, landlord ownership of the assets is assigned to one segment and is not allocated to each user segment. This is consistent with the company's management system and is reflected accordingly in the table below. In those cases, there will not be a precise correlation between segment pre-tax income and segment assets.

Depreciation expense and capital expenditures that are reported by each segment also are consistent with the landlord ownership basis of asset assignment.

Financing amounts for interest income reflect the income associated with Financing's external client transactions, as well as the income from investment in cash and marketable securities. Financing amounts for interest expense reflect the expense associated with intercompany loans and secured borrowings supporting Financing's external client transactions. These secured borrowings are included in note P, "Borrowings." Intercompany financing activities are recorded to other (income) and expense and are reflected in segment pre-tax income.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

Management System Segment View

(\$ in millions)

For the year ended December 31:	Software *	Consulting	Infrastructure	Financing	Total Segments
2022					
Assets	\$57,186	\$13,481	\$12,243	\$15,757	\$ 98,667
Depreciation/amortization of intangibles**	968	289	1,403	14	2,674
Capital expenditures/investments in intangibles	446	33	853	27	1,359
Interest income	—	—	—	582	582
Interest expense	—	—	—	175	175
2021					
Assets	\$58,420	\$11,914	\$11,766	\$16,880	\$ 98,980
Depreciation/amortization of intangibles**	983	250	1,399	49	2,681
Capital expenditures/investments in intangibles	559	55	792	33	1,439
Interest income	—	—	—	628	628
Interest expense	—	—	—	129	129
2020					
Assets	\$57,436	\$10,548	\$12,378	\$24,974	\$105,336
Depreciation/amortization of intangibles**	1,007	207	1,419	120	2,753
Capital expenditures/investments in intangibles	538	26	1,093	41	1,699
Interest income	—	—	—	834	834
Interest expense	—	—	—	307	307

* Prior-year periods were recast to reflect segment change.

** Segment pre-tax income from continuing operations does not include the amortization of acquired intangible assets.

Reconciliations of IBM as Reported

(\$ in millions)

At December 31:	2022	2021 *	2020 *
Assets			
Total reportable segments	\$ 98,667	\$ 98,980	\$105,336
Elimination of internal transactions	(1,062)	(1,608)	(4,686)
Other—divested businesses	100	1,109	1,376
Unallocated amounts			
Cash and marketable securities	8,138	6,222	12,463
Notes and accounts receivable	281	1,622	1,655
Deferred tax assets	6,078	7,158	8,175
Plant, other property and equipment	1,760	2,196	2,449
Operating right-of-use assets	1,586	1,945	2,368
Pension assets	8,236	9,848	7,557
Other	3,459	4,530	3,514
Total assets of discontinued operations	—	—	15,764
Total IBM consolidated assets	\$127,243	\$132,001	\$155,971

* Recast to reflect segment change.

Major Clients

No single client represented 10 percent or more of the company's total revenue in 2022, 2021 or 2020.

Geographic Information

The following tables provide information for those countries that are 10 percent or more of the specific category.

Revenue*

(\$ in millions)

For the year ended December 31:	2022	2021	2020
United States	\$25,098	\$22,893	\$22,258
Japan	5,453	5,648	5,680
Other countries	29,980	28,810	27,241
Total revenue	\$60,530	\$57,350	\$55,179

* Revenues are attributed to countries based on the location of the client.

Plant and Other Property–Net

(\$ in millions)

At December 31:	2022	2021	2020
United States	\$3,209	\$3,375	\$3,452
Other countries	2,100	2,293	2,656
Total*	\$5,308	\$5,668	\$6,108

* Balances do not include rental machines.

Operating Right-of-Use Assets–Net

(\$ in millions)

At December 31:	2022	2021	2020
United States	\$1,074	\$1,148	\$1,165
Japan	259	398	532
Other countries	1,545	1,676	1,870
Total	\$2,878	\$3,222	\$3,566

Revenue by Classes of Similar Products or Services

The following table presents external revenue for similar classes of products or services within the company's reportable segments. Client solutions often include IBM software and systems and other suppliers' products if the client solution requires it. For each of the segments that include services, Software-as-a-Service, consulting, education, training and other product-related services are included as services. For each of these segments, software includes product license charges and ongoing subscriptions.

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Software *			
Software	\$21,374	\$19,845	\$18,771
Services	3,575	3,485	3,253
Systems	88	96	100
Consulting			
Services	\$18,857	\$17,563	\$15,986
Software	170	173	183
Systems	80	108	89
Infrastructure			
Maintenance	\$ 4,590	\$ 4,743	\$ 4,804
Servers	4,471	3,483 **	3,686 **
Services	2,653	2,616	2,656
Storage	1,989	1,919 **	1,824 **
Software	1,585	1,426	1,563
Financing			
Financing	\$ 582	\$ 628	\$ 834
Used equipment sales	\$ 64	\$ 145	\$ 140

* Prior-year periods were recast to reflect segment change.

** Recast to conform to 2022 presentation to present used equipment sales in servers and storage.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

NOTE F. ACQUISITIONS & DIVESTITURES**Acquisitions**

Purchase price consideration for all acquisitions was paid primarily in cash. All acquisitions, except otherwise stated, were for 100 percent of the acquired business and are reported in the Consolidated Statement of Cash Flows, net of acquired cash and cash equivalents.

2022

In 2022, the company completed eight acquisitions at an aggregate cost of \$2,650 million. Each acquisition is expected to enhance the company's portfolio of products and services capabilities and further advance IBM's hybrid cloud and AI strategy.

Acquisition	Segment	Description of Acquired Business
<u>First Quarter</u>		
Envizi	Software	Data and analytics software provider for environmental performance management
Sentaca	Consulting	Telco consulting services and solutions provider specializing in automation, cloud migration, and future networks for telecommunications providers
Neudesic	Consulting	Application development and cloud computing services company
<u>Second Quarter</u>		
Randori	Software	Leading attack surface management (ASM) and cybersecurity provider
Databand.ai	Software	Proactive data observability platform that isolates data errors and issues to alert relevant stakeholders
<u>Third Quarter</u>		
Omnio	Software	Developer of software connectors used in the collection of raw data for various Industrial Internet of Things (IoT) applications
<u>Fourth Quarter</u>		
Dialexa	Consulting	Digital product engineering services firm
Octo	Consulting	IT modernization and digital transformation services provider exclusively serving the U.S. federal government

At December 31, 2022, the remaining cash to be remitted by the company related to certain 2022 acquisitions was \$238 million, of which \$139 million is expected to be paid in 2023 and the remaining amount is expected to be paid in 2024.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2022.

(\$ in millions)

	Amortization Life (in Years)	Octo	Other Acquisitions
Current assets		\$ 119	\$ 87
Property, plant and equipment/noncurrent assets		13	7
Intangible assets			
Goodwill	N/A	826	1,062
Client relationships	7	370	204
Completed technology	4–7	30	90
Trademarks	2–3	15	10
Total assets acquired		\$1,374	\$1,460
Current liabilities		54	51
Noncurrent liabilities		57	22
Total liabilities assumed		\$ 110	\$ 73
Total purchase price		\$1,263	\$1,387

N/A—Not applicable

The goodwill generated is primarily attributable to the assembled workforce of the acquired businesses and the increased synergies expected to be achieved from the integration of the acquired businesses into the company's various integrated solutions and services neither of which qualifies as an amortizable intangible asset.

The valuation of the assets acquired and liabilities assumed is subject to revision. If additional information becomes available, the company may further revise the purchase price allocation as soon as practical, but no later than one year from the acquisition date; however, material changes are not expected.

Octo—The overall weighted-average useful life of the identified amortizable intangible assets acquired was 6.0 years. Goodwill of \$706 million and \$120 million was assigned to the Consulting and Software segments, respectively. It is expected that 24 percent of the goodwill will be deductible for tax purposes.

Other acquisitions—The overall weighted-average useful life of the identified amortizable intangible assets acquired was 6.7 years. Goodwill of \$624 million and \$438 million was assigned to the Consulting and Software segments, respectively. It is expected that 52 percent of the goodwill will be deductible for tax purposes.

The identified intangible assets will be amortized on a straight-line basis over their useful lives, which approximates the pattern that the assets' economic benefits are expected to be consumed over time.

2023 Transactions—In February 2023, the company acquired StepZen, Inc., developer of GraphQL to help build application programming interfaces (APIs) quickly and with less code. StepZen will be integrated into the Software segment. The financial terms related to the acquisition were not material. Additionally, in February 2023, the company signed a definitive agreement to acquire NS1, a leading provider of network automation SaaS solutions. Upon closing, NS1 will be integrated into the Software segment. The transaction is expected to close in the first half of 2023, subject to customary closing conditions, including regulatory clearance.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

2021

In 2021, the company completed fifteen acquisitions at an aggregate cost of \$3,341 million.

Acquisition	Segment	Description of Acquired Business
<u>First Quarter</u>		
Nordcloud	Consulting	Consulting company providing services in cloud implementation, application transformation and managed services
Taos Mountain, LLC (Taos)	Consulting	Leading cloud professional and managed services provider
StackRox	Software	Innovator in container and Kubernetes-native security
<u>Second Quarter</u>		
Turbonomic, Inc. (Turbonomic)	Software	Application Resource Management and Network Performance Management software provider
ECX Copy Data Management business from Catalogic Software, Inc.	Software	Smart data protection solution
Waeg	Consulting	Leading Salesforce consulting partner
myInvenio	Software	Process mining software company
<u>Third Quarter</u>		
VEVRE Software business from Volta, Inc.	Software	Cloud-native virtual routing engine
BoxBoat Technologies	Consulting	Premier DevOps consultancy and enterprise Kubernetes certified service provider
Bluetab Solutions Group	Consulting	Data solutions service provider
<u>Fourth Quarter</u>		
SXiQ Digital Pty Ltd	Consulting	Digital transformation services company specializing in cloud applications, cloud platforms and cloud cybersecurity
McD Tech Labs from McDonald's	Software	Asset purchase to accelerate the development and deployment of McDonald's Automated Order Taking (AOT) technology
ReaQta	Software	Provider of endpoint security solutions designed to leverage AI to automatically identify and manage threats
Adobe Workfront practice from Rego Consulting Corporation	Consulting	Work management software consulting for enterprise clients
Phlyt	Software	Cloud-native development consultancy

Notes to Consolidated Financial Statements

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The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2022. Net purchase price adjustments recorded in 2022 primarily related to deferred tax assets and liabilities.

(\$ in millions)

	Amortization Life (in Years)	Turbonomic	Other Acquisitions
Current assets		\$ 115	\$ 112
Property, plant and equipment/noncurrent assets		11	18
Intangible assets			
Goodwill	N/A	1,390	1,073
Client relationships	4–10	309	196
Completed technology	4–7	117	206
Trademarks	1–6	15	31
Total assets acquired		\$1,957	\$1,636
Current liabilities		73	68
Noncurrent liabilities		55	56
Total liabilities assumed		\$ 128	\$ 124
Total purchase price		\$1,829	\$1,512

N/A—Not applicable

The goodwill generated is primarily attributable to the assembled workforce of the acquired businesses and the increased synergies expected to be achieved from the integration of the acquired businesses into the company's various integrated solutions and services neither of which qualifies as an amortizable intangible asset.

Turbonomic—The overall weighted-average useful life of the identified amortizable intangible assets acquired was 9.0 years. Goodwill of \$1,325 million and \$65 million was assigned to the Software and Consulting segments, respectively. It is expected that none of the goodwill will be deductible for tax purposes.

Other acquisitions—The overall weighted-average useful life of the identified amortizable intangible assets acquired was 6.6 years. Goodwill of \$633 million and \$440 million was assigned to the Consulting and Software segments, respectively. It is expected that nine percent of the goodwill will be deductible for tax purposes.

The identified intangible assets will be amortized on a straight-line basis over their useful lives, which approximates the pattern that the assets' economic benefits are expected to be consumed over time.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

2020

In 2020, the company completed seven acquisitions at an aggregate cost of \$723 million.

Acquisition	Segment	Description of Acquired Business
First Quarter		
Stratoss Lifecycle Manager business (Stratoss) from Accanto Systems Oy	Software	Cloud native business designed to deliver web-scale levels of operational automation for the cloud-based networking world
Second Quarter		
Automated Security Assurance Platform business (ASAP) from Spanugo Inc.	Software	Cloud cybersecurity platform, integrated into the IBM public cloud to further meet the security demands of clients in highly regulated industries
Third Quarter		
WDG Soluções Em Sistemas E Automação De Processos LTDA (WDG Automation)	Software	Provider of robotic process automation
Fourth Quarter		
Instana	Software	Application performance monitoring and observability company which helps businesses better manage applications that span the hybrid cloud landscape
TruQua Enterprises, LLC (TruQua)	Consulting	IT services provider and SAP development partner
Expertus Technologies Inc. (Expertus)	Consulting	Provider of cloud solutions for the financial services industry
7Summits LLC (7Summits)	Consulting	Leading Salesforce partner that delivers transformative digital experiences across industries

The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2020.

(\$ in millions)

	Amortization Life (in Years)	Allocated Amount
Current assets		\$ 35
Property, plant and equipment/noncurrent assets		7
Intangible assets		
Goodwill	N/A	575
Client relationships	5–7	84
Completed technology	2–7	73
Trademarks	1–7	11
Total assets acquired		\$784
Current liabilities		19
Noncurrent liabilities		41
Total liabilities assumed		\$ 61
Total purchase price		\$723

N/A—Not applicable

The goodwill generated is primarily attributable to the assembled workforce of the acquired businesses and the increased synergies expected to be achieved from the integration of the acquired businesses into the company's various integrated solutions and services neither of which qualifies as an amortizable intangible asset.

The overall weighted-average useful life of the identified amortizable intangible assets acquired was 6.8 years. These identified intangible assets will be amortized on a straight-line basis over their useful lives, which approximates the pattern that the assets' economic benefits are expected to be consumed over time. Goodwill of \$362 million, \$205 million and \$8 million was assigned to the

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International Business Machines Corporation and Subsidiary Companies

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Software, Consulting and Infrastructure segments, respectively. The goodwill recorded as a result of these acquisitions was not deductible for tax purposes.

Divestitures

2022

Healthcare Software Assets—In January 2022, IBM and Francisco Partners (Francisco) signed a definitive agreement in which Francisco would acquire IBM's healthcare data and analytics assets reported within Other—divested businesses for \$1,065 million. Refer to note E, "Segments," for additional information. The assets included Health Insights, MarketScan, Clinical Development, Social Program Management, Micromedex, and imaging software offerings. In addition, IBM is providing Francisco with transition services including IT and other services. The closing completed for the U.S. and Canada on June 30, 2022 and subsequent closings were completed in most other countries during the second half of 2022. The company expects to close the remaining countries by the first half of 2023.

On June 30, 2022, the company received a cash payment of \$1,065 million. The total pre-tax gain recognized on this transaction as of December 31, 2022 was \$258 million and was recorded in other (income) and expense in the Consolidated Income Statement. Any pre-tax gains related to the subsequent wave closings are not expected to be material. The total gain on sale may change in the future due to changes in transaction estimates however, such changes are not expected to be material.

Other Divestitures—In the first quarter of 2022, the Infrastructure segment completed one divestiture. The financial terms related to this transaction were not material.

2021

Kyndryl—On November 3, 2021, the company completed the separation of Kyndryl. Refer to note C, "Separation of Kyndryl," for additional information.

Other Divestitures—In 2021, the company completed two divestitures reported in the Software segment and one divestiture reported in Other—divested businesses. In the third quarter of 2021, IBM completed the sale of the company's remaining OEM commercial financing capabilities reported within the Financing segment. The financial terms related to each of these transactions did not have a material impact to IBM's Consolidated Financial Statements.

2020

There were no divestitures completed during the year ended December 31, 2020.

NOTE G. RESEARCH, DEVELOPMENT & ENGINEERING

RD&E expense was \$6,567 million in 2022, \$6,488 million in 2021 and \$6,262 million in 2020.

The company incurred total expense of \$6,267 million, \$6,216 million and \$5,968 million in 2022, 2021 and 2020, respectively, for scientific research and the application of scientific advances to the development of new and improved products and their uses, as well as services and their application. Within these amounts, software-related expense was \$3,971 million, \$3,922 million and \$3,682 million in 2022, 2021 and 2020, respectively.

Expense for product-related engineering was \$299 million, \$272 million and \$295 million in 2022, 2021 and 2020, respectively.

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NOTE H. TAXES

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Income/(loss) from continuing operations before income taxes			
U.S. operations	\$ (6,602)*	\$ (2,654)	\$ (2,349)
Non-U.S. operations	7,758	7,491	4,921
Total income from continuing operations before income taxes	\$ 1,156	\$ 4,837	\$ 2,572

* Includes the impact of a one-time, non-cash pension settlement charge. Refer to note V, "Retirement-Related Benefits," for additional information.

The income from continuing operations provision for/(benefit from) income taxes by geographic operations was as follows:

(\$ in millions)

For the year ended December 31:	2022	2021	2020
U.S. operations	\$ (2,272)	\$ (969)	\$ 1,913
Non-U.S. operations	1,645	1,093	(3,273)
Total continuing operations provision for/(benefit from) income taxes	\$ (626)	\$ 124	\$ (1,360)

The components of the income from continuing operations provision for/(benefit from) income taxes by taxing jurisdiction were as follows:

(\$ in millions)

For the year ended December 31:	2022	2021	2020
U.S. federal			
Current	\$ 391	\$ 374	\$ 312
Deferred	(2,645)	(1,358)	1,102
	\$ (2,253)	\$ (984)	\$ 1,414
U.S. state and local			
Current	\$ 184	\$ 161	\$ 345
Deferred	(486)	(370)	(358)
	\$ (302)	\$ (209)	\$ (13)
Non-U.S.			
Current	\$ 1,676	\$ 1,342	\$ 1,208
Deferred	252	(25)	(3,969)
	\$ 1,929	\$ 1,317	\$ (2,761)
Total continuing operations provision for/(benefit from) income taxes	\$ (626)	\$ 124	\$ (1,360)
Discontinued operations provision for/(benefit from) income taxes	\$ 124	\$ 714	\$ 484
Total provision for/(benefit from) income taxes	\$ (503)	\$ 838	\$ (876)

In addition to the total provision for/(benefit from) income taxes, the company also recorded a provision included in net income for social security, real estate, personal property and other taxes of approximately \$2.8 billion in 2022. The total taxes included in net income was approximately \$2.3 billion in 2022.

A reconciliation of the statutory U.S. federal tax rate to the company's effective tax rate from continuing operations was as follows:

For the year ended December 31:	2022	2021	2020
Statutory rate	21 %	21 %	21 %
Tax differential on foreign income	(29)*	(10)	(31)
Intra-entity IP sale	—	—	(37)
Domestic incentives	(24)*	(5)	(9)
State and local	(21)*	(3)	0
Other	(1)*	0	3
Effective rate	(54)%	3 %	(53)%

* Includes the impacts of the pension settlement charge on tax differential on foreign income, domestic incentives, state and local, and other of (24) points, (20) points, (21) points, and (1) point, respectively.

Percentages rounded for disclosure purposes.

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The significant components reflected within the tax rate reconciliation labeled “Tax differential on foreign income” include the effects of foreign subsidiaries’ earnings taxed at rates other than the U.S. statutory rate, U.S. taxes on foreign income and any net impacts of intercompany transactions. These items also reflect audit settlements or changes in the amount of unrecognized tax benefits associated with each of these items.

