



Let's create

2021
Annual Report

Dear IBM Investor:

Today's IBM has defined a clear strategy to lead in the era of hybrid cloud and AI.

In 2021, we took a series of dramatic steps to execute against that strategy, strengthening our portfolio, expanding our partner ecosystem, and returning your company to growth.

As a result, we enter 2022 more strategically focused and more technologically capable. We are integrating technology and expertise—from IBM, our partners, and even our competitors—to meet the urgent needs of our clients, who see hybrid cloud and AI as crucial sources of competitive advantage. And we are ready to be the catalyst of progress for our clients as they pursue the digital transformation of the world's mission-critical businesses.

As you will see in this report, our strategy is resonating with clients and partners, our technology and business expertise are in high demand, and our company is more nimble, focused, and positioned for sustainable growth.

2021 performance

For the year, IBM generated \$57.4 billion in revenue and \$12.8 billion in cash from operations.

Revenue growth accelerated at constant currency throughout 2021, and we exited the year with 8.6% growth in the fourth quarter, including approximately 3.5 points from incremental external sales to Kyndryl. Hybrid cloud revenue grew 19% at constant currency in 2021 and now makes up 35% of IBM revenue. Today, over 70% of our annual revenue is in software and consulting, both delivering healthy, sustainable growth.

Our performance was driven by our unique ability to combine IBM's technology and expertise to create value for our clients and partners. We integrate IBM Software, IBM Consulting, and IBM Infrastructure to deliver this value.

IBM Software allows clients to leverage the full power of hybrid cloud and AI. Software revenues were up 4% at constant currency. Red Hat continues to gain momentum, growing nearly 21% at constant currency in the fourth quarter, benefiting from its integration with IBM's portfolio and reflecting strong demand for open source innovation.

IBM Consulting revenues were up 8% at constant currency, driven by clients that rely on IBM as their trusted partner for digital transformation.

IBM Infrastructure revenues declined 3% at constant currency, reflecting product cycle dynamics. Clients continue to leverage our Power servers, storage, and IBM Z systems as foundational elements of their hybrid cloud infrastructure. In fact, we have shipped more MIPs in the z15 than any program in our history.

With this revenue and cash generation, we returned \$6 billion to stockholders through dividends in 2021. We reduced debt by \$10 billion in 2021 and by \$21 billion since acquiring Red Hat in 2019. We did all of this while we continued to invest in skills, innovation, and our ecosystem, including \$3 billion on acquisitions in the year.

IBM now has a higher-growth, higher-value business, with strong and growing free cash flow, lower capital intensity, and attractive shareholder returns.

Strategy and execution

We entered 2021 with a series of clear but ambitious goals: to strengthen our portfolio, simplify our operations, and broaden our ecosystem. Our financial performance is a direct reflection of our ability to execute against these goals.

Throughout the year, we continued to align our offerings with the two most transformational technologies of our time: hybrid cloud and AI. Our platform-centric approach starts with Red Hat, which allows our clients to develop and deploy their applications on private and public clouds, achieve consistent security across their computing infrastructure, and consume innovation from anywhere.

Our portfolio is positioned to capture the \$1 trillion hybrid cloud opportunity, enabling our clients to access and deploy our AI capabilities on IBM's cloud or those of other major providers. Our software has been enhanced and bundled to help clients become more data-driven, and to automate, secure, and modernize their business and IT operations. IBM Consulting has transformed itself by deepening its technical expertise and embracing a co-creation model with clients.

To complement our organic investments, we made 15 strategic acquisitions to strengthen and extend our hybrid cloud and AI offerings. For example, Waeg, Bluetab, and Taos reinforce our cloud consulting expertise. Turbonomic integrates with Instana and Watson AIOps to create an industry-leading suite of automation software. The recent acquisition of Envizi builds on our existing asset management and supply chain solutions to help organizations develop more resilient and sustainable operations. And ReaQta expands our AI-based threat detection and response capabilities in IBM Security.

To improve how we deliver the value of these offerings to our clients, we have updated our client engagement model to emphasize experiential selling and co-creation. We have also greatly expanded our partner ecosystem. This network of systems integrators, independent software vendors, service providers, channel partners, and developers has been carefully selected to deliver value to our clients, our partners, and IBM. In 2021, we strengthened existing relationships with companies like Adobe, Oracle, and EY. We created new consulting services in collaboration with SAP and co-created an AI-enabled analytics solution with Deloitte. We announced new strategic partnerships with Cisco, Palo Alto Networks, and Telus, all focused on 5G, Edge, and network automation. And we saw our partnership revenue with AWS, Azure, and Salesforce grow more than 50%.

A client-centric culture

Our efforts have been designed to accelerate the delivery of value to our clients and partners, part of a larger cultural shift at IBM toward total client-centricity. We believe that IBM has a unique ability to solve our clients' most pressing business problems, bringing together all the necessary hardware, software, and consulting, regardless of whether those solutions come from IBM or our ecosystem partners.

We are seeing high demand for our capabilities in many areas. Clients want to automate as many business tasks as possible given the current workforce dynamics. They are increasingly using AI and predictive capabilities to improve their supply chains. Security remains a major focus area, as the cost of cybercrime continues to rise. As clients deal with these challenges and opportunities, they are looking for a trusted partner with a proven track record of delivering strategic transformation.

For example, we are helping Spain's Telefónica to modernize its network platform, combining the potential of 5G with the customization and intelligence of hybrid cloud. National Grid, a leading US electric and gas utility, is working with IBM and Boston Dynamics to analyze data at the edge in real time to improve equipment uptime and prevent power outages. The Australian federal government is working with IBM on the technology platform that powers the country's COVID-19 vaccination program. And IBM Consulting and PNC Bank partnered on a next-generation solution that allows customers to make banking decisions based on real-time data—a massive change for the banking industry.

This client-first, problem-solving approach is the reason why our client renewal rates are increasing and our recurring revenue base is growing. It is the reason why longtime clients like CVS, Verizon, and Anthem continue to put their trust in our people and our technology. And it is the reason why we now have more than 3,800 hybrid cloud platform clients and nearly 3,000 clients co-creating in IBM Garages.

Our commitment to science and innovation

While we are focused on meeting the needs of clients today, we continue to shape the technologies of tomorrow. That is why IBM Research continues to advance the fundamental science of computing, driving innovation and pioneering a new era of accelerated discovery.

IBM continues to lead the development of quantum computing. This year, we delivered operational quantum computers to Japan and Germany, deployed the world's first 127-qubit processor, and are now on our way to a 1,000-qubit processor by the end of 2023. We also forged a series of long-term partnerships with universities, governments, and hospitals to develop quantum applications that will accelerate the discovery of everything from medicine to materials.

In 2021, we unveiled not one, but two, major breakthroughs in semiconductor design. First, the world's first 2-nanometer chip technology, which will allow 50 billion transistors to fit on a chip the size of a fingernail. The chips are expected to achieve 45% higher performance than today's 7-nanometer chips. Second, in collaboration with our Albany Research Alliance partner Samsung, IBM Research introduced a completely new approach to semiconductor design called Vertical-Transport Nanosheet Field Effect Transistor, or VTFET, which could help keep Moore's law alive for years to come.

Responsible stewardship for the digital age

At IBM, we have always understood that our responsibilities extend far beyond the bottom line. That is why we embrace our leadership role in defining good tech in the digital age.

Among the most pressing challenges facing our society today is closing the STEM skills gap, which holds back both technological and socioeconomic progress. To address this issue, IBM regularly engages at the highest levels of government to improve access to the education and skills needed for modern, rewarding jobs. In addition, IBM has committed to providing 30 million people of all ages with critical skills by 2030, by fostering more than 50 new partnerships for the IBM SkillsBuild program.

We also continue to make progress on diversity and inclusion, which we believe is imperative for the health of our business and our society. In 2021, we added a diversity modifier to our executive compensation program to reinforce the importance of a diverse workplace. The Human Rights Campaign Foundation designated IBM as a "Best Place to Work for LGBTQ+ Equality" with a 100% rating. These efforts—and others—were recently recognized by JUST Capital, which named IBM the most just company in our industry.



Arvind Krishna
Chairman and
Chief Executive Officer

In 2021, we furthered our tradition of leadership in sustainability, announcing a goal of net-zero greenhouse gas emissions by 2030 across all the countries in which we operate. Our commitment to the environment is also evident in our products, including the new IBM Environmental Intelligence Suite, which combines weather, climate, and operational data to measure and manage environmental performance. And in May, IBM launched the 2021 Call for Code Global Challenge, which invited the world's software developers to combat climate change with technology powered by open source software. The top prize this year went to Saaf Water, an accessible water quality sensor and analytics platform for people living in rural localities.

The catalyst that makes the world work better

On the cover of this report is a simple phrase: "Let's create." This is a signal to the world that IBM has changed. We are more open to partnership, more open to ideas, and more open to innovation than ever before. "Let's create" is an invitation to all of our stakeholders to join us in solving the most complex problems facing business and society today.

As the nature of those problems changes over time, so too will IBM, reinventing itself to overcome whatever obstacles stand in the way of progress. And while many things about our company change, there are some things that will always stay the same. We will always be dedicated to our clients' success, pursue innovation that matters, and set the standard for trust and responsibility.

Why do we hold ourselves to such high standards? Because IBM's clients own and operate the planet's mission-critical systems: electrical grids, airlines, telecommunications networks, banks, government services, and many others. These systems are more than just engines of economic growth. They are the systems that support modern society. In making them faster, more productive, and more secure, we don't just make business work better; we make the world work better. We don't just create business value; we create progress.

I believe IBM is now positioned to be the catalyst of that progress for decades to come.



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. The rationale for management's use of this non-GAAP information is included on page 6 of the company's 2021 Annual Report, which is Exhibit 13 to the Form 10-K submitted with the SEC on February 22, 2022. For reconciliation of these non-GAAP financial measures to GAAP and other information, please refer to pages 9, 17, and 32 of the company's 2021 Annual Report. Cash from operations is presented on a consolidated basis, which includes activity from discontinued operations related to the separation of Kyndryl.

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OVERVIEW

The financial section of the International Business Machines Corporation (IBM or the company) 2021 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 2021.
- On November 3, 2021, the company completed the previously announced 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 with the intent to dispose of such shares within twelve months after the distribution. The company accounts for the retained Kyndryl common stock as a fair value investment included within prepaid expenses and other current assets in the Consolidated Balance Sheet with subsequent fair value changes included in other (income) and expense in the Consolidated Income Statement.
- 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.
- 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 recast to reflect the separation of Kyndryl 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, information on the separation of Kyndryl, revenue information, acquisitions and divestitures, certain commitments and contingencies and retirement-related plans information.
- Effective immediately prior to the separation of Kyndryl, the company made a number of changes to its organizational structure and management system. These changes impacted the company’s reportable segments beginning in the fourth quarter of 2021 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.
- On July 9, 2019, IBM acquired 100 percent of the outstanding shares of Red Hat, Inc. (Red Hat). Red Hat is reported within the Software segment, in Hybrid Platform & Solutions. Refer to note F, “Acquisitions & Divestitures,” 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. See “Currency Rate Fluctuations” for additional information.
- To provide useful decision-making information for management and shareholders, the company defines and measures 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. The definition of hybrid cloud revenue is consistent with the prior methodology for cloud revenue historically presented. 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.
- 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.

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 related tax effects. 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 include true-ups, accounting elections and any changes to regulations, laws, audit adjustments, etc. that affect the recorded one-time charge. Management also characterizes direct and incremental charges incurred related to the Kyndryl separation as non-operating given their unique and non-recurring nature. These charges include applicable employee awards and tax impacts related to the separation. Given its unique and temporary nature, management has also characterized the unrealized gain on Kyndryl common stock recorded in other (income) and expense in the Consolidated Income Statement as non-operating. The gain reflects fair value changes in the shares that were retained by the company immediately following the separation, with the intent to dispose of such shares within twelve months after the distribution. 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 the company's acquisitions. All other spending for acquired companies is included in both earnings from continuing operations and in operating (non-GAAP) earnings. Throughout the Management Discussion, the impact of acquisitions over the prior 12-month period may be a driver of higher expense year to year. 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 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 the company considers 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 the company's pension plans; improves visibility to management decisions and their impacts on operational performance; enables better comparison to peer companies; and allows the company 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 2021 Form 10-K filed on February 22, 2022.

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:	2021	2020	Yr.-to-Yr. Percent/Margin Change
Revenue	\$ 57,350	\$ 55,179	3.9 %*
Gross profit margin	54.9 %	55.9 %	(1.0)pts.
Total expense and other (income)	\$ 26,649	\$ 28,293 **	(5.8)%
Income from continuing operations before income taxes	\$ 4,837	\$ 2,572 **	88.0 %
Provision for/(benefit from) income taxes from continuing operations	\$ 124	\$ (1,360)	NM
Income from continuing operations	\$ 4,712	\$ 3,932 **	19.8 %
Income from continuing operations margin	8.2 %	7.1 %	1.1 pts.
Income from discontinued operations, net of tax	\$ 1,030	\$ 1,658 +	(37.9)%
Net income	\$ 5,743	\$ 5,590	2.7 %
Earnings per share from continuing operations—assuming dilution	\$ 5.21	\$ 4.38 **	18.9 %
Consolidated earnings per share—assuming dilution	\$ 6.35	\$ 6.23	1.9 %
Weighted-average shares outstanding—assuming dilution	904.6	896.6	0.9 %
Assets**	\$132,001	\$155,971	(15.4)%
Liabilities**	\$113,005	\$135,244	(16.4)%
Equity**	\$ 18,996	\$ 20,727	(8.4)%

* 2.7 percent adjusted for currency.

** Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact to diluted earnings per share from continuing operations of (\$1.33).

+ Includes a \$0.6 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact to diluted earnings per share from discontinued operations of (\$0.51).

** At December 31. Discontinued operations are included in 2020 balances.

NM—Not meaningful

The following table provides the company's operating (non-GAAP) earnings for 2021 and 2020. See page 29 for additional information.

(\$ in millions except per share amounts)

For year ended December 31:	2021	2020	Yr.-to-Yr. Percent Change
Net income as reported	\$5,743	\$5,590	2.7 %
Income from discontinued operations, net of tax	1,030	1,658 *	(37.9)
Income from continuing operations	\$4,712	\$3,932 **	19.8 %
Non-operating adjustments (net of tax)			
Acquisition-related charges	1,424	1,434	(0.7)
Non-operating retirement-related costs/(income)	1,031	864	19.3
U.S. tax reform impacts	89	(110)	NM
Kyndryl-related impacts	(81)	—	NM
Operating (non-GAAP) earnings	\$7,174	\$6,120 **	17.2 %
Diluted operating (non-GAAP) earnings per share	\$ 7.93	\$ 6.82 **	16.3 %

* Includes a \$0.6 billion pre-tax charge for structural actions in the fourth quarter.

** Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact to diluted operating (non-GAAP) earnings per share of (\$1.33).

NM—Not meaningful

Separation of Kyndryl

On November 3, 2021, IBM took an important step in advancing its focus on hybrid cloud and Artificial Intelligence (AI) with the separation of its managed infrastructure services unit into a new public company, Kyndryl. The separation of Kyndryl creates two industry-leading companies, which will continue to have a strong commercial relationship. Both IBM and Kyndryl have increased clarity and ability to focus on their respective operating and financial models, including capital deployment, investment strategies, and investment grade capital structures. The separation enables greater freedom of action to partner and capture new opportunities. The outcome of all of these actions will be increased value for clients and investors.

Global Pandemic

On March 11, 2020, the World Health Organization (WHO) declared the novel coronavirus (COVID-19) a global pandemic which resulted in significant governmental measures being initiated around the globe to slow down and control the spread of the virus. As we managed through the second year of the pandemic, the health of IBM employees, our clients, business partners and community remains our primary focus. We are actively engaged to ensure our plans continue to be aligned with recommendations of the WHO, the U.S. Centers for Disease Control and Prevention and governmental regulations.

The continued environment of uncertainty has only reinforced the need for clients to modernize their businesses to succeed in this new normal, with hybrid cloud and AI at the core of their digital transformations. Across industries, clients are using technology as a source of competitive advantage. We are enabling clients' transformations by embedding technology at the core of their businesses. Among other things, for example, we are leveraging our hybrid cloud and AI capabilities to help clients reimagine critical workflows, at scale, and modernize applications to increase agility, drive innovation and create operational efficiencies. We are also applying data analytics and automation to mitigate friction in their supply chains and automate business tasks.

The spending environment continued to improve throughout the year despite additional waves of the pandemic. From an industry standpoint, we have seen meaningful improvement in areas most affected by the pandemic such as travel, transportation, automotive and industrial products as well as retail and consumer packaged goods. IBM continues to be well positioned to support our clients to emerge even stronger.

Financial Performance Summary

In 2021, we reported \$57.4 billion in revenue, income from continuing operations of \$4.7 billion and operating (non-GAAP) earnings of \$7.2 billion. Diluted earnings per share from continuing operations was \$5.21 as reported and \$7.93 on an operating (non-GAAP) basis. On a consolidated basis, we generated \$12.8 billion in cash from operations and \$6.5 billion in free cash flow, which includes 10 months of Kyndryl operations, cash impacts from the structural actions initiated in the fourth quarter of 2020 and Kyndryl separation-related charges, and delivered shareholder returns of \$5.9 billion in dividends. These results reflect progress in our key growth areas resulting from the strong client demand we see in the marketplace for our technology and consulting. We continue to increase investments in skills, innovation and our ecosystem, and our balance sheet continues to provide us with the flexibility to support our business needs.

Total revenue grew 3.9 percent as reported and 3 percent adjusted for currency compared to the prior year with increases in our key growth areas of software and consulting. Year-to-year performance also included a benefit from incremental revenue from our new commercial relationship with Kyndryl beginning in the fourth quarter of 2021, which represented approximately 1 point of our full-year revenue growth. Software revenue increased 5.3 percent as reported and 4 percent adjusted for currency, including approximately 2 points of growth from fourth-quarter sales to Kyndryl. Hybrid Platform & Solutions grew 8.8 percent as reported (8 percent adjusted for currency), led by strong double-digit growth in Red Hat. Transaction Processing declined 3.3 percent as reported (4 percent adjusted for currency) as clients continued their preference for operating expenses over capital expenditures. Consulting revenue increased 9.8 percent as reported and 8 percent adjusted for currency with growth across all three business areas. Infrastructure revenue decreased 2.4 percent year to year as reported and 3 percent adjusted for currency, with the overall decline in revenue reflecting our product cycle dynamics. This performance also includes approximately 1 point of growth from fourth-quarter sales to Kyndryl. Across the segments, total hybrid cloud revenue of \$20.2 billion in 2021 grew 20 percent as reported and 19 percent adjusted for currency.

From a geographic perspective, Americas revenue grew 4.4 percent year to year as reported (4 percent adjusted for currency). Europe/Middle East/Africa (EMEA) increased 4.1 percent (1 percent adjusted for currency). Asia Pacific grew 2.8 percent (3 percent adjusted for currency).

The gross margin of 54.9 percent decreased 1.0 point year to year, however, gross profit dollars increased 2.0 percent compared to the prior year. Overall, gross margin was impacted by the significant investments we are making to drive our hybrid cloud and AI strategy as well as our product cycle dynamics. The operating (non-GAAP) gross margin of 56.2 percent decreased 1.1 points versus the prior year.

Total expense and other (income) decreased 5.8 percent in 2021 versus the prior year primarily driven by a \$1.9 billion (7 points) decrease in charges for workforce rebalancing and a benefit from expected credit loss expense in the current year compared to a provision in the prior year, partially offset by higher non-operating retirement-related costs and the effects of currency. Our expense dynamics reflect a higher level of investment in innovation, skills and our ecosystem, both organically and through acquisitions, as we execute our hybrid cloud and AI strategy. We are aggressively hiring and scaling resources to better serve clients, while increasing our research spend to deliver innovation in AI, hybrid cloud and emerging areas such as quantum and we are expanding our ecosystem. Total operating (non-GAAP) expense and other (income) decreased 6.8 percent year to year, driven primarily by the same factors excluding the higher non-operating retirement-related costs.

Pre-tax income from continuing operations of \$4.8 billion increased 88.0 percent and the pre-tax margin was 8.4 percent, an increase of 3.8 points versus 2020, primarily due to the higher workforce rebalancing charges in 2020. The continuing operations effective tax rate for 2021 was 2.6 percent compared to (52.9) percent in 2020. The current-year effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. The prior-year effective tax rate was primarily driven by a net tax benefit of \$0.9 billion related to an intra-entity sale of certain of the company's intellectual property (IP) in the first quarter of 2020, and a benefit of \$0.2 billion related to a foreign tax law change. Net income from continuing operations of \$4.7 billion increased 19.8 percent and the net income from continuing operations margin was 8.2 percent, up 1.1 points year to year. Operating (non-GAAP) pre-tax

Management Discussion

International Business Machines Corporation and Subsidiary Companies

income from continuing operations of \$7.9 billion increased 43.6 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations increased 3.8 points to 13.7 percent, reflecting the lower workforce rebalancing charges in the current year. The operating (non-GAAP) effective tax rate for 2021 was 9.0 percent compared to (11.5) percent in 2020. The prior year operating (non-GAAP) benefit from income taxes was primarily driven by the net tax benefit from the intra-entity IP sale. Operating (non-GAAP) income from continuing operations of \$7.2 billion increased 17.2 percent and the operating (non-GAAP) income margin from continuing operations of 12.5 percent was up 1.4 points year to year.

Diluted earnings per share from continuing operations of \$5.21 in 2021 increased 18.9 percent and operating (non-GAAP) diluted earnings per share of \$7.93 increased 16.3 percent versus 2020, with the prior year including a (\$1.33) impact from the fourth-quarter structural actions on both an as reported and operating (non-GAAP) basis.

Our balance sheet is presented on a consolidated basis, with the December 31, 2020 balance sheet reclassified to provide line items on a continuing operations basis and separately provide current and noncurrent assets and liabilities for Kyndryl discontinued operations. In order to present a meaningful year-to-year comparison, the amounts presented below exclude assets and liabilities of discontinued operations.

At December 31, 2021, the balance sheet remained strong with the flexibility to support and invest in the business needs. Cash and cash equivalents, restricted cash and marketable securities at year end were \$7.6 billion, a decrease of \$6.7 billion from December 31, 2020. During 2021, we continued to de-lever our debt, invest in acquisitions and provide a growing dividend to shareholders. We have reduced total debt by \$9.6 billion from prior year end and \$21.3 billion since the second quarter of 2019 (immediately preceding the Red Hat transaction).

Total assets, excluding discontinued operations, decreased \$8.2 billion (decreased \$5.1 billion adjusted for currency) from December 31, 2020 primarily driven by:

- A decrease of \$6.7 billion (\$6.5 billion adjusted for currency) in cash and cash equivalents, restricted cash and marketable securities due to debt paydown, investments in acquisitions and dividend payments;
- A decline in receivables of \$3.5 billion (\$2.8 billion adjusted for currency) primarily due to sales of financing receivables and volumes decline; and
- A decrease in deferred taxes of \$1.0 billion (\$0.7 billion adjusted for currency) primarily due to pension plan remeasurements, foreign audit settlements and realization of deferred tax assets in foreign jurisdictions; partially offset by
- An increase in prepaid pension assets of \$2.3 billion (\$2.4 billion adjusted for currency) driven by plan remeasurements and higher returns on plan assets; and
- An increase of \$1.4 billion (\$1.5 billion adjusted for currency) in prepaid expenses and other current assets primarily due to our investment in Kyndryl and an increase in derivative assets.

Total liabilities, excluding discontinued operations, decreased \$15.1 billion (decreased \$10.9 billion adjusted for currency) from December 31, 2020 primarily driven by:

- A decrease in total debt of \$9.6 billion (\$8.4 billion adjusted for currency) primarily driven by debt maturities and early retirements;
- A decrease in retirement and nonpension postretirement benefit obligations of \$2.7 billion (\$1.9 billion adjusted for currency) mainly driven by plan remeasurements; and
- A decrease in other accrued expenses and liabilities of \$1.7 billion (\$1.2 billion adjusted for currency) primarily due to payments for workforce rebalancing actions.

Total equity of \$19.0 billion decreased \$1.7 billion from December 31, 2020 as a result of:

- A decrease of \$7.2 billion related to the separation of Kyndryl; and
- Dividends paid of \$5.9 billion; partially offset by
- Net income of \$5.7 billion; and
- A decrease in accumulated other comprehensive losses of \$4.8 billion.

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. For 2021, they included 10 months of Kyndryl operations versus a full year of Kyndryl in 2020.

On a consolidated basis, cash provided by operating activities was \$12.8 billion in 2021, a decrease of \$5.4 billion compared to 2020, driven primarily by a decrease in cash provided by receivables (\$3.9 billion) and a decrease in payroll tax and value-added tax payment

liabilities (\$1.0 billion) due to payments in the current year for tax relief provided under the U.S. CARES Act and other non-U.S. government assistance programs in 2020.

Net cash used in investing activities of \$6.0 billion increased \$2.9 billion compared to the prior year, primarily driven by an increase in net cash used for acquisitions (\$3.0 billion).

Financing activities were a net use of cash of \$13.4 billion in 2021 compared to \$9.7 billion in 2020. The year-to-year increase of \$3.6 billion was driven by a decrease in net cash provided from debt transactions (\$4.4 billion), partially offset by an increase in cash provided of \$0.9 billion due to the Kyndryl distribution to IBM at separation.

DESCRIPTION OF BUSINESS

Please refer to IBM's Annual Report on Form 10-K filed with the SEC on February 22, 2022, for Item 1A. entitled "Risk Factors."

IBM is addressing the hybrid cloud and AI opportunity with a platform-centric approach, focused on providing two primary sources of client value – 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

Our strategy is focused on helping clients leverage the power of hybrid cloud and Artificial Intelligence (AI). In 2021, we took an important step with the spin-off of our managed infrastructure services business, now known as Kyndryl. Our strategy resonates with clients, who must continually innovate and redefine their businesses with technology. Our flexible, secure, and open hybrid cloud platform accelerates clients' outcomes, differentiates the company, and drives a multiplier effect across our software, consulting, and infrastructure businesses as well as to a broad ecosystem of partners. Our strategy positions IBM for accelerated growth today, while preparing the company for the opportunities of the future.

Accelerating Digital Transformation

A new era of rapid change and disruption is underway. The need for digital transformation has dramatically accelerated due to the pandemic and extends through the core mission-critical business processes of almost all large enterprises. Successful digital transformations face major obstacles: (1) managing increased complexity, as large enterprises use multiple heterogeneous IT environments and clouds, (2) deriving value from an explosion of available data, projected by analysts to grow up to three-fold in the next three years, (3) guaranteeing competitive operations, in the context of disruptive changes and worker shortages, (4) addressing the increase of malicious security breaches and rising cost of cybercrime, and (5) successfully meeting those challenges together with a cohesive end-to-end sustainable execution.

To address these obstacles, enterprises want technology that provides flexibility with open-source across heterogeneous environments – an approach known as hybrid cloud. We have demonstrated that such an approach creates 2.5 times more value for enterprises than a public cloud-only one. Open-source technologies, such as Linux, containers, and Kubernetes, are essential to hybrid cloud, as they harness the power of millions of developers to accelerate the speed of innovation. 85 percent of organizations expect to use Linux containers by 2025. Additionally, AI continues to expand as a key technology to unlock value, with more than 80 percent of enterprises agreeing that intelligent automation can improve business results. As AI for production scales, enterprises and governments focus on ensuring AI models are unbiased and trustworthy.

A Differentiated Architecture for Business Innovation

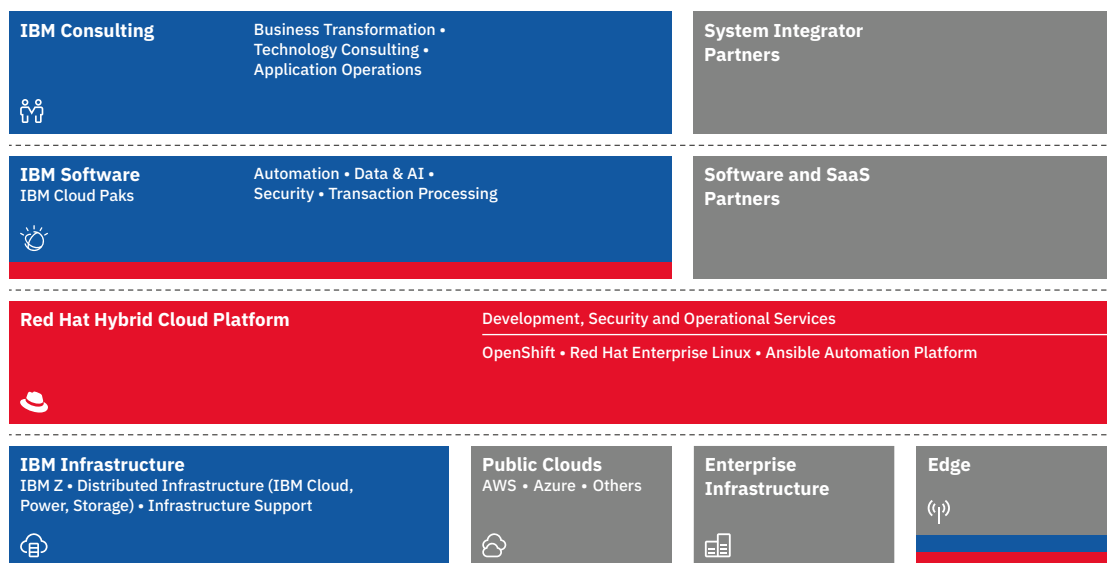
The evolution we see in the market confirms the strategic changes executed by IBM to deliver on a hybrid cloud and AI strategy, creating sustained value for our clients. Our differentiation derives from a flexible, secure, open hybrid cloud platform, the comprehensive set of assets it impacts, and our ability to combine them to scale up solutions for enterprise digital transformation and mission-critical systems.

Our value proposition builds on five core capabilities, addressing our clients' hybrid cloud and AI needs: (1) Build and modernize for the hybrid cloud, to develop and operate with speed, consistency and agility, (2) Create data-driven business insights regardless of where data lives and while maintaining enterprise grade data governance, privacy and trust, (3) Automate the end-to-end enterprise processes, for effectiveness and efficiency 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.

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Our full technology stack helps us to meet clients wherever they are in digital transformation, and we offer the consulting expertise to help guide and implement the best solutions for that journey. Our rapidly growing ecosystem of cloud, ISVs, hardware, network, and services partners enhance the client experience and drive the value and innovation that can be derived from IBM open-source technologies.



Our hybrid cloud approach is platform-centric, with Linux, containers, and Kubernetes as the architectural foundation. Platforms provide compelling economics: every \$1 of platform spend on average drives \$3 to \$5 of software revenue, \$6 to \$8 of services and \$1 to \$2 of enterprise infrastructure. The multiplier effect of our technology stack creates more value for IBM and our growing ecosystem of partners. The hybrid cloud market alone represents a \$1 trillion market, out of which (1) Red Hat Hybrid cloud platforms and IBM Software address a \$450 billion market opportunity, (2) IBM Consulting, a \$300 billion market opportunity, and (3) IBM Infrastructure, a \$230 billion market opportunity.

To capture this hybrid cloud market opportunity, we are prioritizing our investment in offerings aligned to our stated strategy such as Red Hat OpenShift and RHEL, IBM Cloud Paks, related IBM Consulting practices and IBM Infrastructure. We have purposefully embedded our hybrid cloud open platform with our other offerings, to accelerate innovation and amplify impact in our clients' environment. We have also fostered our **ESG** initiatives, as the world continues to move toward a more circular economy, a priority for our stakeholder groups and a growing business opportunity for IBM. In 2021, we targeted 2030 for reaching net zero greenhouse gas emissions, and we launched new AI-enabled solutions such as the IBM Environmental Intelligent Suite, to make our clients more sustainable over time.

In addition to our organic investments in R&D, we have been aggressive in inorganic investments in critical hybrid cloud and sustainability software assets, such as Instana, Turbonomic and Envizi. In Consulting, we have also been aggressive acquiring the expertise our clients demand to support their digital innovation including 7Summits, Taos, BoxBoat Technologies and BlueTab Solutions. We successfully completed 15 acquisitions in 2021.

IBM Software solutions amplify the growth and value of our hybrid cloud platform into the software stack with four critical technology capabilities – (1) “Modernize” from legacy to hybrid cloud architecture, (2) Create “data-driven” business insights from distributed data linked via a hybrid data fabric powered by an automated governance, (3) “Automate” end-to-end processes running across IT and business environments, (4) “Secure” together multiple environments, applications and data. Our capabilities are delivered through Cloud Paks that are pre-integrated, pre-certified, AI-powered containerized software packages and are optimized for Red Hat OpenShift. Of the Fortune 500, 40 percent have purchased IBM Cloud Paks, and two-thirds use IBM Security, while increasingly leveraging our expanding software subscription and as-a-service models. We deeply infuse Artificial Intelligence across our Software portfolio, and we are advancing trustworthy AI with a multidisciplinary approach through the IBM AI Ethics board. In 2021, we added new natural language processing enhancements to Watson Discovery. We are combining and integrating products such as Turbonomic, Instana and Watson AIOps to offer a complete set of AI-powered automation software.

Red Hat, reported in our Software segment, is the leading hybrid cloud software platform, and the only one that is fully integrated and open source, with built-in development, security, and operations features. More than 94 percent of the Fortune 500 use Red Hat products and solutions. Red Hat takes advantage of a broad ecosystem of partners and of millions of developers to accelerate innovation. Leveraging the power of Kubernetes and containers, OpenShift creates the foundation that allows our clients to manage

siloed, multi-cloud, edge, and legacy infrastructure as a single platform. These capabilities are a clear differentiator, enabling our clients to “write once, deploy anywhere” for their hybrid architecture. We are seeing strong momentum, with more than 3,800 clients using our hybrid cloud platform, adding 1,000 clients in 2021. Red Hat OpenShift is recognized as a leader and clear choice for container platform, with more than 40 percent market share in 2021. We are continually investing in Red Hat OpenShift, RHEL and Ansible to extend our technology leadership, while combining the Red Hat platform with IBM’s incumbency, scale, and reach.

IBM Consulting, with 150,000+ professionals in over 150+ countries, helps clients design their digital transformation, build open hybrid cloud architectures, orchestrate applications across environments, and optimize key workflows and business processes. 100 percent of top ten companies in financial services, telecoms, public sector, automotive and healthcare are clients. IBM Consulting has more Red Hat OpenShift certified experts than any of our competition and drove about 700 Red Hat engagements in 2021. IBM Consulting has re-designed its services practices to foster adoption of our hybrid cloud platform and has built or migrated hybrid cloud applications for more than 500 clients. IBM Consulting works with our hybrid cloud and AI ecosystem partners and developers to create the custom solutions that realize digital transformation for clients worldwide, across industries. IBM Consulting also captures growth by investing in advanced practices with AWS, Azure, and major ISVs, such as Adobe, Oracle, SAP and Salesforce.

IBM Infrastructure is the foundation of our hybrid cloud stack, and closely integrates the Red Hat solutions. Our clients are using a combination of public and private cloud infrastructure to keep their mission-critical data and workloads secure, and we continue to be at the heart of mission-critical enterprise workloads. For example, 90 percent of the top 50 banks run on IBM Z, our Mainframe solution. IBM Z delivers security, privacy, and resiliency at scale in a hybrid cloud environment – including running OpenShift to extend the hybrid cloud value proposition. Power, Storage, and IBM Cloud enhance how clients consume, manage, and operate as they take full advantage of our hybrid cloud capabilities for critical workloads. As a result, 94 percent of the Fortune 50 use IBM Cloud.

IBM Research continues to invest in the most promising future technologies with critical impact on clients’ hybrid cloud and AI transformations with confidential computing, trusted AI, neuro-symbolic AI, and sustainability. IBM Quantum fosters next generation computing by (1) delivering the industry leading as-a-Service and software development platform, Qiskit, (2) enabling quantum workflows in existing software such as Watson Studio and (3) providing consulting and technical services as clients and partners adopt quantum computing. In 2021, we unveiled Eagle, a 127-qubit quantum processor. This is the first quantum chip that breaks the 100-qubit barrier and represents a key milestone on our path towards building a 1,000-qubit processor in 2023. Today, more than 380,000 registered users have run over 1.2 trillion hardware quantum circuits. We are committed to accelerating and scaling quantum computing by partnering with industries and fostering a growing ecosystem. The IBM Quantum Network has grown to more than 175 members, including universities, banks, auto companies, telcos, and a wide array of companies from other industries.

Expanding Client Engagements and Our Ecosystem

During 2021, we increased our focus, agility, and client-centric culture. We evolved the way we go to market with our two sales groups – Technology and Consulting. We are scaling technical engagement with clients through significant expansion of experiential selling, client engineering, customer success managers and technical sales talent to help our clients achieve their goals with hybrid cloud and AI.

In parallel, we have accelerated the expansion of our ecosystem as an essential vehicle of our market footprint and growth. We are proactively partnering with a broad variety of companies including hyperscalers, service providers, global system integrators, Software/SaaS vendors and hardware vendors. These partners embed our hybrid cloud platform in their own offerings, integrate it in their services and/or resell it as a channel. We are investing \$1 billion in our ecosystem to ensure that our partners have the resources they need to develop software and build their businesses on our platform. Additionally, we have established a strategic partnership with Kyndryl combining IBM incumbency in applications integration with Kyndryl incumbency in managed infrastructure.

2021 was a milestone year for IBM’s Hybrid Cloud and AI strategy. We have positioned our business to capture growth opportunities and to fulfill IBM’s purpose to be the catalyst that makes the world work better.

Business Segments and Capabilities

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

Software

Software brings together our hybrid cloud platform and our software solutions, optimized for that platform, to help clients become more data-driven, and to automate, secure and modernize their environments. 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:

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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, AIOps and management, integration, and application servers.

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

Security: creates a risk-aware, secure business by gaining real-time threat insights, orchestrating actions and automating responses across all touchpoints. Security includes software and services for threat, data and identity.

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 and builds open, hybrid cloud architectures and optimizes key workflows and business processes with IBM and ecosystem partner technologies. Consulting uses its IBM Garage method to convene experts to co-create business products and solutions together with clients to accelerate their digital transformations.

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

Business Transformation: provides services that enable clients to apply technologies at scale to transform key workflows, processes and domains end-to-end, including strategy, business process design and operations, data and analytics, and system integration. These services deploy AI in business processes to exploit the value of data and include a full ecosystem of partners alongside IBM technology, including strategic partnerships with Adobe, Oracle, SAP and Salesforce, among others.

Technology Consulting: helps clients architect and implement cloud platforms 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 environments through both custom applications and ISV/ERP 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. Infrastructure also includes remanufacturing and remarketing of used equipment with a focus on sustainable recovery services.

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 IBM Z and Distributed Infrastructure.

IBM Z: the premier transaction processing platform with leading security, resilience and scale. It includes IBM Z and LinuxONE, with a range of high-performance systems designed to address computing capacity, security and performance needs of businesses. IBM Z 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. Both Power and Storage offerings are available via flexible consumption models. 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 IBM Z as a service to meet client workload needs.

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 platform 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 major 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. In 2019, we began the wind down of the Original Equipment Manufacturer (OEM) IT portion of our commercial financing operations which completed in early 2021. In the fourth-quarter 2020, Financing expanded its financial flexibility by entering into an agreement with a third-party investor to sell up to \$3 billion of its IBM commercial financing receivables, at any one time, on a revolving basis over the agreement's three-year term.

Human Capital

Employees and Related Workforce

(In thousands)

For the year ended December 31:	2021
IBM/wholly owned subsidiaries	282.1
Less-than-wholly owned subsidiaries	9.8
Complementary*	15.7

* 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 global workforce is highly skilled, reflective of the work we do for our clients' digital transformations and in support of their mission-critical operations. Our global workforce includes developers, consultants, client delivery and services specialists, research scientists and others. Our employees are among the world's leading experts in cloud, AI, quantum computing, cybersecurity and industry-specific solutions.

In November 2021, we completed the separation of our managed infrastructure services business to Kyndryl, comprising approximately 90,000 employees. Over our 111-year history, we have consistently made bold moves to transform and develop our talent. Today, IBM employees are clearly focused on our hybrid cloud and AI strategy for growth.

Talent and Culture

IBM attracts, develops, engages and retains talent in a dynamic and competitive environment. IBM offers a compelling employee value proposition: we develop and deliver innovative technologies including hybrid cloud, AI, and quantum, for clients whose businesses the world relies on. IBM is continuously transforming and developing its talent, both through learning and hiring. Voluntary attrition was higher in 2021 than in 2020 consistent with the overall labor market. On a longer horizon, the average voluntary attrition rate of the pandemic years (2020 and 2021) was still lower than the previous two years (2018 and 2019). In 2021, we added skills in consulting

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and key technical areas. We are scaling our investments in garages, client engineering centers and customer success managers. Employees are encouraged and enabled to learn and grow their careers, with employees using our learning platform to complete more than 70 hours of learning on average in 2021. Our digital learning and career platform uses Watson AI to generate personalized recommendations and includes peer-to-peer collaboration and internal social sharing. Over 170,000 employees globally participated in our annual engagement survey, which measures factors such as workplace experience, inclusion, pride and propensity to recommend IBM as an employer. Our industry-leading talent practices enabled more than eight out of ten employees to be highly engaged. Every manager and leader in IBM has access to their team and organization engagement levels along with actionable data-driven insights.

Diversity and Inclusion

IBM has a long, proud history as a pioneer in diversity and inclusion. A diverse and inclusive workplace leads to greater innovation, agility, performance, and engagement, enabling both business growth and societal impact. We ensure employees from diverse backgrounds are engaged, can be their authentic selves, build skills and grow their careers. In April 2021, with the full support of our Board of Directors, we disclosed an overview of our diversity, equity and inclusion efforts and programs, including diversity representation data and remain committed to continued transparency in 2022. We are proud of our inclusive culture, with nine out of ten employees responding that they can be their authentic selves at work. Our focus on creating a diverse and inclusive workplace led to increased levels of inclusion for women, Black and Hispanic employees. Women make up more than one-third of our workforce, and we increased representation of women, Black and Hispanic employees in 2021 compared to the prior year. In addition, executive representation of women globally, and Hispanic and Black executives in the U.S. improved by 1.0 point, 0.4 points and 1.5 points, respectively, in 2021. Further, a diversity modifier was added to the executive compensation program in 2021 to reinforce our continued accountability for progress. Globally, IBM 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. While we have taken significant actions and made progress, we have ongoing work to do.

IBM believes in pay equity: we have had an equal pay policy since 1935 and a long-standing practice of maintaining pay equity. To this end, we conduct statistical pay equity analysis that includes all countries with IBM employees. We also empower employees to understand their pay by providing comprehensive education and transparent access to pay statements including a comparison to market pay ranges.

Health, Safety and Well-Being

We have a long-standing commitment to the health, safety and well-being of our employees. This remained a focus in 2021 as we continued to face the COVID-19 pandemic. We have a robust case management system to manage COVID-19 exposures and a comprehensive playbook on workplace health and safety measures that allow our offices to reopen when local clinical conditions allow. These measures include limiting travel and in-person meetings and events, required self-screening before accessing workplaces, and imposing strict social distancing and mask wearing. In countries where vaccine access is sufficient or where legally mandated, only employees who are fully vaccinated against COVID-19 can access IBM workplaces.

Additionally, from the outset of the COVID-19 pandemic, IBM has focused on mental health and supporting our employees for the long run with programs shaped by frequent survey polls and employee input sessions. Such programs include: four weeks additional paid time off for working parents and caregivers facing disruption, training for employees on resilience and for managers on how to identify and address mental health issues and financial counseling offerings tailored to pandemic-related matters. Employees are supported with 24/7 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, results of Kyndryl are reported as discontinued operations. Prior periods have been reclassified to conform to this presentation in the Management Discussion to allow for a meaningful comparison of continuing operations.

Segment Details

In the fourth quarter of 2021, immediately prior to the separation of Kyndryl, the company made a number of changes to its organizational structure and management system to align the company’s operating model to its platform-centric approach to hybrid cloud and AI. With these changes, the company revised its reportable segments, but did not impact its Consolidated Financial Statements. The table below presents each reportable segment’s revenue and gross margin results, followed by an analysis of the 2021 versus 2020 reportable segment results. Prior-year results have been recast to conform with the changes noted above.

(\$ in millions)

			Yr.-to-Yr. Percent/ Margin Change	Yr.-to-Yr. Percent Change Adjusted for Currency
For the year ended December 31:	2021	2020 *		
Revenue				
Software	\$24,141	\$22,927	5.3 %	4.1 %
Gross margin	78.8 %	78.3 %	0.4 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	404	488	(17.1)%	(18.8)%
Gross margin	(152.4)%	(126.5)%	(25.9)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 changes.

Software

(\$ in millions)

			Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
For the year ended December 31:	2021	2020 *		
Software revenue	\$24,141	\$22,927	5.3 %	4.1 %
Hybrid Platform & Solutions	\$17,751	\$16,321	8.8 %	7.5 %
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 changes.

Software revenue of \$24,141 million increased 5.3 percent as reported (4 percent adjusted for currency) in 2021 compared to the prior year. In the fourth quarter of 2021, we had incremental sales from our new commercial relationship with 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 \$17,751 million increased 8.8 percent as reported (8 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

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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 enterprises' critical hybrid cloud requirements. We now have 3,800 clients on our hybrid cloud platform as of December 31, 2021, which was an increase of more than 1,000 clients compared to the prior year. 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 recent 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 \$8.7 billion grew 26 percent as reported and 25 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	\$19,014	\$17,958	5.9 %
Gross profit margin	78.8 %	78.3 %	0.4 pts.
Pre-tax income	\$ 4,722	\$ 3,341	41.3 %
Pre-tax margin	19.6 %	14.6 %	5.0 pts.

* Recast to reflect segment changes.

The Software gross profit margin increased 0.4 points to 78.8 percent in 2021 compared to the prior year. Pre-tax income of \$4,722 million increased 41.3 percent compared to the prior year with a pre-tax margin expansion of 5.0 points to 19.6 percent. The increase in pre-tax income and margin reflects the lower workforce rebalancing charges year to year, which resulted in a 3.3 points improvement in the pre-tax margin compared to 2020.

Consulting

(\$ in millions)

	2021	2020 *	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
For the year ended December 31:				
Consulting revenue				
Business Transformation	\$ 17,844	\$ 16,257	9.8 %	8.3 %
Technology Consulting	3,466	3,133	10.6	10.1
Application Operations	6,095	5,931	2.8	1.2

* Recast to reflect segment changes.

Consulting revenue of \$17,844 million increased 9.8 percent as reported (8 percent adjusted for currency) in 2021 compared to the prior year, with growth across all three business areas. Clients are accelerating their business transformations and are turning to IBM Consulting as their trusted partner to help drive innovation, increase agility and productivity, and capture new growth opportunities, powered by hybrid cloud and AI. We had strong double-digit growth in Consulting hybrid cloud revenue as reported and adjusted for currency. Our total Consulting signings in 2021 grew at a mid-single-digit rate compared to the prior year and our book-to-bill for 2021 was 1.1. Consulting continued to drive hybrid cloud platform adoption by our clients, with approximately 700 Red Hat engagements in 2021. Our strategic acquisitions and expansion of strategic partnerships also contributed to our year-to-year revenue growth in 2021.

Business Transformation revenue of \$8,284 million increased 15.2 percent as reported (13 percent adjusted for currency) compared to the prior year. We had strong demand for our Business Transformation solutions, with good performance across all service lines including growth in offerings such as data platform services, Salesforce consulting services, and SAP consulting services and solutions.

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Technology Consulting revenue of \$3,466 million increased 10.6 percent as reported (10 percent adjusted for currency) driven primarily by growth in high-value offerings to develop cloud native applications and modernize existing applications for the cloud.

Application Operations revenue of \$6,095 million increased 2.8 percent as reported (1 percent adjusted for currency), driven primarily by offerings which provide end-to-end management of custom applications in cloud environments, reflecting our clients' trust in IBM Consulting to operate and manage their critical applications whether running in the cloud or on-premises environments.

Within Consulting, hybrid cloud revenue of \$7.9 billion grew 34 percent as reported and 32 percent adjusted for currency, driven by Red Hat-related signings focused on modernizing clients' applications and revenue from consulting engagements in the areas of our strategic partnerships, such as Salesforce, SAP, AWS and Azure.

(\$ in millions)

For the year ended December 31:	2021	2020 *	Yr.-to-Yr. Percent/ Margin Change
Consulting			
Gross profit	\$4,994	\$4,760	4.9 %
Gross profit margin	28.0 %	29.3 %	(1.3)pts.
Pre-tax income	\$1,449	\$1,034	40.1 %
Pre-tax margin	8.1 %	6.4 %	1.8 pts.

* Recast to reflect segment changes.

The Consulting gross profit margin decreased 1.3 points to 28.0 percent compared to the prior year. Pre-tax income of \$1,449 million increased 40.1 percent compared to the prior year and the pre-tax margin increased 1.8 points to 8.1 percent. The decline in gross profit margin reflects our investment in new offerings, integrating and scaling our acquisitions, as well as increased labor costs due to the competitive labor market which were not yet reflected in our pricing. The year-to-year improvement in pre-tax income reflects increased gross profit dollars driven by growth in revenue. The increase in pre-tax margin compared to the prior year was driven primarily by the lower workforce rebalancing charges year to year, which resulted in a 2.9 points improvement in the pre-tax margin, which was partially offset by the decline in gross profit margin.

Consulting Signings and Book-to-Bill

(\$ in millions)

For the year ended December 31:	2021	2020 *	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Total Consulting signings	\$19,163	\$18,018	6.4 %	5.8 %

* Recast to conform to 2021 presentation, reflecting the separation of Kyndryl on November 3, 2021.

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.

Book-to-bill represents the ratio of IBM Consulting signings to its revenue over the same period. The metric is a useful indicator of the demand of our business over time. This definition should be read in conjunction with the signings definition noted above.

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Infrastructure

(\$ in millions)

For the year ended December 31:	2021	2020 *	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Infrastructure revenue	\$14,188	\$14,533	(2.4)%	(3.4)%
Hybrid Infrastructure	\$ 8,167	\$ 8,415	(2.9)%	(3.7)%
IBM Z			(4.9)	(5.4)
Distributed Infrastructure			(1.8)	(2.6)
Infrastructure Support	6,021	6,118	(1.6)	(3.0)

* Recast to reflect segment changes.

Infrastructure revenue of \$14,188 million decreased 2.4 percent year to year as reported (3 percent adjusted for currency). In the fourth quarter of 2021, we had incremental sales from Kyndryl, representing approximately 1 point of growth in full-year revenue. The overall decline in revenue reflects our product cycle dynamics. Although impacted by product cycles, our portfolio of products continues to provide critical and lasting value to our clients in support of their hybrid cloud and digital transformation journeys, and we continue to innovate and refresh our product portfolio to deliver enhanced technologies to our clients.

Hybrid Infrastructure revenue of \$8,167 million declined 2.9 percent as reported (4 percent adjusted for currency). Revenue in 2021 included incremental sales from Kyndryl in fourth quarter, representing approximately 1 point of growth in full-year revenue. The overall decline in revenue reflects product cycle dynamics in IBM Z and our Distributed Infrastructure platforms. IBM Z revenue decreased 4.9 percent as reported (5 percent adjusted for currency) as we concluded the tenth quarter of z15 availability at the end of 2021. The z15 program continued to outpace the success of the prior program and we shipped more MIPS in the z15 program than any program in our history. Clients continued to leverage IBM Z as an essential part of their hybrid cloud infrastructure and its combination of security, scalability, reliability, cloud native development, and newer flexible consumption offerings demonstrate the value of the IBM Z platform within our hybrid cloud and AI strategy. Distributed Infrastructure revenue declined 1.8 percent as reported (3 percent adjusted for currency), driven primarily by declines in Power and Cloud Platform, partially offset by growth in Storage solutions driven by demand from hyperscalers for our tape products. In the third-quarter 2021, our next generation Power 10 became available within the high-end system which has unique hardware innovations, including a processor specifically optimized for data intensive workloads such as SAP S/4HANA.

Infrastructure Support revenue of \$6,021 million declined 1.6 percent as reported (3 percent adjusted for currency) year to year. The fourth-quarter incremental sales from Kyndryl represented approximately 2 points of growth in full-year revenue. The overall decline in revenue in 2021 reflects the hardware product cycles.

Within Infrastructure, hybrid cloud revenue of \$3.6 billion declined 10 percent as reported and 11 percent adjusted for currency, driven primarily by product cycle dynamics.

(\$ in millions)

For the year ended December 31:	2021	2020 *	Yr.-to-Yr. Percent/ Margin Change
Infrastructure			
Gross profit	\$7,848	\$8,359	(6.1)%
Gross profit margin	55.3 %	57.5 %	(2.2)pts.
Pre-tax income	\$2,025	\$1,654	22.4 %
Pre-tax margin	14.3 %	11.4 %	2.9 pts.

* Recast to reflect segment changes.

The Infrastructure gross profit margin decreased 2.2 points to 55.3 percent in 2021 compared to the prior year, driven primarily by margin declines in Distributed Infrastructure reflecting product cycle dynamics, partially offset by margin improvement in IBM Z. Pre-tax income of \$2,025 million increased 22.4 percent and pre-tax margin increased 2.9 points year to year to 14.3 percent, driven primarily by the lower workforce rebalancing charges year to year, which resulted in a 3.6 points improvement in pre-tax margin, partially offset by the decline in gross profit.

Financing

See pages 55 through 57 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:	2021	2020	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Total revenue	\$ 57,350	\$ 55,179	3.9 %	2.7 %
Americas	\$ 28,299	\$ 27,119	4.4 %	4.0 %
Europe/Middle East/Africa	17,447	16,767	4.1	0.8
Asia Pacific	11,604	11,293	2.8	2.6

Total revenue of \$57,350 million in 2021 increased 3.9 percent year to year as reported and 3 percent adjusted for currency. Revenue in 2021 includes incremental sales from our new commercial relationship with Kyndryl which began in the fourth quarter of 2021, representing approximately 1 point of revenue growth for the year.

Americas revenue increased 4.4 percent as reported and 4 percent adjusted for currency. In 2021, revenue includes incremental sales from Kyndryl, representing approximately 1 point of revenue growth for the year. Within North America, the U.S. increased 3.0 percent and Canada increased 23.6 percent as reported and 16 percent adjusted for currency. Latin America increased 0.9 percent as reported and 4 percent adjusted for currency. Within Latin America, Brazil revenue was flat as reported, but grew 3 percent adjusted for currency.

EMEA revenue increased 4.1 percent as reported and 1 percent adjusted for currency. Revenue in 2021 includes incremental sales from Kyndryl, representing approximately 1 point of revenue growth for the year. The UK, France and Germany increased 7.4 percent, 6.5 percent and 5.6 percent, respectively, as reported, and increased 1 percent, 4 percent and 4 percent, respectively, adjusted for currency. Italy increased 0.6 percent as reported, but decreased 2 percent adjusted for currency.

Asia Pacific revenue increased 2.8 percent as reported and 3 percent adjusted for currency. In 2021, revenue includes incremental sales from Kyndryl, representing approximately 2 points of revenue growth for the year. Japan revenue decreased 0.6 percent as reported, but grew 3 percent adjusted for currency. India increased 6.8 percent as reported and 7 percent adjusted for currency. Australia increased 7.7 percent as reported and was flat adjusted for currency. China increased 2.0 percent as reported, but declined 2 percent adjusted for currency.

Total Expense and Other (Income)

(\$ in millions)

For the year ended December 31:	2021	2020	Yr.-to-Yr. Percent/ Margin Change
Total expense and other (income)	\$26,649	\$28,293 *	(5.8)%
Non-operating adjustments			
Amortization of acquired intangible assets	(1,119)	(1,106)	1.1
Acquisition-related charges	(43)	(13)	226.6
Non-operating retirement-related (costs)/income	(1,282)	(1,073)	19.5
Kyndryl-related impacts	118	—	NM
Operating (non-GAAP) expense and other (income)	\$24,324	\$26,101 *	(6.8)%
Total expense-to-revenue ratio	46.5 %	51.3 %	(4.8)pts.
Operating (non-GAAP) expense-to-revenue ratio	42.4 %	47.3 %	(4.9)pts.

* Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter.

NM—Not meaningful

Our expense dynamics reflect a higher level of investment in innovation, skills and our ecosystem, both organically and through acquisitions, as we execute our hybrid cloud and AI strategy. We are aggressively hiring to better serve clients, while increasing our research spend to deliver innovation in AI, hybrid cloud and emerging areas such as quantum, and we are expanding our ecosystem.

Total expense and other (income) decreased 5.8 percent in 2021 versus the prior year primarily driven by a \$1.9 billion decrease in charges for workforce rebalancing, including the charges for structural actions in the fourth quarter of 2020, and a benefit from expected credit loss expense in the current year compared to a provision in the prior year, partially offset by higher non-operating retirement-related costs and the effects of currency. Total operating (non-GAAP) expense and other (income) decreased 6.8 percent year to year, driven primarily by the factors above excluding the higher non-operating retirement-related costs.

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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)

	2021	2020	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Selling, general and administrative expense			
Selling, general and administrative—other	\$15,550	\$15,281	1.8 %
Advertising and promotional expense	1,413	1,509	(6.3)
Workforce rebalancing charges	181	2,035 *	(91.1)
Amortization of acquired intangible assets	1,116	1,104	1.1
Stock-based compensation	555	550	1.0
Provision for/(benefit from) expected credit loss expense	(71)	83	NM
Total selling, general and administrative expense	\$18,745	\$20,561 *	(8.8)%
Non-operating adjustments			
Amortization of acquired intangible assets	(1,116)	(1,104)	1.1
Acquisition-related charges	(43)	(13)	226.6
Kyndryl-related impacts	(8)	—	NM
Operating (non-GAAP) selling, general and administrative expense	\$17,577	\$19,445 *	(9.6)%

* Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter.

NM—Not meaningful

Total selling, general and administrative (SG&A) expense decreased 8.8 percent in 2021 versus 2020, driven primarily by the following factors:

- Lower workforce rebalancing charges in the current year (9 points); and
- A benefit from expected credit loss expense compared to a provision in the prior year (1 point); partially offset by
- The effects of currency (1 point).

Operating (non-GAAP) SG&A expense decreased 9.6 percent year to year primarily driven by the same factors.

Provisions for expected credit loss expense decreased \$154 million in 2021 compared to 2020, primarily driven by decreases in both specific and general reserves in the current year compared to increases in the prior year. In the prior year, the global pandemic resulted in some deterioration in customer credit quality and/or bankruptcies which had an impact to provisions in the first half of 2020. We saw continued improvement in credit quality and some emergence from bankruptcies in the current year as economies have begun to reopen in many parts of the world. The receivables provision coverage was 2.1 percent at December 31, 2021, a decrease of 10 basis points from December 31, 2020.

Research, Development and Engineering Expense

(\$ in millions)

	2021	2020	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Total research, development and engineering	\$6,488	\$6,262	3.6 %

Research, development and engineering (RD&E) expense increased 3.6 percent in 2021 versus 2020, reflecting our continuing investment in innovation as we increase spending in areas including quantum, hybrid cloud and AI. The year-to-year increase was primarily driven by higher spending (2 points) and the effects of currency (1 point).