The continuing operations effective tax rate for 2022 was (54.2) percent compared to 2.6 percent in 2021. The current-year effective tax rate was primarily driven by the transfer of a portion of the Qualified PPP’s defined benefit pension obligations and related plan assets. Refer to note V, “Retirement-Related Benefits,” for additional information. The prior-year effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. The 2020 effective tax rate was primarily driven by an intra-entity sale of certain of the company’s intellectual property which required the recognition of a deferred tax asset.

The effect of tax law changes on deferred tax assets and liabilities did not have a material impact on the company’s 2022 effective tax rate.

Deferred Tax Assets

(\$ in millions)

At December 31:	2022	2021
Retirement benefits	\$ 1,954	\$ 3,142
Leases	927	1,061
Share-based and other compensation	608	661
Domestic tax loss/credit carryforwards	1,798	1,619
Deferred income	633	630
Foreign tax loss/credit carryforwards	845	983
Bad debt, inventory and warranty reserves	383	390
Depreciation	247	249
Restructuring charges	101	216
Accruals	215	305
Intangible assets	2,879	2,929
Capitalized research and development	3,012	2,161
Other	1,157	1,306 *
Gross deferred tax assets	14,759	15,652
Less: valuation allowance	770	883
Net deferred tax assets	\$13,989	\$14,769

* Recast to include 2021 hedging losses in other.

Deferred Tax Liabilities

(\$ in millions)

At December 31:	2022	2021
Goodwill and intangible assets	\$ 3,156	\$ 3,306 *
GILTI deferred taxes	2,483	3,257
Leases and right-of-use assets	1,174	1,314
Depreciation	505	518
Retirement benefits	1,609	1,971
Deferred transition costs	56	42
Undistributed foreign earnings	87	131
Other	955	817
Gross deferred tax liabilities	\$10,025	\$11,356

* Recast to conform to 2022 presentation to include software development costs in goodwill and intangible assets.

For financial reporting purposes, the company had foreign and domestic loss carryforwards, the tax effect of which was \$722 million, as well as foreign and domestic credit carryforwards of \$1,921 million. Substantially all of these carryforwards are available for at least two years and the majority are available for 10 years or more.

The valuation allowances as of December 31, 2022, 2021 and 2020 were \$770 million, \$883 million and \$850 million, respectively. The amounts principally apply to certain foreign and domestic loss carryforwards and credits. In the opinion of management, it is more likely than not that these assets will not be realized. However, to the extent that tax benefits related to these carryforwards are realized in the future, the reduction in the valuation allowance will reduce income tax expense.

Notes to Consolidated Financial Statements

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The amount of unrecognized tax benefits at December 31, 2022 increased by \$19 million in 2022 to \$8,728 million. A reconciliation of the beginning and ending amount of unrecognized tax benefits was as follows:

(\$ in millions)	2022	2021	2020
Balance at January 1	\$8,709	\$8,568	\$7,146
Additions based on tax positions related to the current year	355	934	1,690
Additions for tax positions of prior years	174	247	159
Reductions for tax positions of prior years (including impacts due to a lapse of statute)	(470)	(688)	(408)
Settlements	(41)	(352)	(19)
Balance at December 31	\$8,728	\$8,709	\$8,568

The additions to unrecognized tax benefits related to the current and prior years were primarily attributable to non-U.S. tax matters, including transfer pricing, as well as U.S. federal and state tax matters, credits and incentives. The settlements and reductions to unrecognized tax benefits for tax positions of prior years were primarily attributable to non-U.S. audits, U.S. federal and state tax matters, impacts due to lapse of statute of limitations and foreign currency translation adjustments.

The unrecognized tax benefits at December 31, 2022 of \$8,728 million can be reduced by \$537 million associated with timing adjustments, potential transfer pricing adjustments and state income taxes. The net amount of \$8,191 million, if recognized, would favorably affect the company's effective tax rate. The net amounts at December 31, 2021 and 2020 were \$8,163 million and \$7,994 million, respectively.

Interest and penalties related to income tax liabilities are included in income tax expense. During the years ended December 31, 2022, 2021 and 2020, the company recognized \$185 million, \$125 million and \$117 million, respectively, in interest expense and penalties. The company had \$956 million and \$935 million for the payment of interest and penalties accrued at December 31, 2022 and December 31, 2021, respectively.

Within the next 12 months, the company believes it is reasonably possible that the total amount of unrecognized tax benefits associated with certain positions may be reduced. The potential decrease in the amount of unrecognized tax benefits is associated with certain non-U.S. positions that are expected to be recognized due to a lapse in statute of limitations, as well as anticipated resolution of various non-U.S. audits. The company estimates that the unrecognized tax benefits at December 31, 2022 could be reduced by \$168 million.

During the fourth quarter of 2020, the U.S. Internal Revenue Service (IRS) concluded its examination of the company's U.S. income tax returns for 2013 and 2014, which had a specific focus on certain cross-border transactions that occurred in 2013 and issued a final Revenue Agent's Report (RAR). The IRS' proposed adjustments relative to these cross-border transactions, if sustained, would result in additional taxable income of approximately \$4.5 billion. The company strongly disagrees with the IRS on these specific matters and filed its IRS Appeals protest in the first quarter of 2021. In the third quarter of 2018, the IRS commenced its audit of the company's U.S. tax returns for 2015 and 2016. The company anticipates that this audit will be completed in 2023. In the fourth quarter of 2021, the IRS commenced its audit of the company's U.S. tax returns for 2017 and 2018. With respect to major U.S. state and foreign taxing jurisdictions, the company is generally no longer subject to tax examinations for years prior to 2015. The company is no longer subject to income tax examination of its U.S. federal tax return for years prior to 2013. The open years contain matters that could be subject to differing interpretations of applicable tax laws and regulations as it relates to the amount and/or timing of income, deductions, and tax credits. Although the outcome of tax audits is always uncertain, the company believes that adequate amounts of tax, interest and penalties have been provided for any adjustments that are expected to result for these years.

The company is involved in a number of income tax-related matters in India challenging tax assessments issued by the India Tax Authorities. As of December 31, 2022, the company had recorded \$689 million as prepaid income taxes in India. A significant portion of this balance represents cash tax deposits paid over time to protect the company's right to appeal various income tax assessments made by the India Tax Authorities. Although the outcome of tax audits are always uncertain, the company believes that adequate amounts of tax, interest and penalties have been provided for any adjustments that are expected to result for these years.

Within consolidated retained earnings at December 31, 2022 were undistributed after-tax earnings from certain non-U.S. subsidiaries that were not indefinitely reinvested. At December 31, 2022, the company had a deferred tax liability of \$87 million for the estimated taxes associated with the repatriation of these earnings. Undistributed earnings of approximately \$384 million and other outside basis differences in foreign subsidiaries were indefinitely reinvested in foreign operations. Quantification of the deferred tax liability, if any, associated with indefinitely reinvested earnings and outside basis differences was not practicable.

NOTE I. EARNINGS PER SHARE

The following table presents the computation of basic and diluted earnings per share of common stock.

(\$ in millions except per share amounts)

For the year ended December 31:	2022	2021	2020
Weighted-average number of shares on which earnings per share calculations are based			
Basic	902,664,190	895,990,771	890,348,679
Add—incremental shares under stock-based compensation plans	7,593,455	6,883,290	4,802,940
Add—incremental shares associated with contingently issuable shares	2,011,417	1,766,940	1,412,352
Assuming dilution	912,269,062	904,641,001	896,563,971
Income from continuing operations	\$1,783	\$4,712	\$3,932
Income/(loss) from discontinued operations, net of tax	(143)	1,030	1,658
Net income on which basic earnings per share is calculated	\$1,639	\$5,743	\$5,590
Income from continuing operations	\$1,783	\$4,712	\$3,932
Net income applicable to contingently issuable shares	—	—	(2)
Income from continuing operations on which diluted earnings per share is calculated	\$1,783	\$4,712	\$3,930
Income/(loss) from discontinued operations, net of tax, on which basic and diluted earnings per share is calculated	(143)	1,030	1,658
Net income on which diluted earnings per share is calculated	\$1,639	\$5,743	\$5,588
Earnings/(loss) per share of common stock			
Assuming dilution			
Continuing operations	\$ 1.95	\$ 5.21	\$ 4.38
Discontinued operations	(0.16)	1.14	1.85
Total	\$ 1.80	\$ 6.35	\$ 6.23
Basic			
Continuing operations	\$ 1.97	\$ 5.26	\$ 4.42
Discontinued operations	(0.16)	1.15	1.86
Total	\$ 1.82	\$ 6.41	\$ 6.28

Weighted-average stock options to purchase 814,976 common shares in 2022, 980,505 common shares in 2021 and 1,417,665 common shares in 2020 were outstanding, but were not included in the computation of diluted earnings per share because the exercise price of the options was greater than the average market price of the common shares for the full year, and therefore, the effect would have been antidilutive.

NOTE J. FINANCIAL ASSETS & LIABILITIES**Fair Value Measurements****Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis**

The following table presents the company's financial assets and financial liabilities that are measured at fair value on a recurring basis at December 31, 2022 and 2021.

(\$ in millions)

At December 31:	Fair Value Hierarchy Level	2022		2021	
		Assets ⁽⁸⁾	Liabilities ⁽⁹⁾	Assets ⁽⁸⁾	Liabilities ⁽⁹⁾
Cash equivalents ⁽¹⁾					
Time deposits and certificates of deposit ⁽²⁾	2	\$3,712	N/A	\$2,502 ⁽¹⁰⁾	N/A
Money market funds	1	306	N/A	263	N/A
Total cash equivalents		\$4,018	N/A	\$2,766	N/A
Equity investments ⁽³⁾	1	—	N/A	0	N/A
Kyndryl common stock ⁽⁴⁾	1	—	N/A	807	N/A
Debt securities—current ⁽²⁾⁽⁵⁾	2	852	N/A	600	N/A
Debt securities—noncurrent ⁽²⁾⁽⁶⁾	2,3	31	N/A	37	N/A
Derivatives designated as hedging instruments					
Interest rate contracts	2	3	336	12	—
Foreign exchange contracts	2	184	674	359	117
Derivatives not designated as hedging instruments					
Foreign exchange contracts	2	42	16	21	42
Equity contracts ⁽⁷⁾	1,2	49	8	6	4
Total		\$5,179	\$1,034	\$4,608	\$162

⁽¹⁾ Included within cash and cash equivalents in the Consolidated Balance Sheet.

⁽²⁾ Available-for-sale debt securities with carrying values that approximate fair value.

⁽³⁾ Included within investments and sundry assets in the Consolidated Balance Sheet.

⁽⁴⁾ Refer to "Kyndryl Common Stock" below for additional information.

⁽⁵⁾ U.S. treasury bills and term deposits that are reported within marketable securities in the Consolidated Balance Sheet.

⁽⁶⁾ Includes immaterial activity related to private company investments reported within investments and sundry assets in the Consolidated Balance Sheet.

⁽⁷⁾ Level 1 includes immaterial amounts related to equity futures contracts.

⁽⁸⁾ The gross balances of derivative assets contained within prepaid expenses and other current assets, and investments and sundry assets in the Consolidated Balance Sheet at December 31, 2022 were \$271 million and \$7 million, respectively, and at December 31, 2021 were \$358 million and \$40 million, respectively.

⁽⁹⁾ The gross balances of derivative liabilities contained within other accrued expenses and liabilities, and other liabilities in the Consolidated Balance Sheet at December 31, 2022 were \$546 million and \$488 million, respectively, and at December 31, 2021 were \$60 million and \$103 million, respectively.

⁽¹⁰⁾ Recast to conform to 2022 presentation.

N/A—Not applicable

Kyndryl Common Stock

On November 3, 2021, IBM completed the separation of Kyndryl and retained 19.9 percent of the shares of Kyndryl common stock with the intent to dispose of the shares within twelve months of the separation.

On May 18, 2022, the company borrowed an aggregate principal amount of \$357 million under a short-term credit facility with a third-party financial institution, the proceeds of which were used to repay certain of the company's existing indebtedness. On May 23, 2022, the company completed a debt-for-equity exchange where 22.3 million shares of Kyndryl common stock, equal to half of the company's 19.9 percent retained interest (the Shares), were exchanged at a strike price of \$13.95 per share to extinguish \$311 million of the company's indebtedness under the short-term credit facility (the May 2022 Exchange). The remaining portion of the short-term credit facility was repaid with \$46 million of cash.

In connection with the May 2022 Exchange, the company entered into a cash-settled swap with the lender of the short-term credit facility as the counterparty that maintained IBM's continued economic exposure in the Shares. As a result of the swap, the transfer of the Shares pursuant to the May 2022 Exchange did not qualify as a true sale, and therefore the Shares and debt remained on the company's Consolidated Balance Sheet. Upon settlement of the swap, which occurred on November 2, 2022, IBM paid the lender \$83 million, which was derived from the difference between the volume-weighted average price (VWAP) of the Kyndryl shares over the outstanding term of the swap and the strike price of \$13.95 per share. The realized loss of \$83 million was reflected in other (income) and expense within the company's Consolidated Income Statement for the year ended December 31, 2022. In addition, both the Shares and debt associated with the May 2022 Exchange were entirely derecognized from the company's Consolidated Balance Sheet in the fourth quarter of 2022 upon settlement of the swap. The debt-for-equity exchange associated with the May 2022 Exchange is reflected as a non-cash financing activity for purposes of the company's Consolidated Statement of Cash Flows for the year ended December 31, 2022.

On August 5, 2022, the company borrowed an aggregate principal amount of \$300 million under a short-term credit facility with a third-party financial institution, the proceeds of which were used to repay certain of the company's existing indebtedness. On August 11, 2022, the company completed a debt-for-equity exchange through the transfer of the other 22.3 million shares of Kyndryl common stock to extinguish \$229 million of the company's indebtedness under the short-term credit facility (the August 2022 Exchange). The remaining portion of the short-term credit facility was repaid with \$71 million of cash. The debt-for-equity exchange associated with the August 2022 Exchange is a non-cash financing activity for purposes of the company's Consolidated Statement of Cash Flows for the year ended December 31, 2022.

At December 31, 2022, the company no longer held an ownership interest in Kyndryl. The Kyndryl common stock of \$807 million at December 31, 2021 was included within prepaid expenses and other current assets in the Consolidated Balance Sheet. For the year ended December 31, 2022, the company recognized a total realized loss of \$351 million, including \$267 million on the Kyndryl shares and \$83 million on the swap, compared to an unrealized gain of \$126 million on the Kyndryl shares for the year ended December 31, 2021 which is reflected in other (income) and expense in the Consolidated Income Statement.

Financial Assets and Liabilities Not Measured at Fair Value

Short-Term Receivables and Payables

Short-term receivables (excluding the current portion of long-term receivables) and other investments are financial assets with carrying values that approximate fair value. Accounts payable, other accrued expenses and short-term debt (excluding the current portion of long-term debt and including short-term finance lease liabilities) are financial liabilities with carrying values that approximate fair value. If measured at fair value in the financial statements, these financial instruments would be classified as Level 3 in the fair value hierarchy, except for short-term debt which would be classified as Level 2.

Loans and Long-Term Receivables

Fair values are based on discounted future cash flows using current interest rates offered for similar loans to clients with similar credit ratings for the same remaining maturities. At December 31, 2022 and 2021, the difference between the carrying amount and estimated fair value for loans and long-term receivables was immaterial. If measured at fair value in the financial statements, these financial instruments would be classified as Level 3 in the fair value hierarchy.

Long-Term Debt

Fair value of publicly traded long-term debt is based on quoted market prices for the identical liability when traded as an asset in an active market. For other long-term debt (including long-term finance lease liabilities) for which a quoted market price is not available, an expected present value technique that uses rates currently available to the company for debt with similar terms and remaining maturities is used to estimate fair value. The carrying amount of long-term debt was \$46,189 million and \$44,917 million, and the estimated fair value was \$42,514 million and \$49,465 million at December 31, 2022 and 2021, respectively. If measured at fair value in the financial statements, long-term debt (including the current portion) would be classified as Level 2 in the fair value hierarchy.

NOTE K. INVENTORY

(\$ in millions)

At December 31:	2022	2021
Finished goods	\$ 158	\$ 208
Work in process and raw materials	1,394	1,442
Total	\$1,552	\$1,649

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NOTE L. FINANCING RECEIVABLES

Financing receivables primarily consist of client loan and installment payment receivables (loans), investment in sales-type and direct financing leases (collectively referred to as client financing receivables) and commercial financing receivables. Loans are provided primarily to clients to finance the purchase of hardware, software and services. Payment terms on these financing arrangements are for terms up to seven years. Investment in sales-type and direct financing leases relate principally to the company's Infrastructure products and are for terms ranging generally from two to six years. Commercial financing receivables, which consist of both held-for-investment and held-for-sale receivables, relate primarily to working capital financing for dealers and remarketers of IBM products. Payment terms for working capital financing generally range from 30 to 90 days.

A summary of the components of the company's financing receivables is presented as follows:

(\$ in millions)

	Client Financing Receivables		Commercial Financing Receivables		Total
	Client Loan and Installment Payment Receivables (Loans)	Investment in Sales-Type and Direct Financing Leases	Held for Investment	Held for Sale *	
At December 31, 2022:					
Financing receivables, gross	\$8,875	\$4,023	\$299	\$939	\$14,136
Unearned income	(439)	(351)	—	—	(790)
Unguaranteed residual value	—	422	—	—	422
Amortized cost	\$8,437	\$4,094	\$299	\$939	\$13,769
Allowance for credit losses	(108)	(60)	(5)	—	(173)
Total financing receivables, net	\$8,329	\$4,034	\$293	\$939	\$13,596
Current portion	\$5,073	\$1,485	\$293	\$939	\$ 7,790
Noncurrent portion	\$3,256	\$2,549	\$ —	\$ —	\$ 5,806

(\$ in millions)

	Client Financing Receivables		Commercial Financing Receivables		Total
	Client Loan and Installment Payment Receivables (Loans)	Investment in Sales-Type and Direct Financing Leases	Held for Investment	Held for Sale *	
At December 31, 2021:					
Financing receivables, gross	\$9,303	\$3,336	\$450	\$793	\$13,881
Unearned income	(353)	(223)	—	—	(576)
Unguaranteed residual value	—	335	—	—	335
Amortized cost	\$8,949	\$3,448	\$450	\$793	\$13,640
Allowance for credit losses	(131)	(64)	(6)	—	(201)
Total financing receivables, net	\$8,818	\$3,384	\$444	\$793	\$13,439
Current portion	\$5,371	\$1,406	\$444	\$793	\$ 8,014
Noncurrent portion	\$3,447	\$1,978	\$ —	\$ —	\$ 5,425

* The carrying value of the receivables classified as held for sale approximates fair value.

The company has a long-standing practice of taking mitigation actions, in certain circumstances, to transfer credit risk to third parties. These actions may include credit insurance, financial guarantees, nonrecourse secured borrowings, transfers of receivables recorded as true sales in accordance with accounting guidance or sales of equipment under operating lease. Sale of receivables arrangements are also utilized in the normal course of business as part of the company's cash and liquidity management.

Financing receivables pledged as collateral for secured borrowings were \$349 million and \$408 million at December 31, 2022 and 2021, respectively. These borrowings are included in note P, "Borrowings."

Transfer of Financial Assets

The company has an existing agreement with a third-party investor to sell IBM short-term commercial financing receivables on a revolving basis. The company has expanded this agreement to other countries and geographies since commencement in the U.S. and Canada in 2020. In addition, the company enters into agreements with third-party financial institutions to sell certain of its client financing receivables, including both loan and lease receivables, for cash proceeds. In 2022, sales of client financing receivables were largely focused on credit mitigation. During 2021, sales of client financing receivables were utilized as part of the company's cash and liquidity management as well as for credit mitigation.

The following table presents the total amount of commercial and client financing receivables transferred.