Intellectual Property and Custom Development Income

(\$ in millions)

	2021	2020	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Licensing of intellectual property including royalty-based fees	\$306	\$310	(1.4)%
Custom development income	272	270	0.6
Sales/other transfers of intellectual property	35	41	(14.8)
Total	\$612	\$620	(1.4)%

Total Intellectual Property and Custom Development Income decreased 1.4 percent in 2021 compared to 2020. 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)

	2021	2020	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Other (income) and expense			
Foreign currency transaction losses/(gains)	\$ (204)	\$ 114	NM
(Gains)/losses on derivative instruments	205	(101)	NM
Interest income	(52)	(105)	(50.2)%
Net (gains)/losses from securities and investment assets	(133)	(22)	499.2
Retirement-related costs/(income)	1,282	1,073	19.5
Other	(225)	(156)	43.8
Total other (income) and expense	\$ 873	\$ 802	8.8 %
Non-operating adjustments			
Amortization of acquired intangible assets	(2)	(2)	—
Non-operating retirement-related costs/(income)	(1,282)	(1,073)	19.5
Kyndryl-related impacts	126	—	NM
Operating (non-GAAP) other (income) and expense	\$ (285)	\$ (273)	4.6 %

NM—Not meaningful

Total other (income) and expense was \$873 million of expense in 2021 compared to \$802 million in 2020. The year-to-year change was primarily driven by:

- Higher non-operating retirement-related costs (\$209 million). Refer to “Retirement-Related Plans” for additional information; and
- Lower interest income (\$53 million) driven by lower interest rates and a lower average cash balance in the current year; partially offset by
- An unrealized gain on the shares of Kyndryl stock retained by IBM (\$126 million).

Operating (non-GAAP) other (income) and expense was \$285 million of income in 2021 and increased \$13 million compared to the prior-year period and excludes the impacts of non-operating retirement-related costs, the amortization of acquired intangible assets and the unrealized gain on Kyndryl stock described above.

Interest Expense

(\$ in millions)

	2021	2020	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Total interest expense	\$1,155	\$1,288	(10.3)%

Interest expense decreased \$133 million compared to 2020. 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 2021 was \$1,547 million, a decrease of \$191 million year to year primarily driven by a lower average debt balance in the current year.

Stock-Based Compensation

Pre-tax stock-based compensation cost of \$919 million increased \$45 million compared to 2020. This was primarily due to increases related to the conversion of options previously issued by acquired entities (\$30 million) and restricted stock units (\$25 million), partially offset by a decrease from performance share units (\$10 million). Stock-based compensation cost, and the year-to-year change, was reflected in the following categories: Cost: \$145 million, up \$19 million; SG&A expense: \$555 million, up \$5 million; and RD&E expense: \$218 million, up \$21 million.

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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)

For the year ended December 31:	2021	2020	Yr.-to-Yr. Percent Change
Retirement-related plans—cost			
Service cost	\$ 312	\$ 341	(8.6)%
Multi-employer plans	17	23	(26.5)
Cost of defined contribution plans	992	1,015	(2.3)
Total operating costs/(income)	\$ 1,320	\$ 1,379	(4.2)%
Interest cost	\$ 1,626	\$ 2,181	(25.4)%
Expected return on plan assets	(2,920)	(3,402)	(14.1)
Recognized actuarial losses	2,454	2,215	10.8
Amortization of prior service costs/(credits)	9	12	(25.0)
Curtailments/settlements	94	49	91.7
Other costs	18	18	3.5
Total non-operating costs/(income)	\$ 1,282	\$ 1,073	19.4 %
Total retirement-related plans—cost	\$ 2,601	\$ 2,451	6.1 %

Total pre-tax retirement-related plan cost increased by \$150 million compared to 2020, primarily driven by lower expected returns on plan assets (\$481 million) and an increase in recognized actuarial losses (\$239 million), partially offset by lower interest costs (\$555 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 2021 were \$1,320 million, a decrease of \$59 million compared to 2020. Non-operating costs of \$1,282 million in 2021 increased \$209 million year to year, driven primarily by the same factors as above.

Income Taxes

The continuing operations effective tax rate for 2021 was 2.6 percent compared to (52.9) percent in 2020. The current-year effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. The prior-year effective tax rate was primarily driven by a net tax benefit of \$0.9 billion related to an intra-entity sale of certain of the company's intellectual property in the first quarter of 2020, and a benefit of \$0.2 billion related to a foreign tax law change. The operating (non-GAAP) effective tax rate for 2021 was 9.0 percent compared to (11.5) percent in 2020. The prior year operating (non-GAAP) benefit from income taxes was primarily driven by the net tax benefit from the intra-entity IP sale. 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:	2021	2020	Yr.-to-Yr. Percent Change
Earnings per share of common stock from continuing operations			
Assuming dilution	\$5.21	\$4.38 *	18.9 %
Basic	\$5.26	\$4.42 *	19.0 %
Diluted operating (non-GAAP)	\$7.93	\$6.82 *	16.3 %
Weighted-average shares outstanding (in millions)			
Assuming dilution	904.6	896.6	0.9 %
Basic	896.0	890.3	0.6 %

* The \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulted in an impact of (\$1.33) to diluted earnings per share from continuing operations and diluted operating (non-GAAP) earnings per share. The impact to basic earnings per share was (\$1.34).

Actual shares outstanding at December 31, 2021 and 2020 were 898.1 million and 892.7 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 8.0 million shares higher in 2021 versus 2020.

Financial Position

Dynamics

Our balance sheet is presented on a consolidated basis, with the December 31, 2020 balance sheet reclassified to provide line items on a continuing operations basis and separately provide current and noncurrent assets and liabilities for Kyndryl discontinued operations. Our post-separation balance sheet at December 31, 2021 continues to provide us with flexibility to support our business needs. We continue to manage the investment portfolio to meet our liquidity objectives.

Cash, restricted cash and marketable securities at December 31, 2021 were \$7,556 million, a decrease of \$6,695 million compared to prior year end, as we continued to actively de-lever our debt, invested \$3,293 million in acquisitions and provided a growing dividend to our shareholders. Financing receivables declined \$4,540 million to \$13,439 million since the end of 2020 primarily due to the strategic actions taken to re-focus our Financing portfolio. Assets from discontinued operations declined \$15,764 million due to the separation of Kyndryl, which occurred on November 3, 2021.

Total debt of \$51,703 million decreased \$9,629 million from prior year end. We have reduced total debt \$21,307 million since the end of the second quarter of 2019 (immediately preceding the Red Hat acquisition). We have made good progress in deleveraging while being acquisitive and without sacrificing investments in our business or our solid dividend policy. Liabilities from discontinued operations declined \$7,136 million due to the separation of Kyndryl.

Our cash flow is presented on a consolidated basis and includes 10 months of Kyndryl operations for 2021 versus a full year of Kyndryl operations for 2020. During 2021, we generated \$12,796 million in cash from operating activities, a decrease of \$5,401 million compared to 2020. Our cash from operating activities for 2021 reflects cash paid in 2021 for separation charges and structural actions initiated in the fourth-quarter 2020. We returned \$5,869 million to shareholders through dividends in 2021. Our cash generation permits us to invest and deploy 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. At December 31, 2021, the overall net underfunded position was \$5,450 million, a decrease of \$5,033 million from December 31, 2020, driven by higher discount rates partially offset by modest asset returns. At year end, our qualified defined benefit plans were well-funded and the required contributions related to these plans and multi-employer plans are expected to be approximately \$200 million in 2022. In 2021, the return on the U.S. Personal Pension Plan assets was 2.0 percent and the plan was 112 percent funded at December 31, 2021. Overall, global asset returns were 3.0 percent and the qualified defined benefit plans worldwide were 107 percent funded at December 31, 2021.

IBM Working Capital

(\$ in millions)

At December 31:	2021	2020*
Current assets	\$29,539	\$36,547
Current liabilities	33,619	36,049
Working capital	\$ (4,080)	\$ 498
Current ratio	0.88:1	1.01:1

* Amounts presented exclude the current assets and current liabilities of discontinued operations of \$2,618 million and \$3,820 million, respectively.

Working capital decreased \$4,577 million from the year-end 2020 position. The key changes are described below:

Current assets decreased \$7,008 million (\$6,060 million adjusted for currency) due to:

- A decrease of \$6,695 million (\$6,464 million adjusted for currency) in cash and cash equivalents, restricted cash and marketable securities due to debt paydown, investments in acquisitions and dividend payments; and
- A decline in receivables of \$1,607 million (\$1,115 million adjusted for currency) mainly due to sales of financing receivables; partially offset by
- An increase of \$1,378 million (\$1,536 million adjusted for currency) in prepaid expenses and other current assets primarily due to investment in Kyndryl of \$807 million and an increase in derivative assets.

Current liabilities decreased \$2,430 million (\$1,080 million adjusted for currency) as a result of:

- A decrease in other accrued expenses and liabilities of \$1,740 million (\$1,188 million adjusted for currency) primarily due to payments of \$1,640 million for workforce rebalancing actions;
- A decrease in taxes payable of \$909 million (\$777 million adjusted for currency) primarily driven by tax payments and a decline in reserves as a result of the resolution of certain tax audit matters; and
- A decrease in short-term debt of \$329 million (\$317 million adjusted for currency) due to maturities of \$7,155 million; partially offset by reclassifications of \$6,792 million from long-term debt to reflect upcoming maturities; partially offset by
- An increase in deferred income of \$538 million (\$926 million adjusted for currency).

Management Discussion

International Business Machines Corporation and Subsidiary Companies

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

(\$ in millions)

January 1, 2021	Additions/ (Releases) *	Write-offs **	Other +	December 31, 2021
\$ 550	\$ (56)	\$ (46)	\$ (5)	\$ 443

* 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.

+ Primarily represents translation adjustments.

The total IBM receivables provision coverage was 2.1 percent at December 31, 2021, excluding receivables classified as held for sale, a decrease of 10 basis points compared to December 31, 2020. The decrease in coverage and decrease in allowance were driven by the overall decrease in receivables and an improvement in certain customers' credit quality given the improvement of the macroeconomic environment since the beginning of the pandemic in 2020. 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:	2021	2020
Amortized cost*	\$12,859	\$17,881
Specific allowance for credit losses	159	184
Unallocated allowance for credit losses	42	79
Total allowance for credit losses	201	263
Net financing receivables	\$12,658	\$17,618
Allowance for credit losses coverage	1.6 %	1.5 %

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

The percentage of Financing segment receivables reserved increased from 1.5 percent at December 31, 2020 to 1.6 percent at December 31, 2021, primarily driven by the decline in amortized cost, which reflects the strategic actions described in Financing's "Results of Operations."

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

(\$ in millions)

January 1, 2021	Additions/ (Releases) *	Write-offs **	Other +	December 31, 2021
\$ 263	\$ (39)	\$ (17)	\$ (5)	\$ 201

* 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.

+ Primarily represents translation adjustments.

Financing's expected credit loss expense (including reserves for off-balance sheet commitments which are recorded in other liabilities) was a release of \$54 million in 2021, compared to an addition of \$34 million in 2020. The decrease was primarily driven by lower reserves in Americas and EMEA, due to the overall improvement in the quality of our portfolio, as well as lower future funding commitments reserves related to the separation of Kyndryl.

Noncurrent Assets and Liabilities

(\$ in millions)

At December 31:	2021	2020*
Noncurrent assets	\$ 102,462	\$ 103,660
Long-term debt	\$ 44,917	\$ 54,217
Noncurrent liabilities (excluding debt)	\$ 34,469	\$ 37,842

* Amounts presented exclude the noncurrent assets (\$13,147 million) and noncurrent liabilities (\$3,317 million), including long-term debt, of discontinued operations.

The decrease in noncurrent assets of \$1,198 million (an increase of \$967 million adjusted for currency) was driven by:

- A decrease in long-term financing receivables of \$1,662 million (\$1,425 million adjusted for currency) primarily due to volumes decline and sales of receivables; and
- A decrease in deferred taxes of \$1,034 million (\$735 million adjusted for currency) primarily due to pension plan remeasurements, foreign audit settlements and realization of deferred tax assets in foreign jurisdictions; and
- A decrease in net property, plant and equipment of \$511 million (\$315 million adjusted for currency); and
- A decrease of \$934 million (\$587 million adjusted for currency) in total operating right-of-use assets, deferred costs and investments and sundry assets; partially offset by
- An increase in prepaid pension assets of \$2,293 million (\$2,405 million adjusted for currency) driven by plan remeasurements and higher returns on plan assets; and
- An increase in goodwill and net intangible assets of \$650 million (\$1,625 million adjusted for currency) due to additions from new acquisitions, partially offset by intangibles amortization.

Long-term debt decreased \$9,300 million (\$8,092 million adjusted for currency) primarily driven by:

- Reclassifications to short-term debt of \$6,792 million to reflect upcoming maturities; and
- Early redemption of IBM Credit debt of \$1,250 million.

Noncurrent liabilities (excluding debt) decreased \$3,372 million (\$1,680 million adjusted for currency) primarily driven by:

- A decrease in retirement and nonpension postretirement benefit obligations of \$2,749 million (\$1,875 million adjusted for currency) mainly driven by plan remeasurements; and
- A decrease of \$623 million (an increase of \$195 million adjusted for currency) in operating lease liabilities, other liabilities and deferred income.

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:	2021	2020
Total debt	\$51,703	\$61,333 *
Financing segment debt ⁺	\$13,929	\$21,098 **
Non-Financing debt	37,775	40,235 *

* Amounts presented exclude debt (primarily finance leases) of discontinued operations.

** Amounts presented at December 31, 2020 have been recast to conform to 2021 presentation.

⁺ Financing segment debt includes debt of \$1,345 million in 2021 and \$4,311 million in 2020 to support intercompany financing receivables and other intercompany assets. Refer to Financing's "Financial Position" on page 55 for additional details.

Total debt of \$51,703 million decreased \$9,629 million (\$8,410 million adjusted for currency) from December 31, 2020, primarily driven by early retirements and debt maturities of \$8,557 million. Total debt decreased \$21,307 million since the end of the second quarter 2019 (immediately preceding the Red Hat acquisition).

Non-Financing debt of \$37,775 million decreased \$2,460 million (\$1,640 million adjusting for currency) from December 31, 2020 due to scheduled debt maturities during 2021.

Financing segment debt of \$13,929 million decreased \$7,170 million (\$6,770 million adjusting for currency) from December 31, 2020, primarily due to lower external funding requirements associated with financing receivables, as well as lower internal funding requirements after the separation of Kyndryl. In the first quarter of 2021, IBM Credit early redeemed all of its outstanding fixed-rate debt in the aggregate amount of \$1.75 billion and deregistered with the U.S. Securities and Exchange Commission.

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 and are based on arm's-length pricing. The Financing debt-to-equity ratio remained at 9.0 to 1 at December 31, 2021.

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

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International Business Machines Corporation and Subsidiary Companies

Statement, the external debt-related interest expense supporting Financing's internal financing to the company is classified as interest expense.

Equity

Total equity decreased \$1,731 million from December 31, 2020, primarily due to a decrease of \$7,203 million related to the separation of Kyndryl and dividends paid of \$5,869 million; partially offset by increases from net income of \$5,743 million, a decrease in accumulated other comprehensive losses of \$4,839 driven by retirement-related benefit plans (\$3,828 million), cash flow hedges (\$438 million) and foreign currency translation adjustments (\$573 million), and common stock of \$762 million.

Cash Flow

Our cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows on page 65 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:	2021	2020
Net cash provided by/(used in)		
Operating activities	\$ 12,796	\$18,197
Investing activities	(5,975)	(3,028)
Financing activities	(13,354)	(9,721)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(185)	(87)
Net change in cash, cash equivalents and restricted cash	\$ (6,718)	\$ 5,361

Net cash provided by operating activities decreased \$5,401 million in 2021 driven by the following key factors:

- A decrease of cash provided by receivables of \$3,925 million primarily driven by higher volumes in trade receivables;
- A decrease in payroll tax and value-added tax payment liabilities of approximately \$1,000 million due to payments in the current year for tax relief provided under the U.S. CARES Act and other non-U.S. government assistance programs in 2020 related to COVID-19; and
- An increase in payments for structural actions and Kyndryl separation-related charges; partially offset by performance related improvements within net income.

Net cash used in investing activities increased \$2,947 million driven by:

- An increase in net cash used for acquisitions of \$2,958 million aligned with our hybrid cloud and AI strategy;
- A decrease of \$475 million in cash provided by net non-operating finance receivables primarily driven by the wind down of the OEM IT commercial financing operations; and
- A decrease in cash provided by divestitures of \$389 million; partially offset by
- A decrease in cash used for net capital expenditures of \$661 million.

Net cash used in financing activities increased \$3,633 million driven by:

- A decrease in net cash provided by debt transactions of \$4,401 million driven primarily by a higher level of net additions in the prior year, partially offset by a lower level of maturities in the current year; partially offset by
- An increase in cash provided of \$879 million due to Kyndryl distribution to IBM at separation.

Discontinued Operations

Pre-tax income from discontinued operations of \$1,744 million in 2021 decreased 18.6 percent compared to the prior year. As the separation of Kyndryl occurred on November 3, 2021, the current year included 10 months of Kyndryl operations compared with a full year in 2020. The current year also included a higher level of separation-related charges. These dynamics were partially offset by higher charges for structural actions in the prior year. The discontinued operations provision for income taxes in 2021 was \$714 million compared with \$484 million in 2020. The current-year provision included tax charges related to the Kyndryl separation. 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)

For the year ended December 31, 2021:	GAAP	Acquisition-Related Adjustments	Retirement-Related Adjustments	U.S. Tax Reform Impacts	Kyndryl-Related Impacts	Operating (non-GAAP)
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
RD&E	6,488	—	—	—	—	6,488
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.

(\$ in millions except per share amounts)

For the year ended December 31, 2020:	GAAP	Acquisition-Related Adjustments	Retirement-Related Adjustments	U.S. Tax Reform Impacts	Kyndryl-Related Impacts	Operating (non-GAAP)
Gross profit	\$30,865	\$ 726	\$ —	\$ —	\$ —	\$31,591
Gross profit margin	55.9 %	1.3 pts.	— pts.	— pts.	— pts.	57.3 %
SG&A	\$20,561 *	\$(1,117)	\$ —	\$ —	\$ —	\$19,445 *
RD&E	6,262	—	—	—	—	6,262
Other (income) and expense	802	(2)	(1,073)	—	—	(273)
Total expense and other (income)	28,293 *	(1,119)	(1,073)	—	—	26,101 *
Pre-tax income from continuing operations	2,572 *	1,845	1,073	—	—	5,490 *
Pre-tax margin from continuing operations	4.7 %	3.3 pts.	1.9 pts.	— pts.	— pts.	9.9 %
Provision for/(benefit from) income taxes**	\$ (1,360)	\$ 411	\$ 208	\$ 110	\$ —	\$ (630)
Effective tax rate	(52.9)%	25.3 pts.	14.1 pts.	2.0 pts.	— pts.	(11.5)%
Income from continuing operations	\$ 3,932 *	\$ 1,434	\$ 864	\$ (110)	\$ —	\$ 6,120 *
Income margin from continuing operations	7.1 %	2.6 pts.	1.6 pts.	(0.2)pts.	— pts.	11.1 %
Diluted earnings per share from continuing operations	\$ 4.38 *	\$ 1.60	\$ 0.96	\$(0.12)	\$ —	\$ 6.82 *

* Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact of (\$1.33) to diluted earnings per share from continuing operations and diluted operating (non-GAAP) earnings per share.

** 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.

Management Discussion

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Consolidated Fourth-Quarter Results

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

	2021	2020	Yr.-to-Yr. Percent/ Margin Change
For the fourth quarter:			
Revenue	\$16,695	\$15,682	6.5 %*
Gross profit margin	56.9 %	58.9 %	(2.0)pts.
Total expense and other (income)	\$ 6,632	\$ 8,224 **	(19.4)%
Income from continuing operations before income taxes	\$ 2,869	\$ 1,014 **	182.8 %
Provision for/(benefit from) income taxes from continuing operations	\$ 407	\$ (175)	NM
Income from continuing operations	\$ 2,462	\$ 1,190 **	106.9 %
Income from continuing operations margin	14.7 %	7.6 %	7.2 pts.
Income/(loss) from discontinued operations, net of tax	\$ (129)	\$ 166 +	NM
Net income	\$ 2,332	\$ 1,356	72.0 %
Earnings per share from continuing operations—assuming dilution	\$ 2.72	\$ 1.32 **	106.1 %
Consolidated earnings per share—assuming dilution	\$ 2.57	\$ 1.51	70.2 %
Weighted-average shares outstanding—assuming dilution	906.6	899.0	0.9 %

* 8.6 percent adjusted for currency.

** Includes a \$1.5 billion pre-tax charge for structural actions resulting in an impact to diluted earnings per share from continuing operations of (\$1.33).

+ Includes a \$0.6 billion pre-tax charge for structural actions resulting in an impact to diluted earnings per share from discontinued operations of (\$0.51).

NM—Not meaningful

The following table provides operating (non-GAAP) earnings for the fourth quarter of 2021 and 2020. See page 36 for additional information.

(\$ in millions except per share amounts)

	2021	2020	Yr.-to-Yr. Percent Change
For the fourth quarter:			
Net income as reported	\$2,332	\$1,356	72.0 %
Income/(loss) from discontinued operations, net of tax	(129)	166 *	NM
Income from continuing operations	\$2,462	\$1,190 **	106.9 %
Non-operating adjustments (net of tax)			
Acquisition-related charges	355	357	(0.4)
Non-operating retirement-related costs/(income)	206	122	68.4
U.S. tax reform impacts	94	18	430.4
Kyndryl-related impacts	(81)	—	NM
Operating (non-GAAP) earnings	\$3,035	\$1,686 **	80.0 %
Diluted operating (non-GAAP) earnings per share	\$ 3.35	\$ 1.88 **	78.2 %

* Includes a \$0.6 billion pre-tax charge for structural actions.

** Includes a \$1.5 billion pre-tax charge for structural actions resulting in an impact to diluted operating (non-GAAP) earnings per share of (\$1.33).

NM—Not meaningful

Snapshot

In the fourth quarter of 2021, we reported \$16.7 billion in revenue, income from continuing operations of \$2.5 billion and operating (non-GAAP) earnings of \$3.0 billion. Diluted earnings per share from continuing operations was \$2.72 as reported and \$3.35 on an operating (non-GAAP) basis. On a consolidated basis, we generated \$2.5 billion in cash from operations, \$3.3 billion in free cash flow and delivered shareholder returns of \$1.5 billion in dividends. These results reflect the strong demand we see in the marketplace for our technology and consulting. We continue to invest in skills, innovation and our ecosystem to position us for 2022 and the longer term.

Total revenue increased 6.5 percent as reported and 9 percent adjusted for currency compared to the prior year with strong performance in our key growth areas of software and consulting. Fourth-quarter 2021 also includes incremental revenue from our new commercial relationship with Kyndryl, representing approximately 3.5 points of our total revenue growth. Software increased 8.2 percent as reported and 10 percent adjusted for currency, with growth in both Hybrid Platform & Solutions and Transaction Processing. Within this segment, Hybrid Platform & Solutions grew 7.1 percent (9 percent adjusted for currency), with Red Hat delivering strong double-digit growth. Transaction Processing revenue grew from the new commercial relationship with Kyndryl. Consulting increased 13.1 percent as reported and 16 percent adjusted for currency with growth across all business areas. Consulting growth was led by Business Transformation which grew 17.9 percent as reported and 20 percent adjusted for currency reflecting strong demand for solutions to transform critical workflows. Infrastructure decreased 0.2 percent as reported but grew 2 percent adjusted

for currency including a benefit from the Kyndryl commercial relationship. Across the segments, total IBM hybrid cloud revenue of \$6.2 billion in the fourth quarter of 2021 grew 16 percent as reported and 18 percent adjusted for currency.

From a geographic perspective, Americas revenue increased 6.6 percent year to year as reported (7 percent adjusted for currency). EMEA increased 3.6 percent (7 percent adjusted for currency). Asia Pacific increased 10.9 percent year to year as reported (16 percent adjusted for currency).

The gross margin was 56.9 percent and the operating (non-GAAP) gross margin was 58.0 percent, both decreasing 2.0 points year to year. Overall, gross margin was impacted by the significant investments we are making to drive our hybrid cloud and AI strategy and a competitive labor market which has impacted labor costs due to higher acquisition, retention and wage costs.

Total expense and other (income) decreased 19.4 percent in the fourth quarter of 2021 versus the prior-year period primarily driven by a \$1.5 billion pre-tax charge in the fourth quarter of 2020 for structural actions to simplify and optimize our operating model and improve our position going forward. This decrease was partially offset by increased spending as we continue to invest to drive growth and scale resources to better serve our clients. We are also increasing our research spend to deliver innovation in AI, hybrid cloud and emerging areas such as quantum and expanding our ecosystem. Total operating (non-GAAP) expense and other (income) decreased 19.8 percent year to year, driven primarily by the same factors.

Pre-tax income from continuing operations of \$2.9 billion increased \$1.9 billion and the pre-tax margin was 17.2 percent, an increase of 10.7 points versus the prior-year period, primarily due to the prior-year workforce rebalancing charge. The continuing operations effective tax rate for the fourth quarter of 2021 was 14.2 percent compared to an effective tax rate of (17.3) percent in the fourth quarter of 2020. The prior-year tax rate was primarily driven by the geographical mix of pre-tax income, including from structural actions taken in 2020. Net income from continuing operations was \$2.5 billion, an increase of 106.9 percent year to year. The net income margin from continuing operations was 14.7 percent, an increase of 7.2 points from the prior-year period.

Operating (non-GAAP) pre-tax income from continuing operations of \$3.5 billion increased 101.9 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations increased 10.0 points to 21.2 percent, primarily due to the prior-year workforce rebalancing charge. The operating (non-GAAP) effective tax rate from continuing operations in the fourth quarter of 2021 was 14.2 percent versus 3.7 percent in the prior year. The increase was primarily driven by the same factors described above. Operating (non-GAAP) income from continuing operations of \$3.0 billion increased 80.0 percent with an operating (non-GAAP) income margin from continuing operations of 18.2 percent, up 7.4 points year to year.

Diluted earnings per share from continuing operations of \$2.72 in the fourth quarter of 2021 increased 106.1 percent and operating (non-GAAP) diluted earnings per share of \$3.35 increased 78.2 percent versus the fourth quarter of 2020, respectively.

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International Business Machines Corporation and Subsidiary Companies

Results of Continuing Operations

As discussed in the “Organization of Information” section, with the completion of the separation on November 3, 2021, results of Kyndryl are reported as discontinued operations. Prior periods have been reclassified to conform to this presentation in the Management Discussion to allow for a meaningful comparison of continuing operations.

Segment Details

The following is an analysis of the fourth quarter of 2021 versus the fourth quarter of 2020 reportable segment revenue and gross margin results. Segment pre-tax income includes certain limited transactions, predominantly between the Financing and Infrastructure segments, that are recorded to other income and excludes certain unallocated corporate items. Prior-year results have been recast to conform with segment changes effective fourth-quarter 2021.

(\$ in millions)

For the fourth quarter:	2021	2020 *	Yr.-to-Yr. Percent/ Margin Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Revenue				
Software	\$ 7,273	\$ 6,719	8.2 %	10.1 %
Gross margin	80.9 %	80.5 %	0.4 pts.	
Consulting	4,746	4,196	13.1 %	15.7 %
Gross margin	27.0 %	29.7 %	(2.7)pts.	
Infrastructure	4,414	4,425	(0.2)%	1.7 %
Gross margin	54.8 %	60.1 %	(5.3)pts.	
Financing	172	244	(29.4)%	(28.8)%
Gross margin	32.5 %	36.0 %	(3.6)pts.	
Other	89	98	(9.3)%	2.1 %
Gross margin	(160.7)%	(170.4)%	9.7 pts.	
Total revenue	\$16,695	\$15,682	6.5 %	8.6 %
Total gross profit	\$ 9,500	\$ 9,238	2.8 %	
Total gross margin	56.9 %	58.9 %	(2.0)pts.	
Non-operating adjustments				
Amortization of acquired intangible assets	182	176	3.6 %	
Operating (non-GAAP) gross profit	\$ 9,682	\$ 9,414	2.8 %	
Operating (non-GAAP) gross margin	58.0 %	60.0 %	(2.0)pts.	

* Recast to reflect segment changes.

Software

Software revenue of \$7,273 million increased 8.2 percent as reported (10 percent adjusted for currency) in the fourth quarter of 2021 compared to the prior-year period. Fourth-quarter 2021 includes incremental revenue from our new commercial relationship with Kyndryl, representing approximately 5 points of revenue growth. We had double-digit growth in total hybrid cloud revenue within the segment as reported and adjusted for currency. We had continued strength in our Hybrid Platform & Solutions portfolio, led by Red Hat, Automation and Data & AI. Transaction Processing revenue grew in the fourth quarter with all the growth coming from the new commercial relationship with Kyndryl.

Hybrid Platform & Solutions revenue of \$5,140 million increased 7.1 percent as reported (9 percent adjusted for currency) year to year. This revenue performance reflects the strength across the software growth areas that focus on hybrid cloud and AI, and includes incremental revenue in fourth-quarter 2021 from our new commercial relationship with Kyndryl, representing approximately 1 point of revenue growth. Red Hat revenue grew 18.6 percent as reported (21 percent adjusted for currency) driven primarily by strong growth in infrastructure and double-digit growth in application development and emerging technologies, as RHEL and OpenShift address enterprises' critical hybrid cloud requirements. Automation revenue increased 12.8 percent as reported (15 percent adjusted for currency), driven primarily by good performance in AIOps and management that address resource management and observability, as well as continued growth in Cloud Pak for Integration. Data & AI revenue grew 1.4 percent as reported (3 percent adjusted for currency) reflecting the strength in Data Fabric which enables clients to connect siloed data that is distributed across a hybrid cloud landscape. Within Data & AI, we also had strong performance in our business analytics and weather offerings. Within Security, although we had growth in the full-year 2021, revenue in the fourth quarter declined 2.3 points as reported (1 percent adjusted for currency) driven by lower performance in Data Security. Security innovation is an integral part of our strategy and in the fourth quarter, we launched a new data security solution, Guardium Insights, and acquired ReaQta which leverages AI and machine learning to automatically identify and block threats.

Within Hybrid Platform & Solutions, our annual recurring revenue (ARR) increased 8 percent in the fourth quarter of 2021 compared to the prior-year period. 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.

Transaction Processing revenue of \$2,133 million increased 11.2 percent as reported (14 percent adjusted for currency) year to year. Fourth-quarter 2021 includes incremental revenue from our new commercial relationship with Kyndryl, representing approximately 16 points of revenue growth. In the fourth quarter, we also had some large perpetual license transactions given the expansion in IBM Z capacity driven by the z15 program, as well as strong renewal rates which is proof of our client's commitment to our infrastructure platform and our high-value software offerings.

Within Software, total hybrid cloud revenue of \$2.7 billion grew 22 percent as reported (24 percent adjusted for currency) in the fourth quarter of 2021 compared to the prior-year period reflecting our clients' demand for our Hybrid Platform & Solutions offerings.

Software gross profit margin of 80.9 percent increased 0.4 points year to year compared to the prior-year period. Pre-tax income of \$2,109 million increased 83.2 percent and pre-tax margin increased 11.9 points to 29.0 percent, reflecting the lower workforce rebalancing charges year to year which resulted in 9.7 points of improvement on the pre-tax margin.

Consulting

Consulting revenue of \$4,746 million increased 13.1 percent as reported (16 percent adjusted for currency) in the fourth quarter of 2021 compared to the prior-year period. We had strong growth year to year in all three business areas, led by Business Transformation, and our book-to-bill ratio was 1.2. We had double-digit growth in total hybrid cloud revenue in the segment as reported and adjusted for currency. Clients are accelerating their business transformations, powered by hybrid cloud and AI, to drive innovation, increase their agility and productivity, and capture new growth opportunities. Enterprises are turning to IBM Consulting as their trusted partner on their transformation journey and are leveraging our deep client, industry and technical expertise, which helps drive adoption of our hybrid cloud platform.

Business Transformation revenue of \$2,213 million increased 17.9 percent as reported (20 percent adjusted for currency). This business area brings together technology and strategic consulting to transform critical workflows at scale. We enable this by leveraging our skills and capabilities in IBM technologies along with our strategic ecosystem partners. Our practices are centered on areas such as finance and supply chain, talent, industry-specific solutions and digital design. This quarter, we had broad-based revenue growth reflecting strong demand for these solutions.

Technology Consulting revenue of \$928 million increased 14.4 percent as reported (19 percent adjusted for currency). Technology Consulting architects and implements cloud platforms and strategies, leveraging hybrid cloud with Red Hat OpenShift. In the fourth quarter, we continued to see good performance in application modernization offerings that build cloud native applications as well as modernize existing applications for the cloud.

Application Operations revenue of \$1,605 million increased 6.5 percent as reported (8 percent adjusted for currency). This business area focuses on application and cloud platform services required to operationalize and run in both cloud and on-premise environments. The growth in fourth-quarter revenue was driven by offerings which provide end-to-end management of custom applications in cloud environments.

Within Consulting, hybrid cloud revenue of \$2.2 billion grew 31 percent as reported (34 percent adjusted for currency) in the fourth quarter of 2021 compared to the prior-year period, reflecting strong double-digit growth across all three business areas. Consulting Red Hat-related signings more than doubled year to year in the fourth quarter, as we added over 150 engagements in the quarter. Our hybrid cloud revenue from our strategic partnerships grew at a solid double-digit rate in the fourth quarter on a year-to-year basis.

Consulting fourth-quarter gross profit margin of 27.0 percent decreased 2.7 points year to year. The gross profit margin decline was across all three business areas. We are in a competitive labor market and continued to have increased pressure on labor costs. We expect to capture this increased resource cost in engagements going forward, however, this will take time to be reflected in our future profit profile. Pre-tax income increased \$374 million to \$436 million and pre-tax margin increased 7.7 points to 9.2 percent compared to the prior-year period. The increase in pre-tax income and margin reflects the lower workforce rebalancing charges year to year which resulted in 9.4 points of improvement on the pre-tax margin.

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International Business Machines Corporation and Subsidiary Companies

Infrastructure

Infrastructure revenue of \$4,414 million decreased 0.2 percent as reported, but increased 2 percent adjusted for currency in the fourth quarter of 2021 compared to the prior-year period. The incremental sales from our new commercial relationship with Kyndryl contributed approximately 5 points of revenue growth in the fourth quarter. By bringing together Hybrid Infrastructure and Infrastructure Support (formerly Technology Support Services), we can now better manage the lifecycle of our hardware platform and provide end-to-end value for our clients.

Hybrid Infrastructure revenue of \$2,873 million was flat as reported and grew 2 percent adjusted for currency in the fourth quarter of 2021 compared to the prior-year period. In the fourth quarter, the incremental sales from our new commercial relationship with Kyndryl contributed approximately 4 points of revenue growth. Distributed Infrastructure grew 4.7 percent as reported and 7 percent adjusted for currency, driven primarily by revenue growth across our storage portfolio, partially offset by declines in Power and Cloud IaaS. IBM Z revenue decreased 5.9 percent as reported (4 percent adjusted for currency) reflecting the z15 product cycle. This was the tenth quarter of z15 availability and the program continues to outpace the strong z14 program with more MIPS shipped than any program in our history. With its combination of security, scalability and reliability, the z15 continues to resonate with our clients, who are leveraging IBM Z as an essential part of their hybrid cloud infrastructure.

Infrastructure Support revenue of \$1,541 million decreased 0.9 percent as reported, but grew 1 percent adjusted for currency in the fourth quarter of 2021 compared to the prior year. The Infrastructure Support business benefited from our new commercial relationship with Kyndryl, which contributed incremental revenue representing approximately 6 points of revenue growth in the fourth quarter.

Within Infrastructure, hybrid cloud revenue of \$1.3 billion decreased 12 percent as reported (11 percent adjusted for currency) in the fourth quarter of 2021 compared to the same period in 2020, primarily driven by the IBM Z and Distributed Infrastructure product cycles.

The Infrastructure gross profit margin decreased 5.3 points to 54.8 percent in the fourth quarter of 2021 compared to the prior-year period. Pre-tax income of \$1,036 million increased 64.6 percent and the pre-tax margin increased 9.2 points year to year to 23.5 percent. The decrease in gross profit margin was driven primarily by declines in margins across the Hybrid Infrastructure product portfolio and margin decline in Infrastructure Support. The increase in pre-tax income and margin reflects the lower workforce rebalancing charges year to year, which resulted in 9.4 points of improvement in the pre-tax margin.

Financing

Financing revenue of \$172 million decreased 29.4 percent as reported (29 percent adjusted for currency) compared to the prior year, primarily driven by declines in client financing revenue due to a lower average asset balance. Financing's fourth-quarter pre-tax income decreased 27.9 percent to \$79 million and the pre-tax margin of 46.0 percent increased 0.9 points year to year. The decrease in pre-tax income was driven by the lower average asset balance noted above which reflects the strategic actions described in Financing's "Results of Operations."

Geographic Revenue

Total revenue of \$16,695 million increased 6.5 percent as reported and 9 percent adjusted for currency in the fourth quarter compared to the prior-year period. Fourth-quarter 2021 includes incremental revenue from our new commercial relationship with Kyndryl, representing approximately 3.5 points of revenue growth.

Americas revenue of \$8,121 million increased 6.6 percent as reported and 7 percent adjusted for currency. Fourth-quarter 2021 includes incremental revenue from Kyndryl, representing approximately 2 points of revenue growth. Within North America, revenue in the U.S. increased 5.0 percent and Canada increased 22.3 percent as reported (19 percent adjusted for currency). Latin America increased 6.1 percent as reported (9 percent adjusted for currency). Within Latin America, Brazil increased 6.3 percent as reported (8 percent adjusted for currency).

EMEA revenue of \$5,266 million increased 3.6 percent as reported and 7 percent adjusted for currency. This includes incremental revenue from Kyndryl, representing approximately 4 points of revenue growth. Germany and France increased 7.3 percent and 6.8 percent, respectively, as reported, and increased 13 percent and 12 percent, respectively, adjusted for currency. Italy decreased 3.6 percent as reported, but grew 2 percent adjusted for currency. In the UK, revenue declined 1.1 percent as reported and 3 percent adjusted for currency.

Asia Pacific revenue of \$3,307 million increased 10.9 percent as reported and 16 percent adjusted for currency. The fourth quarter incremental revenue from Kyndryl represented approximately 6 points of revenue growth. Japan increased 6.0 percent as reported and 15 percent adjusted for currency. India, China and Australia increased 29.8 percent, 19.1 percent and 16.0 percent, respectively, as reported and increased 32 percent, 17 percent and 18 percent, respectively, adjusted for currency.

Total Expense and Other (Income)

(\$ in millions)

	2021	2020	Yr.-to-Yr. Percent/ Margin Change
For the fourth quarter:			
Total expense and other (income)	\$6,632	\$8,224 *	(19.4)%
Non-operating adjustments			
Amortization of acquired intangible assets	(284)	(273)	4.1 %
Acquisition-related charges	(6)	(10)	(41.9)
Non-operating retirement-related (costs)/income	(315)	(278)	13.2
Kyndryl-related impacts	118	—	NM
Operating (non-GAAP) expense and other (income)	\$6,145	\$7,662 *	(19.8)%
Total expense-to-revenue ratio	39.7 %	52.4 %	(12.7)pts.
Operating (non-GAAP) expense-to-revenue ratio	36.8 %	48.9 %	(12.1)pts.

* Includes a \$1.5 billion pre-tax charge for structural actions.

NM—Not meaningful

Total expense and other (income) decreased 19.4 percent in the fourth quarter with an expense-to-revenue ratio of 39.7 percent compared to 52.4 percent in the fourth quarter of 2020. The year-to-year decrease was primarily driven by the fourth-quarter 2020 charge for structural actions (18 points), impact of currency (3 points), non-operating Kyndryl-related benefits (1 point) and shared services expense transferred to Kyndryl at separation (1 point), partially offset by higher spending (3 points) and higher non-operating retirement-related costs (1 point). Our expense dynamics reflect a higher level of investment in innovation, skills and our ecosystem, both organically and through acquisitions, as we execute our hybrid cloud and AI strategy. We are aggressively hiring and scaling resources to better serve clients, while increasing our research spend to deliver innovation in AI, hybrid cloud and emerging areas such as quantum, and we are expanding our ecosystem.

Total operating (non-GAAP) expense and other income decreased 19.8 percent year to year, primarily driven by the same factors described above, excluding the non-operating Kyndryl-related benefits and higher non-operating retirement-related costs.

Cash Flow

On a consolidated basis, we generated \$2.5 billion in cash flow from operating activities in the fourth quarter of 2021, a decrease of \$3.3 billion compared to the fourth quarter of 2020, primarily driven by a decrease in cash provided by receivables of \$2.5 billion which includes one month of Kyndryl's results. Net cash used in investing activities of \$0.7 billion was \$0.1 billion higher than the prior year, primarily driven by a decrease in cash provided by net non-operating finance receivables (\$0.4 billion), partially offset by a decrease in cash used for capital expenditures (\$0.3 billion). Net cash used in financing activities of \$2.7 billion decreased \$3.6 billion compared to the prior year, primarily due to lower net reductions in debt (\$2.8 billion) and net cash proceeds from the Kyndryl distribution to IBM upon separation (\$0.9 billion).

Results of Discontinued Operations

Pre-tax income/(loss) from discontinued operations, was a loss of \$63 million in the fourth quarter of 2021 compared to income of \$354 million in the fourth quarter of 2020. As the separation of Kyndryl occurred on November 3, 2021, the fourth-quarter 2021 included a partial quarter of Kyndryl operations compared with a full quarter in the prior-year period. The current-year period also included a higher level of separation-related charges. These dynamics were partially offset by higher charges for structural actions in the prior-year period. The discontinued operations provision for income taxes in the fourth quarter of 2021 was \$66 million compared with \$188 million in the prior-year period. The fourth-quarter 2021 provision for income taxes included tax charges related to the Kyndryl separation.

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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. 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 fourth quarter 2021:						
Gross profit	\$9,500	\$ 182	\$ —	\$ —	\$ —	\$9,682
Gross profit margin	56.9 %	1.1 pts.	— pts.	— pts.	— pts.	58.0 %
SG&A	\$4,903	\$(290)	\$ —	\$ —	\$ (8)	\$4,605
Other (income) and expense	(18)	(1)	(315)	—	126	(208)
Total expense and other (income)	6,632	(290)	(315)	—	118	6,145
Pre-tax income from continuing operations	2,869	472	315	—	(118)	3,537
Pre-tax margin from continuing operations	17.2 %	2.8 pts.	1.9 pts.	— pts.	(0.7)pts.	21.2 %
Provision for income taxes*	\$ 407	\$ 117	\$ 109	\$ (94)	\$ (37)	\$ 502
Effective tax rate	14.2 %	1.4 pts.	1.8 pts.	(2.7)pts.	(0.6)pts.	14.2 %
Income from continuing operations	\$2,462	\$ 355	\$ 206	\$ 94	\$ (81)	\$3,035
Income margin from continuing operations	14.7 %	2.1 pts.	1.2 pts.	0.6 pts.	(0.5)pts.	18.2 %
Diluted earnings per share from continuing operations	\$ 2.72	\$0.39	\$0.23	\$ 0.10	\$(0.09)	\$ 3.35

* The tax impact on operating (non-GAAP) pre-tax income from continuing operations 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 fourth quarter 2020:						
Gross profit	\$9,238	\$ 176	\$ —	\$ —	\$ —	\$9,414
Gross profit margin	58.9 %	1.1 pts.	— pts.	— pts.	— pts.	60.0 %
SG&A	\$6,256 *	\$(283)	\$ —	\$ —	\$ —	\$5,973 *
Other (income) and expense	230	(1)	(278)	—	—	(49)
Total expense and other (income)	8,224 *	(283)	(278)	—	—	7,662 *
Pre-tax income from continuing operations	1,014 *	459	278	—	—	1,752 *
Pre-tax margin from continuing operations	6.5 %	2.9 pts.	1.8 pts.	— pts.	— pts.	11.2 %
Provision for/(benefit from) income taxes**	\$ (175)	\$ 102	\$ 156	\$ (18)	\$ —	\$ 66
Effective tax rate	(17.3)%	10.4 pts.	11.7 pts.	(1.0)pts.	— pts.	3.7 %
Income from continuing operations	\$1,190 *	\$ 357	\$ 122	\$ 18	\$ —	\$1,686 *
Income margin from continuing operations	7.6 %	2.3 pts.	0.8 pts.	0.1 pts.	— pts.	10.8 %
Diluted earnings per share from continuing operations	\$ 1.32 *	\$0.40	\$0.14	\$ 0.02	\$ —	\$ 1.88 *

* Includes a \$1.5 billion pre-tax charge for structural actions resulting in an impact of \$(1.33) to diluted earnings per share from continuing operations and diluted operating (non-GAAP) earnings per share.

** The tax impact on operating (non-GAAP) pre-tax income from continuing operations 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.

PRIOR YEAR IN REVIEW

This section provides a summary of our financial performance in 2020 as compared with 2019. As discussed in the “Organization of Information” section, financial performance has been reclassified to reflect discontinued operations presentation and recast to conform to our segment changes effective fourth-quarter 2021. Refer to “Year in Review” pages 30-45 of the “Management Discussion” section of our 2020 Annual Report for other details of our financial performance in 2020 compared to 2019.

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

For year ended December 31:	2020	2019	Yr.-to-Yr. Percent/Margin Change
Revenue	\$55,179	\$57,714	(4.4)%*
Gross profit margin	55.9 %	54.6 %	1.3 pts.
Total expense and other (income)	\$28,293 **	\$24,327	16.3 %
Income from continuing operations before income taxes	\$ 2,572 **	\$ 7,206	(64.3)%
Provision for/(benefit from) income taxes from continuing operations	\$ (1,360)	\$ 60	NM
Income from continuing operations	\$ 3,932 **	\$ 7,146	(45.0)%
Income from continuing operations margin	7.1 %	12.4 %	(5.3)pts.
Income from discontinued operations, net of tax	\$ 1,658 +	\$ 2,285	(27.4)%
Net income	\$ 5,590	\$ 9,431	(40.7)%
Earnings per share from continuing operations—assuming dilution	\$ 4.38 **	\$ 8.00	(45.3)%
Consolidated earnings per share—assuming dilution	\$ 6.23	\$ 10.56	(41.0)%
Weighted-average shares outstanding—assuming dilution	896.6	892.8	0.4 %

* (4.5) percent adjusted for currency; (2.9) percent excluding divested businesses and adjusted for currency.

** Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact to diluted earnings per share from continuing operations of (\$1.33).

+ Includes a \$0.6 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact to diluted earnings per share from discontinued operations of (\$0.51).

NM—Not meaningful

The following table provides the company’s operating (non-GAAP) earnings for 2020 and 2019. See page 45 for additional information.

(\$ in millions except per share amounts)

For year ended December 31:	2020	2019	Yr.-to-Yr. Percent Change
Net income as reported	\$5,590	\$9,431	(40.7)%
Income from discontinued operations, net of tax	1,658 *	2,285	(27.4)
Income from continuing operations	\$3,932 **	\$7,146	(45.0)%
Non-operating adjustments (net of tax)			
Acquisition-related charges	1,434	1,335	7.4
Non-operating retirement-related costs/(income)	864	466	85.6
U.S. tax reform impacts	(110)	146	NM
Operating (non-GAAP) earnings	\$6,120 **	\$9,093	(32.7)%
Diluted operating (non-GAAP) earnings per share	\$ 6.82 **	\$10.18	(33.0)%

* Includes a \$0.6 billion pre-tax charge for structural actions in the fourth quarter.

** Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact to diluted operating (non-GAAP) earnings per share of (\$1.33).

NM—Not meaningful

Financial Performance Summary

In 2020, we reported \$55.2 billion in revenue and income from continuing operations of \$3.9 billion, which included a \$1.5 billion pre-tax charge for structural actions (primarily workforce rebalancing) in the fourth quarter to simplify and optimize our operating model. Operating (non-GAAP) earnings in 2020 were \$6.1 billion, which also included the charge for workforce rebalancing. Diluted earnings per share from continuing operations was \$4.38 as reported and \$6.82 on an operating (non-GAAP) basis. On a consolidated basis, we also generated \$18.1 billion in cash from operations, \$10.8 billion in free cash flow and delivered shareholder returns of \$5.8 billion in dividends. With the unprecedented COVID-19 pandemic and macroeconomic uncertainty beginning in March 2020, client priorities shifted to maintaining operational stability, flexibility and preservation of cash. While there was continued demand for offerings that support their digital transformation, clients moved to shorter term duration engagements and prioritized operational expenditures over capital expenditures, which impacted the company’s performance in 2020. However, our results reflected strong performance in hybrid cloud led by Red Hat, gross margin expansion and solid cash generation. We also continued to strengthen our position as a hybrid cloud platform and AI company through strategic organic investments and acquisitions.

Total revenue decreased 4.4 percent as reported and 4.5 percent adjusted for currency compared to the prior year. To provide better transparency on the recurring performance of the ongoing business, total revenue, geographic revenue and hybrid cloud revenue growth rates are provided excluding divested businesses and at constant currency. These divested businesses are included in the category “Other—divested businesses.” Excluding divested businesses and adjusted for currency, revenue decreased 2.9 percent. Software revenue increased 2.3 percent as reported and 2 percent adjusted for currency, with strong performance from Red Hat, offset by declines in transactional performance in other areas of the portfolio. Software revenue performance was impacted by purchase deferrals, clients opting for shorter duration contracts and preference for operating expenses over capital expenditures. Consulting decreased 4.0 percent as reported and 4 percent adjusted for currency with declines due to project delays and less discretionary spending by clients. Infrastructure decreased 7.9 percent year to year as reported and 8 percent adjusted for currency primarily due to product cycle dynamics. Across the segments, total IBM hybrid cloud revenue of \$16.8 billion in 2020 grew 22 percent as reported (21 percent adjusted for currency) and 24 percent excluding divested businesses and adjusted for currency.

From a geographic perspective, Americas revenue declined 5.5 percent year to year as reported (3 percent excluding divested businesses and adjusted for currency). EMEA decreased 3.0 percent (3 percent excluding divested businesses and adjusted for currency). Asia Pacific declined 3.7 percent (3 percent excluding divested businesses and adjusted for currency).

The gross margin of 55.9 percent increased 1.3 points year to year, and the operating (non-GAAP) gross margin of 57.3 percent increased 1.7 points versus the prior year, reflecting portfolio mix with strong software contribution and our focus on productivity.

Total expense and other (income) increased 16.3 percent in 2020 compared to the prior year. The year-to-year performance was driven by higher charges for workforce rebalancing, a full year of Red Hat operational spending in 2020 compared to six months in 2019, lower gains from divestitures and higher non-operating retirement-related costs, partially offset by lower spending including reductions in travel and other expenses associated with COVID-19 restrictions. Total operating (non-GAAP) expense and other (income) increased 15.5 percent year to year, driven primarily by the same factors excluding the non-operating retirement-related costs.

Pre-tax income from continuing operations of \$2.6 billion decreased 64.3 percent and the pre-tax margin was 4.7 percent, a decrease of 7.8 points versus 2019, primarily due to higher workforce rebalancing charges in 2020, lower gains from divestitures and higher retirement-related costs in the current year. The continuing operations effective tax rate for 2020 was (52.9) percent compared to 0.8 percent in 2019. The benefit from income taxes in 2020 was primarily due to the tax impacts of an intra-entity sale of certain of the company's intellectual property and related impacts in the first quarter, which resulted in a net tax benefit of \$0.9 billion and a benefit of \$0.2 billion related to a foreign tax law change. Net income from continuing operations of \$3.9 billion decreased 45.0 percent and the net income from continuing operations margin was 7.1 percent, down 5.3 points year to year, primarily due to the fourth-quarter workforce rebalancing charge. Operating (non-GAAP) pre-tax income from continuing operations of \$5.5 billion decreased 42.1 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations decreased 6.5 points to 9.9 percent, reflecting the higher workforce rebalancing charges and lower gains from divestitures in the current year. The operating (non-GAAP) effective tax rate for 2020 was (11.5) percent compared to 4.0 percent in 2019. The current year operating (non-GAAP) benefit from income taxes was primarily driven by the net tax benefit from an intra-entity IP sale in the first quarter. Operating (non-GAAP) income from continuing operations of \$6.1 billion decreased 32.7 percent and the operating (non-GAAP) income margin from continuing operations of 11.1 percent was down 4.7 points year to year.

Diluted earnings per share from continuing operations of \$4.38 in 2020 decreased 45.3 percent and operating (non-GAAP) diluted earnings per share of \$6.82 decreased 33.0 percent versus 2019, both including a (\$1.33) impact from the structural actions initiated in the fourth-quarter 2020.

During 2020, we continued to take actions to further enhance our balance sheet and liquidity position. Cash and cash equivalents, restricted cash and marketable securities at year end were \$14.3 billion, an increase of \$5.3 billion from December 31, 2019. Throughout 2020, we took mitigation actions to preserve liquidity as well as strategic actions to optimize our capital structure, for example, we re-focused our Financing portfolio reducing our external debt needs. We reduced total debt by \$1.4 billion from year end 2019 and \$11.7 billion since the second quarter of 2019 (immediately preceding the Red Hat transaction).

Results of Continuing Operations

As discussed in the “Organization of Information” section, with the completion of the separation on November 3, 2021, results of Kyndryl are reported as discontinued operations. Prior periods have been reclassified to conform to this presentation in the Management Discussion to allow for a meaningful comparison of continuing operations.

Segment Details

The following is an analysis of the 2020 versus 2019 reportable segment results. The table below presents each reportable segment's revenue and gross margin results. Segment pre-tax income includes certain limited transactions, predominantly between the Financing and Infrastructure segments, that are recorded to other income and excludes certain unallocated corporate items. Prior-year results have been recast to conform with segment changes effective fourth-quarter 2021.

(\$ in millions)

For the year ended December 31:	2020 *	2019 *	Yr.-to-Yr. Percent/ Margin Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Revenue				
Software	\$22,927	\$22,408	2.3 %	2.1 %
Gross margin	78.3 %	78.0 %	0.4 pts.	
Consulting	16,257	16,939	(4.0)%	(4.3)%
Gross margin	29.3 %	27.4 %	1.8 pts.	
Infrastructure	14,533	15,774	(7.9)%	(7.5)%
Gross margin	57.5 %	55.6 %	1.9 pts.	
Financing	975	1,215	(19.8)%	(18.9)%
Gross margin	41.6 %	42.2 %	(0.6)pts.	
Other	488	1,378	(64.6)%	(65.0)%
Gross margin	(126.5)%	9.4 %	NM	
Total revenue	\$55,179	\$57,714	(4.4)%**	(4.5)%
Total gross profit	\$30,865	\$31,533	(2.1)%	
Total gross margin	55.9 %	54.6 %	1.3 pts.	
Non-operating adjustments				
Amortization of acquired intangible assets	726	527	37.8 %	
Acquisition-related charges	—	13	(100.0)%	
Operating (non-GAAP) gross profit	\$31,591	\$32,073	(1.5)%	
Operating (non-GAAP) gross margin	57.3 %	55.6 %	1.7 pts.	

* Recast to reflect segment changes.

** (2.9) percent excluding divested businesses and adjusted for currency.

NM—Not meaningful

Software

(\$ in millions)

For the year ended December 31:	2020 *	2019 *	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Software revenue	\$22,927	\$22,408	2.3 %	2.1 %
Hybrid Platform & Solutions	\$16,321 **	\$14,472	12.8 %	12.5 %
Red Hat			287.8 **	286.8 **
Automation			(10.3)	(10.6)
Data & AI			(6.3)	(6.6)
Security			0.7	0.6
Transaction Processing	6,606	7,936	(16.8)	(17.0)

* Recast to reflect segment changes.

** Red Hat was acquired on July 9, 2019. Results in 2020 include a full year of Red Hat revenue.

Software revenue of \$22,927 million increased 2.3 percent as reported (2 percent adjusted for currency) in 2020 compared to the prior year. There was strong growth in Hybrid Platform & Solutions, driven primarily by Red Hat, as our hybrid cloud and AI solutions are resonating with clients. Transaction Processing revenue decreased year to year, driven by declines in transactional software performance as clients delayed longer term commitments in 2020 due to the macroeconomic environment.

Hybrid Platform & Solutions revenue of \$16,321 million increased 12.8 percent as reported (12 percent adjusted for currency) compared to the prior year, driven by a full year of Red Hat revenue contribution and Red Hat's strong performance in infrastructure software and application development and emerging technologies. Red Hat OpenShift, the leading open source hybrid cloud platform, helped clients modernize mission-critical workloads, build cloud native applications, and deploy and manage data and applications

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across various clouds within an environment that is open, flexible and secure. Security revenue grew year to year due to good client adoption in security solutions such as Cloud Pak for Security and growth in security services as clients focused on their secure digital transformations. This growth was partially offset by year-to-year declines in Automation and Data & AI as clients deferred transformational investments in 2020 to focus on their core operations.

Transaction Processing revenue of \$6,606 million decreased 16.8 percent as reported (17 percent adjusted for currency) in 2020 compared to the prior year. With the macroeconomic environment due to the COVID-19 pandemic, clients focused on near-term priorities resulting in purchase deferrals, which impacted our transactional software performance in 2020. However, our subscription and support revenue grew in 2020 compared to the prior year.

Within Software, hybrid cloud revenue of \$6.9 billion grew 69 percent as reported and 68 percent adjusted for currency year to year.

(\$ in millions)

For the year ended December 31:	2020 *	2019 *	Yr.-to-Yr. Percent/ Margin Change
Software			
Gross profit	\$17,958	\$17,470	2.8 %
Gross profit margin	78.3 %	78.0 %	0.4 pts.
Pre-tax income	\$ 3,341	\$ 5,025	(33.5)%
Pre-tax margin	14.6 %	22.4 %	(7.8)pts.

* Recast to reflect segment changes.

The Software gross profit margin increased 0.4 points to 78.3 percent in 2020 compared to the prior year. The gross profit margin expansion was driven primarily by the full-year contribution from Red Hat and year-to-year improvement in services margins as we continued to focus on shifting to higher value services, such as Software-as-a-Service and security services, and driving AI-powered automation across the portfolio. Pre-tax income of \$3,341 million decreased 33.5 percent compared to the prior year with a pre-tax margin decline of 7.8 points to 14.6 percent. The decline in pre-tax income and margin was driven primarily by the decline in transactional software performance in Transaction Processing and our continued investment in strategic areas of hybrid cloud and AI. The decline also reflects the impact of higher workforce rebalancing charges year to year which had 3.1 points of impact on the pre-tax margin.

Consulting

(\$ in millions)

For the year ended December 31:	2020 *	2019 *	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Consulting revenue	\$16,257	\$16,939	(4.0)%	(4.3)%
Business Transformation	\$ 7,193	\$ 7,569	(5.0)%	(5.2)%
Technology Consulting	3,133	2,821	11.1	10.3
Application Operations	5,931	6,549	(9.4)	(9.5)

* Recast to reflect segment changes.

Consulting revenue of \$16,257 million decreased 4.0 percent as reported (4 percent adjusted for currency) in 2020 compared to the prior year. As the global pandemic intensified through the year, we aligned our offerings to help clients focus on engaging customers virtually, modernizing and migrating applications to the cloud, empowering a remote workforce, and focusing on cybersecurity and IT resiliency. In 2020, Consulting accelerated the number of engagements using Red Hat technology and continued to drive client adoption of Red Hat OpenShift and IBM Cloud Paks.

Business Transformation revenue of \$7,193 million decreased 5.0 percent as reported (5 percent adjusted for currency) in 2020 compared to the prior year. Given the macroeconomic environment during 2020, clients shifted priorities, which led to project delays and less demand for more discretionary offerings. Our cognitive process services (formerly Global Process Services) revenue returned to growth in the fourth quarter of 2020, as we continued to deliver efficiency and flexibility to our clients' processes by infusing innovative technology and redesigning intelligent workflows.