(\$ in millions)		
For the year ended December 31:	2022	2021
Commercial financing receivables		
Receivables transferred during the period	\$ 9,029	\$ 7,359
Receivables uncollected at end of period*	\$ 1,561	\$ 1,653
Client financing receivables		
Lease receivables	\$ 15	\$ 819
Loan receivables	2	2,224
Total client financing receivables transferred	\$ 17	\$ 3,043

* Of the total amount of commercial financing receivables sold and derecognized from the Consolidated Balance Sheet, the amounts presented remained uncollected from business partners as of December 31, 2022 and 2021.

The transfer of these receivables qualified as true sales and therefore reduced financing receivables. The cash proceeds from the sales are included in cash flows from operating activities. The impacts to the Consolidated Income Statement including fees and net loss associated with the transfer of commercial financing receivables were \$62 million for the year ended December 31, 2022. The fees and net loss recorded in 2021 associated with the transfer of client and commercial financing receivables were not material.

Financing Receivables by Portfolio Segment

The following tables present the amortized cost basis for client financing receivables at December 31, 2022 and 2021, further segmented by three classes: Americas, Europe/Middle East/Africa (EMEA) and Asia Pacific. The commercial financing receivables portfolio segment is excluded from the tables in the sections below as the receivables are short term in nature and the current estimated risk of loss and resulting impact to the company's financial results are not material.

(\$ in millions)				
At December 31, 2022:	Americas	EMEA	Asia Pacific	Total
Amortized cost	\$ 7,281	\$ 3,546	\$ 1,704	\$ 12,531
Allowance for credit losses				
Beginning balance at January 1, 2022	\$ 111	\$ 61	\$ 23	\$ 195
Write-offs	(20)	(3)	(2)	(25)
Recoveries	1	0	4	5
Additions/(releases)	(5)	6	(4)	(3)
Other*	2	(5)	(2)	(4)
Ending balance at December 31, 2022	\$ 88	\$ 60	\$ 20	\$ 168

(\$ in millions)				
At December 31, 2021:	Americas	EMEA	Asia Pacific	Total
Amortized cost	\$ 6,573	\$ 3,793	\$ 2,031	\$ 12,397
Allowance for credit losses				
Beginning balance at January 1, 2021	\$ 141	\$ 77	\$ 37	\$ 255
Write-offs	(8)	(2)	(7)	(17)
Recoveries	0	0	1	1
Additions/(releases)	(19)	(11)	(7)	(38)
Other*	(3)	(3)	0	(7)
Ending balance at December 31, 2021	\$ 111	\$ 61	\$ 23	\$ 195

* Primarily represents translation adjustments.

When determining the allowances, financing receivables are evaluated either on an individual or a collective basis. For the company's policy on determining allowances for credit losses, refer to note A, "Significant Accounting Policies."

Past Due Financing Receivables

The company summarizes information about the amortized cost basis for client financing receivables, including amortized cost aged over 90 days and still accruing, billed invoices aged over 90 days and still accruing, and amortized cost not accruing.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

	Total Amortized Cost	Amortized Cost > 90 Days *	Amortized Cost > 90 Days and Accruing *	Billed Invoices > 90 Days and Accruing	Amortized Cost Not Accruing **
At December 31, 2022:					
Americas	\$ 7,281	\$272	\$198	\$22	\$ 74
EMEA	3,546	52	8	1	46
Asia Pacific	1,704	20	3	1	17
Total client financing receivables	\$12,531	\$344	\$208	\$23	\$137

(\$ in millions)

	Total Amortized Cost	Amortized Cost > 90 Days *	Amortized Cost > 90 Days and Accruing *	Billed Invoices > 90 Days and Accruing	Amortized Cost Not Accruing **
At December 31, 2021:					
Americas	\$ 6,573	\$188	\$100	\$ 6	\$ 90
EMEA	3,793	99	7	2	95
Asia Pacific	2,031	25	5	2	20
Total client financing receivables	\$12,397	\$312	\$112	\$10	\$205

* At a contract level, which includes total billed and unbilled amounts for financing receivables aged greater than 90 days.

** Of the amortized cost not accruing, there was a related allowance of \$122 million and \$153 million at December 31, 2022 and 2021, respectively. Financing income recognized on these receivables was immaterial for the years ended December 31, 2022 and 2021, respectively.

Credit Quality Indicators

The company's credit quality indicators, which are based on rating agency data, publicly available information and information provided by customers, are reviewed periodically based on the relative level of risk. The resulting indicators are a numerical rating system that maps to Moody's Investors Service credit ratings as shown below. The company uses information provided by Moody's, where available, as one of many inputs in its determination of customer credit ratings. The credit quality of the customer is evaluated based on these indicators and is assigned the same risk rating whether the receivable is a lease or a loan.

The following tables present the amortized cost basis for client financing receivables by credit quality indicator at December 31, 2022 and 2021, respectively. Receivables with a credit quality indicator ranging from Aaa to Baa3 are considered investment grade. All others are considered non-investment grade. The credit quality indicators reflect mitigating credit enhancement actions taken by customers which reduce the risk to IBM.

(\$ in millions)

At December 31, 2022:	Americas		EMEA		Asia Pacific	
	Aaa - Baa3	Ba1 - D	Aaa - Baa3	Ba1 - D	Aaa - Baa3	Ba1 - D
Vintage year						
2022	\$3,316	\$1,097	\$1,447	\$ 704	\$ 799	\$ 96
2021	1,197	323	451	159	203	65
2020	559	217	258	158	210	49
2019	251	91	161	99	127	22
2018	128	26	42	16	84	21
2017 and prior	32	45	14	38	12	17
Total	\$5,482	\$1,800	\$2,373	\$1,173	\$1,434	\$269

(\$ in millions)

At December 31, 2021:	Americas		EMEA		Asia Pacific	
	Aaa - Baa3	Ba1 - D	Aaa - Baa3	Ba1 - D	Aaa - Baa3	Ba1 - D
Vintage year						
2021	\$2,556	\$1,147	\$1,181	\$ 778	\$ 565	\$226
2020	1,013	392	506	342	381	86
2019	544	236	287	291	297	51
2018	338	117	189	85	211	64
2017	108	50	15	52	74	17
2016 and prior	20	53	21	46	38	20
Total	\$4,579	\$1,994	\$2,198	\$1,595	\$1,567	\$464

Troubled Debt Restructurings

The company did not have any significant troubled debt restructurings for the years ended December 31, 2022 and 2021.

NOTE M. PROPERTY, PLANT & EQUIPMENT

(\$ in millions)

At December 31:	2022	2021
Land and land improvements	\$ 213	\$ 224
Buildings and building and leasehold improvements	5,678	6,049
Information technology equipment	9,643	10,589 *
Production, engineering, office and other equipment	3,161	3,222
Total—gross	18,695	20,085 *
Less: Accumulated depreciation	13,361	14,390 *
Total—net	\$ 5,334	\$ 5,694

* Recast to conform to 2022 presentation to present rental machines within information technology equipment.

NOTE N. LEASES

Accounting for Leases as a Lessee

The following table presents the various components of lease costs.

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Finance lease cost	\$ 67	\$ 52	\$ 35
Operating lease cost	1,050	1,126	1,181
Short-term lease cost	7	21	28
Variable lease cost	262	336	343
Sublease income	(72)	(46)	(28)
Total lease cost	\$1,315	\$1,489	\$1,558

The company recorded net gains on sale and leaseback transactions of \$41 million and \$7 million for the years ended December 31, 2022 and 2021, respectively. The company had no sale and leaseback transactions in 2020.

The following table presents supplemental information relating to the cash flows arising from lease transactions. Cash payments related to variable lease costs and short-term leases are not included in the measurement of operating and finance lease liabilities, and, as such, are excluded from the amounts below.

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Cash paid for amounts included in the measurement of lease liabilities			
Operating cash outflows from finance leases	\$ 9	\$ 8	\$ 8
Financing cash outflows from finance leases	55	42	25
Operating cash outflows from operating leases	1,020	1,135	1,212
ROU assets obtained in exchange for new finance lease liabilities*	196	46	50
ROU assets obtained in exchange for new operating lease liabilities*	705	779	785

* Includes the impact of currency.

The following table presents the weighted-average lease term and discount rate for finance and operating leases.

At December 31:	2022	2021
Finance leases		
Weighted-average remaining lease term	3.7 yrs.	4.1 yrs.
Weighted-average discount rate	3.57 %	0.88 %
Operating leases		
Weighted-average remaining lease term	4.5 yrs.	4.5 yrs.
Weighted-average discount rate	3.77 %	3.01 %

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

The following table presents a maturity analysis of expected undiscounted cash flows for operating and finance leases on an annual basis for the next five years and thereafter.

(\$ in millions)

	2023	2024	2025	2026	2027	Thereafter	Imputed Interest *	Total **
Finance leases	\$ 88	\$ 74	\$ 54	\$ 24	\$ 22	\$ 19	\$ (43)	\$ 239
Operating leases	960	788	555	430	285	313	(267)	3,064

* Imputed interest represents the difference between undiscounted cash flows and discounted cash flows.

** The company entered into lease agreements for certain facilities and equipment with payments totaling approximately \$691 million that have not yet commenced as of December 31, 2022, and therefore are not included in this table.

The following table presents information on the company's finance leases recognized in the Consolidated Balance Sheet.

(\$ in millions)

At December 31:	2022	2021
ROU Assets—Property, plant and equipment	\$ 223	\$ 86
Lease Liabilities		
Short-term debt	75	36
Long-term debt	164	63

Accounting for Leases as a Lessor

The following table presents amounts included in the Consolidated Income Statement related to lessor activity.

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Lease income—sales-type and direct financing leases			
Sales-type lease selling price	\$1,636	\$1,355	\$1,321
Less: Carrying value of underlying assets*	(385)	(300)	(410)
Gross profit	1,251	1,055	911
Interest income on lease receivables	200	179	249
Total sales-type and direct financing lease income	1,451	1,234	1,160
Lease income—operating leases	116	169	255
Variable lease income	87	120	115
Total lease income	\$1,653	\$1,523	\$1,530

* Excludes unguaranteed residual value.

Sales-Type and Direct Financing Leases

At December 31, 2022 and 2021, the unguaranteed residual values of sales-type and direct financing leases were \$422 million and \$335 million, respectively. Refer to note L, "Financing Receivables," for additional information on the company's net investment in leases.

For the years ended December 31, 2022 and 2021, impairment of residual values was immaterial.

The following table presents a maturity analysis of the lease payments due to IBM on sales-type and direct financing leases over the next five years and thereafter, as well as a reconciliation of the undiscounted cash flows to the financing receivables recognized in the Consolidated Balance Sheet at December 31, 2022.

(\$ in millions)

	Total
2023	\$1,692
2024	1,173
2025	738
2026	330
2027	87
Thereafter	3
Total undiscounted cash flows	\$4,023
Present value of lease payments (recognized as financing receivables)	3,672 *
Difference between undiscounted cash flows and discounted cash flows	\$ 351

* The present value of the lease payments will not equal the financing receivables balances in the Consolidated Balance Sheet due to certain items including IDCs, allowance for credit losses and residual values, which are included in the financing receivable balance, but are not included in the future lease payments.

NOTE O. INTANGIBLE ASSETS INCLUDING GOODWILL

Intangible Assets

The following table presents the company's intangible asset balances by major asset class.

(\$ in millions)

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount *
At December 31, 2022:			
Intangible asset class			
Capitalized software	\$ 1,650	\$ (705)	\$ 945
Client relationships	8,559	(2,951)	5,608
Completed technology	5,220	(2,045)	3,175
Patents/trademarks	2,140	(688)	1,452
Other**	19	(15)	4
Total	\$17,588	\$(6,404)	\$11,184

* Includes a decrease in net intangible asset balance of \$198 million due to foreign currency translation.

** Other intangibles are primarily acquired proprietary and nonproprietary business processes, methodologies and systems.

(\$ in millions)

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount *
At December 31, 2021:			
Intangible asset class			
Capitalized software	\$ 1,696	\$ (751)	\$ 945
Client relationships	9,021	(2,889)	6,132
Completed technology	6,074	(2,259)	3,815
Patents/trademarks	2,196	(586)	1,610
Other**	44	(35)	9
Total	\$19,031	\$(6,520)	\$12,511

* Includes a decrease in net intangible asset balance of \$221 million due to foreign currency translation.

** Other intangibles are primarily acquired proprietary and nonproprietary business processes, methodologies and systems.

There was no impairment of intangible assets recorded in 2022 and 2021. The net carrying amount of intangible assets decreased \$1,327 million during the year ended December 31, 2022, primarily due to intangible asset amortization, partially offset by additions of acquired intangibles and capitalized software. The aggregate intangible amortization expense was \$2,397 million and \$2,506 million for the years ended December 31, 2022 and 2021, respectively. In addition, in 2022 and 2021, respectively, the company retired \$1,301 million and \$904 million of fully amortized intangible assets, impacting both the gross carrying amount and accumulated amortization by this amount. The company also derecognized intangible assets with a gross carrying amount of \$1,313 million and \$1,149 million of accumulated amortization as part of the divestiture of its healthcare software assets on June 30, 2022.

The future amortization expense relating to intangible assets currently recorded in the Consolidated Balance Sheet is estimated to be the following at December 31, 2022:

(\$ in millions)	Capitalized Software	Acquired Intangibles	Total
2023	\$514	\$1,571	\$2,085
2024	328	1,554	1,881
2025	103	1,535	1,639
2026	0	1,512	1,512
2027	—	1,493	1,493
Thereafter	—	2,574	2,574

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

Goodwill

The changes in the goodwill balances by reportable segment for the years ended December 31, 2022 and 2021 are as follows:

(\$ in millions)

Segment	Balance at January 1, 2022	Goodwill Additions	Purchase Price Adjustments	Divestitures	Foreign Currency Translation and Other Adjustments *	Balance at December 31, 2022
Software	\$43,966	\$ 568	\$(118)	\$ —	\$(760)	\$43,657
Consulting	6,797	1,366	(42)	—	(192)	7,928
Infrastructure	4,396	—	—	(1)	(32)	4,363
Other**	484	—	—	(484)	—	—
Total	\$55,643	\$ 1,934	\$(159)	\$(485)	\$(984)	\$55,949

* Primarily driven by foreign currency translation.

** The company derecognized \$484 million of goodwill related to the divestiture of its healthcare software assets. Refer to note F, "Acquisitions & Divestitures," for additional information.

(\$ in millions)

Segment	Balance at January 1, 2021	Goodwill Additions	Purchase Price Adjustments	Divestitures	Foreign Currency Translation and Other Adjustments *	Balance at December 31, 2021
Software**	\$42,665	\$ 1,836	\$ 23	\$(13)	\$(545)	\$43,966
Consulting	6,145	713	(21)	—	(40)	6,797
Infrastructure	4,436	—	0	—	(39)	4,396
Other**	520	—	-	(37)	1	484
Total	\$53,765	\$ 2,549	\$ 2	\$(50)	\$(623)	\$55,643

* Primarily driven by foreign currency translation.

** Recast to conform to 2022 presentation.

There were no goodwill impairment losses recorded during 2022 or 2021 and the company has no accumulated impairment losses.

Purchase price adjustments recorded in 2022 and 2021 were related to acquisitions that were still subject to the measurement period that ends at the earlier of 12 months from the acquisition date or when information becomes available. Net purchase price adjustments recorded in 2022 primarily related to deferred tax assets and liabilities associated with the Turbonomic acquisition. Net purchase price adjustments recorded in 2021 were not material.

NOTE P. BORROWINGS**Short-Term Debt**

(\$ in millions)

At December 31:	2022	2021
Short-term loans	\$ 8	\$ 22
Long-term debt—current maturities	4,751	6,764
Total	\$4,760	\$ 6,787

The weighted-average interest rate for short-term loans was 7.6 percent and 6.7 percent at December 31, 2022 and 2021, respectively.

Long-Term Debt
Pre-Swap Borrowing

(\$ in millions)

At December 31:	Maturities	2022	2021
U.S. dollar debt (weighted-average interest rate at December 31, 2022):*			
2.6%	2022	\$ —	\$ 5,673
3.4%	2023	1,529	1,573
3.3%	2024	5,009	5,016
5.1%	2025	1,603	608
3.3%	2026	4,351	4,356
3.1%	2027	3,620	2,221
6.5%	2028	313	313
3.5%	2029	3,250	3,250
2.0%	2030	1,350	1,350
4.4%	2032	1,850	600
8.0%	2038	83	83
4.5%	2039	2,745	2,745
2.9%	2040	650	650
4.0%	2042	1,107	1,107
7.0%	2045	27	27
4.7%	2046	650	650
4.3%	2049	3,000	3,000
3.0%	2050	750	750
4.2%	2052	1,400	—
7.1%	2096	316	316
		\$33,605	\$ 34,290
Other currencies (weighted-average interest rate at December 31, 2022, in parentheses):*			
Euro (1.1%)	2023-2040	\$17,087	\$ 15,903
Pound sterling	2022	—	406
Japanese yen (0.3%)	2024-2026	694	1,263
Other (16.0%)	2023-2026	361	378
		\$51,747	\$ 52,240
Finance lease obligations (3.5%)	2023-2030	239	99
		\$51,986	\$ 52,339
Less: net unamortized discount		835	839
Less: net unamortized debt issuance costs		138	130
Add: fair value adjustment**		(73)	311
		\$50,940	\$ 51,681
Less: current maturities		4,751	6,764
Total		\$46,189	\$ 44,917

* Includes notes, debentures, bank loans and secured borrowings.

** The portion of the company's fixed-rate debt obligations that is hedged is reflected in the Consolidated Balance Sheet as an amount equal to the sum of the debt's carrying value and a fair value adjustment representing changes in the fair value of the hedged debt obligations attributable to movements in benchmark interest rates.

The company's indenture governing its debt securities and its various credit facilities each contain significant covenants which obligate the company to promptly pay principal and interest, limit the aggregate amount of secured indebtedness and sale and leaseback transactions to 10 percent of the company's consolidated net tangible assets, and restrict the company's ability to merge or consolidate unless certain conditions are met. The credit facilities also include a covenant on the company's consolidated net interest expense ratio, which cannot be less than 2.20 to 1.0, as well as a cross default provision with respect to other defaulted indebtedness of at least \$500 million.

The company is in compliance with all of its debt covenants and provides periodic certifications to its lenders. The failure to comply with its debt covenants could constitute an event of default with respect to the debt to which such provisions apply. If certain events of default were to occur, the principal and interest on the debt to which such event of default applied would become immediately due and payable.

In the first quarter of 2021, IBM Credit LLC early redeemed all of its outstanding fixed-rate debt in the aggregate amount of \$1.75 billion with maturity dates ranging from 2021 to 2023 and deregistered with the U.S. Securities and Exchange Commission. The notes were redeemed at a price equal to 100 percent of the aggregate principal plus a make-whole premium and accrued interest. The company incurred a loss of approximately \$22 million upon redemption that was recorded in other (income) and expense in the Consolidated Income Statement.

In the first quarter of 2022, the company issued \$2.3 billion of Euro fixed-rate notes in tranches with maturities ranging from 8 to 12 years and coupons ranging from 0.875 to 1.25 percent, and \$1.8 billion of U.S. dollar fixed-rate notes in tranches with maturities ranging from 5

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

to 30 years and coupons ranging from 2.20 to 3.43 percent. In the third quarter of 2022, the company issued \$3.25 billion of U.S. dollar fixed-rate notes in tranches with maturities ranging from 3 to 30 years and coupons ranging from 4.00 to 4.90 percent.

Post-Swap Borrowing (Long-Term Debt, Including Current Portion)

(\$ in millions)

	2022		2021	
	Amount	Weighted-Average Interest Rate	Amount	Weighted-Average Interest Rate
At December 31:				
Fixed-rate debt	\$43,898	2.7 %	\$49,976	2.8 %
Floating-rate debt*	7,042	5.9 %	1,705	2.6 %
Total	\$50,940		\$51,681	

* Includes \$6,525 million and \$425 million in 2022 and 2021, respectively, of notional interest-rate swaps that effectively convert fixed-rate long-term debt into floating-rate debt. Refer to note T, "Derivative Financial Instruments," for additional information.

Pre-swap annual contractual obligations of long-term debt outstanding at December 31, 2022, are as follows:

(\$ in millions)

	Total
2023	\$ 4,754
2024	6,367
2025	4,875
2026	4,700
2027	4,705
Thereafter	26,585
Total	\$ 51,986

Interest on Debt

(\$ in millions)

For the year ended December 31:	2022	2021	2020
Cost of financing	\$ 346	\$ 392	\$ 451
Interest expense	1,216	1,155	1,288
Interest capitalized	5	3	5
Total interest paid and accrued	\$1,566	\$1,550	\$1,743

Refer to the related discussion in note E, "Segments," for interest expense of the Financing segment. Refer to note T, "Derivative Financial Instruments," for a discussion of the use of foreign currency denominated debt designated as a hedge of net investment, as well as a discussion of the use of currency and interest-rate swaps in the company's debt risk management program.

Lines of Credit

On June 30, 2022, the company amended its existing \$2.5 billion Three-Year Credit Agreement and \$7.5 billion Five-Year Credit Agreement (the Credit Agreements) to extend the maturity dates to June 20, 2025 and June 22, 2027, respectively, and to replace the London Interbank Offered Rate (LIBOR) interest rate provisions with customary provisions based on the Secured Overnight Financing Rate (SOFR). The Credit Agreements permit the company and its subsidiary borrowers to borrow up to \$10 billion on a revolving basis. The total expense recorded by the company related to these agreements was \$11 million, \$12 million, and \$12 million in 2022, 2021, and 2020, respectively. Subject to certain conditions stated in the Credit Agreements, the borrower may borrow, prepay and re-borrow amounts under the Credit Agreements at any time during the term of such agreements. Funds borrowed may be used for the general corporate purposes of the borrower.

Interest rates on borrowings under the Credit Agreements will be based on prevailing market interest rates, as further described in the Credit Agreements. The Credit Agreements contain customary representations and warranties, covenants, events of default, and indemnification provisions. The company believes that circumstances that might give rise to breach of these covenants or an event of default, as specified in the Credit Agreements, are remote. As of December 31, 2022, there were no borrowings by the company under the Credit Agreements.

The company also has other committed lines of credit in some of the geographies which are not significant in the aggregate. Interest rates and other terms of borrowing under these lines of credit vary from country to country, depending on local market conditions. As of December 31, 2022, there were no material borrowings by the company under these credit facilities.

NOTE Q. OTHER LIABILITIES

(\$ in millions)

At December 31:	2022	2021
Income tax reserves*	\$ 6,404	\$ 6,179
Excess 401(k) Plus Plan	1,307	1,686
Disability benefits	303	359
Derivative liabilities	488	103
Workforce reductions	524	752
Deferred taxes	2,292	3,956
Other taxes payable	90	72
Environmental accruals	243	224
Warranty accruals	36	29
Asset retirement obligations	82	92
Acquisition related	152	218
Divestiture related	49	47
Other	273	278
Total	\$12,243	\$13,996

* Refer to note H, "Taxes," for additional information.

In response to changing business needs, the company periodically takes workforce reduction actions to improve productivity, cost competitiveness and to rebalance skills. The noncurrent contractually obligated future payments associated with these activities are reflected in the workforce reductions caption in the previous table. The noncurrent liabilities are workforce accruals primarily related to terminated employees who are no longer working for the company and who were granted annual payments to supplement their incomes in certain countries. Depending on the individual country's legal requirements, these required payments will continue until the former employee begins receiving pension benefits or passes away. The total amounts accrued for workforce reductions, including amounts classified as other accrued expenses and liabilities in the Consolidated Balance Sheet, were \$701 million and \$1,359 million at December 31, 2022 and 2021, respectively. The decrease is primarily due to cash payments made in 2022 for the workforce reduction action in the fourth quarter of 2020. The company recorded a charge of \$1,472 million in selling, general and administrative expense in the Consolidated Income Statement in the year ended December 31, 2020 for severance and employee related benefits in accordance with the accounting guidance for ongoing benefit arrangements.

The company employs extensive internal environmental protection programs that primarily are preventive in nature. The company also participates in environmental assessments and cleanups at a number of locations, including operating facilities, previously owned facilities and Superfund sites. The company's maximum exposure for all environmental liabilities cannot be estimated and no amounts have been recorded for non-ARO environmental liabilities that are not probable or estimable. The total amounts accrued for non-ARO environmental liabilities, including amounts classified as current in the Consolidated Balance Sheet, that do not reflect actual or anticipated insurance recoveries, were \$271 million and \$248 million at December 31, 2022 and 2021, respectively. Estimated environmental costs are not expected to materially affect the consolidated financial position or consolidated results of the company's operations in future periods. However, estimates of future costs are subject to change due to protracted cleanup periods, changing environmental remediation regulations and changes in assumptions.

As of December 31, 2022, the company was unable to estimate the range of settlement dates and the related probabilities for certain asbestos remediation AROs. These conditional AROs are primarily related to the encapsulated structural fireproofing that is not subject to abatement unless the buildings are demolished and non-encapsulated asbestos that the company would remediate only if it performed major renovations of certain existing buildings. Because these conditional obligations have indeterminate settlement dates, the company could not develop a reasonable estimate of their fair values. The company will continue to assess its ability to estimate fair values at each future reporting date. The related liability will be recognized once sufficient additional information becomes available. The total amounts accrued for ARO liabilities, including amounts classified as current in the Consolidated Balance Sheet, were \$107 million and \$119 million at December 31, 2022 and 2021, respectively.

NOTE R. COMMITMENTS & CONTINGENCIES**Commitments**

The company's extended lines of credit to third-party entities include unused amounts of \$1.6 billion and \$1.7 billion at December 31, 2022 and 2021, respectively. A portion of these amounts was available to the company's business partners to support their working capital needs. In addition, the company has committed to provide future financing to its clients in connection with client purchase agreements for \$2.1 billion and \$3.2 billion at December 31, 2022 and 2021, respectively. The reduction in the future financing commitments is primarily due to lower services financing in the current year. The company collectively evaluates the allowance for these arrangements using a provision methodology consistent with the portfolio of the commitments. Refer to note A, "Significant Accounting Policies," for additional information. The allowance for these commitments is recorded in other liabilities in the Consolidated Balance Sheet and was not material at December 31, 2022 and 2021.

The company has applied the guidance requiring a guarantor to disclose certain types of guarantees, even if the likelihood of requiring the guarantor's performance is remote. The following is a description of arrangements in which the company is the guarantor.

The company is a party to a variety of agreements pursuant to which it may be obligated to indemnify the other party with respect to certain matters. Typically, these obligations arise in the context of contracts entered into by the company, under which the company customarily agrees to hold the party harmless against losses arising from a breach of representations and covenants related to such matters as title to the assets sold, certain intellectual property rights, specified environmental matters, third-party performance of nonfinancial contractual obligations and certain income taxes. In each of these circumstances, payment by the company is conditioned on the other party making a claim pursuant to the procedures specified in the particular contract, the procedures of which typically allow the company to challenge the other party's claims. While indemnification provisions typically do not include a contractual maximum on the company's payment, the company's obligations under these agreements may be limited in terms of time and/or nature of claim, and in some instances, the company may have recourse against third parties for certain payments made by the company.

It is not possible to predict the maximum potential amount of future payments under these or similar agreements due to the conditional nature of the company's obligations and the unique facts and circumstances involved in each particular agreement. Historically, payments made by the company under these agreements have not had a material effect on the company's business, financial condition or results of operations.

In addition, the company guarantees certain loans and financial commitments. The maximum potential future payment under these financial guarantees and the fair value of these guarantees recognized in the Consolidated Balance Sheet at December 31, 2022 and 2021 was not material.

Changes in the company's warranty liability for standard warranties, which are included in other accrued expenses and liabilities and other liabilities in the Consolidated Balance Sheet, and for extended warranty contracts, which are included in deferred income in the Consolidated Balance Sheet, are presented in the following tables.

Standard Warranty Liability

(\$ in millions)

	2022	2021
Balance at January 1	\$ 77	\$ 83
Current period accruals	84	82
Accrual adjustments to reflect experience	(2)	(1)
Charges incurred	(81)	(86)
Balance at December 31	\$ 79	\$ 77

Extended Warranty Liability (Deferred Income)

(\$ in millions)

	2022	2021
Balance at January 1	\$ 350	\$ 425
Revenue deferred for new extended warranty contracts	100	133
Amortization of deferred revenue	(163)	(198)
Other*	(15)	(10)
Balance at December 31	\$ 272	\$ 350
Current portion	\$ 137	\$ 163
Noncurrent portion	\$ 135	\$ 186

* Other consists primarily of foreign currency translation adjustments.

Contingencies

As a company with a substantial employee population and with clients in more than 175 countries, IBM is involved, either as plaintiff or defendant, in a variety of ongoing claims, demands, suits, investigations, tax matters and proceedings that arise from time to time in the ordinary course of its business. The company is a leader in the information technology industry and, as such, has been and will continue to be subject to claims challenging its IP rights and associated products and offerings, including claims of copyright and patent infringement and violations of trade secrets and other IP rights. In addition, the company enforces its own IP against infringement, through license negotiations, lawsuits or otherwise. Further, given the rapidly evolving external landscape of cybersecurity, privacy and data protection laws, regulations and threat actors, the company and its clients have been and will continue to be subject to actions and proceedings in various jurisdictions. Also, as is typical for companies of IBM's scope and scale, the company is party to actions and proceedings in various jurisdictions involving a wide range of labor and employment issues (including matters related to contested employment decisions, country-specific labor and employment laws, and the company's pension, retirement and other benefit plans), as well as actions with respect to contracts, product liability, securities, foreign operations, competition law and environmental matters. These actions may be commenced by a number of different parties, including competitors, clients, current or former employees, government and regulatory agencies, stockholders and representatives of the locations in which the company does business. Some of the actions to which the company is party may involve particularly complex technical issues, and some actions may raise novel questions under the laws of the various jurisdictions in which these matters arise.

The company records a provision with respect to a claim, suit, investigation or proceeding when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Any recorded liabilities, including any changes to such liabilities for the years ended December 31, 2022, 2021 and 2020 were not material to the Consolidated Financial Statements.

In accordance with the relevant accounting guidance, the company provides disclosures of matters for which the likelihood of material loss is at least reasonably possible. In addition, the company also discloses matters based on its consideration of other matters and qualitative factors, including the experience of other companies in the industry, and investor, customer and employee relations considerations.

With respect to certain of the claims, suits, investigations and proceedings discussed herein, the company believes at this time that the likelihood of any material loss is remote, given, for example, the procedural status, court rulings, and/or the strength of the company's defenses in those matters. With respect to the remaining claims, suits, investigations and proceedings discussed in this note, except as specifically discussed herein, the company is unable to provide estimates of reasonably possible losses or range of losses, including losses in excess of amounts accrued, if any, for the following reasons. Claims, suits, investigations and proceedings are inherently uncertain, and it is not possible to predict the ultimate outcome of these matters. It is the company's experience that damage amounts claimed in litigation against it are unreliable and unrelated to possible outcomes, and as such are not meaningful indicators of the company's potential liability. Further, the company is unable to provide such an estimate due to a number of other factors with respect to these claims, suits, investigations and proceedings, including considerations of the procedural status of the matter in question, the presence of complex or novel legal theories, and/or the ongoing discovery and development of information important to the matters. The company reviews claims, suits, investigations and proceedings at least quarterly, and decisions are made with respect to recording or adjusting provisions and disclosing reasonably possible losses or range of losses (individually or in the aggregate), to reflect the impact and status of settlement discussions, discovery, procedural and substantive rulings, reviews by counsel and other information pertinent to a particular matter.

Whether any losses, damages or remedies finally determined in any claim, suit, investigation or proceeding could reasonably have a material effect on the company's business, financial condition, results of operations or cash flows will depend on a number of variables, including: the timing and amount of such losses or damages; the structure and type of any such remedies; the significance of the impact any such losses, damages or remedies may have in the Consolidated Financial Statements; and the unique facts and circumstances of the particular matter that may give rise to additional factors. While the company will continue to defend itself vigorously, it is possible that the company's business, financial condition, results of operations or cash flows could be affected in any particular period by the resolution of one or more of these matters.

The following is a summary of the more significant legal matters involving the company.

In December 2017, CIS General Insurance Limited (CISGIL) sued IBM UK regarding a contract entered into by IBM UK and CISGIL in 2015 to implement and operate an IT insurance platform. The contract was terminated by IBM UK in July 2017 for non-payment by CISGIL. CISGIL alleges wrongful termination, breach of contract and breach of warranty. In February 2021, the Technology & Construction Court in London rejected the majority of CISGIL's claims and ruled in IBM's favor on its counterclaim. The court's decision required IBM to pay approximately \$20 million in damages, plus interest and litigation costs. In April 2022, the Court of Appeal awarded CISGIL additional damages of approximately \$89 million, plus interest and litigation costs. IBM filed an application for permission to appeal with the UK Supreme Court, which was denied in December 2022.

On June 8, 2021, IBM sued GlobalFoundries U.S. Inc. (GF) in New York State Supreme Court for claims including fraud and breach of contract relating to a long-term strategic relationship between IBM and GF for researching, developing, and manufacturing advanced

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International Business Machines Corporation and Subsidiary Companies

semiconductor chips for IBM. GF walked away from its obligations and IBM is now suing to recover amounts paid to GF, and other compensatory and punitive damages, totaling more than \$1.5 billion. On September 14, 2021, the court ruled on GF's motion to dismiss. On April 7, 2022, the Appellate Division unanimously reversed the lower court's dismissal of IBM's fraud claim. IBM's claims for breaches of contract, promissory estoppel, and fraud are proceeding.

On April 5, 2022, a putative securities law class action was commenced in the United States District Court for the Southern District of New York alleging that during the period from April 4, 2017 through October 20, 2021, certain strategic imperatives revenues were misclassified. The company, two current IBM senior executives, and two former IBM senior executives are named as defendants. On June 23, 2022, the court entered an order appointing Iron Workers Local 580 Joint Funds as lead plaintiff. On September 21, 2022, the plaintiff voluntarily dismissed the case, without prejudice. On January 13, 2023, a putative securities law class action making allegations substantially similar to those in the dismissed case was filed in the same court. On March 25, 2022, the Board of Directors received a shareholder demand letter making similar allegations and demanding that the company's Board of Directors take action to assert the company's rights. A special committee of independent directors was formed to investigate the issues raised in the letter. The special committee has completed its investigation and recommended that no claims should be asserted on behalf of the company. The independent directors of the company's Board of Directors unanimously adopted that recommendation.

On June 2, 2022, a putative class action lawsuit was filed in the United States District Court for the Southern District of New York alleging that the IBM Pension Plan miscalculated certain joint and survivor annuity pension benefits by using outdated actuarial tables in violation of the Employee Retirement Income Security Act of 1974. IBM, the Plan Administrator Committee, and the IBM Pension Plan are named as defendants.

As disclosed in the Kyndryl Form 10 and subsequent Kyndryl public filings, in 2017 BMC Software, Inc. (BMC) filed suit against IBM in the United States District Court for the Southern District of Texas in a dispute involving IBM's former managed infrastructure services business. On May 30, 2022, the trial court awarded BMC \$718 million in direct damages and \$718 million in punitive damages, plus interest and fees. IBM filed a notice of appeal, and BMC cross appealed. IBM does not believe it has any material exposure relating to this litigation. No material liability or related indemnification asset has been recorded by IBM.

The company is party to, or otherwise involved in, proceedings brought by U.S. federal or state environmental agencies under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), known as "Superfund," or laws similar to CERCLA. Such statutes require potentially responsible parties to participate in remediation activities regardless of fault or ownership of sites. The company is also conducting environmental investigations, assessments or remediations at or in the vicinity of several current or former operating sites globally pursuant to permits, administrative orders or agreements with country, state or local environmental agencies, and is involved in lawsuits and claims concerning certain current or former operating sites.

The company is also subject to ongoing tax examinations and governmental assessments in various jurisdictions. Along with many other U.S. companies doing business in Brazil, the company is involved in various challenges with Brazilian tax authorities regarding non-income tax assessments and non-income tax litigation matters. The total potential amount related to all these matters for all applicable years is approximately \$400 million. The company believes it will prevail on these matters and that this amount is not a meaningful indicator of liability.

NOTE 5. EQUITY ACTIVITY

The authorized capital stock of IBM consists of (i) 4,687,500,000 shares of common stock with a \$.20 per share par value, of which 906,091,977 shares were outstanding at December 31, 2022, and (ii) 150,000,000 shares of preferred stock with a \$.01 per share par value, whereby 75,000,000 shares have been designated as Series A Preferred Stock, of which 57,916,244 shares of Series A Preferred Stock were issued to a wholly owned subsidiary of the company but were not outstanding at December 31, 2022. The company does not intend to issue or transfer any shares of Series A Preferred Stock to any third parties.

Stock Repurchases

The Board of Directors authorizes the company to repurchase IBM common stock. The company suspended its share repurchase program at the time of the Red Hat acquisition in 2019. At December 31, 2022, \$2,008 million of Board common stock repurchase authorization was available.

Other Stock Transactions

The company issued the following shares of common stock as part of its stock-based compensation plans and employees stock purchase plan: 8,539,072 shares in 2022, 5,608,845 shares in 2021, and 4,972,028 shares in 2020. The company issued 2,512,300 treasury shares in 2022, 2,093,243 treasury shares in 2021, and 2,934,907 treasury shares in 2020, as a result of restricted stock unit releases and exercises of stock options by employees of certain acquired businesses and by non-U.S. employees. Also, as part of the company's stock-based compensation plans, 3,027,994 common shares at a cost of \$407 million, 2,286,912 common shares at a cost of \$319 million, and 2,363,966 common shares at a cost of \$302 million in 2022, 2021 and 2020, respectively, were remitted by employees to the company in order to satisfy minimum statutory tax withholding requirements. These amounts are included in the treasury stock balance in the Consolidated Balance Sheet and the Consolidated Statement of Equity.

Reclassifications and Taxes Related to Items of Other Comprehensive Income

(\$ in millions)

	Before Tax Amount	Tax (Expense)/ Benefit	Net of Tax Amount
For the year ended December 31, 2022:			
Other comprehensive income/(loss)			
Foreign currency translation adjustments	\$ 176	\$ (406)	\$ (229)
Net changes related to available-for-sale securities			
Unrealized gains/(losses) arising during the period	\$ (1)	\$ 0	\$ (1)
Reclassification of (gains)/losses to other (income) and expense	—	—	—
Total net changes related to available-for-sale securities	\$ (1)	\$ 0	\$ (1)
Unrealized gains/(losses) on cash flow hedges			
Unrealized gains/(losses) arising during the period	\$ 241	\$ (64)	\$ 178
Reclassification of (gains)/losses to:			
Cost of services	(24)	6	(18)
Cost of sales	(99)	28	(70)
Cost of financing	24	(6)	18
SG&A expense	(38)	11	(28)
Other (income) and expense	(349)	88	(261)
Interest expense	86	(22)	64
Total unrealized gains/(losses) on cash flow hedges	\$ (158)	\$ 41	\$ (117)
Retirement-related benefit plans*			
Prior service costs/(credits)	\$ 463	\$ (99)	\$ 364
Net (losses)/gains arising during the period	878	(183)	695
Curtailments and settlements	5,970	(1,490)	4,480
Amortization of prior service (credits)/costs	12	(3)	9
Amortization of net (gains)/losses	1,596	(304)	1,293
Total retirement-related benefit plans	\$8,919	\$ (2,078)	\$6,841
Other comprehensive income/(loss)	\$8,936	\$ (2,442)	\$6,494

* These AOCI components are included in the computation of net periodic pension cost and include the impact of a one-time, non-cash pension settlement charge of \$5.9 billion (\$4.4 billion net of tax). Refer to note V, "Retirement-Related Benefits," for additional information.