Technology Consulting revenue of \$3,133 million increased 11.1 percent as reported (10 percent adjusted for currency) in 2020 compared to the prior year, driven primarily by growth in higher value offerings to develop and modernize cloud applications.

Application Operations revenue of \$5,931 million decreased 9.4 percent as reported (10 percent adjusted for currency), reflecting the decline in our traditional on-premises application management services.

Within Consulting, hybrid cloud revenue of \$5.9 billion grew 11 percent year to year as reported and adjusted for currency. Consulting continued to drive the adoption of our hybrid cloud platform to help our clients accelerate their digital reinventions by modernizing their application infrastructures and leveraging business transformation services built on hybrid cloud.

(\$ in millions)

For the year ended December 31:	2020 *	2019 *	Yr.-to-Yr. Percent/ Margin Change
Consulting			
Gross profit	\$4,760	\$4,648	2.4 %
Gross profit margin	29.3 %	27.4 %	1.8 pts.
Pre-tax income	\$1,034	\$1,344	(23.0)%
Pre-tax margin	6.4 %	7.9 %	(1.6)pts.

* Recast to reflect segment changes.

The Consulting gross profit margin increased 1.8 points to 29.3 percent in 2020 compared to the prior year. The gross margin expansion reflects our shift to higher-value offerings, improved productivity and operational efficiency created by our investments in innovative delivery capabilities and our ability to leverage our variable and global delivery resource model. Pre-tax income of \$1,034 million decreased 23.0 percent compared to the prior year and the pre-tax margin declined 1.6 points to 6.4 percent. The year-to-year declines in pre-tax income and margin were driven by the higher workforce rebalancing charges year to year, which had 2.7 points of impact to pre-tax margin, partially offset by the gross margin expansion.

Infrastructure

(\$ in millions)

For the year ended December 31:	2020 *	2019 *	Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency
Infrastructure revenue	\$14,533	\$15,774	(7.9)%	(7.5)%
Hybrid Infrastructure	\$ 8,415	\$ 9,176	(8.3)%	(8.6)%
IBM Z			(1.3)	(1.7)
Distributed Infrastructure			(12.0)	(12.2)
Infrastructure Support	6,118	6,599	(7.3)	(6.0)

* Recast to reflect segment changes.

Infrastructure revenue of \$14,533 million decreased 7.9 percent year to year as reported (8 percent adjusted for currency). Although impacted by product cycles, our Infrastructure solutions continued to deliver critical and lasting value to enterprise clients in support of our hybrid cloud strategy.

Hybrid Infrastructure revenue of \$8,415 million decreased 8.3 percent as reported (9 percent adjusted for currency) driven primarily by the decline in Distributed Infrastructure reflecting the Power and Storage product cycles. IBM Z revenue decreased 1.3 percent as reported (2 percent adjusted for currency), driven by a decline in IBM Z operating system software, partially offset by growth in IBM Z hardware reflecting an elongated z15 adoption cycle as a result of the challenging environment. IBM Z continued to offer clients a high-value, secure and scalable platform with cloud native development capabilities.

Infrastructure Support revenue decreased 7.3 percent as reported (6 percent adjusted for currency) year to year, driven primarily by the IBM Z and Distributed Infrastructure portfolio product cycles and a shift away from lower value services.

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Within Infrastructure, hybrid cloud revenue of \$4.0 billion declined 3 percent as reported and 4 percent adjusted for currency.

(\$ in millions)

			Yr.-to-Yr. Percent/ Margin Change
For the year ended December 31:	2020 *	2019 *	
Infrastructure			
Gross profit	\$8,359	\$8,773	(4.7)%
Gross profit margin	57.5 %	55.6 %	1.9 pts.
Pre-tax income	\$1,654	\$2,481	(33.3)%
Pre-tax margin	11.4 %	15.7 %	(4.3)pts.

* Recast to reflect segment changes.

The Infrastructure gross profit margin increased 1.9 points to 57.5 percent in 2020 compared to the prior year, driven primarily by margin improvements in Hybrid Infrastructure reflecting margin expansion in IBM Z and Power within Distributed Infrastructure. Pre-tax income of \$1,654 million declined 33.3 percent and pre-tax margin decreased 4.3 points year to year to 11.4 percent, driven primarily by the higher level of workforce rebalancing charges in the current year, which had 3.4 points of impact on the pre-tax margin.

Financing

(\$ in millions)

			Yr.-to-Yr. Percent Change
For the year ended December 31:	2020 *	2019 *	
Revenue	\$975	\$1,215	(19.8)%
Pre-tax income	\$449	\$ 652	(31.2)%

* Recast to conform to 2021 presentation.

In 2019, we began the wind down of our OEM Commercial Financing business to refocus our Financing business on IBM's products and services which completed in early 2021. In 2020, we entered into arrangements to sell certain financing receivables to third parties. While the strategic actions we have taken are the primary driver of the decline in external 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 revenue decreased 19.8 percent (19 percent adjusted for currency) compared to the prior year, driven by commercial financing which declined \$196 million to \$45 million and client financing which declined \$44 million to \$930 million. For the year ended December 31, 2020, the decrease in financing revenue was due to a lower average asset balance, primarily driven by the strategic actions described above.

Financing pre-tax income decreased 31.2 percent to \$449 million compared to the prior year and the pre-tax margin of 46.1 percent decreased 7.6 points year to year. The decrease in pre-tax income was primarily driven by a decrease in gross profit reflecting the strategic actions described above, a decline in internal financing and higher provisions for credit losses in Americas.

Geographic Revenue

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

(\$ in millions)

			Yr.-to-Yr. Percent Change	Yr.-to-Yr. Percent Change Adjusted for Currency	Yr.-to-Yr. Percent Change Excluding Divested Businesses And Adjusted for Currency
For the year ended December 31:	2020	2019			
Total revenue	\$55,179	\$57,714	(4.4)%	(4.5)%	(2.9)%
Americas	\$27,119	\$28,704	(5.5)%	(4.5)%	(2.8)%
Europe/Middle East/Africa	16,767	17,282	(3.0)	(4.5)	(2.8)
Asia Pacific	11,293	11,728	(3.7)	(4.5)	(3.4)

Total revenue of \$55,179 million in 2020 decreased 4.4 percent year to year as reported (4 percent adjusted for currency and 3 percent excluding divested businesses and adjusted for currency).

Americas revenue decreased 5.5 percent as reported (4 percent adjusted for currency and 3 percent excluding divested businesses and adjusted for currency). Within North America, the U.S. decreased 4.7 percent and Canada decreased 4.7 percent as reported (4

percent adjusted for currency). Latin America declined 12.0 percent as reported (2 percent adjusted for currency). Within Latin America, Brazil declined 15.5 percent as reported (2 percent adjusted for currency).

EMEA revenue decreased 3.0 percent as reported (4 percent adjusted for currency and 3 percent excluding divested businesses and adjusted for currency). The UK, Germany, France and Italy decreased 8.8 percent, 5.8 percent, 3.9 percent and 1.1 percent, respectively, as reported, and declined 9 percent, 8 percent, 6 percent and 3 percent, respectively, adjusted for currency.

Asia Pacific revenue decreased 3.7 percent as reported (4 percent adjusted for currency and 3 percent excluding divested businesses and adjusted for currency). Japan decreased 1 percent as reported and 3 percent adjusted for currency. China decreased 13.7 percent as reported and 14 percent adjusted for currency. India declined 1.1 percent as reported, but grew 4 percent adjusted for currency. Australia increased 0.8 percent as reported and 1 percent adjusted for currency.

Total Expense and Other (Income)

(\$ in millions)

	2020	2019	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Selling, general and administrative	\$20,561 *	\$18,724	9.8 %
Research, development and engineering	6,262	5,910	5.9
Intellectual property and custom development income	(620)	(639)	(2.8)
Other (income) and expense	802	(1,012)	NM
Interest expense	1,288	1,344	(4.2)
Total expense and other (income)	\$28,293 *	\$24,327	16.3 %
Non-operating adjustments			
Amortization of acquired intangible assets	(1,106)	(744)	48.6
Acquisition-related charges	(13)	(409)	(96.8)
Non-operating retirement-related (costs)/income	(1,073)	(576)	86.4
Operating (non-GAAP) expense and other (income)	\$26,101 *	\$22,598	15.5 %
Total expense-to-revenue ratio	51.3 %	42.2 %	9.1 pts.
Operating (non-GAAP) expense-to-revenue ratio	47.3 %	39.2 %	8.1 pts.

* Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter.

NM—Not meaningful

Total expense and other (income) year-to-year results for the year ended December 31, 2020 were impacted by the Red Hat acquisition which closed in July 2019. As a result, in 2020, there was a full year of expenses for Red Hat operational spending and amortization of acquired intangible assets associated with the transaction. Expense in 2020 also included a fourth-quarter \$1.5 billion pre-tax charge for structural actions (primarily workforce rebalancing) to simplify and optimize our operating model.

Total expense and other (income) increased 16.3 percent in 2020 versus the prior year, primarily driven by higher Red Hat operational spending, the fourth-quarter charge for workforce rebalancing, lower gains from divestitures and higher non-operating retirement-related costs, partially offset by lower spending including reductions in travel and other expenses associated with COVID-19 restrictions. Total operating (non-GAAP) expense and other (income) increased 15.5 percent year to year, driven primarily by the factors above excluding the higher non-operating retirement-related costs.

Total selling, general and administrative (SG&A) expense increased 9.8 percent in 2020 versus 2019, driven primarily by the following factors:

- Higher workforce rebalancing charge (9 points);
- Higher spending (1 point) driven by a full year of Red Hat operational expense in 2020 compared to six months in 2019 (6 points), partially offset by spending reductions associated with COVID-19 restrictions;
- Higher amortization of acquired intangible assets associated with the Red Hat transaction (2 points); partially offset by
- Lower acquisition-related charges associated with the Red Hat transaction (2 points).

Provisions for expected credit loss expense increased \$45.9 million in 2020 compared to 2019. The receivables provision coverage was 2.2 percent at December 31, 2020, an increase of 70 basis points from December 31, 2019. The higher coverage rate at December 31, 2020 also reflects the adoption of the new guidance for current expected credit losses.

RD&E expense increased 5.9 percent in 2020 versus 2019 primarily driven by:

- Higher spending (7 points) driven by a full year of Red Hat spending in 2020 compared to six months in 2019 (8 points); partially offset by
- Lower acquisition-related charges associated with the Red Hat transaction (1 point).

Management Discussion

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Total intellectual property and custom development income decreased 2.8 percent in 2020 compared to 2019. This was primarily due to a decline in licensing of intellectual property including royalty-based fees compared to the prior year. 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.

Total other (income) and expense was expense of \$802 million in 2020 compared to income of \$1,012 million in 2019. The year-to-year change was primarily driven by:

- Lower gains from divestitures (\$733 million);
- Higher non-operating retirement-related costs (\$497 million);
- Net exchange losses (including derivative instruments) in the current year versus net exchange gains (including derivative instruments) in the prior year (\$277 million); and
- Lower interest income (\$244 million) driven by lower interest rates and a lower average cash balance in the current year.

Interest expense decreased \$56 million compared to 2019. 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 2020 was \$1,738 million, a decrease of \$214 million year to year, primarily driven by lower average interest rates.

Income Taxes

The continuing operations effective tax rate for 2020 was (52.9) percent compared to 0.8 percent in 2019. The decrease in the effective tax rate was primarily driven by a net tax benefit of \$0.9 billion related to an intra-entity sale of certain of the company's intellectual property and related impacts in the first quarter of 2020, and a benefit of \$0.2 billion related to a foreign tax law change. The operating (non-GAAP) effective tax rate for 2020 was (11.5) percent compared to 4.0 percent in 2019. The 2020 operating (non-GAAP) benefit from income taxes was primarily driven by the net tax benefit from the intra-entity IP sale. For more information, see note H, "Taxes."

Results of Discontinued Operations

Income from discontinued operations, net of tax was \$1,658 million in 2020 compared to \$2,285 million in 2019, a decrease of 27.4 percent year to year. The decrease was primarily driven by charges for structural actions in the fourth quarter of 2020. Refer to 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. Refer to the "Operating (non-GAAP) Earnings" section for management's rationale for presenting operating earnings information.

(\$ in millions except per share amounts)

For the year ended December 31, 2020:	GAAP	Acquisition- Related Adjustments	Retirement- Related Adjustments	U.S. Tax Reform Impacts	Operating (non-GAAP)
Gross profit	\$30,865	\$ 726	\$ —	\$ —	\$31,591
Gross profit margin	55.9 %	1.3 pts.	— pts.	— pts.	57.3 %
SG&A	\$20,561 *	\$(1,117)	\$ —	\$ —	\$19,445 *
RD&E	6,262	—	—	—	6,262
Other (income) and expense	802	(2)	(1,073)	—	(273)
Interest expense	1,288	—	—	—	1,288
Total expense and other (income)	28,293 *	(1,119)	(1,073)	—	26,101 *
Pre-tax income from continuing operations	2,572 *	1,845	1,073	—	5,490 *
Pre-tax margin from continuing operations	4.7 %	3.3 pts.	1.9 pts.	— pts.	9.9 %
Provision for/(benefit from) income taxes**	\$ (1,360)	\$ 411	\$ 208	\$ 110	\$ (630)
Effective tax rate	(52.9)%	25.3 pts.	14.1 pts.	2.0 pts.	(11.5)%
Income from continuing operations	\$ 3,932 *	\$ 1,434	\$ 864	\$ (110)	\$ 6,120 *
Income margin from continuing operations	7.1 %	2.6 pts.	1.6 pts.	(0.2)pts.	11.1 %
Diluted earnings per share from continuing operations	\$ 4.38 *	\$ 1.60	\$ 0.96	\$ (0.12)	\$ 6.82 *

* Includes a \$1.5 billion pre-tax charge for structural actions in the fourth quarter resulting in an impact of (\$1.33) to diluted earnings per share from continuing operations and diluted operating (non-GAAP) earnings per share.

** 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)

For the year ended December 31, 2019:	GAAP	Acquisition- Related Adjustments	Retirement- Related Adjustments	U.S. Tax Reform Impacts	Operating (non-GAAP)
Gross profit	\$31,533	\$ 540	\$ —	\$ —	\$32,073
Gross profit margin	54.6 %	0.9 pts.	— pts.	— pts.	55.6 %
SG&A	\$18,724	\$(1,024)	\$ —	\$ —	\$17,700
RD&E	5,910	(53)	—	—	5,857
Other (income) and expense	(1,012)	152	(576)	—	(1,436)
Interest expense	1,344	(228)	—	—	1,116
Total expense and other (income)	24,327	(1,154)	(576)	—	22,598
Pre-tax income from continuing operations	7,206	1,693	576	—	9,475
Pre-tax margin from continuing operations	12.5 %	2.9 pts.	1.0 pts.	— pts.	16.4 %
Provision for income taxes*	\$ 60	\$ 358	\$ 110	\$ (146)	\$ 382
Effective tax rate	0.8 %	3.6 pts.	1.1 pts.	(1.5)pts.	4.0 %
Income from continuing operations	\$ 7,146	\$ 1,335	\$ 466	\$ 146	\$ 9,093
Income margin from continuing operations	12.4 %	2.3 pts.	0.8 pts.	0.3 pts.	15.8 %
Diluted earnings per share from continuing operations	\$ 8.00	\$ 1.50	\$ 0.52	\$ 0.16	\$ 10.18

* 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.

OTHER INFORMATION

Looking Forward

Executing on a Hybrid Cloud & AI Strategy

Over the last year and a half, we have taken a series of significant steps to execute our hybrid cloud and AI strategy and to improve our revenue profile. Our portfolio, our capital allocation and the actions we have been taking are all designed to “create value through focus” for our clients, our partners, our employees and our shareholders.

Our most significant portfolio action was the separation of Kyndryl which was completed on November 3. The separation of Kyndryl creates two industry-leading companies, which will continue to have a strong commercial relationship. Both IBM and Kyndryl have increased clarity and ability to focus on their respective operating and financial models, including capital deployment, investment strategies and investment grade capital structures. The separation enables greater freedom of action to partner and capture new opportunities.

We are building a stronger client-centric culture to drive growth. We have been aggressively hiring with approximately 60 percent of our hires in Consulting. We are scaling resources in garages, client engineering centers and customer success managers, to better serve our clients. We are increasing investments in R&D to deliver innovation in AI, hybrid cloud and emerging areas like quantum. We continue to acquire companies that complement and strengthen our portfolio, with a total of 15 acquisitions in 2021. We are increasing investment to expand our ecosystem to drive platform adoption and are simplifying and redesigning our go-to market to better meet client needs, and to execute on our growth agenda.

We are addressing the hybrid cloud and AI opportunity with a more platform-centric business model. Our new management structure, under our four reportable segments: Software, Consulting, Infrastructure and Financing, aligns our operating model to our platform-centric approach, reflects a simpler and more streamlined business and provides greater transparency into segment trends.

Our platform-centric approach is designed to meet clients wherever they are in their digital transformation journey. The hybrid cloud platform we have built is open, secure, and flexible and continues to gain traction in the marketplace. We are seeing high demand for our capabilities in several areas. Across industries, clients see technology as a major source of competitive advantage and are eager to automate as many business tasks as possible. They realize that powerful technologies, embedded at the heart of their business, can lead to seismic shifts in the way they create value and differentiation. They are using AI and predictive capabilities to mitigate friction in their supply chains. Cybersecurity remains a major area of concern as the cost of cybercrime rises each year. As clients deal with these challenges and opportunities, they are looking for a partner they can trust and who has a proven track record in bringing about strategic transformation projects. There is tremendous opportunity for us to help our clients leverage the power of hybrid cloud and AI. This is what we have built our platform for and why we have such confidence in our strategy.

With the actions we have taken to simplify our operating model, the fundamentals of our business model remain solid. Our balance sheet and liquidity position remains strong. At December 31, 2021, we had \$7.6 billion of cash and cash equivalents, restricted cash and marketable securities. We have made good progress in deleveraging, while being acquisitive and without sacrificing investments in our business or our solid dividend policy. We have reduced our debt by \$9.6 billion since the end of 2020 and \$21.3 billion from our peak level at June 30, 2019 (immediately preceding the Red Hat acquisition).

We exited 2021 a different company. We have a higher growth and higher value business mix, with over 70 percent of our revenue in software and services, and a significant recurring revenue base, dominated by software. This will result in an improving revenue growth profile, higher operating margin, strong and growing free cash flow and lower capital intensity – leading to a higher return on invested capital business. We are managing for the long-term and are confident in the direction and focus of our business. 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 a strong dividend policy. Our expectations for 2022 are aligned with our mid-term financial model which was previously communicated at our investor briefing on October 4, 2021.

Retirement-Related Plans

The combination of modest returns and higher discount rates improved the overall funded status of our plans. In aggregate, our worldwide-tax qualified plans are funded at 107 percent, with the U.S. at 112 percent. Contributions for all retirement-related plans are expected to be approximately \$2.1 billion in 2022, approximately flat compared to 2021, of which \$0.2 billion generally relates to legally required contributions to non-U.S. defined benefit and multi-employer plans. We expect 2022 pre-tax retirement-related plan cost to be approximately \$2.1 billion, a decrease of approximately \$500 million compared to 2021. This estimate reflects current pension plan assumptions at December 31, 2021. Within total retirement-related plan cost, operating retirement-related plan cost is expected to be approximately \$1.2 billion in 2022, a decrease of approximately \$100 million versus 2021. Non-operating retirement-related plan cost is expected to be approximately \$0.9 billion, a decrease of approximately \$400 million compared to 2021, primarily driven by higher income from expected return on assets and lower recognized actuarial losses.

Liquidity and Capital Resources

The company has consistently generated strong cash flow from operations, providing a source of funds ranging between \$12.8 billion and \$18.2 billion per year over the past three years. The company provides 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, 2019 through 2021.

Cash Flow and Liquidity Trends

(\$ in billions)

	2021	2020	2019
Net cash from operating activities*	\$12.8 **	\$18.2	\$14.8
Cash and cash equivalents, restricted cash and short-term marketable securities	\$ 7.6	\$14.3	\$ 9.0
Committed global credit facilities ⁺	\$10.0	\$15.3	\$15.3

* Includes cash flows of discontinued operations of \$1.6 billion, \$4.4 billion and \$4.5 billion in 2021, 2020 and 2019, 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 Q, "Borrowings," for additional information.

In 2021, we continued to actively de-lever our debt, invested \$3.3 billion in acquisitions and provided a growing dividend to our shareholders.

On July 9, 2019, we closed the acquisition of Red Hat for cash consideration of \$34.8 billion. The transaction was funded through a combination of cash on hand and proceeds from debt issuances. In order to reduce this debt and return to target leverage ratios within a couple of years, we suspended our share repurchase program at the time of the Red Hat acquisition closing.

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 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, 2021, the fair value of those instruments that were in a liability position was \$162 million, before any applicable netting, and this position is subject to fluctuations in fair value period to period based on the level of the company's 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, 2021 were as follows:

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. Debt levels have decreased \$9.6 billion from December 31, 2020 and \$21.3 billion from our peak levels at June 30, 2019 (immediately preceding the Red Hat acquisition).

In July 2017, the UK's Financial Conduct Authority (FCA), which regulates the London Interbank Offered Rate (LIBOR), had announced its intent to phase out LIBOR by the end of 2021. In March 2021, the FCA extended the phase out in the case of U.S. dollar settings for certain tenors until the end of June 2023. During this time, various central bank committees and working groups addressed replacement of benchmark rates, the process for amending existing LIBOR-based contracts, and the potential economic impacts of

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different alternatives. The Alternative Reference Rates Committee has identified the Secured Overnight Financing Rate (SOFR) as its preferred alternative rate for USD LIBOR. SOFR is a measure of the cost of borrowing cash overnight, collateralized by U.S. Treasury securities, and is based on directly observable U.S. Treasury-backed repurchase transactions. Effective December 31, 2021, the use of LIBOR has been substantially eliminated for purposes of any new financial contract executions. Any legacy USD LIBOR based financial contracts are expected to be addressed using the LIBOR rates published through the June 2023 extension period. We have evaluated the replacement of the LIBOR benchmark interest rate, including risk management and internal operational readiness, and have monitored the FASB standard-setting process to address financial reporting issues that might arise in connection with transition from LIBOR to a new benchmark rate. 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 65 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 format.

Management uses free cash flow as a measure to evaluate its operating results, plan share repurchase 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 table represents the way in which management reviews cash flow as described below and is presented on a consolidated basis, including cash flows of discontinued operations.

(\$ in billions)

For the year ended December 31:	2021	2020	2019
Net cash from operating activities per GAAP*	\$ 12.8	\$ 18.2	\$ 14.8
Less: the change in Financing receivables	3.9	4.3	0.5
Net cash from operating activities, excluding Financing receivables	8.9	13.8	14.3
Capital expenditures, net	(2.4)	(3.0)	(2.4)
Free cash flow (FCF)	6.5 **	10.8	11.9
Acquisitions	(3.3)	(0.3)	(32.6)
Divestitures	0.1	0.5	1.1
Share repurchase	—	—	(1.4)
Common stock repurchases for tax withholdings	(0.3)	(0.3)	(0.3)
Dividends	(5.9)	(5.8)	(5.7)
Non-Financing debt	(1.2)	0.2	22.8
Other (includes Financing receivables and Financing debt)	(2.7) ⁺	0.2	1.0
Change in cash, cash equivalents, restricted cash and short-term marketable securities	\$ (6.7)	\$ 5.3	\$ (3.2)

* Includes cash flows of discontinued operations of \$1.6 billion, \$4.4 billion and \$4.5 billion in 2021, 2020 and 2019, respectively.

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

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

From the perspective of how management views cash flow, in 2021, after investing \$2.4 billion in capital investments, we generated free cash flow of \$6.5 billion. These consolidated results include 10 months of Kyndryl operations, and reflect cash paid in 2021 for separation charges and structural actions initiated in the fourth-quarter 2020. Payments made in 2021 for prior-year taxes that were deferred in relation to COVID-19 government relief programs also contributed to the year-to-year decline. In 2021, we continued to return value to shareholders including \$5.9 billion in dividends.

IBM's Board of Directors considers the dividend payment on a quarterly basis. In the second quarter of 2021, the Board of Directors increased the company's quarterly common stock dividend from \$1.63 to \$1.64 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 S, "Commitments & Contingencies." With respect to pension funding, in 2021, we contributed \$103 million to our non-U.S. defined benefit plans compared to \$189 million in 2020. 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 2022 contributions are currently

expected to be approximately \$200 million. Contributions related to all retirement-related plans are expected to be approximately \$2.1 billion in 2022, approximately flat compared to 2021. 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 2022, 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			
		2022	2023–24	2025–26	After 2026
Long-term debt obligations	\$52,240	\$ 6,729	\$11,204	\$ 8,726	\$25,581
Interest on long-term debt obligations	15,252	1,478	2,617	1,837	9,320
Finance lease obligations*	99	36	35	7	20
Operating lease obligations*	3,669	1,047	1,530	737	356
Purchase obligations	2,959	854	1,447	643	15
Other long-term liabilities:					
Minimum defined benefit plan pension funding (mandated)**	1,100	200	500	400	
Excess 401(k) Plus Plan	1,892	206	455	511	720
Long-term termination benefits	1,388	539	229	135	485
Tax reserves†	5,311	37			
Other	612	131	172	52	258
Total	\$84,522	\$11,257	\$18,189	\$13,048	\$36,755

* 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 2026 could not be reasonably estimated.

† These amounts represent the liability for unrecognized tax benefits. We estimate that approximately \$37 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, 2021, plus the interest rate spread associated with that debt, if any.

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Off-Balance Sheet Arrangements

From time to time, we may enter into off-balance sheet arrangements as defined by SEC Financial Reporting Release 67 (FRR-67), "Disclosure in Management's Discussion and Analysis about Off-Balance Sheet Arrangements and Aggregate Contractual Obligations."

At December 31, 2021, we had no such 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 S, "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."

The macroeconomic impacts of the COVID-19 pandemic did not have a material impact on our critical accounting estimates reflected in our 2020 and 2021 results. Given the inherent uncertainty of the magnitude of future impacts from and/or the duration of the pandemic, our estimates may change materially in future periods.

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 Annual Report 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 40 basis points to 2.60 percent on December 31, 2021. This change will decrease pre-tax income recognized in 2022 by an estimated \$33 million. If the discount rate assumption for the PPP had decreased by 40 basis points on December 31, 2021, pre-tax income recognized in 2022 would increase by an estimated \$43 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 \$1.1 billion based upon December 31, 2021 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 \$238 million on the following year's pre-tax net periodic pension (income)/cost (based upon the PPP's plan assets at December 31, 2021 and assuming no contributions are made in 2022).

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 W, “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 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 2021, the impact on net income would have been \$42 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. 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, 2021 and 2020.

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 \$48 million in 2021.

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 may elect to first assess qualitative risk factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Judgment in the assessment of qualitative factors of impairment include entity specific factors, industry and market 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.

We perform the annual goodwill impairment analysis during the fourth quarter. In fourth-quarter 2021, as a result of the separation of Kyndryl that occurred on November 3, 2021 and the segment changes immediately prior to the separation, we performed the quantitative test for goodwill impairment for all reporting units.

When estimating the fair value of the Infrastructure Services reporting unit, which included Kyndryl, we applied a weighted average approach utilizing a combination of income and market approaches. Under the market approaches, we estimated the fair value through consideration of market multiples of comparable companies and the market capitalization of Kyndryl. We applied a control premium to these market approaches, which was estimated primarily through consideration of market data for recent comparable transactions. The income approach was used to estimate the fair value of all other reporting units.

The quantitative assessments resulted in no impairment as the estimated fair value of each reporting unit exceeded its carrying value. The Infrastructure Services reporting unit, which contained the future Kyndryl reporting unit and had goodwill of \$5.8 billion as of the time of testing, exceeded its carrying amount by approximately 8 percent. Each of the other reporting units with goodwill had a fair value that was substantially in excess of its carrying value. Following the changes to the organizational structure, goodwill was reassigned to the new reporting units using a relative fair value allocation approach. As a result, we performed the quantitative test for goodwill impairment for all affected reporting units. The quantitative assessment resulted in no impairment. Goodwill applicable to the Kyndryl business of \$5.8 billion was allocated to the Kyndryl reporting unit and was derecognized at the time of the separation. Each of the other reporting units with goodwill had a fair value that was substantially in excess of 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 significant client that represents a 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 \$20 million depending upon whether the actual collectibility was better or worse, respectively, than the estimates.

Residual Value

Residual value represents the estimated fair value of equipment under lease as of the end of the lease. Residual value estimates can impact the determination of whether a lease is classified as operating, sales-type or direct financing. Financing 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 technological innovations. Residual value estimates are periodically reviewed and “other than temporary” declines in estimated future residual values are recognized upon identification. Anticipated increases in future residual values are not recognized until the equipment is remarketed.

Factors that could cause actual results to materially differ from the estimates include significant changes in the used-equipment market brought on by unforeseen changes in technology innovations and any resulting changes in the useful lives of used equipment.

To the extent that actual residual value recovery is lower than management’s estimates by 10 percent, Financing’s segment pre-tax income and our income from continuing operations before income taxes for 2021 would have been lower by an estimated \$35 million. If the actual residual value recovery is higher than management’s estimates, the increase in income will be realized at the end of lease when the equipment is remarketed.

Currency Rate Fluctuations

Changes in the relative values of non-U.S. currencies to the U.S. dollar affect our financial results and financial position. At December 31, 2021, currency changes resulted in assets and liabilities denominated in local currencies being translated into fewer dollars than at year-end 2020. We use financial hedging instruments to limit specific currency risks related to financing transactions and other foreign currency-based transactions.

During periods of sustained movements in currency, the marketplace and competition adjust to the changing rates. For example, when pricing offerings in the marketplace, we may use some of the advantage from a weakening U.S. dollar to improve our position competitively, and price more aggressively to win the business, essentially passing on a portion of the currency advantage to our customers. Competition will frequently take the same action. Consequently, we believe that some of the currency-based changes in cost impact the prices charged to clients. We also maintain currency hedging programs for cash management purposes which may temporarily mitigate, but not eliminate, the volatility of currency impacts on our financial results.