(\$ in millions)

	Before Tax Amount	Tax (Expense)/ Benefit	Net of Tax Amount
For the year ended December 31, 2021:			
Other comprehensive income/(loss)			
Foreign currency translation adjustments	\$ 987	\$ (414)	\$ 573
Net changes related to available-for-sale securities			
Unrealized gains/(losses) arising during the period	\$ 0	\$ 0	\$ 0
Reclassification of (gains)/losses to other (income) and expense	—	—	—
Total net changes related to available-for-sale securities	\$ 0	\$ 0	\$ 0
Unrealized gains/(losses) on cash flow hedges			
Unrealized gains/(losses) arising during the period	\$ 344	\$ (89)	\$ 256
Reclassification of (gains)/losses to:			
Cost of services	(43)	11	(32)
Cost of sales	16	(3)	13
Cost of financing	22	(6)	17
SG&A expense	24	(6)	19
Other (income) and expense	157	(40)	118
Interest expense	65	(16)	49
Total unrealized gains/(losses) on cash flow hedges	\$ 587	\$ (149)	\$ 438
Retirement-related benefit plans*			
Prior service costs/(credits)	\$ (51)	\$ (1)	\$ (52)
Net (losses)/gains arising during the period	2,433	(601)	1,832
Curtailments and settlements	94	(11)	83
Amortization of prior service (credits)/costs	9	0	9
Amortization of net (gains)/losses	2,484	(528)	1,956
Total retirement-related benefit plans	\$4,969	\$ (1,140)	\$3,828
Other comprehensive income/(loss)	\$6,542	\$ (1,703)	\$4,839

* These AOCI components are included in the computation of net periodic pension cost. Refer to note V, "Retirement-Related Benefits," for additional information.

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(\$ in millions)

	Before Tax Amount	Tax (Expense)/Benefit	Net of Tax Amount
For the year ended December 31, 2020:			
Other comprehensive income/(loss)			
Foreign currency translation adjustments	\$ (1,500)	\$ 535	\$ (965)
Net changes related to available-for-sale securities			
Unrealized gains/(losses) arising during the period	\$ (1)	\$ 0	\$ 0
Reclassification of (gains)/losses to other (income) and expense	—	—	—
Total net changes related to available-for-sale securities	\$ (1)	\$ 0	\$ 0
Unrealized gains/(losses) on cash flow hedges			
Unrealized gains/(losses) arising during the period	\$ (349)	\$ 89	\$ (261)
Reclassification of (gains)/losses to:			
Cost of services	(23)	6	(18)
Cost of sales	(2)	1	(2)
Cost of financing	27	(7)	20
SG&A expense	0	0	0
Other (income) and expense	(101)	25	(75)
Interest expense	78	(20)	58
Total unrealized gains/(losses) on cash flow hedges	\$ (370)	\$ 94	\$ (277)
Retirement-related benefit plans*			
Prior service costs/(credits)	\$ (37)	\$ 7	\$ (29)
Net (losses)/gains arising during the period	(1,678)	295	(1,383)
Curtailments and settlements	52	(14)	38
Amortization of prior service (credits)/costs	13	(1)	12
Amortization of net (gains)/losses	2,314	(451)	1,863
Total retirement-related benefit plans	\$ 664	\$ (163)	\$ 501
Other comprehensive income/(loss)	\$ (1,206)	\$ 466	\$ (740)

* These AOCI components are included in the computation of net periodic pension cost. Refer to note V, "Retirement-Related Benefits," for additional information.

Accumulated Other Comprehensive Income/(Loss) (net of tax)

(\$ in millions)

	Net Unrealized Gains/(Losses) on Cash Flow Hedges	Foreign Currency Translation Adjustments *	Net Change Retirement-Related Benefit Plans	Net Unrealized Gains/(Losses) on Available-For-Sale Securities	Accumulated Other Comprehensive Income/(Loss)
December 31, 2019	\$ (179)	\$ (3,700)	\$ (24,718)	\$ 0	\$ (28,597)
Other comprehensive income before reclassifications	(261)	(965)	(1,412)	0	(2,638)
Amount reclassified from accumulated other comprehensive income	(16)	—	1,914	—	1,898
Total change for the period	(277)	(965)	501	0	(740)
December 31, 2020	(456)	(4,665)	(24,216)	0	(29,337)
Other comprehensive income before reclassifications	256	573	1,780	0	2,608
Amount reclassified from accumulated other comprehensive income	183	—	2,049	—	2,231
Separation of Kyndryl	—	730	534	—	1,264
Total change for the period	438	1,303	4,362	0	6,103
December 31, 2021	(18)	(3,362)	(19,854)	(1)	(23,234)
Other comprehensive income before reclassifications	178	(229)	1,059	(1)	1,007
Amount reclassified from accumulated other comprehensive income	(295)	—	5,782 **	—	5,487
Total change for the period	(117)	(229)	6,841	(1)	6,494
December 31, 2022	\$ (135)	\$ (3,591)	\$ (13,013)	\$ (1)	\$ (16,740)

* Foreign currency translation adjustments are presented gross except for any associated hedges which are presented net of tax.

** Includes the impact of a one-time, non-cash pension settlement charge of \$5.9 billion (\$4.4 billion net of tax). Refer to note V, "Retirement-Related Benefits," for additional information.

NOTE T. DERIVATIVE FINANCIAL INSTRUMENTS

The company operates in multiple functional currencies and is a significant lender and borrower in the global markets. In the normal course of business, the company is exposed to the impact of interest rate changes and foreign currency fluctuations, and to a lesser extent equity and commodity price changes and client credit risk. The company limits these risks by following established risk management policies and procedures, including the use of derivatives, and, where cost effective, financing with debt in the currencies in which assets are denominated. For interest rate exposures, derivatives are used to better align rate movements between the interest rates associated with the company's lease and other financial assets and the interest rates associated with its financing debt. Derivatives are also used to manage the related cost of debt. For foreign currency exposures, derivatives are used to better manage the cash flow volatility arising from foreign exchange rate fluctuations.

In the Consolidated Balance Sheet, the company does not offset derivative assets against liabilities in master netting arrangements nor does it offset receivables or payables recognized upon payment or receipt of cash collateral against the fair values of the related derivative instruments. The amount recognized in other accounts receivable for the right to reclaim cash collateral was \$140 million and \$2 million at December 31, 2022 and 2021, respectively. The amount recognized in accounts payable for the obligation to return cash collateral was \$8 million and \$38 million at December 31, 2022 and 2021, respectively. The company restricts the use of cash collateral received to rehypothecation, and therefore reports it in restricted cash in the Consolidated Balance Sheet. The amount rehypothecated was \$8 million and \$2 million at December 31, 2022 and 2021, respectively. Additionally, if derivative exposures covered by a qualifying master netting agreement had been netted in the Consolidated Balance Sheet at December 31, 2022 and 2021, the total derivative asset and liability positions each would have been reduced by \$220 million and \$60 million, respectively.

On May 19, 2022, in connection with the disposition of 22.3 million shares of Kyndryl common stock, the company entered into a cash-settled swap with the lender of the short-term credit facility as the counterparty that maintained IBM's continued economic exposure in those shares pursuant to the May 2022 Exchange. Refer to note J, "Financial Assets & Liabilities," for additional information. The notional value of the swap was \$311 million. Upon settlement of the swap, which occurred on November 2, 2022, IBM recognized a loss and paid \$83 million derived from the difference between the VWAP of the Kyndryl common stock over the outstanding term of the swap and the strike price of \$13.95 per share.

In its hedging programs, the company may use forward contracts, futures contracts, interest-rate swaps, cross-currency swaps, equity swaps and options depending upon the underlying exposure. The company is not a party to leveraged derivative instruments.

A brief description of the major hedging programs, categorized by underlying risk, follows.

Interest Rate Risk

Fixed and Variable Rate Borrowings

The company issues debt in the global capital markets to fund its operations and financing business. Access to cost-effective financing can result in interest rate mismatches with the underlying assets. To manage these mismatches and to reduce overall interest cost, the company may use interest-rate swaps to convert specific fixed-rate debt issuances into variable-rate debt (i.e., fair value hedges) and to convert specific variable-rate debt issuances into fixed-rate debt (i.e., cash flow hedges). At December 31, 2022 and 2021, the total notional amount of the company's interest-rate swaps was \$6.5 billion and \$0.4 billion, respectively. The weighted-average remaining maturity of these instruments at December 31, 2022 and 2021 was approximately 6 years and 1.2 years, respectively. These interest-rate contracts were accounted for as fair value hedges. The company did not have any cash flow hedges relating to this program outstanding at December 31, 2022 and 2021.

Forecasted Debt Issuance

The company is exposed to interest rate volatility on future debt issuances. To manage this risk, the company may use instruments such as forward starting interest-rate swaps to lock in the rate on the interest payments related to the forecasted debt issuances. There were no instruments outstanding at December 31, 2022 and 2021.

In connection with cash flow hedges of forecasted interest payments related to the company's borrowings, the company recorded net losses (before taxes) of \$139 million and \$157 million at December 31, 2022 and 2021, respectively, in AOCI. The company estimates that \$18 million of the deferred net losses (before taxes) on derivatives in AOCI at December 31, 2022 will be reclassified to net income within the next 12 months, providing an offsetting economic impact against the underlying interest payments.

Foreign Exchange Risk**Long-Term Investments in Foreign Subsidiaries (Net Investment)**

A large portion of the company's foreign currency denominated debt portfolio is designated as a hedge of net investment in foreign subsidiaries to reduce the volatility in stockholders' equity caused by changes in foreign currency exchange rates in the functional currency of major foreign subsidiaries with respect to the U.S. dollar. At December 31, 2022 and 2021, the carrying value of debt designated as hedging instruments was \$13.4 billion and \$14.1 billion, respectively. The company also uses cross-currency swaps and foreign exchange forward contracts for this risk management purpose. At December 31, 2022 and 2021, the total notional amount of derivative instruments designated as net investment hedges was \$4.7 billion and \$6.8 billion, respectively. At both December 31, 2022 and 2021, the weighted-average remaining maturity of these instruments was approximately 0.1 years.

Anticipated Royalties and Cost Transactions

The company's operations generate significant nonfunctional currency, third-party vendor payments and intercompany payments for royalties and goods and services among the company's non-U.S. subsidiaries and with the company. In anticipation of these foreign currency cash flows and in view of the volatility of the currency markets, the company selectively employs foreign exchange forward contracts to manage its currency risk. These forward contracts are accounted for as cash flow hedges. At December 31, 2022, the maximum remaining length of time over which the company has hedged its exposure to the variability in future cash flows is approximately two years. At December 31, 2022 and 2021, the total notional amount of forward contracts designated as cash flow hedges of forecasted royalty and cost transactions was \$8.1 billion and \$7.2 billion, respectively. At both December 31, 2022 and 2021, the weighted-average remaining maturity of these instruments was approximately 0.6 years.

At December 31, 2022 and 2021, in connection with cash flow hedges of anticipated royalties and cost transactions, the company recorded net gains (before taxes) of \$66 million and \$315 million, respectively, in AOCI. The company estimates that \$7 million of deferred net gains (before taxes) on derivatives in AOCI at December 31, 2022 will be reclassified to net income within the next 12 months, providing an offsetting economic impact against the underlying anticipated transactions.

Foreign Currency Denominated Borrowings

The company is exposed to exchange rate volatility on foreign currency denominated debt. To manage this risk, the company employs cross-currency swaps to convert fixed-rate foreign currency denominated debt to fixed-rate debt denominated in the functional currency of the borrowing entity. These swaps are accounted for as cash flow hedges. At December 31, 2022, the maximum length of time remaining over which the company has hedged its exposure was approximately five years. At December 31, 2022 and 2021, the total notional amount of cross-currency swaps designated as cash flow hedges of foreign currency denominated debt was \$3.1 billion and \$2.0 billion, respectively.

At December 31, 2022 and 2021, in connection with cash flow hedges of foreign currency denominated borrowings, the company recorded net losses (before taxes) of \$101 million and \$174 million, respectively, in AOCI. The company estimates that \$10 million of deferred net gains (before taxes) on derivatives in AOCI at December 31, 2022 will be reclassified to net income within the next 12 months, providing an offsetting economic impact against the underlying exposure.

Subsidiary Cash and Foreign Currency Asset/Liability Management

The company uses its Global Treasury Centers to manage the cash of its subsidiaries. These centers principally use currency swaps to convert cash flows in a cost-effective manner. In addition, the company uses foreign exchange forward contracts to economically hedge, on a net basis, the foreign currency exposure of a portion of the company's nonfunctional currency assets and liabilities. The terms of these forward and swap contracts are generally less than one year. The changes in the fair values of these contracts and of the underlying hedged exposures are generally offsetting and are recorded in other (income) and expense in the Consolidated Income Statement. At December 31, 2022 and 2021, the total notional amount of derivative instruments in economic hedges of foreign currency exposure was \$5.9 billion and \$6.8 billion, respectively.

Equity Risk Management

The company is exposed to market price changes in certain broad market indices and in the company's own stock primarily related to certain obligations to employees. Changes in the overall value of these employee compensation obligations are recorded in SG&A expense in the Consolidated Income Statement. Although not designated as accounting hedges, the company utilizes derivatives, including equity swaps and futures, to economically hedge the exposures related to its employee compensation obligations. The derivatives are linked to the total return on certain broad market indices or the total return on the company's common stock, and are recorded at fair value with gains or losses also reported in SG&A expense in the Consolidated Income Statement. At December 31, 2022 and 2021, the total notional amount of derivative instruments in economic hedges of these compensation obligations was \$1.1 billion and \$1.4 billion, respectively.

Cumulative Basis Adjustments for Fair Value Hedges

At December 31, 2022 and 2021, the following amounts were recorded in the Consolidated Balance Sheet related to cumulative basis adjustments for fair value hedges:

(\$ in millions)

At December 31:	2022	2021
Short-term debt		
Carrying amount of the hedged item	\$ (199)	\$(227)
Cumulative hedging adjustments included in the carrying amount—assets/(liabilities)	1	(2)
Long-term debt		
Carrying amount of the hedged item	(6,216)	(508)
Cumulative hedging adjustments included in the carrying amount—assets/(liabilities)*	72	(309)

* Includes (\$250) million and (\$302) million of hedging adjustments on discontinued hedging relationships at December 31, 2022 and 2021, respectively.

The Effect of Derivative Instruments in the Consolidated Income Statement

The total amounts of income and expense line items presented in the Consolidated Income Statement in which the effects of fair value hedges, cash flow hedges, net investment hedges and derivatives not designated as hedging instruments are recorded and the total effect of hedge activity on these income and expense line items are as follows:

(\$ in millions)

For the year ended December 31:	Total			Gains/(Losses) of Total Hedge Activity		
	2022	2021	2020	2022	2021	2020
Cost of services	\$ 21,062	\$ 19,147	\$ 17,689	\$ 24	\$ 43	\$ 23
Cost of sales	6,374	6,184	6,048	99	(16)	2
Cost of financing	406	534	577	2	1	12
SG&A expense	18,609	18,745	20,561	(211)	176	141
Other (income) and expense	5,803	873	802	(225)	(205)	101
Interest expense	1,216	1,155	1,288	6	3	35

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

For the year ended December 31:	Gain/(Loss) Recognized in Consolidated Income Statement						
	Consolidated Income Statement Line Item	Recognized on Derivatives			Attributable to Risk Being Hedged ⁽²⁾		
		2022	2021	2020	2022	2021	2020
Derivative instruments in fair value hedges ⁽¹⁾							
Interest rate contracts	Cost of financing	\$ (73)	\$ (1)	\$ 20	\$ 85	\$ 18	\$ 4
	Interest expense	(257)	(2)	58	299	53	11
Derivative instruments not designated as hedging instruments							
Foreign exchange contracts	Other (income) and expense	(492)	(48)	1	N/A	N/A	N/A
Equity contracts	SG&A expense	(249)	201	142	N/A	N/A	N/A
	Other (income) and expense	(83)	—	—	N/A	N/A	N/A
Total		\$(1,153)	\$150	\$220	\$384	\$ 71	\$ 14

(\$ in millions)

For the year ended December 31:	Gain/(Loss) Recognized in Consolidated Income Statement and Other Comprehensive Income									
	Recognized in OCI			Consolidated Income Statement Line Item	Reclassified from AOCI			Amounts Excluded from Effectiveness Testing ⁽³⁾		
	2022	2021	2020		2022	2021	2020	2022	2021	2020
Derivative instruments in cash flow hedges										
Interest rate contracts	\$ —	\$ —	\$ —	Cost of financing	\$ (4)	\$ (4)	\$ (5)	\$ —	\$ —	\$ —
				Interest expense	(14)	(13)	(13)	—	—	—
Foreign exchange contracts	241	344	(349)	Cost of services	24	43	23	—	—	—
				Cost of sales	99	(16)	2	—	—	—
				Cost of financing	(21)	(18)	(23)	—	—	—
				SG&A expense	38	(24)	0	—	—	—
				Other (income) and expense	349	(157)	101	—	—	—
				Interest expense	(72)	(52)	(65)	—	—	—
Instruments in net investment hedges ⁽⁴⁾										
Foreign exchange contracts	1,613	1,644	(2,127)	Cost of financing	—	—	—	14	6	16
				Interest expense	—	—	—	50	17	45
Total	\$1,854	\$1,989	\$(2,477)		\$400	\$(243)	\$ 21	\$64	\$23	\$60

⁽¹⁾ The amount includes changes in clean fair values of the derivative instruments in fair value hedging relationships and the periodic accrual for coupon payments required under these derivative contracts.

⁽²⁾ The amount includes basis adjustments to the carrying value of the hedged item recorded during the period and amortization of basis adjustments recorded on de-designated hedging relationships during the period.

⁽³⁾ The company's policy is to recognize all fair value changes in amounts excluded from effectiveness testing in net income each period.

⁽⁴⁾ Instruments in net investment hedges include derivative and non-derivative instruments with the amounts recognized in OCI providing an offset to the translation of foreign subsidiaries.

N/A—Not applicable

For the years ending December 31, 2022, 2021 and 2020, there were no material gains or losses excluded from the assessment of hedge effectiveness (for fair value or cash flow hedges), or associated with an underlying exposure that did not or was not expected to occur (for cash flow hedges); nor are there any anticipated in the normal course of business.

NOTE U. STOCK-BASED COMPENSATION

The following table presents total stock-based compensation cost included in income from continuing operations.

(\$ in millions)			
For the year ended December 31:	2022	2021	2020
Cost	\$ 164	\$ 145	\$ 126
SG&A expense	566	555	550
RD&E expense	258	218	197
Pre-tax stock-based compensation cost	987	919	873
Income tax benefits	(249)	(223)	(198)
Net stock-based compensation cost	\$ 738	\$ 695	\$ 675

The company's total unrecognized compensation cost related to non-vested awards at December 31, 2022 was \$1.5 billion and is expected to be recognized over a weighted-average period of approximately 2.6 years.

Capitalized stock-based compensation cost was not material at December 31, 2022, 2021 and 2020.

Incentive Awards

Stock-based incentive awards are provided to employees under the terms of the company's long-term performance plans (the Plans). The Plans are administered by the Executive Compensation and Management Resources Committee of the Board of Directors. Awards available under the Plans principally include restricted stock units, performance share units, stock options or any combination thereof.

There were 293 million shares originally authorized to be awarded under the company's existing Plans and 66 million shares granted under previous plans that, if and when those awards were cancelled, could be reissued under the existing Plans. At December 31, 2022, 65 million unused shares were available to be granted.

Stock Awards

Stock awards for the periods presented were made in the form of Restricted Stock Units (RSUs), including Retention Restricted Stock Units (RRSUs), or Performance Share Units (PSUs).

The following table summarizes RSU and PSU activity under the Plans during the years ended December 31, 2022, 2021 and 2020.

	RSUs		PSUs	
	Weighted-Average Grant Price	Number of Units	Weighted-Average Grant Price	Number of Units
Balance at January 1, 2020	\$123	11,326,628	\$126	2,856,450
Awards granted	115	10,651,955	117	1,582,666
Awards released	126	(3,781,240)	137	(630,974)
Awards canceled/forfeited/performance adjusted	121	(1,300,639)	125	(256,642)*
Balance at December 31, 2020	\$117	16,896,704	\$120	3,551,500 **
Awards granted	125	9,566,307	129	1,561,120
Awards released	120	(4,582,159)	129	(581,397)
Awards canceled/forfeited/performance adjusted	119	(2,072,800)	124	(453,178)*
Kyndryl separation - adjustment	—	660,089	—	120,428
Kyndryl separation - cancellation	119	(1,429,661)	119	(469,616)
Balance at December 31, 2021	\$116	19,038,480	\$118	3,728,857 **
Awards granted	112	11,447,966	110	1,237,019
Awards released	114	(7,013,530)	114	(679,601)
Awards canceled/forfeited/performance adjusted	116	(2,420,002)	116	(720,197)*
Balance at December 31, 2022	\$115	21,052,914	\$117	3,566,078 **

* Includes adjustments of (362,247), (223,397) and (70,089) PSUs for 2022, 2021 and 2020, respectively, because final performance metrics were above or below specified targets.

** Represents the number of shares expected to be issued based on achievement of grant date performance targets. The actual number of shares issued will depend on final performance against specified targets over the vesting period.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

The total fair value of RSUs and PSUs granted and vested during the years ended December 31, 2022, 2021 and 2020 were as follows:

(\$ in millions)			
For the year ended December 31:	2022	2021	2020
RSUs			
Granted	\$1,288	\$1,195	\$1,220
Vested	801	549	478
PSUs			
Granted	\$ 136	\$ 201	\$ 186
Vested	77	75	86

In connection with vesting and release of RSUs and PSUs, the tax benefits realized by the company for the years ended December 31, 2022, 2021 and 2020 were \$249 million, \$175 million and \$139 million, respectively.

Stock Options

Stock options are awards which allow the employee to purchase shares of the company's stock at a fixed price. Stock options are granted at an exercise price equal to the company's average high and low stock price on the date of grant. These awards generally vest in four equal increments on the first four anniversaries of the grant date and have a contractual term of 10 years. The company estimates the fair value of stock options at the date of grant using a Black-Scholes valuation model. Key inputs and assumptions used to estimate the fair value of stock options include the grant price of the award, the expected option term, volatility of the company's stock, the risk-free rate and the company's dividend yield. For the stock options granted for the year ended December 31, 2022, the expected option term was determined from historical exercise patterns, volatility was based on an analysis of the company's historical stock prices over the expected option term, the risk-free rate was obtained from the U.S. Treasury yield curve in effect at the time of grant and the dividend yield was based on the company's expectation of paying dividends in the foreseeable future. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the company. During the years ended December 31, 2021 and 2020, the company did not grant stock options and no material stock options were exercised, forfeited or cancelled. In 2022, stock options were primarily granted by the company as part of its executive compensation programs.

The weighted-average fair value of stock options granted for the year ended December 31, 2022 was \$14.29. The fair value was estimated based on the following weighted-average assumptions:

For the year ended December 31:	2022
Expected term (years)	6.3
Expected volatility	25.5 %
Risk-free rate	2.0 %
Dividend yield	5.3 %

The following table summarizes option activity under the Plans during the year ended December 31, 2022.

	Weighted-Average Exercise Price	Number of Shares Under Option
Balance at January 1, 2022	\$135	1,549,732
Options granted	125	5,044,353
Options exercised	—	—
Options forfeited/cancelled/expired	125	(319,560)
Balance at December 31, 2022	\$128	6,274,525
Vested and exercisable at December 31, 2022	\$135	1,549,732

The weighted-average remaining contractual term and the aggregate intrinsic value of stock options outstanding was 7.7 years and \$87 million, respectively, at December 31, 2022. The weighted-average remaining contractual term and the aggregate intrinsic value of stock options vested and exercisable was 3.1 years and \$12 million, respectively, at December 31, 2022. The total intrinsic value of stock options exercised for the years ended December 31, 2022, 2021 and 2020 was immaterial.

The company settles employee stock option exercises primarily with newly issued common shares and, occasionally, with treasury shares. Total treasury shares held at December 31, 2022 and 2021 were approximately 1,351 million shares.

Acquisitions

In connection with various acquisition transactions, there were 0.4 million stock options outstanding at December 31, 2022, as a result of the company's conversion of stock-based awards previously granted by acquired entities. The weighted-average exercise price of these stock options was \$20 per share. No material stock awards were outstanding at December 31, 2022.

IBM Employees Stock Purchase Plan

Effective April 1, 2022, the company increased the discount for eligible participants to purchase shares of IBM common stock under its Employee Stock Purchase Plan (ESPP) from 5 percent to 15 percent off the average market price on the date of purchase. With this change, the ESPP is considered compensatory under the accounting requirements for stock-based compensation. The ESPP enables eligible participants to purchase shares of IBM common stock through payroll deductions of up to 10 percent of eligible compensation. Eligible compensation includes any compensation received by the employee during the year. The ESPP provides for semi-annual offering periods during which shares may be purchased and continues as long as shares remain available under the ESPP, unless terminated earlier at the discretion of the Board of Directors. Individual ESPP participants are restricted from purchasing more than \$25,000 of common stock in one calendar year or 1,000 shares in an offering period.

Employees purchased approximately 2.4 million, 1.0 million and 1.1 million shares under the ESPP during the years ended December 31, 2022, 2021 and 2020, respectively. For the year ended December 31, 2022, the average market price of shares purchased was \$114 per share and the total stock-based compensation cost was \$43 million. Cash dividends declared and paid by the company on its common stock also include cash dividends on the company stock purchased through the ESPP. Dividends are paid on full and fractional shares and can be reinvested. The company stock purchased through the ESPP is considered outstanding and is included in the weighted-average outstanding shares for purposes of computing basic and diluted earnings per share.

Approximately 14.4 million shares were available for purchase under the ESPP at December 31, 2022.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

NOTE V. RETIREMENT-RELATED BENEFITS

Description of Plans

IBM sponsors the following retirement-related plans/benefits:

Plan	Eligibility	Funding	Benefit Calculation	Other	
U.S. Defined Benefit (DB) Pension Plans	Qualified Personal Pension Plan (Qualified PPP)	U.S. regular, full-time and part-time employees hired prior to January 1, 2005	Company contributes to irrevocable trust fund, held for sole benefit of participants and beneficiaries	Vary based on the participant: Five-year, final pay formula based on salary, years of service, mortality and other participant-specific factors Cash balance formula based on percentage of employees' annual salary, as well as an interest crediting rate	Benefit accruals ceased December 31, 2007. Certain defined benefit pension obligations and related plan assets were transferred in 2022, as described below
	Excess Personal Pension Plan (Excess PPP)		Unfunded, provides benefits in excess of IRS limitations for qualified plans		
	Supplemental Executive Retention Plan (Retention Plan)	Eligible U.S. executives	Unfunded	Based on average earnings, years of service and age at termination of employment	
U.S. Defined Contribution (DC) Plans*	401(k) Plus	U.S. regular, full-time and part-time employees	All contributions are made in cash and invested in accordance with participants' investment elections	Dollar-for-dollar match, generally 5 or 6 percent of eligible compensation and automatic matching of 1, 2 or 4 percent of eligible compensation, depending on date of hire	Employees generally receive contributions after one year of service
	Excess 401(k) Plus	U.S. employees whose eligible compensation is expected to exceed IRS compensation limit for qualified plans	Unfunded, non-qualified amounts deferred are record-keeping (notional) accounts and are not held in trust for the participants, but may be invested in accordance with participants' investment elections (under the 401(k) Plus Plan options)	Company match and automatic contributions (at the same rate under 401(k) Plus Plan) on eligible compensation deferred and on compensation earned in excess of the IRC pay limit. The percentage varies depending on eligibility and years of service	Employees generally receive contributions after one year of service. Amounts deferred into the Plan, including company contributions, are recorded as liabilities
U.S. Nonpension Postretirement Benefit Plan	Nonpension Postretirement Plan	Medical and dental benefits for eligible U.S. retirees and eligible dependents, as well as life insurance for eligible U.S. retirees	Company contributes to irrevocable trust fund, held for the sole benefit of participants and beneficiaries	Varies based on plan design formulas and eligibility requirements	Since January 1, 2004, new hires are not eligible for these benefits
Non-U.S. Plans	DB or DC	Eligible regular employees in certain non-U.S. subsidiaries or branches	Company deposits funds under various fiduciary-type arrangements, purchases annuities under group contracts or provides reserves for these plans	Based either on years of service and the employee's compensation (generally during a fixed number of years immediately before retirement) or on annual credits	In certain countries, benefit accruals have ceased and/or have been closed to new hires as of various dates
	Nonpension Postretirement Plan	Medical and dental benefits for eligible non-U.S. retirees and eligible dependents, as well as life insurance for certain eligible non-U.S. retirees	Primarily unfunded except for a few select countries where the company contributes to irrevocable trust funds held for the sole benefit of participants and beneficiaries	Varies based on plan design formulas and eligibility requirements by country	Most non-U.S. retirees are covered by local government sponsored and administered programs

* Matching and automatic contributions are made once at the end of the year for employees that are employed as of December 15 of the plan year. Contributions may be made for certain types of separations that occur prior to December 15. Beginning in 2023, matching and automatic contributions are made each pay period instead of annually.

Plan Financial Information

Summary of Financial Information

The following table presents a summary of the total retirement-related benefits net periodic (income)/cost recorded in the Consolidated Income Statement.

(\$ in millions)

For the year ended December 31:	U.S. Plans			Non-U.S. Plans			Total		
	2022	2021	2020	2022	2021	2020	2022	2021	2020
Defined benefit pension plans	\$5,849 *	\$ 303	\$167	\$ 836	\$1,119	\$1,057	\$6,685	\$1,422	\$1,224
Retention Plan	8	16	11	—	—	—	8	16	11
Total defined benefit pension plans (income)/cost	\$5,857 *	\$ 319	\$178	\$ 836	\$1,119	\$1,057	\$6,693	\$1,438	\$1,235
IBM 401(k) Plus Plan and non-U.S. plans	\$ 530	\$ 561	\$585	\$ 369	\$ 409	\$ 403	\$ 899	\$ 971	\$ 988
Excess 401(k)	25	21	27	—	—	—	25	21	27
Total defined contribution plans cost	\$ 555	\$ 582	\$612	\$ 369	\$ 409	\$ 403	\$ 924	\$ 992	\$1,015
Nonpension postretirement benefit plans cost	\$ 85	\$ 127	\$145	\$ 30	\$ 44	\$ 57	\$ 115	\$ 172	\$ 202
Total retirement-related benefits net periodic cost	\$6,497 *	\$1,029	\$934	\$1,235	\$1,573	\$1,517	\$7,732	\$2,601	\$2,451

* Includes the impact of a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion related to the Qualified PPP, as described below.

The following table presents a summary of the total PBO for defined benefit pension plans, APBO for nonpension postretirement benefit plans, fair value of plan assets and the associated funded status recorded in the Consolidated Balance Sheet.

(\$ in millions)

At December 31:	Benefit Obligations		Fair Value of Plan Assets		Funded Status*	
	2022	2021	2022	2021	2022	2021
U.S. Plans						
Overfunded plans						
Qualified PPP	\$20,091 **	\$46,458	\$25,094 **	\$51,852	\$ 5,002	\$ 5,395
Underfunded plans						
Excess PPP	\$ 1,173	\$ 1,441	\$ —	\$ —	\$ (1,173)	\$ (1,441)
Retention Plan	228	283	—	—	(228)	(283)
Nonpension postretirement benefit plan	2,369	3,404	10	8	(2,359)	(3,395)
Total underfunded U.S. plans	\$ 3,771	\$ 5,128	\$ 10	\$ 8	\$ (3,761)	\$ (5,119)
Non-U.S. Plans						
Overfunded plans						
Qualified defined benefit pension plans+	\$15,443	\$21,617	\$18,677	\$26,071	\$ 3,234	\$ 4,454
Nonpension postretirement benefit plans	7	—	7	—	0	—
Total overfunded non-U.S. plans	\$15,450	\$21,617	\$18,684	\$26,071	\$ 3,234	\$ 4,454
Underfunded plans						
Qualified defined benefit pension plans+	\$11,361	\$17,360	\$ 9,694	\$13,908	\$ (1,667)	\$ (3,452)
Nonqualified defined benefit pension plans+	4,457	6,120	—	—	(4,457)	(6,120)
Nonpension postretirement benefit plans	524	638	22	31	(502)	(607)
Total underfunded non-U.S. plans	\$16,342	\$24,118	\$ 9,716	\$13,939	\$ (6,626)	\$ (10,179)
Total overfunded plans	\$35,541	\$68,075	\$43,778	\$77,924	\$ 8,236	\$ 9,850
Total underfunded plans	\$20,113	\$29,246	\$ 9,726	\$13,947	\$ (10,387)	\$ (15,300)

* Funded status is recognized in the Consolidated Balance Statement as follows: Asset amounts as prepaid pension assets; (Liability) amounts as compensation and benefits (current liability) and retirement and nonpension postretirement benefit obligations (noncurrent liability).

** Year-to-year reduction includes the transfer of \$16 billion of pension benefit obligations and assets to the Insurers as discussed below.

+ Non-U.S. qualified plans represent plans funded outside of the U.S. Non-U.S. nonqualified plans are unfunded.

At December 31, 2022, the company's qualified defined benefit pension plans worldwide were 114 percent funded compared to the benefit obligations, with the U.S. Qualified PPP 125 percent funded. Overall, including nonqualified plans, the company's defined benefit pension plans worldwide were 101 percent funded.

Defined Benefit Pension and Nonpension Postretirement Benefit Plan Financial Information

The following tables through page 112 represent financial information for the company's retirement-related benefit plans, excluding defined contribution plans. The defined benefit pension plans under U.S. Plans consist of the Qualified PPP, the Excess PPP and the Retention Plan. The defined benefit pension plans and the nonpension postretirement benefit plans under non-U.S. Plans consist of all plans sponsored by the company's subsidiaries. The nonpension postretirement benefit plan under U.S. Plan consists of only the U.S. Nonpension Postretirement Benefit Plan.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

The following tables present the components of net periodic (income)/cost of the retirement-related benefit plans recognized in the Consolidated Income Statement, excluding defined contribution plans.

(\$ in millions)

	Defined Benefit Pension Plans					
	U.S. Plans			Non-U.S. Plans		
	2022	2021	2020	2022	2021	2020
For the year ended December 31:						
Service cost	\$ —	\$ —	\$ —	\$ 237	\$ 300	\$ 328
Interest cost*	1,129	1,109	1,501	493	424	541
Expected return on plan assets*	(1,729)	(1,802)	(2,169)	(1,016)	(1,115)	(1,229)
Amortization of transition assets*	—	—	—	—	—	—
Amortization of prior service costs/(credits)*	8	16	16	14	(12)	(9)
Recognized actuarial losses*	527	996	829	1,031	1,392	1,336
Curtailments and settlements*	5,923 **	—	—	47	94	49
Multi-employer plans	—	—	—	15	17	23
Other costs/(credits)	—	—	—	15	18	18
Total net periodic (income)/cost	\$ 5,857 *	\$ 319	\$ 178	\$ 836	\$ 1,119	\$ 1,057

(\$ in millions)

	Nonpension Postretirement Benefit Plans					
	U.S. Plan			Non-U.S. Plans		
	2022	2021	2020	2022	2021	2020
For the year ended December 31:						
Service cost	\$ 5	\$ 7	\$ 9	\$ 3	\$ 4	\$ 4
Interest cost*	85	65	103	24	27	35
Expected return on plan assets*	—	—	—	(2)	(3)	(4)
Amortization of transition assets*	—	—	—	—	—	—
Amortization of prior service costs/(credits)*	(10)	4	4	0	0	0
Recognized actuarial losses*	5	52	29	4	15	21
Curtailments and settlements*	—	—	—	0	0	0
Other costs/(credits)	—	—	—	0	0	0
Total net periodic cost	\$ 85	\$127	\$145	\$30	\$44	\$57

* These components of net periodic pension costs are included in other (income) and expense in the Consolidated Income Statement.

** Includes the impact of a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion related to the Qualified PPP, as described below.

IBM U.S. Pension and Nonpension Postretirement Plan Changes

Over the past several years, the company has taken actions to reduce the risk profile of its worldwide retirement-related plans, while at the same time increasing the funded status of the plans. As described in note A, "Significant Accounting Policies," in September 2022, the Qualified PPP irrevocably transferred to the Insurers approximately \$16 billion of the Qualified PPP's defined benefit pension obligations and related plan assets, thereby reducing the company's pension obligations and assets by the same amount. This transaction further de-risks the company's retirement-related plans by eliminating the potential for the company to make future cash contributions to fund this portion of pension obligations being transferred to the Insurers.

Upon issuance of the group annuity contracts, the Qualified PPP's benefit obligations and administration for approximately 100,000 of the company's retirees and beneficiaries (the Transferred Participants) were transferred to the Insurers. Under the group annuity contracts, each Insurer has made an irrevocable commitment, and will be solely responsible, to pay 50 percent of the pension benefits of each Transferred Participant that are due on and after January 1, 2023. The transaction resulted in no changes to the benefits to be received by the Transferred Participants. The company recognized a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion (\$4.4 billion net of tax) in the third quarter of 2022 primarily related to the accelerated recognition of actuarial losses included within AOCI in the Consolidated Statement of Equity.

In September 2022, the company amended its U.S. Nonpension Postretirement Plan to transition coverage for Medicare-eligible participants to a new IBM-sponsored group Medicare Advantage program administered by UnitedHealthcare, starting January 1, 2023. The changes are intended to provide an enhanced member experience, better value and more comprehensive benefits to IBM participants. This change resulted in a decrease in nonpension postretirement benefit obligations and a corresponding decrease in AOCI.

The following table presents the changes in benefit obligations and plan assets of the company's retirement-related benefit plans, excluding DC plans.