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. Currency movements impacted our year-to-year revenue and earnings per share growth in 2021. Based on the currency rate movements in 2021, total revenue increased 3.9 percent as reported and 2.7 percent at constant currency versus 2020. On an income from continuing operations before income taxes basis, these translation impacts offset by the net impact of hedging activities resulted in a theoretical maximum (assuming no pricing or sourcing actions) 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. The same mathematical exercise resulted in an increase of approximately \$260 million in 2020 on an as-reported and 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, but we believe it could be substantially less than the theoretical maximum given the competitive pressure in the marketplace.

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. In addition to the market risk associated with interest rate and currency movements on outstanding debt and non-U.S. dollar denominated assets and liabilities, other examples of risk include collectibility of accounts receivable and recoverability of residual values on leased assets.

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 U, “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

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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, 2021 and 2020. 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, 2021 and 2020, 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 \$0.4 billion at December 31, 2021 and 2020. 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.

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 and \$1.8 billion at December 31, 2021 and 2020, respectively. The theoretical changes from the prior year are primarily driven by changes in foreign currency activities related to IBM Financing, as well as 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)

	2021	2020 *	Yr.-to-Yr. Percent Change
For the year ended December 31:			
Revenue	\$774	\$975	(20.6)%
Pre-tax income	\$441	\$449	(1.8)%

* Recast to conform to 2021 presentation.

We have refocused our Financing business on IBM's products and services. The wind down of our OEM commercial financing operations completed in early 2021. In 2020, we began entering into agreements to sell certain 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 revenue decreased 20.6 percent (22 percent adjusted for currency) compared to the prior year, driven by client financing down \$166 million to \$763 million and commercial financing down \$35 million to \$10 million. For the year ended December 31, 2021, the decrease in financing revenue was due to a lower average asset balance, driven by the strategic actions described above.

Financing pre-tax income decreased 1.8 percent to \$441 million compared to the prior year and the pre-tax margin of 57.0 percent increased 10.9 points year to year. The decrease in pre-tax income was primarily driven by a decrease in gross profit which reflects the strategic actions described above, partially offset by improvements in provisions for credit losses due to the overall improvement in the credit quality of our portfolio year to year, as well as lower future funding commitments reserves related to the separation of Kyndryl.

Financial Position

(\$ in millions)

	2021	2020 ⁽¹⁾
At December 31:		
Cash and cash equivalents	\$ 1,359	\$ 1,862
Client financing receivables		
Net investment in sales-type and direct financing leases ⁽²⁾	3,396	4,092
Client loans	8,818	11,498
Total client financing receivables	\$12,215	\$15,590
Commercial financing receivables ⁽³⁾		
Held for investment	444	2,028
Held for sale	793	383
Other receivables	61	91
Total external receivables ⁽⁴⁾	\$13,512	\$18,092
Intercompany financing receivables ⁽⁵⁾⁽⁶⁾	778	3,959
Other assets ⁽⁷⁾	1,231	1,061
Total assets	\$16,880	\$24,974
Intercompany payables ⁽⁵⁾	\$ 467	\$ 278
Debt ⁽⁸⁾	13,929	21,098
Other liabilities	937	1,254
Total liabilities	\$15,333	\$22,629
Total equity	\$ 1,547	\$ 2,344
Total liabilities and equity	\$16,880	\$24,974

⁽¹⁾ Recast to reflect segment changes.

⁽²⁾ Includes deferred initial direct costs which are expensed in IBM's consolidated financial results.

⁽³⁾ Recast to conform to 2021 presentation.

⁽⁴⁾ The difference between the decrease in total external receivables of \$4.6 billion (from \$18.1 in 2020 to \$13.5 billion in 2021) and the \$3.9 billion change in Financing segment's receivables disclosed in the free cash flow presentation on page 48 is primarily attributable to currency impacts.

⁽⁵⁾ The entire amount is eliminated for purposes of IBM's consolidated financial results and therefore does not appear in the Consolidated Balance Sheet.

⁽⁶⁾ These assets, along with all other financing assets in this table, are leveraged at the value in the table using Financing segment debt. 2020 includes \$3.0 billion of intercompany financing loans in support of Kyndryl's arrangements settled upon separation.

⁽⁷⁾ Includes \$0.7 billion of other intercompany assets.

⁽⁸⁾ Financing segment debt is primarily composed of intercompany loans.

At December 31, 2021, we continue to apply our rigorous credit policies. Approximately 67 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

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compared to September 30, 2021. This investment grade percentage is based on the credit ratings of the companies in the portfolio and reflects mitigating credit enhancement actions taken by the client 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 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 entered into agreements with third-party financial institutions to sell certain of its client and commercial financing receivables for cash proceeds. Sales of client financing receivables include both loan and lease receivables. In addition, on December 24, 2020, the company entered into an agreement with a third-party investor to sell up to \$3.0 billion of IBM short-term commercial financing receivables, at any one time, on a revolving basis, starting in the U.S. and Canada in 2020, and expanding to other countries within Europe and Asia Pacific in 2021, including Germany and the UK.

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

(\$ in millions)	2021	2020
Client financing receivables for the year ended December 31		
Lease receivables	\$ 819	\$1,152
Loan receivables	2,224	1,410
Total client financing receivables transferred*	\$3,043	\$2,562
Commercial financing receivables		
Receivables transferred for the year ended December 31	\$7,359	\$ 515
Receivables transferred and uncollected as of December 31**	1,653	510

* More than half of the client financing receivables sold were classified as current assets at the time of sale.

** 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, 2021 and 2020.

For additional information relating to financing receivables refer to note L, "Financing Receivables." Refer to pages 26 through 28 for additional information related to Financing segment receivables, allowance for credit losses and debt.

Return on Equity Calculation

(\$ in millions)	2021	2020 *
At December 31:		
Numerator		
Financing after-tax income ^{(1) **}	\$ 374	\$ 381
Denominator		
Average Financing equity ^{(2) +}	\$1,935	\$2,467
Financing return on equity ^{(1)/(2)}	19.3 %	15.4 %

* Recast to reflect segment changes.

** 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 19.3 percent compared to 15.4 percent for the years ended December 31, 2021 and 2020, respectively. The increase was driven by a lower average equity balance, which reflects the strategic actions and the overall improvement in the credit quality of our portfolio described in the Financing's "Results of Operations" and "Financial Position" above.

Residual Value

Residual value is a risk unique to the financing business, and management of this risk is dependent upon the ability to accurately project future equipment values at lease inception. Financing has insight into product plans and cycles for IBM products. Based upon this product information, Financing continually monitors projections of future equipment values and compares them with the residual values reflected in the portfolio.

Financing optimizes the recovery of residual values by selling assets sourced from end of lease, leasing used equipment to new clients or extending lease arrangements with current clients.

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The following table presents the recorded amount of unguaranteed residual value for sales-type and direct financing leases, as well as operating leases at December 31, 2021 and December 31, 2020. In addition, the table presents the run out of when the unguaranteed residual value assigned to equipment on leases at December 31, 2021 and December 31, 2020, is expected to be returned to the company.

Unguaranteed Residual Value

(\$ in millions)

	At December 31, 2020	At December 31, 2021	Estimated Run Out of December 31, 2021 Balance			
			2022	2023	2024	2025 and Beyond
Sales-type and direct financing leases	\$469	\$335	\$ 99	\$126	\$65	\$ 45
Operating leases	48	13	9	2	0	2
Total unguaranteed residual value	\$516	\$348	\$108	\$128	\$65	\$ 47

Report of Management

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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, 2021.

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 22, 2022



James J. Kavanaugh
Senior Vice President and Chief Financial Officer
February 22, 2022

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, 2021 and 2020, 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, 2021, 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, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

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

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

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or

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

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, 2021, 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, international, federal, and state filing positions, and the related final tax returns; (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.

Goodwill Impairment Assessment for the Infrastructure Services Reporting Unit

As described in Notes A and O to the consolidated financial statements, the Company's consolidated goodwill balance was \$55.6 billion as of December 31, 2021. 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. As disclosed by management, if a quantitative test is performed, management compares the fair value of the reporting unit to its carrying amount. In the fourth quarter of 2021, as a result of the separation of Kyndryl and the segment changes immediately prior to the separation, management performed a quantitative test for goodwill impairment. Goodwill associated with the Infrastructure Services (IS) reporting unit was \$5.8 billion as of the time of testing. Management estimated fair value based on a weighted average approach utilizing a combination of income and market approaches. Under the market approaches, management estimated the fair value through consideration of market multiples of comparable companies and market capitalization. Management applied a control premium to these market approaches. Under the income approach, management estimated the fair value based on the present value of estimated discounted future cash flows, which require the use of significant assumptions, including revenue growth rates and discount rates.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment for the IS reporting unit is a critical audit matter are the significant judgment by management when developing the fair value of the reporting unit, which in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to revenue growth rates and the discount rate used in the income approach, and the selection of market multiples of comparable companies and the control premium, as applicable, for the market approaches. Also, 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 management's goodwill impairment assessment, including controls over the valuation of the IS reporting unit. These procedures also included, among

others, (i) testing management's process for developing the fair value estimate, (ii) evaluating the appropriateness of the income and market approaches and the weighting of the approaches; (iii) testing the completeness and accuracy of underlying data used in the income and market approaches; and (iv) evaluating the reasonableness of the significant assumptions used by management related to revenue growth rates and the discount rate in the income approach and market multiples of comparable companies and the control premium, as applicable, in the market approaches. Evaluating management's assumptions related to revenue growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the consistency with external market and industry data, (ii) the current and past performance of the reporting unit, and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the income and market approaches, the weighting of the approaches, and evaluating the appropriateness of the discount rate, control premium, and market multiples of comparable companies assumptions.



PricewaterhouseCoopers LLP
New York, New York
February 22, 2022

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	2021	2020 *	2019 *
Revenue				
Services		\$29,225	\$27,626	\$29,141
Sales		27,346	26,569 **	27,357 **
Financing		780	984 **	1,216 **
Total revenue	D	57,350	55,179	57,714
Cost				
Services		19,147	17,689	19,009
Sales		6,184	6,048 **	6,467 **
Financing		534	577 **	704 **
Total cost		25,865	24,314	26,181
Gross profit		31,486	30,865	31,533
Expense and other (income)				
Selling, general and administrative		18,745	20,561	18,724
Research, development and engineering	G	6,488	6,262	5,910
Intellectual property and custom development income		(612)	(620)	(639)
Other (income) and expense		873	802	(1,012)
Interest expense	Q&U	1,155	1,288	1,344
Total expense and other (income)		26,649	28,293	24,327
Income from continuing operations before income taxes		4,837	2,572	7,206
Provision for/(benefit from) income taxes	H	124	(1,360)	60
Income from continuing operations		4,712	3,932	7,146
Income/(loss) from discontinued operations, net of tax	C	1,030	1,658	2,285
Net income		\$ 5,743	\$ 5,590	\$ 9,431
Earnings/(loss) per share of common stock				
Assuming dilution				
Continuing operations	I	\$ 5.21	\$ 4.38	\$ 8.00
Discontinued operations	I	1.14	1.85	2.56
Total	I	\$ 6.35	\$ 6.23	\$ 10.56
Basic				
Continuing operations	I	\$ 5.26	\$ 4.42	\$ 8.05
Discontinued operations	I	1.15	1.86	2.58
Total	I	\$ 6.41	\$ 6.28	\$ 10.63
Weighted-average number of common shares outstanding				
Assuming dilution		904,641,001	896,563,971	892,813,376
Basic		895,990,771	890,348,679	887,235,105

* Reclassified to reflect discontinued operations presentation.

** Reclassified to conform to 2021 presentation.

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	2021	2020 *	2019 *
Net income		\$ 5,743	\$ 5,590	\$ 9,431
Other comprehensive income/(loss), before tax				
Foreign currency translation adjustments	T	987	(1,500)	(39)
Net changes related to available-for-sale securities	T			
Unrealized gains/(losses) arising during the period		0	(1)	1
Reclassification of (gains)/losses to net income		—	—	—
Total net changes related to available-for-sale securities		0	(1)	1
Unrealized gains/(losses) on cash flow hedges	T			
Unrealized gains/(losses) arising during the period		344	(349)	(689)
Reclassification of (gains)/losses to net income		243	(21)	75
Total unrealized gains/(losses) on cash flow hedges		587	(370)	(614)
Retirement-related benefit plans	T			
Prior service costs/(credits)		(51)	(37)	(73)
Net (losses)/gains arising during the period		2,433	(1,678)	(120)
Curtailments and settlements		94	52	41
Amortization of prior service (credits)/costs		9	13	(9)
Amortization of net (gains)/losses		2,484	2,314	1,843
Total retirement-related benefit plans		4,969	664	1,681
Other comprehensive income/(loss), before tax	T	6,542	(1,206)	1,029
Income tax (expense)/benefit related to items of other comprehensive income	T	(1,703)	466	(136)
Other comprehensive income/(loss)	T	4,839	(740)	893
Total comprehensive income		\$ 10,582	\$ 4,850	\$ 10,324

* 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	2021	2020 **
Assets			
Current assets			
Cash and cash equivalents		\$ 6,650	\$ 13,188
Restricted cash		307	463
Marketable securities	J	600	600
Notes and accounts receivable—trade (net of allowances of \$218 in 2021 and \$260 in 2020)		6,754	5,790
Short-term financing receivables	L		
Held for investment (net of allowances of \$176 in 2021 and \$218 in 2020)		7,221	10,509 **
Held for sale		793	383 **
Other accounts receivable (net of allowances of \$24 in 2021 and \$25 in 2020)		1,002	695
Inventory	K	1,649	1,812
Deferred costs	D	1,097	1,018
Prepaid expenses and other current assets		3,466	2,089
Current assets of discontinued operations	C	—	2,618
Total current assets		29,539	39,165
Property, plant and equipment	M	20,085	20,100
Less: Accumulated depreciation	M	14,390	13,895
Property, plant and equipment—net	M	5,694	6,205
Operating right-of-use assets—net	N	3,222	3,566
Long-term financing receivables (net of allowances of \$25 in 2021 and \$45 in 2020)	L	5,425	7,086
Prepaid pension assets	W	9,850	7,557
Deferred costs	D	924	1,150
Deferred taxes	H	7,370	8,404
Goodwill	O	55,643	53,765
Intangible assets—net	O	12,511	13,739
Investments and sundry assets	P	1,823	2,187
Non-current assets of discontinued operations	C	—	13,147
Total assets		\$ 132,001	\$ 155,971
Liabilities and equity			
Current liabilities			
Taxes	H	\$ 2,289	\$ 3,198
Short-term debt	J&Q	6,787	7,116
Accounts payable		3,955	4,033
Compensation and benefits		3,204	3,056
Deferred income		12,518	11,980
Operating lease liabilities	N	974	1,035
Other accrued expenses and liabilities		3,892	5,632
Current liabilities of discontinued operations	C	—	3,820
Total current liabilities		33,619	39,869
Long-term debt	J&Q	44,917	54,217
Retirement and nonpension postretirement benefit obligations	W	14,435	17,184
Deferred income		3,577	3,758
Operating lease liabilities	N	2,462	2,720
Other liabilities	R	13,996	14,180
Non-current liabilities of discontinued operations	C	—	3,317
Total liabilities		113,005	135,244
Commitments and Contingencies	S		
Equity	T		
IBM stockholders' equity			
Common stock, par value \$.20 per share, and additional paid-in capital		57,319	56,556
Shares authorized: 4,687,500,000			
Shares issued (2021—2,248,577,848; 2020—2,242,969,004)			
Retained earnings		154,209	162,717
Treasury stock, at cost (shares: 2021—1,350,509,249; 2020—1,350,315,580)		(169,392)	(169,339)
Accumulated other comprehensive income/(loss)		(23,234)	(29,337)
Total IBM stockholders' equity		18,901	20,597
Noncontrolling interests	A	95	129
Total equity		18,996	20,727
Total liabilities and equity		\$ 132,001	\$ 155,971

* Reclassified to reflect discontinued operations presentation.

** Recast to conform to 2021 presentation.

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:	2021	2020	2019
Cash flows from operating activities			
Net income	\$ 5,743	\$ 5,590	\$ 9,431
Adjustments to reconcile net income to cash provided by operating activities			
Depreciation	3,888	4,227	4,209
Amortization of intangibles	2,529	2,468	1,850
Stock-based compensation	982	937	679
Deferred taxes	(2,001)	(3,203)	(1,527)
Net (gain)/loss on asset sales and other	(307)	(70)	(1,096)
Change in operating assets and liabilities, net of acquisitions/divestitures			
Receivables (including financing receivables)	1,372	5,297	502
Retirement related	1,038	936	301
Inventory	138	(209)	67
Other assets/other liabilities	(671)	2,087	858
Accounts payable	85	138	(503)
Net cash provided by operating activities	12,796	18,197	14,770
Cash flows from investing activities			
Payments for property, plant and equipment	(2,062)	(2,618)	(2,286)
Proceeds from disposition of property, plant and equipment	387	188	537
Investment in software	(706)	(612)	(621)
Purchases of marketable securities and other investments	(3,561)	(6,246)	(3,693)
Proceeds from disposition of marketable securities and other investments	3,147	5,618	3,961
Non-operating finance receivables—net	0	475	6,720
Acquisition of businesses, net of cash acquired	(3,293)	(336)	(32,630)
Divestiture of businesses, net of cash transferred	114	503	1,076
Net cash provided by/(used in) investing activities	(5,975)	(3,028)	(26,936)
Cash flows from financing activities			
Proceeds from new debt	522	10,504	31,825
Payments to settle debt	(8,597)	(13,365)	(12,944)
Short-term borrowings/(repayments) less than 90 days—net	(40)	(853)	(2,597)
Common stock repurchases	—	—	(1,361)
Common stock repurchases for tax withholdings	(319)	(302)	(272)
Financing—other	70	92	99
Distribution from Kyndryl*	879	—	—
Cash dividends paid	(5,869)	(5,797)	(5,707)
Net cash provided by/(used in) financing activities	(13,354)	(9,721)	9,042
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(185)	(87)	(167)
Net change in cash, cash equivalents and restricted cash	(6,718)	5,361	(3,290)
Cash, cash equivalents and restricted cash at January 1	13,675	8,314	11,604
Cash, cash equivalents and restricted cash at December 31	\$ 6,957	\$ 13,675	\$ 8,314
Supplemental data			
Income taxes paid—net of refunds received	\$ 2,103	\$ 2,253	\$ 2,091
Interest paid on debt	\$ 1,512	\$ 1,830	\$ 1,685

* 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 and therefore, also include \$24 million of cash and cash equivalents presented in current assets of discontinued operations in the IBM Consolidated Balance Sheet as of December 31, 2020. 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
2019							
Equity, January 1, 2019	\$55,151	\$159,206	\$(168,071)	\$(29,490)	\$16,796	\$ 134	\$16,929
Net income plus other comprehensive income/(loss)							
Net income		9,431			9,431		9,431
Other comprehensive income/(loss)				893	893		893
Total comprehensive income/(loss)					\$10,324		\$10,324
Cash dividends paid—common stock (\$6.43 per share)		(5,707)			(5,707)		(5,707)
Common stock issued under employee plans (4,569,917 shares)	745				745		745
Purchases (2,000,704 shares) and sales (2,041,347 shares) of treasury stock under employee plans—net		30	(11)		19		19
Other treasury shares purchased, not retired (9,979,516 shares)			(1,331)		(1,331)		(1,331)
Changes in other equity		(5)			(5)		(5)
Changes in noncontrolling interests						10	10
Equity, December 31, 2019	\$55,895	\$162,954	\$(169,413)	\$(28,597)	\$20,841	\$ 144	\$20,985

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
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. Refer to note B, "Accounting Changes."

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
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.

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.

On November 3, 2021, the company completed the previously announced 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 with the intent to dispose of such shares within twelve months after the distribution. The company accounts for the retained Kyndryl common stock as a fair value investment included within prepaid expenses and other current assets in the Consolidated Balance Sheet with subsequent fair value changes included in other (income) and expense in the Consolidated Income Statement. Refer to note J, "Financial Assets and Liabilities," for additional information.

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.

Effective immediately prior to the separation of Kyndryl, the company made a number of changes to its organizational structure and management system. These changes impacted the company's reportable segments beginning in the fourth quarter of 2021 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.

On July 9, 2019, the company completed the acquisition of all the outstanding shares of Red Hat, Inc. (Red Hat). Refer to note F, "Acquisitions & Divestitures," for additional information.

The benefit from income taxes for the year ended December 31, 2020 includes the tax impacts of an intra-entity sale of certain of the company's intellectual property, which resulted in a net benefit of \$0.9 billion in the first quarter of 2020 and a benefit of \$0.2 billion related to a foreign tax law change. Refer to note H, "Taxes," for additional information.

Noncontrolling interest amounts of \$19 million, \$13 million and \$16 million, net of tax, for the years ended December 31, 2021, 2020 and 2019, 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, including the macroeconomic impacts of the COVID-19 pandemic. Actual results may be different from these estimates.

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 and security. 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 range from less than one year to over 10 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 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 \$3,460 million and \$3,604 million at December 31, 2021 and 2020, 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, 2021 and 2020, contract assets for services contracts of \$430 million and \$376 million, respectively, are included in prepaid expenses and other current assets in the Consolidated Balance Sheet. The remaining amount of unbilled accounts receivable of \$723 million and \$650 million at December 31, 2021 and 2020, 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 Z systems 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, and security; transaction processing, which primarily supports mission-critical systems for clients; and, distributed infrastructure software, which provides operating systems for IBM Z 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.

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 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 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, competitive positioning, competitor actions, 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, 2021 and 2020.

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 is determined based on the average customer relationship period, including expected renewals, for each offering type and ranges from three to six 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 S, "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. Advertising and promotional expense, which includes media, agency and promotional expense, was \$1,413 million, \$1,509 million and \$1,591 million in 2021, 2020 and 2019, 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

Other (income) and expense includes interest income (other than from Financing external transactions), gains and losses on certain derivative instruments, gains and losses from securities and other investments including the changes in fair value associated with the company's retained interest in Kyndryl common stock, gains and losses from certain real estate transactions, foreign currency transaction gains and losses, gains and losses from the sale of financial assets, gains and losses from the sale of businesses, other than reported as discontinued operations, and amounts related to accretion of asset retirement obligations. Other (income) and expense also includes certain components of retirement-related costs, including interest costs, expected return on plan assets, amortization of prior service costs/(credits), curtailments and settlements and other net periodic pension/post-retirement benefit costs.

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.

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 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 five-year period. PSUs are stock awards where the number of shares ultimately received by the employee depends on the company's 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 U, "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.

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. Effective January 1, 2020 with the adoption of the new standard on credit losses, 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, 2021 and 2020. Prior to the adoption of the new standard, available-for-sale securities were measured for impairment using an other-than-temporary impairment model. No impairment was recorded for the year ended December 31, 2019.

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, 2021, 2020 and 2019.

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. 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., Canada 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 \$1.8 billion, \$2.2 billion and \$1.4 billion for the years ended December 31, 2021, 2020 and 2019, respectively. Within the notes and accounts receivables—trade sold and derecognized from the Consolidated Balance Sheet, \$0.7 billion, \$0.4 billion, and \$0.4 billion remained uncollected from customers at December 31, 2021, 2020 and 2019, 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

Effective January 1, 2020, the company adopted the new accounting standard related to current expected credit losses. The standard applies to financial assets measured at amortized cost, including loans, net investments in leases, trade accounts receivable and certain off-balance sheet commitments. As of the effective date, the company estimates its allowance for current expected credit losses based on an expected loss model, compared to prior periods which were estimated using an incurred loss model. The impact related to adopting the new standard was not material. Certain changes resulting from the new standard impacted the company's description of its significant accounting policies compared to 2019. For further information regarding the adoption of the new standard, see note B, "Accounting Changes."

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. As of January 1, 2020, 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.

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 include new and used IBM equipment and certain OEM products. IBM equipment generally consists of IBM Z, 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, whereas 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. Estimating residual value is a risk unique to financing activities, and management of this risk is dependent upon the ability to accurately project future equipment values. The company has insight into product plans and cycles for IBM products under 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. The company manages residual value risk through insight into its own product cycles. The company 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 an adjustment to the residual value estimate. For sales-type and direct financing leases, this reduction lowers the recorded net investment and is recognized as a loss charged to finance income in the period in which the estimate is changed, as well as an adjustment to unearned income to reduce future-period financing income.

Operating Leases

Equipment provided to clients under an operating lease is carried at cost within property, plant and equipment in the Consolidated Balance Sheet and depreciated over the lease term using the straight-line method, generally ranging from one to four years. The depreciable basis is the original cost of the equipment less the estimated residual value of the equipment at the end of the lease term.

At commencement of an operating lease, IDCs are deferred. As lease payments are made, the company records sales revenue over the lease term. IDCs are amortized over the lease term on the same basis as lease income is recorded.

Assets under operating leases are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The impairment test is 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.

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 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.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

Effective Date and Adoption Considerations—The guidance is effective for annual disclosures beginning in 2022 and early adoption was permitted. The company will adopt 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.

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 is effective January 1, 2022 and early adoption is 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 is not expected to have a material impact in the consolidated financial results.

Standards Implemented**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 is effective January 1, 2023, and early adoption is 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 in the year ended December 31, 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.

Reference Rate Reform

Standard/Description—Issuance date: March 2020, with amendments in 2021. This guidance provides optional expedients and exceptions for applying GAAP to contract modifications, hedging relationships, and other transactions affected by the discontinuation of the London Interbank Offered Rate (LIBOR) or by another reference rate expected to be discontinued, subject to meeting certain criteria.

Effective Date and Adoption Considerations—The guidance is effective as of March 12, 2020 through December 31, 2022.

Effect on Financial Statements or Other Significant Matters—The company made a policy election in the first quarter of 2020 to adopt the practical expedient which allows for the continuation of fair value hedge accounting for interest rate derivative contracts upon the transition from LIBOR to Secured Overnight Financing Rate (SOFR) or another reference rate alternative, without any impact to the Consolidated Income Statement. The replacement of the LIBOR benchmark within the company's interest rate risk management activities did not have a material impact in the consolidated financial results.

Simplifying the Test for Goodwill Impairment

Standard/Description—Issuance date: January 2017. This guidance simplifies the goodwill impairment test by removing Step 2. It also requires disclosure of any reporting units that have zero or negative carrying amounts if they have goodwill allocated to them.

Effective Date and Adoption Considerations—The guidance was effective January 1, 2020 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.

Financial Instruments—Credit Losses

Standard/Description—Issuance date: June 2016, with amendments in 2018, 2019, and 2020. This changes the guidance for credit losses based on an expected loss model rather than an incurred loss model. It requires the consideration of all available relevant information when estimating expected credit losses, including past events, current conditions and forecasts and their implications for expected credit losses. It also expands the scope of financial instruments subject to impairment, including off-balance sheet commitments and residual value.

Effective Date and Adoption Considerations—The guidance was effective January 1, 2020 with one-year early adoption permitted. The company adopted the guidance as of the effective date, using the transition methodology whereby prior comparative periods were not retrospectively presented in the Consolidated Financial Statements.

Effect on Financial Statements or Other Significant Matters—At January 1, 2020, an increase in the allowance for credit losses of \$81 million was recorded for accounts receivable—trade and financing receivables (inclusive of its related off-balance sheet commitments). Additionally, net deferred taxes were reduced by \$14 million in the Consolidated Balance Sheet, resulting in a cumulative effect net decrease to retained earnings of \$66 million.

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

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 shares of 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 with the intent to dispose of such shares within twelve months after the distribution. 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 have been presented as discontinued operations and, as such, have been excluded from continuing operations and segment results for all periods presented. Prior to the separation, Kyndryl was predominantly reported within the company's Global Technology Services segment. For additional information relating to the company's segments, refer to note E, "Segments."

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 do 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.

In the fourth quarter of 2021, prior to separation, Kyndryl completed the offering of \$2.4 billion in aggregate principal amount of senior unsecured fixed-rate notes and entered into a \$500 million three-year variable-rate term loan. Cash raised from the debt issuance and term loan was used to fund Kyndryl's opening cash balance, with the remaining net cash proceeds of \$879 million paid by Kyndryl to IBM in the form of a dividend at separation which is included in cash flows from financing activities in the Consolidated Statement of Cash Flows. Following completion of the Kyndryl separation on November 3, 2021, the notes and term loan are no longer obligations of IBM.

Separation costs of \$1,042 million and \$21 million incurred during the years ended December 31, 2021 and 2020, respectively, are included in income from discontinued operations, net of taxes 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 tax charges related to the Kyndryl separation. There were no separation costs incurred in 2019.

IBM and Kyndryl entered into various agreements to effect the separation and provide a framework for their on-going relationship, including a separation and distribution agreement, transition services agreement, employee matters agreement, tax matters agreement, intellectual property agreement, real estate matters agreement, client relationship agreement, master subcontracting agreement and a stockholder's and registration rights agreement. The transition services predominantly consist of information technology services that IBM will provide to Kyndryl 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, 2021 was not material.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

IBM and Kyndryl entered into various commercial agreements pursuant to which Kyndryl will purchase hardware, software and services from IBM for use in the delivery of Kyndryl services agreements and under which IBM will receive services from Kyndryl, related to hosting data centers and servicing IBM's information infrastructure. As part of the separation, IBM has committed to provide Kyndryl upgraded hardware at no cost to Kyndryl over a two-year period after the separation. IBM recorded \$265 million for the total estimate of IBM's obligation under the agreement to other accrued expenses and liabilities in the Consolidated Balance Sheet.

The following table presents the major categories of income from discontinued operations:

(\$ in millions)			
For the year ended December 31:	2021 ⁺	2020 [*]	2019 [*]
Revenue	\$ 14,994	\$ 18,441	\$ 19,433
Cost of sales	11,270	13,651	14,478
Selling, general and administrative expense	1,865	1,638	1,726
Workforce rebalancing charges	35	887	158
RD&E and Other (income) and expense	80	124	116
Income from discontinued operations before income taxes	\$ 1,744	\$ 2,142	\$ 2,954
Provision for income taxes	714 ^{**}	484	670
Income from discontinued operations, net of tax ⁺⁺	\$ 1,030	\$ 1,658	\$ 2,285

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

** Includes tax charges related to the Kyndryl separation.

+ Represents 10 months of Kyndryl operations in 2021, versus a full year of Kyndryl operations in 2020 and 2019.

++ Includes \$(1) million, \$89 million and \$(4) million in 2021, 2020 and 2019, respectively, related to discontinued operations of Microelectronics, divested in 2015.

The following table presents the major classes of assets and liabilities of discontinued operations:

(\$ in millions)	
At December 31:	2020
Assets	
Current assets	
Notes and accounts receivable (net of allowances of \$94)	\$ 1,361
Deferred costs	1,089
Prepaid expenses and other current assets	168
Total current assets of discontinued operations	2,618
Plant, rental machines and other property, net	3,835
Operating right-of-use assets, net	1,120
Deferred costs	1,300
Deferred taxes	837
Goodwill*	5,851
Other assets	203
Total non-current assets of discontinued operations	13,147
Total assets of discontinued operations	\$15,764
Liabilities	
Current liabilities	
Accounts payable	\$ 875
Compensation and benefits	384
Workforce reductions	449
Deferred income	854
Operating lease liabilities	322
Other accrued expenses and liabilities	936
Total current liabilities of discontinued operations	3,820
Long-term debt	138
Retirement and nonpension postretirement benefit obligations	1,063
Deferred income	543
Operating lease liabilities	854
Other liabilities	718
Total non-current liabilities of discontinued operations	3,317
Total liabilities of discontinued operations	\$ 7,136

* Goodwill allocated to discontinued operations represents the amount of goodwill attributable to Kyndryl which was determined on a relative fair value basis.

The total net impact to stockholder's equity as a result of the separation was a reduction of \$7,203 million, which has been 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 company retained 19.9 percent of the shares of Kyndryl common stock which had a net book value of \$681 million as of November 3, 2021, the separation date. Refer to note A, "Significant Accounting Policies," and note J, "Financial Assets & Liabilities," for additional information on the retained shares.

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

(\$ in millions)			
For the year ended December 31:	2021 *	2020	2019
Net cash provided by/(used in) operating activities	\$ 1,612	\$ 4,403	\$ 4,535
Net cash provided by/(used in) investing activities	(380)	(935)	(1,113)

* Represents 10 months of Kyndryl operations in 2021, versus a full year of Kyndryl operations in 2020 and 2019.

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:	2021	2020 *	2019 *
Hybrid Platform & Solutions	\$17,751	\$16,321	\$14,472
Transaction Processing	6,390	6,606	7,936
Total Software	\$24,141	\$22,927	\$22,408
Business Transformation	\$ 8,284	\$ 7,193	\$ 7,569
Technology Consulting	3,466	3,133	2,821
Application Operations	6,095	5,931	6,549
Total Consulting	\$17,844	\$16,257	\$16,939
Hybrid Infrastructure	\$ 8,167	\$ 8,415	\$ 9,176
Infrastructure Support	6,021	6,118	6,599
Total Infrastructure	\$14,188	\$14,533	\$15,774
Financing**	\$ 774	\$ 975	\$ 1,215
Other	\$ 404	\$ 488	\$ 1,378
Total Revenue	\$57,350	\$55,179	\$57,714

* Recast to reflect segment changes.

** Contains lease and loan/working capital 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:	2021	2020	2019
Software	\$ 8,713	\$ 6,907	\$ 4,099
Consulting	7,852	5,861	5,274
Infrastructure	3,645	4,039	4,183
Other—divested businesses	—	32	279
Total	\$20,210	\$16,838	\$13,834

Revenue by Geography

(\$ in millions)			
For the year ended December 31:	2021	2020	2019
Americas	\$28,299	\$27,119	\$28,704
Europe/Middle East/Africa	17,447	16,767	17,282
Asia Pacific	11,604	11,293	11,728
Total	\$57,350	\$55,179	\$57,714

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

Notes to Consolidated Financial Statements

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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 revaluations, adjustment for revenue that has not materialized and adjustments for currency.

At December 31, 2021, the aggregate amount of the transaction price allocated to RPO related to customer contracts that are unsatisfied or partially unsatisfied was \$62 billion. Approximately 68 percent of the amount is expected to be recognized as revenue in the subsequent two years, approximately 28 percent in the subsequent three to five years and the balance thereafter.

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

For the year ended December 31, 2021, revenue was reduced by \$61 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:	2021	2020
Notes and accounts receivable—trade (net of allowances of \$218 in 2021 and \$260 in 2020)	\$ 6,754	\$ 5,790
Contract assets*	471	425
Deferred income (current)	12,518	11,980
Deferred income (noncurrent)	3,577	3,758

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

The amount of revenue recognized during the year ended December 31, 2021 that was included within the deferred income balance at December 31, 2020 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, 2021 and 2020.

(\$ in millions)

January 1, 2021	Additions/(Releases)	Write-offs	Other *	December 31, 2021
\$260	\$(15)	\$(28)	\$1	\$218

January 1, 2020	Additions/(Releases)	Write-offs	Other *	December 31, 2020
\$235	\$ 63	\$(39)	\$1	\$260

* Primarily represents translation adjustments.

The contract assets allowance for expected credit losses was not material in the years ended December 31, 2021 and 2020.

Deferred Costs

(\$ in millions)

At December 31:	2021	2020
Capitalized costs to obtain a contract	\$ 476	\$ 572
Deferred costs to fulfill a contract		
Deferred setup costs	546	591
Other deferred fulfillment costs	1,000	1,004
Total deferred costs*	\$2,022	\$2,168

* Of the total deferred costs, \$1,097 million was current and \$924 million was noncurrent at December 31, 2021 and \$1,018 million was current and \$1,150 million was noncurrent at December 31, 2020.

The amount of total deferred costs amortized during the year ended December 31, 2021 was \$1,872 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.

NOTE E. SEGMENTS

In the fourth quarter of 2021, immediately prior to the separation of Kyndryl, the company made a number of changes to its organizational structure and management system to align the company's operating model to its platform-centric approach to hybrid cloud and AI. With these changes, the company revised its reportable segments, but did not impact its Consolidated Financial Statements.

The following table displays the segment updates:

Previous Segments	Changes*	New Segments
Cloud & Cognitive Software	• Revenue categories	Software
Global Business Services	• Revenue categories	Consulting
Global Technology Services	- Separated managed infrastructure services** - Technology Support Services - IBM Cloud IaaS - Managed infrastructure services retained JV ⁺	N/A
Systems	• Revenue categories + Technology Support Services + IBM Cloud IaaS + Global asset recovery service	Infrastructure
Global Financing	- Global asset recovery service	Financing
Other	+ Managed infrastructure services retained JV ⁺	Other

* Does not include minor mission moves.

** IBM completed the separation of its managed infrastructure services business to Kyndryl on November 3, 2021.

+ Represents a joint venture relationship that was historically managed by the managed infrastructure services business that was not transferred to Kyndryl as part of the separation.

N/A—Not applicable

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.

With this organizational and management system change, the segments no longer include internal revenue. Certain transactions between the segments are recorded to other income and expense and are reflected in segment pre-tax income. After the Kyndryl separation, 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 prior period revenue and pre-tax income presented in the tables below are reported on a comparable basis.

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, 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 and have been recast for the prior-year periods due to the company's segment changes in the fourth quarter of 2021. Performance measurement is based on pre-tax income from continuing operations, consistent with the company's management and measurement system. 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
2021					
Revenue	\$24,141	\$17,844	\$14,188	\$ 774	\$56,946
Pre-tax income from continuing operations	4,722	1,449	2,025	441	8,637
Revenue year-to-year change	5.3 %	9.8 %	(2.4)%	(20.6)%	4.1 %
Pre-tax income year-to-year change	41.3 %	40.1 %	22.4 %	(1.8)%	33.3 %
Pre-tax income margin	19.6 %	8.1 %	14.3 %	57.0 %	15.2 %
2020*					
Revenue	\$22,927	\$16,257	\$14,533	\$ 975	\$54,691
Pre-tax income from continuing operations**	3,341	1,034	1,654	449	6,479
Revenue year-to-year change	2.3 %	(4.0)%	(7.9)%	(19.8)%	(2.9)%
Pre-tax income year-to-year change	(33.5)%	(23.0)%	(33.3)%	(31.2)%	(31.8)%
Pre-tax income margin	14.6 %	6.4 %	11.4 %	46.1 %	11.8 %
2019*					
Revenue	\$22,408	\$16,939	\$15,774	\$ 1,215	\$56,336
Pre-tax income from continuing operations	5,025	1,344	2,481	652	9,502

* Recast to conform to 2021 presentation.

** 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 (\$0.7 billion), Consulting (\$0.4 billion), Infrastructure (\$0.4 billion). The impact to Financing was immaterial.

Reconciliations of IBM as Reported

(\$ in millions)

For the year ended December 31:	2021	2020 *	2019 *
Revenue			
Total reportable segments	\$56,946	\$54,691	\$56,336
Other—divested businesses	70	101	1,010
Other revenue	335	387	368
Total revenue	\$57,350	\$55,179	\$57,714

(\$ in millions)

For the year ended December 31:	2021	2020 *	2019 *
Pre-tax income from continuing operations			
Total reportable segments	\$ 8,637	\$ 6,479 **	\$ 9,502
Amortization of acquired intangible assets	(1,838)	(1,832)	(1,271)
Acquisition-related charges	(43)	(13)	(423)
Non-operating retirement-related (costs)/income	(1,282)	(1,073)	(576)
Kyndryl-related impacts	118	—	—
Elimination of internal transactions	(7)	(28)	(21)
Other—divested businesses	25	12	580
Unallocated corporate amounts and other	(774)	(973)	(586)
Total pre-tax income from continuing operations	\$ 4,837	\$ 2,572 **	\$ 7,206

* Recast to conform to 2021 presentation.

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

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, and manufacturing inventory. 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 the arm's length terms of the intercompany loans supporting Financing's external client transactions. Intercompany financing activities are recorded to other income and expense and are reflected in segment pre-tax income.

Management System Segment View

(\$ in millions)

For the year ended December 31:	Software	Consulting	Infrastructure	Financing	Total Segments
2021					
Assets	\$59,336	\$11,914	\$11,766	\$16,880	\$ 99,896
Depreciation/amortization of intangibles**	1,204	250	1,399	49	2,902
Capital expenditures/investments in intangibles	565	55	792	33	1,444
Interest income	—	—	—	628	628
Interest expense	—	—	—	129	129
2020*					
Assets	\$58,558	\$10,548	\$12,378	\$24,974	\$106,458
Depreciation/amortization of intangibles**	1,237	207	1,419	120	2,983
Capital expenditures/investments in intangibles	548	26	1,093	41	1,709
Interest income	—	—	—	834	834
Interest expense	—	—	—	307	307
2019*					
Assets	\$58,230	\$10,421	\$12,002	\$29,460	\$110,113
Depreciation/amortization of intangibles**	676	179	1,348	186	2,389
Capital expenditures/investments in intangibles	517	45	612	57	1,230
Interest income	—	—	—	1,133	1,133
Interest expense	—	—	—	512	512

* Recast to conform to 2021 presentation.

** 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:	2021	2020 *	2019 *
Assets			
Total reportable segments	\$ 99,896	\$106,458	\$110,113
Elimination of internal transactions	(1,608)	(4,686)	(4,317)
Other—divested businesses	193	254	1,942
Unallocated amounts			
Cash and marketable securities	6,222	12,463	7,271
Notes and accounts receivable	1,622	1,655	1,601
Deferred tax assets	7,158	8,175	4,917
Plant, other property and equipment	2,196	2,449	2,488
Operating right-of-use assets	1,945	2,368	2,531
Pension assets	9,848	7,557	6,819
Other	4,530	3,514	3,184
Total assets of discontinued operations**	—	15,764	15,638
Total IBM consolidated assets	\$132,001	\$155,971	\$152,186

* Recast to conform to 2021 presentation.

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

Major Clients

No single client represented 10 percent or more of the company's total revenue in 2021, 2020 or 2019.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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:	2021	2020 *	2019 *
United States	\$22,893	\$22,258	\$23,389
Japan	5,648	5,680	5,755
Other countries	28,810	27,241	28,570
Total revenue	\$57,350	\$55,179	\$57,714

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

* Recast to conform to 2021 presentation.

Plant and Other Property-Net

(\$ in millions)

At December 31:	2021	2020 *	2019 *
United States	\$3,375	\$3,452	\$3,513
Other countries	2,293	2,656	2,273
Total	\$5,668	\$6,108	\$5,785

* Recast to conform to 2021 presentation.

Operating Right-of-Use Assets-Net

(\$ in millions)

At December 31:	2021	2020 *	2019 *
United States	\$1,148	\$1,165	\$1,305
Japan	398	532	599
Other countries	1,676	1,870	1,947
Total	\$3,222	\$3,566	\$3,850

* Recast to conform to 2021 presentation.

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:	2021	2020 *	2019 *
Software			
Software	\$20,098	\$19,046	\$18,574
Services	3,934	3,770	3,670
Systems	109	110	165
Consulting			
Services	\$17,563	\$15,986	\$16,663
Software	173	183	160
Systems	108	89	116
Infrastructure			
Maintenance	\$ 4,743	\$ 4,804	\$ 5,171
Servers	3,363	3,549	3,829
Services	2,616	2,656	2,927
Storage	1,908	1,813	1,936
Software	1,426	1,563	1,725
Used Equipment Sales**	131	149	186
Financing			
Financing	\$ 628	\$ 834	\$ 1,120
Used Equipment Sales	145	140	95

* Recast to conform to 2021 presentation.

** Represents Global Asset Recovery Service transferred from Financing segment.

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.

2021

In 2021, the company completed fifteen acquisitions at an aggregate cost of \$3,342 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>		
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

The following table reflects the purchase price related to these acquisitions and the resulting purchase price allocations as of December 31, 2021.

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International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

	Amortization Life (in Years)	Turbonomic	Other Acquisitions
Current assets		\$ 126	\$ 108
Property, plant and equipment/noncurrent assets		—	12
Intangible assets			
Goodwill	N/A	1,439	1,110
Client relationships	4–10	290	200
Completed technology	4–7	117	196
Trademarks	1–6	18	30
Total assets acquired		\$1,990	\$1,656
Current liabilities		49	59
Noncurrent liabilities		113	84
Total liabilities assumed		\$ 161	\$ 143
Total purchase price		\$1,829	\$1,513

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.

Turbonomic—The overall weighted-average useful life of the identified amortizable intangible assets acquired was 8.9 years. Goodwill of \$1,372 million and \$67 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 \$646 million and \$464 million was assigned to the Consulting and Software segments, respectively. It is expected that approximately seven 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.

Transactions Closed in 2022—In January 2022, the company acquired Envizi, a leading data and analytics software provider for environmental performance management; and Sentaca, a leading telco consulting services and solutions provider specializing in automation, cloud migration, and future networks for telecommunication operators. In February 2022, the company acquired Neudesic, an application development and cloud computing services company. Envizi will be integrated into the Software segment. Sentaca and Neudesic will be integrated into the Consulting segment. At the date of issuance of the financial statements, the initial purchase accounting for Envizi, Sentaca, and Neudesic was not complete.

2020

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

Acquisition	Segment	Description of Acquired Business
<u>First Quarter</u>		
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
<u>Second Quarter</u>		
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
<u>Third Quarter</u>		
WDG Soluções Em Sistemas E Automação De Processos LTDA (WDG Automation)	Software	Provider of robotic process automation
<u>Fourth Quarter</u>		
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

At December 31, 2020, the remaining cash to be remitted by the company related to certain fourth-quarter acquisitions was \$323 million. This amount was classified as restricted cash in the Consolidated Balance Sheet, most of which was paid in the first quarter of 2021.

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

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International Business Machines Corporation and Subsidiary Companies

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

2019

In 2019, the company completed one acquisition at an aggregate cost of \$35 billion.

Red Hat—On July 9, 2019, IBM completed the acquisition of all of the outstanding shares of Red Hat at an aggregate cost of \$35 billion. Red Hat's portfolio of open source and cloud technologies combined with IBM's innovative hybrid cloud technology and industry expertise are accelerating the delivery of the hybrid cloud platform capabilities required to address the next chapter of cloud implementations.

On the acquisition date, Red Hat shareholders received \$190 per share in cash, representing a total equity value of approximately \$34 billion. The company funded the transaction through a combination of cash on hand and proceeds from debt issuances.

The following table reflects the purchase price and the resulting purchase price allocation as of December 31, 2020. The net purchase price adjustments recorded during 2020 were primarily related to noncurrent tax assets and liabilities.

(\$ in millions)

	Amortization Life (in Years)	Allocated Amount
Current assets*		\$ 3,186
Property, plant and equipment/noncurrent assets		948
Intangible assets		
Goodwill	N/A	22,985
Client relationships	10	7,215
Completed technology	9	4,571
Trademarks	20	1,686
Total assets acquired		\$40,592
Current liabilities**		1,395
Noncurrent liabilities		4,117
Total liabilities assumed		\$ 5,512
Total purchase price		\$35,080

* Includes \$2.2 billion of cash and cash equivalents.

** Includes \$485 million of short-term debt related to the convertible notes acquired from Red Hat that were recognized at their fair value on the acquisition date, which was fully settled as of October 1, 2019.

N/A—Not applicable

The goodwill generated was primarily attributable to the assembled workforce of Red Hat and the increased synergies expected to be achieved from the integration of Red Hat products into the company's various integrated solutions neither of which qualify as an amortizable intangible asset.

The overall weighted-average useful life of the identified amortizable intangible assets acquired was 10.9 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. The following table presents the goodwill allocated to the segments as of December 31, 2021:

(\$ in billions)

Segment	Goodwill Allocated *
Software	\$18.4
Consulting	1.1
Infrastructure	0.8
Total	\$20.3 **

* Approximately seven percent of the goodwill was determined to be deductible for tax purposes.

** Goodwill of approximately \$2.7 billion related to the Red Hat acquisition was derecognized at the time of the Kyndryl separation. Refer to note A, "Significant Accounting Policies," and note C, "Separation of Kyndryl," for additional details.

The following table presents the supplemental consolidated financial results of the company as of December 31, 2019 on an unaudited pro forma basis, as if the acquisition had been consummated on January 1, 2018. The primary adjustments reflected in the pro forma results relate to: (1) the debt used to fund the acquisition, (2) changes driven by acquisition accounting, including amortization of intangible assets and the deferred revenue fair value adjustment, (3) employee retention plans, (4) elimination of intercompany transactions between IBM and Red Hat, and (5) the presentation of acquisition-related costs.

The unaudited pro forma financial information presented below does not purport to represent the actual results of operations that IBM and Red Hat would have achieved had the companies been combined during the periods presented, and was not intended to project the future results of operations that the combined company could achieve after the acquisition. Historical fiscal periods are not aligned under this presentation. The unaudited pro forma financial information did not reflect any potential cost savings, operating efficiencies, long-term debt pay down estimates, suspension of IBM's share repurchase program, financial synergies or other strategic benefits as a result of the acquisition or any restructuring costs to achieve those benefits.

(Unaudited)

(\$ in millions)

For the year ended December 31:	2019
Revenue	\$60,195 *
Net income	\$ 7,438 *

* Adjusted to reflect the Kyndryl separation. Refer to note A, "Significant Accounting Policies," and note C, "Separation of Kyndryl," for additional information.

Divestitures

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.

Transactions Announced—In January 2022, the company signed a definitive agreement in which Francisco Partners will acquire IBM's healthcare data and analytics assets reported within the Software segment. The assets include Health Insights, MarketScan, Clinical Development, Social Program Management, Micromedex, and imaging software offerings. The transaction is expected to close in the second quarter of 2022, subject to customary regulatory clearances and closing conditions. At December 31, 2021, the company concluded that the business did not meet the criteria for held-for-sale classification.

2020

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

2019

Select IBM Software Products—On June 30, 2019, HCL Technologies Limited (HCL) acquired select standalone Software products from IBM for \$1,775 million, inclusive of \$150 million of contingent consideration. The transaction included commercial software, intellectual property and services offerings in addition to transition services for IT and other services. The company recognized a pre-tax gain on this transaction of \$626 million and \$43 million in 2019 and 2020, respectively.

The company received cash of \$812 million at closing and \$812 million in the second quarter of 2020. The company also received \$140 million of contingent consideration as of December 31, 2021. In addition, IBM remits payment to HCL predominantly for servicing certain customer contracts until such contracts are terminated or entitlements are assumed by HCL, related to deferred revenue that

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existed prior to closing. IBM made cash payments to HCL of \$38 million, \$288 million, and \$174 million in 2021, 2020 and 2019, respectively, for such contracts.

Select IBM Marketing Platform and Commerce Offerings—On April 4, 2019, IBM and Centerbridge Partners, L.P. (Centerbridge) announced a definitive agreement, in which Centerbridge would acquire select marketing platform and commerce offerings from IBM. The transaction included commercial software and services offerings. In addition, IBM is providing Centerbridge with IT transition services. All other contracted transition services concluded as of June 30, 2020. Upon closing, Centerbridge announced that this business would be re-branded under the name Acoustic. The closing completed for the U.S. on June 30, 2019. The company received a net cash payment of \$240 million in 2019 and expects to receive an additional \$150 million of cash within 36 months of the U.S. closing.

A subsequent closing occurred in most other countries on March 31, 2020. The closing of all remaining countries occurred as of June 30, 2020. The pre-tax gain recognized on this transaction as of December 31, 2021 was \$79 million.

IBM Risk Analytics and Regulatory Offerings—On September 24, 2019, IBM and SS&C Technologies Holdings, Inc. (SS&C) entered into a definitive agreement in which SS&C would acquire certain Algorithmics and related assets from IBM. The transaction closed in the fourth quarter of 2019. The company recognized an immaterial pre-tax gain on the sale for the year ended December 31, 2019.

Sales Performance Management Offerings—On November 20, 2019, IBM and Varicent Parent Holdings Corporation (Varicent) entered into a definitive agreement in which Varicent would acquire certain sales performance management assets from IBM. The initial closing of certain countries was completed on December 31, 2019. The company received a net cash payment of \$230 million and recognized a pre-tax gain on the sale of \$136 million for the year ended December 31, 2019. A subsequent closing for the remaining countries occurred on March 31, 2020 and the company recognized an immaterial pre-tax gain.

The above 2019 divested businesses are reported in Other—divested businesses as described in note E, "Segments."

In addition to the above, the company completed three divestitures reported in the Financing segment, the Consulting segment and the Other—divested businesses in 2019. The financial terms related to each of these transactions were not material.

The pre-tax gains recognized on the divestitures above were recorded in other (income) and expense in the Consolidated Income Statement.

NOTE G. RESEARCH, DEVELOPMENT & ENGINEERING

RD&E expense was \$6,488 million in 2021, \$6,262 million in 2020 and \$5,910 million in 2019.

The company incurred total expense of \$6,216 million, \$5,968 million and \$5,578 million in 2021, 2020 and 2019, 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 \$3,922 million, \$3,682 million and \$3,497 million in 2021, 2020 and 2019, respectively.

Expense for product-related engineering was \$272 million, \$295 million and \$334 million in 2021, 2020 and 2019, respectively.

NOTE H. TAXES

(\$ in millions)

For the year ended December 31:	2021	2020	2019
Income/(loss) from continuing operations before income taxes			
U.S. operations	\$ (2,654)	\$ (2,349)	\$ (874)
Non-U.S. operations	7,491	4,921	8,080
Total income from continuing operations before income taxes	\$ 4,837	\$ 2,572	\$ 7,206

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:	2021	2020	2019
U.S. operations	\$ (969)	\$ 1,913	\$ (419)
Non-U.S. operations	1,093	(3,273)	479
Total continuing operations provision for/(benefit from) income taxes	\$ 124	\$ (1,360)	\$ 60

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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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:	2021	2020	2019
U.S. federal			
Current	\$ 374	\$ 312	\$ 327
Deferred	(1,358)	1,102	(873)
	\$ (984)	\$ 1,414	\$ (546)
U.S. state and local			
Current	\$ 161	\$ 345	\$ (55)
Deferred	(370)	(358)	(85)
	\$ (209)	\$ (13)	\$ (140)
Non-U.S.			
Current	\$ 1,342	\$ 1,208	\$1,376
Deferred	(25)	(3,969)	(630)
	\$ 1,317	\$ (2,761)	\$ 746
Total continuing operations provision for/(benefit from) income taxes	\$ 124	\$ (1,360)	\$ 60
Discontinued operations provision for/(benefit from) income taxes	714	484	670
Provision for social security, real estate, personal property and other taxes	3,227	3,199	3,304
Total taxes included in net income	\$ 4,065	\$ 2,322	\$4,034

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:	2021	2020	2019
Statutory rate	21 %	21 %	21 %
Enactment of U.S. tax reform	—	—	2
Tax differential on foreign income	(10)	(31)	(14)
Intra-entity IP sale	—	(37)	—
Domestic incentives	(5)	(9)	(6)
State and local	(3)	0	(2)
Other	0	3	0
Effective rate	3 %	(53)%	1 %

Percentages rounded for disclosure purposes.

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 rate for 2021 was 2.6 percent compared to (52.9) percent in 2020. The current-year effective tax rate was primarily driven by tax benefits related to audit settlements in multiple jurisdictions. The prior-year effective tax rate was primarily driven by an intra-entity sale of certain of the company's intellectual property in the first quarter of 2020 which required the recognition of a \$3.4 billion deferred tax asset. The recognition of this non-U.S. deferred tax asset and its related GILTI impacts in the U.S. resulted in a net tax benefit of \$0.9 billion in the first quarter of 2020. In addition, a change in foreign tax law resulted in a \$0.2 billion tax benefit in the prior year.

The effect of tax law changes on deferred tax assets and liabilities did not have a material impact on the company's 2021 effective tax rate.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

Deferred Tax Assets

(\$ in millions)

At December 31:	2021	2020
Retirement benefits	\$ 3,142	\$ 3,700
Leases	1,061	1,149
Share-based and other compensation	661	579
Domestic tax loss/credit carryforwards	1,619	1,746
Deferred income	630	661
Foreign tax loss/credit carryforwards	983	818
Bad debt, inventory and warranty reserves	390	324
Depreciation	249	139
Hedging losses	26	576
Restructuring charges	216	253
Accruals	305	483
Intangible assets	2,929	3,540
Capitalized research and development	2,161	1,387
Other	1,280	1,352
Gross deferred tax assets	15,652	16,707
Less: valuation allowance	883	850
Net deferred tax assets	\$14,769	\$15,857

Deferred Tax Liabilities

(\$ in millions)

At December 31:	2021	2020
Goodwill and intangible assets	\$ 2,290	\$ 2,635
GILTI deferred taxes	3,257	4,119
Leases and right-of-use assets	1,314	1,584
Depreciation	518	646
Retirement benefits	1,971	1,209
Software development costs	1,016	1,007
Deferred transition costs	42	200
Undistributed foreign earnings	131	276
Other	817	734
Gross deferred tax liabilities	\$11,356	\$12,410

For financial reporting purposes, the company had foreign and domestic loss carryforwards, the tax effect of which was \$773 million, as well as foreign and domestic credit carryforwards of \$1,829 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, 2021, 2020 and 2019 were \$883 million, \$850 million and \$608 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.

The amount of unrecognized tax benefits at December 31, 2021 increased by \$141 million in 2021 to \$8,709 million. A reconciliation of the beginning and ending amount of unrecognized tax benefits was as follows:

(\$ in millions)

	2021	2020	2019
Balance at January 1	\$8,568	\$7,146	\$6,759
Additions based on tax positions related to the current year	934	1,690	816
Additions for tax positions of prior years	247	159	779
Reductions for tax positions of prior years (including impacts due to a lapse of statute)	(688)	(408)	(922)
Settlements	(352)	(19)	(286)
Balance at December 31	\$8,709	\$8,568	\$7,146

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, 2021 of \$8,709 million can be reduced by \$546 million associated with timing adjustments, U.S. tax credits, potential transfer pricing adjustments and state income taxes. The net amount of \$8,163 million, if

recognized, would favorably affect the company's effective tax rate. The net amounts at December 31, 2020 and 2019 were \$7,994 million and \$6,562 million, respectively.

Interest and penalties related to income tax liabilities are included in income tax expense. During the year ended December 31, 2021, the company recognized \$125 million in interest expense and penalties; in 2020, the company recognized \$117 million in interest expense and penalties; and, in 2019, the company recognized \$13 million in interest expense and penalties. The company had \$935 million for the payment of interest and penalties accrued at December 31, 2021, and had \$843 million accrued at December 31, 2020.

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, 2021 could be reduced by \$166 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 2022. 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, 2021, the company had recorded \$727 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, 2021 were undistributed after-tax earnings from certain non-U.S. subsidiaries that were not indefinitely reinvested. At December 31, 2021, the company had a deferred tax liability of \$131 million for the estimated taxes associated with the repatriation of these earnings. Quantification of the deferred tax liability associated with indefinitely reinvested non-earnings related outside basis differences, if any, was not practicable.

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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:	2021	2020	2019
Weighted-average number of shares on which earnings per share calculations are based			
Basic	895,990,771	890,348,679	887,235,105
Add—incremental shares under stock-based compensation plans	6,883,290	4,802,940	4,199,440
Add—incremental shares associated with contingently issuable shares	1,766,940	1,412,352	1,378,831
Assuming dilution	904,641,001	896,563,971	892,813,376
Income from continuing operations	\$4,712	\$3,932	\$7,146
Income/(loss) from discontinued operations, net of tax	1,030	1,658	2,285
Net income on which basic earnings per share is calculated	\$5,743	\$5,590	\$9,431
Income from continuing operations	\$4,712	\$3,932	\$7,146
Net income applicable to contingently issuable shares	—	(2)	0
Income from continuing operations on which diluted earnings per share is calculated	\$4,712	\$3,930	\$7,146
Income/(loss) from discontinued operations, net of tax, on which basic and diluted earnings per share is calculated	1,030	1,658	2,285
Net income on which diluted earnings per share is calculated	\$5,743	\$5,588	\$9,431
Earnings/(loss) per share of common stock			
Assuming dilution			
Continuing operations	\$ 5.21	\$ 4.38	\$ 8.00
Discontinued operations	1.14	1.85	2.56
Total	\$ 6.35	\$ 6.23	\$10.56
Basic			
Continuing operations	\$ 5.26	\$ 4.42	\$ 8.05
Discontinued operations	1.15	1.86	2.58
Total	\$ 6.41	\$ 6.28	\$10.63

Weighted-average stock options to purchase 980,505 common shares in 2021, 1,417,665 common shares in 2020 and 855,679 common shares in 2019 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, 2021 and 2020.