(\$ in millions)

	Defined Benefit Pension Plans				Nonpension Postretirement Benefit Plans			
	U.S. Plans		Non-U.S. Plans		U.S. Plan		Non-U.S. Plans	
	2022	2021	2022	2021	2022	2021	2022	2021
Change in benefit obligation								
Benefit obligation at January 1	\$ 48,182	\$ 52,237	\$ 45,097	\$ 50,447	\$ 3,404	\$ 3,791	\$ 638	\$ 756
Service cost	—	—	237	300	5	7	3	4
Interest cost	1,129	1,109	493	424	85	65	24	27
Plan participants' contributions	—	—	14	19	43	50	—	—
Acquisitions/divestitures, net	—	—	(45)	(70)	—	—	—	6
Actuarial losses/(gains)	(7,849)	(1,582)	(8,819)	(876)	(780)	(141)	(87)	(78)
Benefits paid from trust*	(3,133)	(3,181)	(1,572)	(1,736)	(385)	(369)	(6)	(6)
Direct benefit payments	(123)	(125)	(418)	(516)	(2)	(1)	(32)	(28)
Foreign exchange impact	—	—	(3,463)	(2,548)	—	—	(10)	(42)
Amendments/curtailments/ settlements/other*	(16,712)**	(276)	(262)	(347)	0	3	(1)	(1)
Benefit obligation at December 31	\$ 21,493	\$ 48,182	\$ 31,261	\$ 45,097	\$ 2,369	\$ 3,404	\$ 531	\$ 638
Change in plan assets								
Fair value of plan assets at January 1	\$ 51,852	\$ 54,386	\$ 39,979	\$ 42,308	\$ 8	\$ 15	\$ 31	\$ 40
Actual return on plan assets	(6,914)	924	(6,737)	1,686	—	—	3	(14)
Employer contributions	—	—	103	86	344	313	—	6
Acquisitions/divestitures, net	—	—	(20)	(87)	—	—	—	—
Plan participants' contributions	—	—	14	19	43	50	—	—
Benefits paid from trust*	(3,133)	(3,181)	(1,572)	(1,736)	(385)	(369)	(6)	(6)
Foreign exchange impact	—	—	(3,154)	(1,939)	—	—	2	6
Amendments/curtailments/ settlements/other*	(16,712)**	(276)	(243)	(358)	0	0	0	0
Fair value of plan assets at December 31	\$ 25,094	\$ 51,852	\$ 28,371	\$ 39,979	\$ 10	\$ 8	\$ 29	\$ 31
Funded status at December 31	\$ 3,600	\$ 3,671	\$ (2,891)	\$ (5,118)	\$(2,359)	\$(3,395)	\$(501)	\$(607)
Accumulated benefit obligation+	\$ 21,493	\$ 48,182	\$ 30,961	\$ 44,628	N/A	N/A	N/A	N/A

* Prior period amounts for defined benefit pension plans have been recast to conform to 2022 presentation.

** Primarily represents the transfer of Qualified PPP pension obligations and related plan assets to the Insurers pursuant to group annuity contracts.

+ Represents the benefit obligation assuming no future participant compensation increases.

N/A—Not applicable

The following table presents the net funded status recognized in the Consolidated Balance Sheet.

(\$ in millions)

	Defined Benefit Pension Plans				Nonpension Postretirement Benefit Plans			
	U.S. Plans		Non-U.S. Plans		U.S. Plan		Non-U.S. Plans	
	2022	2021	2022	2021	2022	2021	2022	2021
At December 31:								
Prepaid pension assets	\$ 5,002	\$ 5,395	\$ 3,234	\$ 4,455	\$ 0	\$ 0	\$ 0	\$ 0
Current liabilities—compensation and benefits	(121)	(123)	(347)	(359)	(307)	(364)	(16)	(19)
Noncurrent liabilities—retirement and nonpension postretirement benefit obligations	(1,281)	(1,601)	(5,777)	(9,215)	(2,052)	(3,031)	(486)	(588)
Funded status—net	\$ 3,600	\$ 3,671	\$(2,891)	\$(5,118)	\$(2,359)	\$(3,395)	\$(501)	\$(607)

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The following table presents the pre-tax net loss, prior service costs/(credits) and transition (assets)/liabilities recognized in OCI and the changes in the pre-tax net loss, prior service costs/(credits) and transition (assets)/liabilities recognized in AOCI for the retirement-related benefit plans.

(\$ in millions)

	Defined Benefit Pension Plans				Nonpension Postretirement Benefit Plans			
	U.S. Plans		Non-U.S. Plans		U.S. Plan		Non-U.S. Plans	
	2022	2021	2022	2021	2022	2021	2022	2021
Net loss at January 1	\$ 14,273	\$ 15,972	\$ 13,412	\$ 16,310	\$ 464	\$ 656	\$ 183	\$ 263
Current period loss/(gain)	794	(704)	(1,115)	(1,411)	(365)	(141)	(93)	(65)
Curtailments and settlements	(5,923)*	—	(47)	(94)	—	—	0	0
Amortization of net loss included in net periodic (income)/cost	(527)	(996)	(1,031)	(1,392)	(5)	(52)	(4)	(15)
Net loss at December 31	\$ 8,617	\$ 14,273	\$ 11,219	\$ 13,412	\$ 94	\$ 464	\$ 86	\$ 183
Prior service costs/(credits) at January 1	\$ 8	\$ 24	\$ 397	\$ 325	\$ 26	\$ 30	\$ (4)	\$ (4)
Current period prior service costs/(credits)	—	—	(53)	60	(415)	—	5	0
Curtailments, settlements and other	—	—	—	—	—	—	—	—
Amortization of prior service (costs)/credits included in net periodic (income)/cost	(8)	(16)	(14)	12	10	(4)	0	0
Prior service costs/(credits) at December 31	\$ 0	\$ 8	\$ 330	\$ 397	\$ (379)	\$ 26	\$ 0	\$ (4)
Transition (assets)/liabilities at January 1	\$ —	\$ —	\$ 0	\$ 0	\$ —	\$ —	\$ 0	\$ 0
Amortization of transition assets/(liabilities) included in net periodic (income)/cost	—	—	—	—	—	—	—	0
Transition (assets)/liabilities at December 31	\$ —	\$ —	\$ 0	\$ 0	\$ —	\$ —	\$ 0	\$ 0
Total loss recognized in accumulated other comprehensive income/(loss)**	\$ 8,617	\$ 14,281	\$ 11,549	\$ 13,809	\$ (285)	\$ 490	\$ 86	\$ 179

* Includes the impact of a one-time, non-cash, pre-tax pension settlement charge of \$5.9 billion related to the Qualified PPP, as described above.

** Refer to note S, "Equity Activity," for the total change in AOCI, and the Consolidated Statement of Comprehensive Income for the components of net periodic (income)/cost, including the related tax effects, recognized in OCI for the retirement-related benefit plans.

Assumptions Used to Determine Plan Financial Information

Underlying both the measurement of benefit obligations and net periodic (income)/cost are actuarial valuations. These valuations use participant-specific information such as salary, age and years of service, as well as certain assumptions, the most significant of which include estimates of discount rates, expected return on plan assets, rate of compensation increases, interest crediting rates and mortality rates. The company evaluates these assumptions, at a minimum, annually, and makes changes as necessary.

The following tables present the assumptions used to measure the net periodic (income)/cost and the year-end benefit obligations for retirement-related benefit plans.

	Defined Benefit Pension Plans					
	U.S. Plans			Non-U.S. Plans		
	2022	2021	2020	2022	2021	2020
Weighted-average assumptions used to measure net periodic (income)/cost for the year ended December 31						
Discount rate	3.30 %*	2.20 %	3.10 %	1.26 %	0.87 %	1.20 %
Expected long-term returns on plan assets	4.33 %*	3.75 %	4.50 %	2.97 %	2.85 %	3.36 %
Rate of compensation increase	N/A	N/A	N/A	3.02 %	2.59 %	2.32 %
Interest crediting rate	2.07 %*	1.10 %	2.70 %	0.26 %	0.26 %	0.28 %
Weighted-average assumptions used to measure benefit obligations at December 31						
Discount rate	5.30 %	2.60 %	2.20 %	3.80 %	1.26 %	0.87 %
Rate of compensation increase	N/A	N/A	N/A	4.00 %	3.02 %	2.59 %
Interest crediting rate	4.40 %	1.10 %	1.10 %	0.34 %	0.26 %	0.26 %

* The Qualified PPP discount rate, expected long-term return on plan assets and interest crediting rate of 2.60 percent, 4.00 percent and 1.10 percent, respectively, for the period January 1, 2022 through August 31, 2022, changed to 4.70 percent, 5.00 percent and 4.00 percent, respectively, for the period September 1, 2022 through December 31, 2022 due to remeasurement of the plan as a result of the changes described on page 110.

N/A—Not applicable

	Nonpension Postretirement Benefit Plans					
	U.S. Plan			Non-U.S. Plans		
	2022	2021	2020	2022	2021	2020
Weighted-average assumptions used to measure net periodic cost for the year ended December 31						
Discount rate	3.05 %*	1.80 %	2.80 %	5.35 %	4.55 %	5.08 %
Expected long-term returns on plan assets	N/A	N/A	N/A	6.64 %	6.62 %	7.73 %
Interest crediting rate	2.16 %*	1.10 %	2.70 %	N/A	N/A	N/A
Weighted-average assumptions used to measure benefit obligations at December 31						
Discount rate	5.30 %	2.30 %	1.80 %	7.25 %	5.35 %	4.55 %
Interest crediting rate	4.40 %	1.10 %	1.10 %	N/A	N/A	N/A

* The U.S. Nonpension Postretirement Plan discount rate and interest crediting rate of 2.30 percent and 1.10 percent, respectively, for the period January 1, 2022 through July 31, 2022, changed to 4.10 percent and 3.65 percent, respectively, for the period August 1, 2022 through December 31, 2022 due to remeasurement of the plan as a result of the changes described on page 110.

N/A—Not applicable

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Item	Description of Assumptions
Discount Rate	<p>Changes in discount rate assumptions impact net periodic (income)/cost and the PBO.</p> <p>For the U.S. and certain non-U.S. countries, a portfolio of high-quality corporate bonds is used to construct a yield curve. Cash flows from the company's expected benefit obligation payments are matched to the yield curve to derive the discount rates.</p> <p>In other non-U.S. countries where the markets for high-quality long-term bonds are not as well developed, a portfolio of long-term government bonds is used as a base, and a credit spread is added to simulate corporate bond yields at these maturities in the jurisdiction of each plan. This is the benchmark for developing the respective discount rates.</p>
Expected Long-Term Returns on Plan Assets	<p>Represents the expected long-term returns on plan assets based on the calculated market-related value of plan assets and considers long-term expectations for future returns and the investment policies and strategies discussed on pages 114 to 115. These rates of return are developed and tested for reasonableness against historical returns by the company.</p> <p>The use of expected returns may result in pension income that is greater or less than the actual return of those plan assets in a given year. Over time, however, the expected long-term returns are designed to approximate the actual long-term returns, and therefore result in a pattern of income or loss recognition that more closely matches the pattern of the services provided by the employees.</p> <p>The difference between actual and expected returns is recognized as a component of net loss or gain in AOCI, which is amortized as a component of net periodic (income)/cost over the service lives or life expectancy of the plan participants, depending on the plan, provided such amounts exceed certain thresholds provided by accounting standards. The market-related value of plan assets recognizes changes in the fair value of plan assets systematically over a five-year period in the expected return on plan assets line in net periodic (income)/cost.</p> <p>The projected long-term rate of return on plan assets for 2023 is 5.50 percent for U.S. and 4.44 percent for non-U.S. DB Plans.</p>
Rate of Compensation Increases and Mortality Assumptions	<p>Compensation rate increases are determined based on the company's long-term plans for such increases. These rate increases are not applicable to the U.S. DB pension plans as benefit accruals ceased December 31, 2007.</p> <p>Mortality assumptions are based on life expectancy and death rates for different types of participants and are periodically updated based on actual experience.</p>
Interest Crediting Rate	<p>Benefits for certain participants in the PPP are calculated using a cash balance formula. An assumption underlying this formula is an interest crediting rate, which impacts both net periodic (income)/cost and the PBO. This provides the basis for projecting the expected interest rate that plan participants will earn on the benefits that they are expected to receive in the following year and is based on the average from August to October of the one-year U.S. Treasury Constant Maturity yield plus one percent.</p>
Healthcare Cost Trend Rate	<p>For nonpension postretirement benefit plans, the company determines healthcare cost trend rates based on medical cost inflation expectations in each market and IBM's plan characteristics. The healthcare cost trend rate is an important consideration when setting future expectations for plan costs or benefit obligations, taking into account the terms of the plan which limit the company's future obligations to the participants.</p> <p>The company's U.S. healthcare cost trend rate assumption for 2023 is 5.40 percent and is expected to decrease to 4.15 percent over approximately 14 years.</p>

Plan Assets

Retirement-related benefit plan assets are recognized and measured at fair value. Because of the inherent uncertainty of valuations, these fair value measurements may not necessarily reflect the amounts the company could realize in current market transactions.

Investment Policies and Strategies

The investment objectives of the Qualified PPP portfolio are designed to generate returns that will enable the plan to meet its future obligations. The precise amount for which these obligations will be settled depends on future events, including the retirement dates and life expectancy of the plans' participants. The obligations are estimated using actuarial assumptions, based on the current economic environment and other pertinent factors described above. The Qualified PPP portfolio's investment strategy balances the requirement to generate returns, using potentially higher yielding assets such as equity securities, with the need to control risk in the portfolio with less volatile assets, such as fixed-income securities. Risks include, among others, inflation, volatility in equity values and changes in interest rates that could cause the plan to become underfunded, thereby increasing its dependence on contributions from the company. To mitigate any potential concentration risk, careful consideration is given to balancing the portfolio among industry sectors, companies and geographies, taking into account interest rate sensitivity, dependence on economic growth, currency and other

factors that affect investment returns. There were no significant changes to investment strategy made in 2022 and none are planned for 2023. The Qualified PPP portfolio's target allocation is 8 percent equity securities, 83 percent fixed-income securities, 4 percent real estate and 5 percent other investments.

The assets are managed by professional investment firms and investment professionals who are employees of the company. They are bound by investment mandates determined by the company's management and are measured against specific benchmarks. Among these managers, consideration is given, but not limited to, balancing security concentration, issuer concentration, investment style and reliance on particular active and passive investment strategies.

Market liquidity risks are tightly controlled, with \$3,159 million of the Qualified PPP portfolio as of December 31, 2022 invested in private market assets consisting of private equities and private real estate investments, which are less liquid than publicly traded securities. In addition, the Qualified PPP portfolio had \$1,137 million in commitments for future investments in private markets to be made over a number of years. These commitments are expected to be funded from plan assets.

Derivatives are used as an effective means to achieve investment objectives and/or as a component of the plan's risk management strategy. The primary reasons for the use of derivatives are fixed income management, including duration, interest rate management and credit exposure, cash equitization and to manage currency strategies.

Outside the U.S., the investment objectives are similar to those described previously, subject to local regulations. The weighted-average target allocation for the non-U.S. plans is 17 percent equity securities, 62 percent fixed-income securities, 3 percent real estate, 13 percent insurance contracts and 5 percent other investments, which is consistent with the allocation decisions made by the company's management. In some countries, a higher percentage allocation to fixed income is required to manage solvency and funding risks. In others, the responsibility for managing the investments typically lies with a board that may include up to 50 percent of members elected by employees and retirees. This can result in slight differences compared with the strategies previously described. The percentage of non-U.S. plans investment in assets that are less liquid is consistent with the U.S. plan. The use of derivatives is also consistent with the U.S. plan and mainly for currency hedging, interest rate risk management, credit exposure and alternative investment strategies.

The company's nonpension postretirement benefit plans are underfunded or unfunded. For some plans, the company maintains a nominal, highly liquid trust fund balance to ensure timely benefit payments.

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Defined Benefit Pension Plan Assets

The following table presents the company's defined benefit pension plans' asset classes and their associated fair value at December 31, 2022. The U.S. Plan consists of the Qualified PPP and the non-U.S. Plans consist of all plans sponsored by the company's subsidiaries.

(\$ in millions)

	U.S. Plan				Non-U.S. Plans			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Equity								
Equity securities ⁽¹⁾	\$518	\$ —	\$ —	\$ 518	\$247	\$ —	\$ —	\$ 247
Equity mutual funds ⁽²⁾	114	—	—	114	0	—	—	0
Fixed income								
Government and related ⁽³⁾	—	9,074	—	9,074	—	6,837	—	6,837
Corporate bonds ⁽⁴⁾	—	6,885	721	7,606	—	2,546	—	2,546
Mortgage and asset-backed securities	—	238	—	238	—	2	—	2
Fixed income mutual funds ⁽⁵⁾	234	—	—	234	—	—	9	9
Insurance contracts ⁽⁶⁾	—	—	—	—	—	3,654	—	3,654
Cash and short-term investments ⁽⁷⁾	72	570	—	643	286	263	—	549
Private equity	—	—	421	421	—	—	—	—
Real estate	—	8	—	8	—	—	145	145
Derivatives ⁽⁸⁾	—	—	—	—	32	262	—	294
Other mutual funds ⁽⁹⁾	—	—	—	—	25	—	—	25
Subtotal	937	16,776	1,142	18,855	590	13,563	155	14,308
Investments measured at net asset value using the NAV practical expedient ⁽¹⁰⁾	—	—	—	6,242	—	—	—	14,141
Other ⁽¹¹⁾	—	—	—	(4)	—	—	—	(78)
Fair value of plan assets	\$937	\$16,776	\$1,142	\$25,094	\$590	\$13,563	\$155	\$28,371

⁽¹⁾ Represents U.S. and international securities. The U.S. Plan includes IBM common stock of \$1 million. Non-U.S. Plans include IBM common stock of \$2 million.

⁽²⁾ Invests in predominantly equity securities.

⁽³⁾ Includes debt issued by national, state and local governments and agencies.

⁽⁴⁾ The U.S. Plans include IBM corporate bonds of \$6 million. Non-U.S. Plans include IBM corporate bonds of \$3 million.

⁽⁵⁾ Invests predominantly in fixed-income securities.

⁽⁶⁾ Primarily represents insurance policy contracts (Buy-In) in certain non-U.S. plans.

⁽⁷⁾ Includes cash, cash equivalents and short-term marketable securities.

⁽⁸⁾ Includes interest-rate derivatives, forwards, exchange-traded and other over-the-counter derivatives.

⁽⁹⁾ Invests in both equity and fixed-income securities.

⁽¹⁰⁾ Investments measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient, including commingled funds, hedge funds, private equity and real estate partnerships.

⁽¹¹⁾ Represents net unsettled transactions, relating primarily to purchases and sales of plan assets.

The U.S. nonpension postretirement benefit plan assets of \$10 million were invested primarily in cash equivalents, categorized as Level 1 in the fair value hierarchy. The non-U.S. nonpension postretirement benefit plan assets of \$29 million, primarily in Brazil, and, to a lesser extent, in Mexico and South Africa, were invested primarily in government and related fixed-income securities and corporate bonds, categorized as Level 2 in the fair value hierarchy.

The following table presents the company's defined benefit pension plans' asset classes and their associated fair value at December 31, 2021. The U.S. Plan consists of the Qualified PPP and the non-U.S. Plans consist of all plans sponsored by the company's subsidiaries.

(\$ in millions)

	U.S. Plan				Non-U.S. Plans			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Equity								
Equity securities ⁽¹⁾	\$2,023	\$ 0	\$ —	\$ 2,023	\$485	\$ —	\$ —	\$ 485
Equity mutual funds ⁽²⁾	133	—	—	133	0	—	—	0
Fixed income								
Government and related ⁽³⁾	—	21,751	—	21,751	—	9,900	—	9,900
Corporate bonds ⁽⁴⁾	—	16,246	598	16,844	—	3,842	—	3,842
Mortgage and asset-backed securities	—	660	—	660	—	3	—	3
Fixed income mutual funds ⁽⁵⁾	281	—	—	281	—	—	—	—
Insurance contracts ⁽⁶⁾	—	—	—	—	—	5,662	—	5,662
Cash and short-term investments ⁽⁷⁾	104	1,269	—	1,373	324	403	—	728
Real estate	—	—	—	—	—	—	174	174
Derivatives ⁽⁸⁾	3	3	—	5	61	489	—	550
Other mutual funds ⁽⁹⁾	—	—	—	—	30	—	—	30
Subtotal	2,543	39,930	598	43,070	900	20,300	174	21,374
Investments measured at net asset value using the NAV practical expedient ⁽¹⁰⁾								
Other ⁽¹¹⁾	—	—	—	9,078	—	—	—	18,652
	—	—	—	(296)	—	—	—	(47)
Fair value of plan assets	\$2,543	\$39,930	\$598	\$51,852	\$900	\$20,300	\$174	\$39,979

⁽¹⁾ Represents U.S. and international securities. The U.S. Plan includes IBM common stock of \$2 million. Non-U.S. Plans include IBM common stock of \$2 million.

⁽²⁾ Invests in predominantly equity securities.

⁽³⁾ Includes debt issued by national, state and local governments and agencies.

⁽⁴⁾ The U.S. Plans include IBM corporate bonds of \$19 million. Non-U.S. Plans include IBM corporate bonds of \$4 million.

⁽⁵⁾ Invests in predominantly fixed-income securities.

⁽⁶⁾ Primarily represents insurance policy contracts (Buy-In) in certain non-U.S. plans.

⁽⁷⁾ Includes cash, cash equivalents and short-term marketable securities.

⁽⁸⁾ Includes interest-rate derivatives, forwards, exchange-traded and other over-the-counter derivatives.

⁽⁹⁾ Invests in both equity and fixed-income securities.

⁽¹⁰⁾ Investments measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient, including commingled funds, hedge funds, private equity and real estate partnerships.

⁽¹¹⁾ Represents net unsettled transactions, relating primarily to purchases and sales of plan assets.

The U.S. nonpension postretirement benefit plan assets of \$8 million were invested in cash equivalents, categorized as Level 1 in the fair value hierarchy. The non-U.S. nonpension postretirement benefit plan assets of \$31 million, primarily in Brazil, and, to a lesser extent, in Mexico and South Africa, were invested primarily in government and related fixed-income securities and corporate bonds, categorized as Level 2 in the fair value hierarchy.

The following tables present the reconciliation of the beginning and ending balances of Level 3 assets for the years ended December 31, 2022 and 2021 for the U.S. Plan.

(\$ in millions)

	Corporate Bonds	Private Equity	Total
Balance at January 1, 2022	\$ 598	\$ —	\$ 598
Return on assets held at end of year	(114)	—	(114)
Return on assets sold during the year	(2)	—	(2)
Purchases, sales and settlements, net	206	—	206
Transfers, net	33	421	454
Balance at December 31, 2022	\$ 721	\$421	\$1,142

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(\$ in millions)

	Corporate Bonds
Balance at January 1, 2021	\$ 542
Return on assets held at end of year	(15)
Return on assets sold during the year	1
Purchases, sales and settlements, net	63
Transfers, net	6
Balance at December 31, 2021	\$ 598

The following tables present the reconciliation of the beginning and ending balances of Level 3 assets for the years ended December 31, 2022 and 2021 for the non-U.S. Plans.

(\$ in millions)

	Government and Related	Private Real Estate	Total
Balance at January 1, 2022	\$ —	\$ 174	\$ 174
Return on assets held at end of year	0	6	6
Return on assets sold during the year	—	(1)	(1)
Purchases, sales and settlements, net	10	(16)	(7)
Transfers, net	—	0	0
Foreign exchange impact	0	(18)	(19)
Balance at December 31, 2022	\$ 9	\$ 145	\$ 155

(\$ in millions)

	Government and Related	Private Real Estate	Total
Balance at January 1, 2021	\$ 2	\$ 298	\$ 300
Return on assets held at end of year	0	(43)	(43)
Return on assets sold during the year	0	58	58
Purchases, sales and settlements, net	(2)	(138)	(140)
Transfers, net	—	—	—
Foreign exchange impact	0	(1)	(1)
Balance at December 31, 2021	\$ —	\$ 174	\$ 174

Valuation Techniques

The following is a description of the valuation techniques used to measure plan assets at fair value. There were no changes in valuation techniques during 2022 and 2021.

Equity securities are valued at the closing price reported on the stock exchange on which the individual securities are traded. IBM common stock is valued at the closing price reported on the New York Stock Exchange. Mutual funds are typically valued based on quoted market prices. These assets are generally classified as Level 1.

The fair value of fixed-income securities is typically estimated using pricing models, quoted prices of securities with similar characteristics or discounted cash flows and are generally classified as Level 2. If available, they are valued using the closing price reported on the major market on which the individual securities are traded.

Cash includes money market accounts that are valued at their cost plus interest on a daily basis, which approximates fair value. Short-term investments represent securities with original maturities of one year or less. These assets are classified as Level 1 or Level 2.

Real estate valuations require significant judgment due to the absence of quoted market prices, the inherent lack of liquidity and the long-term nature of such assets. These assets are initially valued at cost and are reviewed periodically utilizing available and relevant market data, including appraisals, to determine if the carrying value of these assets should be adjusted. These assets are classified as Level 3.

Exchange-traded derivatives are valued at the closing price reported on the exchange on which the individual securities are traded, while forward contracts are valued using a mid-close price. Over-the-counter derivatives are typically valued using pricing models. The models require a variety of inputs, including, for example, yield curves, credit curves, measures of volatility and foreign exchange rates. These assets are classified as Level 1 or Level 2 depending on availability of quoted market prices.

Certain investments are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a practical expedient. These investments, which include commingled funds, hedge funds, private equity and real estate partnerships, are typically valued

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using the NAV provided by the administrator of the fund and reviewed by the company. The NAV is based on the value of the underlying assets owned by the fund, minus liabilities and divided by the number of shares or units outstanding.

Contributions and Direct Benefit Payments

It is the company's general practice to fund amounts for pensions sufficient to meet the minimum requirements set forth in applicable employee benefits laws and local tax laws. From time to time, the company contributes additional amounts as it deems appropriate.

The following table presents the contributions made to the non-U.S. DB plans, nonpension postretirement benefit plans, multi-employer plans, DC plans and direct benefit payments for 2022 and 2021. The cash contributions to the multi-employer plans represent the annual cost included in the net periodic (income)/cost recognized in the Consolidated Income Statement. The company's participation in multi-employer plans has no material impact on the company's financial statements.

(\$ in millions)		
For the years ended December 31:	2022	2021
Non-U.S. DB plans	\$ 103	\$ 86
Nonpension postretirement benefit plans	344	319
Multi-employer plans	15	17
DC plans	924	992
Direct benefit payments	576	671
Total	\$1,962	\$2,085

In 2022 and 2021, \$349 million and \$416 million, respectively, of contributions to the non-U.S. DB plans and nonpension postretirement benefit plans were made in U.S. Treasury securities. Additionally, in 2022 and 2021, contributions of \$557 million and \$424 million, respectively, were made to the Active Medical Trust in U.S. Treasury securities. Contributions made with U.S. Treasury securities are considered a non-cash transaction.

Defined Benefit Pension Plans

In 2023, the company is not legally required to make any contributions to the U.S. defined benefit pension plans. However, depending on market conditions, or other factors, the company may elect to make discretionary contributions to the Qualified PPP during the year.

In 2023, the company estimates contributions to its non-U.S. defined benefit and multi-employer plans to be approximately \$200 million, the largest of which will be contributed to defined benefit pension plans in India and Spain. This amount generally represents legally mandated minimum contributions.

Financial market performance in 2023 could increase the legally mandated minimum contribution in certain countries which require monthly or daily remeasurement of the funded status. The company could also elect to contribute more than the legally mandated amount based on market conditions or other factors.

Expected Benefit Payments

Defined Benefit Pension Plan Expected Payments

The following table presents the total expected benefit payments to defined benefit pension plan participants subsequent to the transfer of Qualified PPP's defined benefit pension obligations and related plan assets, as described above. These payments have been estimated based on the same assumptions used to measure the plans' PBO at December 31, 2022 and include benefits attributable to estimated future compensation increases, where applicable.

(\$ in millions)					
	Qualified U.S. Plan Payments	Nonqualified U.S. Plans Payments	Qualified Non-U.S. Plans Payments	Nonqualified Non-U.S. Plans Payments	Total Expected Benefit Payments
2023	\$1,757	\$124	\$1,893	\$ 342	\$ 4,115
2024	1,791	123	1,869	323	4,106
2025	1,813	121	1,879	324	4,137
2026	1,765	119	1,866	328	4,077
2027	1,712	116	1,846	321	3,996
2028-2032	7,792	538	8,876	1,548	18,754

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The 2023 expected benefit payments to defined benefit pension plan participants not covered by the respective plan assets (underfunded plans) represent a component of compensation and benefits, within current liabilities, in the Consolidated Balance Sheet.

Nonpension Postretirement Benefit Plan Expected Payments

The following table presents the total expected benefit payments to nonpension postretirement benefit plan participants. These payments have been estimated based on the same assumptions used to measure the plans' APBO at December 31, 2022.

(\$ in millions)

	U.S. Plan Payments	Qualified Non-U.S. Plans Payments	Nonqualified Non-U.S. Plans Payments	Total Expected Benefit Payments
2023	\$ 326	\$ 17	\$ 23	\$ 367
2024	253	18	23	294
2025	238	19	23	280
2026	229	20	22	272
2027	220	21	22	263
2028-2032	1,043	122	106	1,271

The 2023 expected benefit payments to nonpension postretirement benefit plan participants not covered by the respective plan assets represent a component of compensation and benefits, within current liabilities, in the Consolidated Balance Sheet.

Other Plan Information

The following table presents information for defined benefit pension plans with accumulated benefit obligations (ABO) in excess of plan assets. For a more detailed presentation of the funded status of the company's defined benefit pension plans, see the table on page 111.

(\$ in millions)

	2022		2021	
	Benefit Obligation	Plan Assets	Benefit Obligation	Plan Assets
At December 31:				
Plans with PBO in excess of plan assets	\$17,220	\$ 9,694	\$25,204	\$13,908
Plans with ABO in excess of plan assets	16,979	9,694	24,853	13,908
Plans with plan assets in excess of PBO	35,534	43,770	68,075	77,924

The following table presents information for the nonpension postretirement benefit plan with APBO in excess of plan assets. For a more detailed presentation of the funded status of the company's nonpension postretirement benefit plans, see the table on page 111.

(\$ in millions)

	2022		2021	
	Benefit Obligation	Plan Assets	Benefit Obligation	Plan Assets
At December 31:				
Plans with APBO in excess of plan assets	\$2,893	\$32	\$4,042	\$40
Plans with plan assets in excess of APBO	7	7	—	—

NOTE W. SUBSEQUENT EVENTS

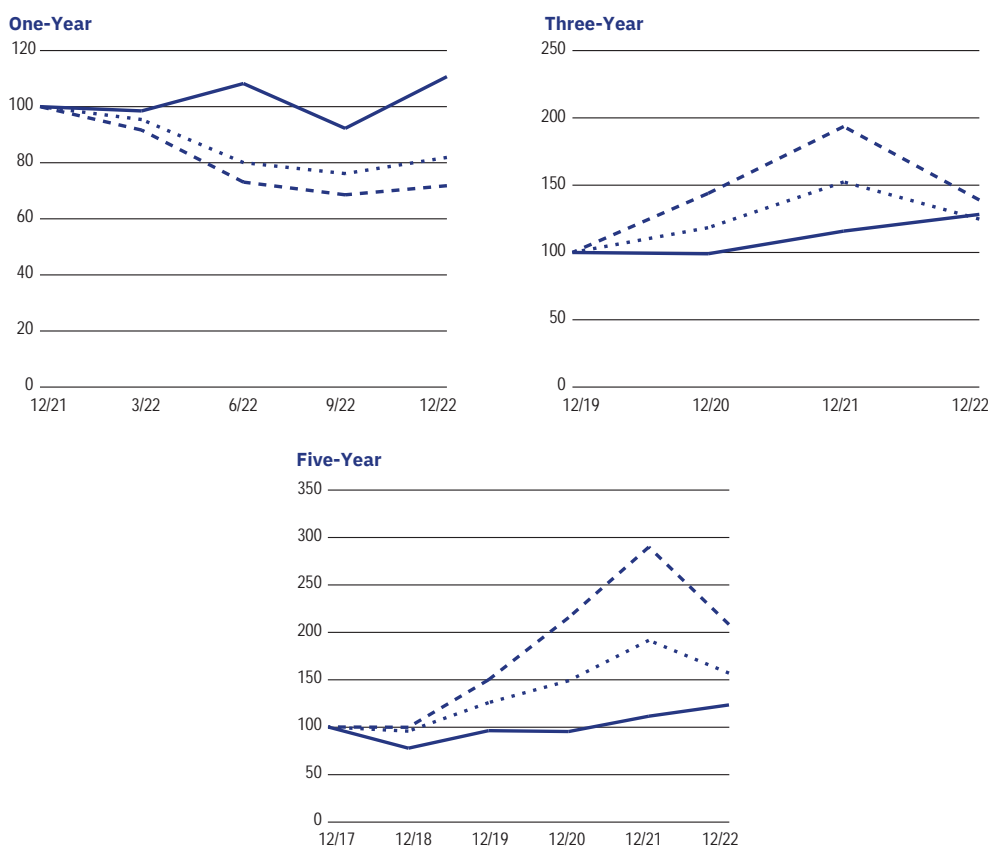
On January 31, 2023, the company announced that the Board of Directors approved a quarterly dividend of \$1.65 per common share. The dividend is payable March 10, 2023 to shareholders of record on February 10, 2023.

On January 27, 2023, the company issued \$0.7 billion of Japanese yen floating-rate syndicated bank loans with a maturity of 5 years. On February 6, 2023, the company issued \$4.6 billion of Euro fixed-rate notes in tranches with maturities ranging from 4 to 20 years and coupons ranging from 3.375 to 4 percent; \$0.9 billion of Pound sterling fixed-rate notes with a maturity of 15 years and a coupon of 4.875 percent; and \$3.25 billion of U.S. dollar fixed-rate notes in tranches with maturities ranging from 3 to 30 years and coupons ranging from 4.5 to 5.1 percent.

COMPARISON OF ONE-, THREE- AND FIVE-YEAR CUMULATIVE TOTAL RETURN FOR IBM, S&P 500 STOCK INDEX AND S&P INFORMATION TECHNOLOGY INDEX

The following graphs compare the one-, three- and five-year cumulative total returns for IBM common stock with the comparable cumulative returns of certain Standard & Poor's (S&P) indices. Due to the fact that IBM is a company included in the S&P 500 Stock Index, the SEC's rules require the use of that index for the required five-year graph. Under those rules, the second index used for comparison may be a published industry or line-of-business index. The S&P Information Technology Index is such an index. IBM is also included in this index.

The graph assumes \$100 invested on December 31 (of the initial year shown in the graph) in IBM common stock and \$100 invested on the same date in each of the S&P indices. The comparisons assume that all dividends are reinvested. On November 3, 2021, we completed the separation of Kyndryl. IBM stockholders received one share of common stock in Kyndryl for every five shares of IBM common stock held at the close of business on October 25, 2021, the record date for the distribution. The effect of the Kyndryl transaction is reflected in the cumulative total return as reinvested dividends.



One-Year

(U.S. Dollar)		12/2021	3/2022	6/2022	9/2022	12/2022
—	International Business Machines	\$100.00	\$ 98.47	\$108.24	\$ 92.25	\$110.70
••••	S & P 500	100.00	95.40	80.04	76.13	81.89
- - - -	S & P Information Technology	100.00	91.64	73.09	68.56	71.81

Three-Year

(U.S. Dollar)		2019	2020	2021	2022
—	International Business Machines	\$100.00	\$ 99.04	\$115.88	\$128.29
••••	S & P 500	100.00	118.40	152.39	124.79
- - - -	S & P Information Technology	100.00	143.89	193.58	139.00

Five-Year

(U.S. Dollar)		2017	2018	2019	2020	2021	2022
—	International Business Machines	\$100.00	\$77.62	\$ 96.13	\$ 95.21	\$111.40	\$123.32
••••	S & P 500	100.00	95.62	125.72	148.85	191.58	156.89
- - - -	S & P Information Technology	100.00	99.71	149.86	215.63	290.08	208.30

Stockholder Information

International Business Machines Corporation and Subsidiary Companies

IBM Stockholder Services

Stockholders with questions about their accounts should contact:

Computershare Trust Company, N.A., P.O. Box 43078, Providence, Rhode Island 02940-3078, (888) IBM-6700.

Investors residing outside the United States, Canada and Puerto Rico should call (781) 575-2727.

Stockholders can also reach Computershare Trust Company, N.A. via e-mail at: ibm@computershare.com

Hearing-impaired stockholders with access to a telecommunications device (TDD) can communicate directly with Computershare Trust Company, N.A., by calling (800) 490-1493. Stockholders residing outside the United States, Canada and Puerto Rico should call (781) 575-2694.

IBM on the Internet

Topics featured in this Annual Report can be found online at www.ibm.com. Financial results, news on IBM products, services and other activities can also be found at that website.

IBM files reports with the Securities and Exchange Commission (SEC), including the annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any other filings required by the SEC.

IBM's website (www.ibm.com/investor) contains a significant amount of information about IBM, including the company's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. These materials are available free of charge on or through IBM's website.

The SEC maintains a website (www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

**Computershare Investment Plan (CIP)
(formerly IBM Investor Services Program)**

The Computershare Investment Plan brochure outlines a number of services provided for IBM stockholders and potential IBM investors, including the reinvestment of dividends, direct purchase and the deposit of IBM stock certificates for safekeeping. The brochure is available at www.computershare.com/ibmcip or by calling (888) IBM-6700. Investors residing outside the United States, Canada and Puerto Rico should call (781) 575-2727.

Investors with other requests may write to: IBM Stockholder Relations, New Orchard Road, M/D 325, Armonk, New York 10504.

IBM Stock

IBM common stock is listed on the New York Stock Exchange and the NYSE Chicago under the symbol "IBM".

Stockholder Communications

Stockholders can get quarterly financial results and voting results from the Annual Meeting by calling (914) 499-7777, by sending an e-mail to infoibm@us.ibm.com, or by writing to IBM Stockholder Relations, New Orchard Road, M/D 325, Armonk, New York 10504.

Annual Meeting

The IBM Annual Meeting of Stockholders will be held on Tuesday, April 25, 2023, at 10 a.m. (ET).

Literature for IBM Stockholders

The literature mentioned below on IBM is available without charge from:

Computershare Trust Company, N.A., P.O. Box 43078, Providence, Rhode Island 02940-3078, (888) IBM-6700.

Investors residing outside the United States, Canada and Puerto Rico should call (781) 575-2727.

The company's annual report on Form 10-K and the quarterly reports on Form 10-Q provide additional information on IBM's business. The 10-K report is released by the end of February; 10-Q reports are released by early May, August and November.

An audio recording of the 2022 Annual Report will be available for sight-impaired stockholders in June 2023.

The IBM ESG Report reflects IBM's belief that corporate responsibility drives long-term value not just in our business, but also for IBM stakeholders. Our 2021 ESG Report, *IBM Impact*, and the related addendum are available online at <https://www.ibm.com/impact>.

General Information

Stockholders of record can receive account information and answers to frequently asked questions regarding stockholder accounts online at www.ibm.com/investor. Stockholders of record can also consent to receive future IBM Annual Reports and Proxy Statements online through this site.

For answers to general questions about IBM from within the continental United States, call (800) IBM-4YOU. From outside the United States, Canada and Puerto Rico, call (914) 499-1900.

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International Business Machines Corporation and Subsidiary Companies

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*Retiring by June 30, 2023.



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