(\$ in millions)

At December 31:	Fair Value Hierarchy Level	2021		2020	
		Assets ⁽⁷⁾	Liabilities ⁽⁸⁾	Assets ⁽⁷⁾	Liabilities ⁽⁸⁾
Cash equivalents ⁽¹⁾					
Time deposits and certificates of deposit ⁽²⁾	2	\$1,903	N/A	\$7,658	N/A
Money market funds	1	263	N/A	148	N/A
U.S. government securities ⁽²⁾	2	599	N/A	500	N/A
Total cash equivalents		\$2,766	N/A	\$8,306	N/A
Equity investments ⁽³⁾	1	0	N/A	2	N/A
Kyndryl common stock	1	807	N/A	—	N/A
Debt securities—current ⁽²⁾⁽⁴⁾	2	600	N/A	600	N/A
Debt securities—noncurrent ⁽²⁾⁽⁵⁾	1,2,3	37	N/A	7	N/A
Derivatives designated as hedging instruments					
Interest rate contracts	2	12	—	100	—
Foreign exchange contracts	2	359	117	111	580
Derivatives not designated as hedging instruments					
Foreign exchange contracts	2	21	42	13	47
Equity contracts ⁽⁶⁾	1,2	6	4	12	—
Total		\$4,608	\$162	\$9,151	\$627

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

⁽⁵⁾Primarily includes corporate and government debt securities that are reported within investments and sundry assets in the Consolidated Balance Sheet.

⁽⁶⁾Level 1 includes immaterial amounts related to equity futures contracts.

⁽⁷⁾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, 2021 were \$358 million and \$40 million, respectively, and at December 31, 2020 were \$85 million and \$151 million, respectively.

⁽⁸⁾The gross balances of derivative liabilities contained within other accrued expenses and liabilities, and other liabilities in the Consolidated Balance Sheet at December 31, 2021 were \$60 million and \$103 million, respectively, and at December 31, 2020 were \$587 million and \$40 million, respectively.

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. The company accounts for the Kyndryl shares as a fair value investment. The fair value of the shares at December 31, 2021 of \$807 million is included within prepaid expenses and other current assets in the Consolidated Balance Sheet. An unrealized gain of \$126 million representing the difference between the book value of the Kyndryl shares as of the date of separation and the fair value of the shares as of December 31, 2021 was recorded in other (income) and expense in the Consolidated Income Statement for the year ended December 31, 2021. Refer to note C, "Separation of Kyndryl," for additional information.

Financial Assets and Liabilities Not Measured at Fair Value

Short-Term Receivables and Payables

Notes and other accounts receivable 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, 2021 and 2020, 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.

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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 \$44,917 million and \$54,217 million, and the estimated fair value was \$49,465 million and \$61,460 million at December 31, 2021 and 2020, 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:	2021	2020
Finished goods	\$ 208	\$ 163
Work in process and raw materials	1,442	1,649
Total	\$1,649	\$1,812

NOTE L. 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. Loans are provided primarily to clients to finance the purchase of hardware, software and services. Payment terms on these financing arrangements are generally 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		
	Client Loan and Installment Payment Receivables/ (Loans)	Investment in Sales-Type and Direct Financing Leases	Held for Investment	Held for Sale *	Total
At December 31, 2021:					
Financing receivables, gross	\$9,303	\$3,336	\$450	\$793	\$13,881
Unearned income	(353)	(223)	—	—	(576)
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

(\$ in millions)

	Client Financing Receivables		Commercial Financing Receivables*		
	Client Loan and Installment Payment Receivables/ (Loans)	Investment in Sales-Type and Direct Financing Leases	Held for Investment	Held for Sale *	Total
At December 31, 2020:					
Financing receivables, gross	\$12,159	\$4,001	\$2,036	\$383	\$18,580
Unearned income	(488)	(335)	0	—	(823)
Residual value**	—	485	—	—	485
Amortized cost	\$11,671	\$4,151	\$2,036	\$383	\$18,242
Allowance for credit losses	(173)	(82)	(8)	—	(263)
Total financing receivables, net	\$11,498	\$4,069	\$2,028	\$383	\$17,979
Current portion	\$ 6,955	\$1,525	\$2,028	\$383	\$10,892
Noncurrent portion	\$ 4,542	\$2,544	\$ —	\$ —	\$ 7,086

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

** Includes guaranteed and unguaranteed residual value.

† Recast to conform to 2021 presentation.

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 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 nonrecourse borrowings were \$408 million and \$482 million at December 31, 2021 and 2020, respectively. These borrowings are included in note Q, "Borrowings."

Transfer of Financial Assets

The company has entered 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 addition, on December 24, 2020, the company entered into an agreement with a third-party investor to sell up to \$3.0 billion of IBM short-term commercial financing receivables, at any one time, on a revolving basis, starting in the U.S. and Canada in 2020, and expanding to other countries within Europe and Asia Pacific in 2021, including Germany and the UK.

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

(\$ in millions)	2021	2020
Client financing receivables for the year ended December 31		
Lease receivables	\$ 819	\$ 1,152
Loan receivables	2,224	1,410
Total client financing receivables transferred*	\$ 3,043	\$ 2,562
Commercial financing receivables		
Receivables transferred for the year ended December 31	\$ 7,359	\$ 515
Receivables transferred and uncollected as of December 31**	1,653	510

* More than half of the client financing receivables sold were classified as current assets at the time of sale.

** 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, 2021 and 2020.

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 and the impacts to the Consolidated Income Statement, including fees and net gain or loss associated with the transfers of these receivables for the years ended December 31, 2021 and 2020 were not material.

Financing Receivables by Portfolio Segment

The following tables present the amortized cost basis for client financing receivables at December 31, 2021 and 2020, 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, 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.

(\$ in millions)				
At December 31, 2020:	Americas	EMEA	Asia Pacific	Total
Amortized cost	\$ 7,758	\$ 5,023	\$ 3,042	\$ 15,822
Allowance for credit losses				
Beginning balance at January 1, 2020	142	69	41	252
Write-offs	(28)	(3)	(3)	(34)
Recoveries	0	0	2	3
Additions/(releases)	33	5	(4)	34
Other*	(6)	6	1	1
Ending balance at December 31, 2020	\$ 141	\$ 77	\$ 37	\$ 255

* Primarily represents translation adjustments.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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.

(\$ in millions)

	Total Amortized Cost	Amortized Cost > 90 Days ⁽¹⁾	Amortized Cost > 90 Days and Accruing ⁽¹⁾	Billed Invoices > 90 Days and Accruing	Amortized Cost Not Accruing ⁽²⁾
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

(\$ in millions)

	Total Amortized Cost	Amortized Cost > 90 Days ⁽¹⁾	Amortized Cost > 90 Days and Accruing ⁽¹⁾	Billed Invoices > 90 Days and Accruing	Amortized Cost Not Accruing ⁽²⁾
At December 31, 2020:					
Americas	\$ 7,758	\$295	\$200	\$12	\$ 96
EMEA	5,023	119	28	5	95
Asia Pacific	3,042	42	12	4	32
Total client financing receivables	\$15,822	\$456	\$241	\$20	\$223

⁽¹⁾ At a contract level, which includes total billed and unbilled amounts for financing receivables aged greater than 90 days.

⁽²⁾ Of the amortized cost not accruing, there was a related allowance of \$153 million and \$178 million at December 31, 2021 and 2020, respectively. Financing income recognized on these receivables was immaterial for the years ended December 31, 2021 and 2020, 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, 2021 and 2020, 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)

	Americas		EMEA		Asia Pacific	
At December 31, 2021:	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

(\$ in millions)

	Americas		EMEA		Asia Pacific	
At December 31, 2020:	Aaa - Baa3	Ba1 - D	Aaa - Baa3	Ba1 - D	Aaa - Baa3	Ba1 - D
Vintage year						
2020	\$2,818	\$1,449	\$1,513	\$1,427	\$ 958	\$351
2019	988	623	668	519	564	123
2018	829	360	329	245	419	167
2017	285	154	70	128	205	52
2016	90	52	33	46	114	33
2015 and prior	28	81	22	22	38	18
Total	\$5,038	\$2,720	\$2,635	\$2,387	\$2,298	\$743

Troubled Debt Restructurings

The company did not have any significant troubled debt restructurings for the years ended December 31, 2021 and 2020.

NOTE M. PROPERTY, PLANT & EQUIPMENT

(\$ in millions)

At December 31:	2021	2020
Land and land improvements	\$ 224	\$ 234
Buildings and building and leasehold improvements	6,049	6,407
Information technology equipment	10,515	9,840
Production, engineering, office and other equipment	3,222	3,354
Plant and other property—gross	20,010	19,836
Less: Accumulated depreciation	14,343	13,728
Plant and other property—net	5,668	6,108
Rental machines	74	265
Less: Accumulated depreciation	48	168
Rental machines—net	27	97
Total—net	\$ 5,694	\$ 6,205

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:	2021	2020	2019
Finance lease cost	\$ 52	\$ 35	\$ 14
Operating lease cost	1,126	1,181	1,257
Short-term lease cost	21	28	24
Variable lease cost	336	343	364
Sublease income	(46)	(28)	(22)
Total lease cost	\$1,489	\$1,558	\$1,637

The company recorded net gains on sale and leaseback transactions of \$7 million and \$36 million for the years ended December 31, 2021 and 2019, 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:	2021	2020	2019
Cash paid for amounts included in the measurement of lease liabilities			
Operating cash outflows from finance leases	\$ 8	\$ 8	\$ 7
Financing cash outflows from finance leases	42	25	4
Operating cash outflows from operating leases	1,135	1,212	1,154
ROU assets obtained in exchange for new finance lease liabilities	46	50	68 *
ROU assets obtained in exchange for new operating lease liabilities	779	785	5,102 *

* Includes opening balance additions as a result of the adoption of the new lease guidance effective January 1, 2019. The post adoption addition of leases for the year ended December 31, 2019 was \$1,383 million for operating leases and immaterial for finance leases.

Notes to Consolidated Financial Statements

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

At December 31:	2021	2020
Finance leases		
Weighted-average remaining lease term	4.1 yrs.	4.9 yrs.
Weighted-average discount rate	0.88 %	1.08 %
Operating leases		
Weighted-average remaining lease term	4.5 yrs.	4.7 yrs.
Weighted-average discount rate	3.01 %	3.25 %

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)

	2022	2023	2024	2025	2026	Thereafter	Imputed Interest *	Total **
Finance leases	\$ 43	\$ 30	\$ 18	\$ 9	\$ 8	\$ 28	\$ (36)	\$ 99
Operating leases	1,047	845	685	424	313	356	(234)	3,435

* 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 \$202 million that have not yet commenced as of December 31, 2021, 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:	2021	2020
ROU Assets—Property, plant and equipment	\$86	\$84
Lease Liabilities		
Short-term debt	36	30
Long-term debt	63	60

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:	2021	2020	2019
Lease income—sales-type and direct financing leases			
Sales-type lease selling price	\$1,355	\$1,321	\$1,360
Less: Carrying value of underlying assets*	(300)	(410)	(476)
Gross profit	1,055	911	884
Interest income on lease receivables	179	249	303
Total sales-type and direct financing lease income	1,234	1,160	1,187
Lease income—operating leases	169	255	322
Variable lease income	120	115	56
Total lease income	\$1,523	\$1,530	\$1,565

* Excludes unguaranteed residual value.

Sales-Type and Direct Financing Leases

At December 31, 2021 and 2020, the unguaranteed residual values of sales-type and direct financing leases were \$335 million and \$469 million, respectively. For further information on the company's net investment in leases, including guaranteed and unguaranteed residual values, refer to note L, "Financing Receivables."

For the years ended December 31, 2021 and 2020, 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, 2021:

(\$ in millions)	
	Total
2022	\$1,528
2023	1,014
2024	555
2025	209
2026	27
Thereafter	1
Total undiscounted cash flows	\$3,336
Present value of lease payments (recognized as financing receivables)	3,113 *
Difference between undiscounted cash flows and discounted cash flows	\$ 223

* 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.

Operating Leases

The following table presents a maturity analysis of the undiscounted lease payments due to IBM on operating leases over the next five years and thereafter at December 31, 2021:

(\$ in millions)	
	Total
2022	\$ 13
2023	4
2024	0
2025	0
2026	—
Thereafter	—
Total undiscounted cash flows	\$ 17

There were no material impairment losses incurred for equipment provided to clients under an operating lease for the years ended December 31, 2021 and 2020.

At December 31, 2021 and 2020, the unguaranteed residual values of operating leases were \$13 million and \$48 million, respectively.

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, 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.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount *
At December 31, 2020:			
Intangible asset class			
Capitalized software	\$ 1,777	\$ (814)	\$ 963
Client relationships	8,708	(1,976)	6,732
Completed technology	5,937	(1,655)	4,283
Patents/trademarks	2,244	(499)	1,744
Other**	56	(39)	16
Total	\$18,722	\$(4,983)	\$13,739

* Includes an increase in net intangible asset balance of \$279 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 2021 and 2020. The net carrying amount of intangible assets decreased \$1,228 million during the year ended December 31, 2021, primarily due to intangible asset amortization, partially offset by additions of acquired intangibles and capitalized software. The aggregate intangible amortization expense was \$2,506 million and \$2,441 million for the years ended December 31, 2021 and 2020, respectively. In addition, in 2021 and 2020, respectively, the company retired \$904 million and \$1,461 million of fully amortized intangible assets, impacting both the gross carrying amount and accumulated amortization by this amount.

The future amortization expense relating to intangible assets currently recorded in the Consolidated Balance Sheet is estimated to be the following at December 31, 2021:

(\$ in millions)	Capitalized Software	Acquired Intangibles	Total
2022	\$512	\$1,818	\$ 2,329
2023	313	1,513	1,826
2024	120	1,467	1,587
2025	0	1,450	1,450
2026	0	1,433	1,433
Thereafter	—	3,886	3,886

Goodwill

The changes in the goodwill balances by reportable segment, for the years ended December 31, 2021 and 2020, are as follows:

(\$ in millions)

	Balance at January 1, 2021	Goodwill Additions	Purchase Price Adjustments	Divestitures	Foreign Currency Translation and Other Adjustments **	Balance at December 31, 2021
Segment*						
Software	\$43,149	\$1,836	\$ 23	\$(13)	\$(545)	\$44,450
Consulting	6,145	713	(21)	—	(40)	6,797
Infrastructure	4,436	—	0	—	(39)	4,396
Other—divested businesses	36	—	—	(37)	1	—
Total	\$53,765	\$2,549	\$ 2	\$(50)	\$(623)	\$55,643

(\$ in millions)

	Balance at January 1, 2020	Goodwill Additions	Purchase Price Adjustments	Divestitures	Foreign Currency Translation and Other Adjustments **	Balance at December 31, 2020
Segment*						
Software	\$42,275	\$362	\$(139)	\$ —	\$651	\$43,149
Consulting	5,775	205	—	—	165	6,145
Infrastructure	4,386	8	—	—	42	4,436
Other—divested businesses	35	—	—	—	1	36
Total	\$52,471	\$575	\$(139)	\$ —	\$859	\$53,765

* Recast to reflect segment changes.

** Primarily driven by foreign currency translation.

The company performed its annual goodwill impairment test for all reporting units during the fourth quarter of 2021. Following the changes to the organizational structure, goodwill was reassigned to the reporting units using a relative fair value allocation approach. As a result, the company performed the quantitative goodwill impairment test for all affected reporting units.

There were no goodwill impairment losses recorded during 2021 or 2020 and the company has no accumulated impairment losses.

Purchase price adjustments recorded in 2021 and 2020 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 2021 were not material. During 2020, net purchase price adjustments recorded to noncurrent tax assets and liabilities were related to the Red Hat acquisition.

NOTE P. INVESTMENTS & SUNDRY ASSETS

(\$ in millions)

At December 31:	2021	2020
Derivatives—noncurrent	\$ 40	\$ 151
Alliance investments		
Equity method	159	170
Non-equity method	47	46
Long-term deposits	205	231
Other receivables	181	423
Employee benefit-related	210	237
Prepaid income taxes	743	777
Other assets	237	153
Total	\$1,823	\$2,187

NOTE Q. BORROWINGS

Short-Term Debt

(\$ in millions)

At December 31:	2021	2020
Short-term loans	\$ 22	\$ 130
Long-term debt—current maturities	6,764	6,986
Total	\$6,787	\$ 7,116

The weighted-average interest rate for short-term loans was 6.7 percent and 5.7 percent at December 31, 2021 and 2020, respectively.

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International Business Machines Corporation and Subsidiary Companies

Long-Term Debt

Pre-Swap Borrowing

(\$ in millions)

At December 31:	Maturities	2021	2020
U.S. dollar debt (weighted-average interest rate at December 31, 2021):*			
1.3%	2021	\$ —	\$ 5,499
2.6%	2022	5,673	6,233
3.4%	2023	1,573	2,395
3.3%	2024	5,016	5,029
6.9%	2025	608	631
3.3%	2026	4,356	4,370
3.0%	2027	2,221	2,219
6.5%	2028	313	313
3.5%	2029	3,250	3,250
2.0%	2030	1,350	1,350
5.9%	2032	600	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
7.1%	2096	316	316
		\$34,290	\$ 41,218
Other currencies (weighted-average interest rate at December 31, 2021, in parentheses):*			
Euro (1.1%)	2023-2040	\$15,903	\$ 18,355
Pound sterling (2.6%)	2022	406	411
Japanese yen (0.3%)	2022-2026	1,263	1,409
Other (11.3%)	2022-2025	378	324
		\$52,240	\$ 61,718
Finance lease obligations (1.8%)	2022-2030	99	91
		\$52,339	\$ 61,808
Less: net unamortized discount		839	875
Less: net unamortized debt issuance costs		130	156
Add: fair value adjustment**		311	426
		\$51,681	\$ 61,203
Less: current maturities		6,764	6,986
Total		\$44,917	\$ 54,217

* 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 2020, the company issued an aggregate of \$4.1 billion of Euro fixed-rate notes and the proceeds were primarily used to early redeem outstanding fixed-rate debt which was due in 2021 in the aggregate amount of \$2.9 billion. 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 \$49 million upon redemption that was recorded in other (income) and expense in the Consolidated Income Statement.

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.

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

(\$ in millions)

	2021		2020	
	Amount	Weighted-Average Interest Rate	Amount	Weighted-Average Interest Rate
For the year ended December 31:				
Fixed-rate debt	\$49,976	2.8 %	\$53,237	2.7 %
Floating-rate debt*	1,705	2.6 %	7,966	1.1 %
Total	\$51,681		\$61,203	

* Includes \$425 million and \$2,975 million in 2021 and 2020, respectively, of notional interest-rate swaps that effectively convert fixed-rate long-term debt into floating-rate debt. Refer to note U, "Derivative Financial Instruments," for additional information.

Pre-swap annual contractual obligations of long-term debt outstanding at December 31, 2021, are as follows:

(\$ in millions)

	Total
2022	\$ 6,765
2023	4,848
2024	6,391
2025	4,015
2026	4,719
Thereafter	25,601
Total	\$52,339

Interest on Debt

(\$ in millions)

For the year ended December 31:	2021	2020	2019
Cost of financing	\$ 392	\$ 451	\$ 608
Interest expense	1,155	1,288	1,344
Interest capitalized	3	5	4
Total interest paid and accrued	\$1,550	\$1,743	\$1,956

Refer to the related discussion in note E, "Segments," for interest expense of the Financing segment. Refer to note U, "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 22, 2021, the company entered into a new \$2.5 billion Three-Year Credit Agreement and \$7.5 billion Five-Year Credit Agreement to replace the existing \$2.5 billion Three-Year and \$10.25 billion Five-Year Credit Agreements. The maturity dates for the new Three-Year and Five-Year Credit Agreements (the Credit Agreements) are June 21, 2024, and June 22, 2026, respectively. The Credit Agreements permit the company and its subsidiary borrowers to borrow up to \$10 billion on a revolving basis. In connection with entering into the Credit Agreements, the company also terminated its \$2.5 billion 364-Day Credit Agreement which was scheduled to expire on July 1, 2021. The total expense recorded by the company related to these agreements was \$12 million, \$12 million and \$9 million in 2021, 2020 and 2019, 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. The company also has other committed lines of credit in some of the geographies

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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, 2021, there were no borrowings by the company, or its subsidiaries, under these credit facilities.

NOTE R. OTHER LIABILITIES

(\$ in millions)

At December 31:	2021	2020
Income tax reserves	\$ 6,179	\$ 5,274
Excess 401(k) Plus Plan	1,686	1,635
Disability benefits	359	385
Derivative liabilities	103	40
Workforce reductions	752	886
Deferred taxes	3,956	4,958
Other taxes payable	72	253
Environmental accruals	224	246
Warranty accruals	29	33
Asset retirement obligations	92	84
Acquisition related	218	60
Divestiture related	47	63
Other	278	263
Total	\$13,996	\$14,180

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 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 \$1,359 million and \$2,631 million at December 31, 2021 and 2020, respectively. The decrease is primarily due to cash payments made in 2021 for the workforce reduction action in the fourth quarter of 2020 for which the company recorded a charge of \$1,472 million in selling, general and administrative expense in the Consolidated Income Statement 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 \$248 million and \$266 million at December 31, 2021 and 2020, 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 and changing environmental remediation regulations.

As of December 31, 2021, 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 \$119 million and \$122 million at December 31, 2021 and 2020, respectively.

NOTE 5. COMMITMENTS & CONTINGENCIES

Commitments

The company's extended lines of credit to third-party entities include unused amounts of \$1.7 billion and \$2.1 billion at December 31, 2021 and 2020, 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 \$3.2 billion and \$3.4 billion at December 31, 2021 and 2020, respectively. 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, 2021 and 2020.

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, 2021 and 2020 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)

	2021	2020
Balance at January 1	\$ 83	\$113
Current period accruals	82	83
Accrual adjustments to reflect experience	(1)	(16)
Charges incurred	(86)	(96)
Balance at December 31	\$ 77	\$ 83

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

Extended Warranty Liability (Deferred Income)

(\$ in millions)

	2021	2020
Balance at January 1	\$ 425	\$ 477
Revenue deferred for new extended warranty contracts	133	166
Amortization of deferred revenue	(198)	(224)
Other*	(10)	6
Balance at December 31	\$ 350	\$ 425
Current portion	\$ 163	\$ 204
Noncurrent portion	\$ 186	\$ 221

* 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 or 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, 2021, 2020 and 2019 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. CISGIL was granted permission to appeal and the matter is now pending at the Court of Appeal in London.

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 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. IBM's claims for breaches of contract and promissory estoppel are proceeding.

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 T. 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 898,068,600 shares were outstanding at December 31, 2021, 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, 2021. 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 effective with the close of the Red Hat acquisition on July 9, 2019 in order to focus on reducing debt related to the acquisition. The company repurchased 9,979,516 common shares at a cost of \$1,331 million in 2019. Actual cash disbursements for repurchased shares may differ due to varying settlement dates for these transactions. At December 31, 2021, \$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: 5,608,845 shares in 2021, 4,972,028 shares in 2020, and 4,569,917 shares in 2019. The company issued 2,093,243 treasury shares in 2021, 2,934,907 treasury shares in 2020, and 2,041,347 treasury shares in 2019, 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, 2,286,912 common shares at a cost of \$319 million, 2,363,966 common shares at a cost of \$302 million, and 2,000,704 common shares at a cost of \$272 million in 2021, 2020 and 2019, 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.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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, 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⁽¹⁾			
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

⁽¹⁾ These AOCI components are included in the computation of net periodic pension cost. Refer to note W, "Retirement-Related Benefits," for additional information.

(\$ 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⁽¹⁾			
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)

⁽¹⁾ These AOCI components are included in the computation of net periodic pension cost. Refer to note W, "Retirement-Related Benefits," for additional information.

(\$ in millions)

For the year ended December 31, 2019:	Before Tax Amount	Tax (Expense)/Benefit	Net of Tax Amount
Other comprehensive income/(loss)			
Foreign currency translation adjustments	\$ (39)	\$ 29	\$ (10)
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	\$ (689)	\$ 167	\$ (522)
Reclassification of (gains)/losses to:			
Cost of services	(68)	17	(50)
Cost of sales	(51)	15	(37)
Cost of financing	89	(22)	67
SG&A expense	(53)	14	(39)
Other (income) and expense	(39)	10	(29)
Interest expense	197	(50)	148
Total unrealized gains/(losses) on cash flow hedges	\$ (614)	\$ 151	\$ (463)
Retirement-related benefit plans⁽¹⁾			
Prior service costs/(credits)	\$ (73)	\$ 10	\$ (63)
Net (losses)/gains arising during the period	(120)	52	(68)
Curtailments and settlements	41	(12)	29
Amortization of prior service (credits)/costs	(9)	5	(4)
Amortization of net (gains)/losses	1,843	(371)	1,471
Total retirement-related benefit plans	\$1,681	\$(316)	\$1,365
Other comprehensive income/(loss)	\$1,029	\$(136)	\$ 893

⁽¹⁾ These AOCI components are included in the computation of net periodic pension cost. Refer to note W, "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, 2018	\$ 284	\$(3,690)	\$(26,083)	\$ 0	\$(29,490)
Other comprehensive income before reclassifications	(522)	(10)	(131)	1	(663)
Amount reclassified from accumulated other comprehensive income	59	—	1,496	—	1,556
Total change for the period	(463)	(10)	1,365	1	893
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)

* Foreign currency translation adjustments are presented gross except for any associated hedges which are presented net of tax.

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

NOTE U. 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 \$2 million at December 31, 2021 and no amount was recognized at December 31, 2020. The amount recognized in accounts payable for the obligation to return cash collateral at December 31, 2021 was \$38 million and no amount was recognized at December 31, 2020. The company restricts the use of cash collateral received to rehypothecation, and therefore reports it in restricted cash in the Consolidated Balance Sheet. At December 31, 2021, \$2 million was rehypothecated and no amount was rehypothecated at December 31, 2020. Additionally, if derivative exposures covered by a qualifying master netting agreement had been netted in the Consolidated Balance Sheet at December 31, 2021 and 2020, the total derivative asset and liability positions each would have been reduced by \$60 million and \$213 million, respectively.

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, 2021 and 2020, the total notional amount of the company's interest-rate swaps was \$0.4 billion and \$3.0 billion, respectively. In the first quarter of 2021, in addition to the scheduled swap maturities, the company terminated \$1.3 billion of interest-rate swaps concurrent with the early redemption of the underlying hedged fixed-rate debt. The weighted-average remaining maturity of these instruments at both December 31, 2021 and 2020 was approximately 1.2 years. 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, 2021 and 2020.

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, 2021 and 2020.

In connection with cash flow hedges of forecasted interest payments related to the company's borrowings, the company recorded net losses of \$157 million and \$174 million (before taxes) at December 31, 2021 and 2020, respectively, in AOCI. The company estimates that \$18 million (before taxes) of the deferred net losses on derivatives in AOCI at December 31, 2021 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, 2021 and 2020, the carrying value of debt designated as hedging instruments was \$14.1 billion and \$16.4 billion, respectively. The company also uses cross-currency swaps and foreign exchange forward contracts for this risk management purpose. At December 31, 2021 and 2020, the total notional amount of derivative instruments designated as net investment hedges was \$6.8 billion and \$7.2 billion, respectively. At December 31, 2021 and 2020, the weighted-average remaining maturity of these instruments was approximately 0.1 years and 0.3 years, respectively.

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, 2021, the maximum remaining length of time over which the company has hedged its exposure to the variability in future cash flows is approximately three years. At December 31, 2021 and 2020, the total notional amount of forward contracts designated as cash flow hedges of forecasted royalty and cost transactions was \$7.2 billion and \$8.0 billion, respectively. At December 31, 2021 and 2020, the weighted-average remaining maturity of these instruments was approximately 0.6 years and 0.7 years, respectively.

At December 31, 2021 and 2020, in connection with cash flow hedges of anticipated royalties and cost transactions, the company recorded net gains of \$315 million and net losses of \$192 million (before taxes), respectively, in AOCI. The company estimates that \$236 million (before taxes) of deferred net gains on derivatives in AOCI at December 31, 2021 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, 2021, the maximum length of time remaining over which the company has hedged its exposure was approximately six years. At December 31, 2021 and 2020, the total notional amount of cross-currency swaps designated as cash flow hedges of foreign currency denominated debt was \$2.0 billion and \$1.5 billion, respectively.

At December 31, 2021 and 2020, in connection with cash flow hedges of foreign currency denominated borrowings, the company recorded net losses of \$174 million and \$236 million (before taxes), respectively, in AOCI. The company estimates that \$15 million (before taxes) of deferred net losses on derivatives in AOCI at December 31, 2021 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 both December 31, 2021 and 2020, the total notional amount of derivative instruments in economic hedges of foreign currency exposure was \$6.8 billion.

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, 2021 and 2020, the total notional amount of derivative instruments in economic hedges of these compensation obligations was \$1.4 billion and \$1.3 billion, respectively.

Cumulative Basis Adjustments for Fair Value Hedges

At December 31, 2021 and 2020, the following amounts were recorded in the Consolidated Balance Sheet related to cumulative basis adjustments for fair value hedges:

(\$ in millions)		
At December 31:	2021	2020
Short-term debt		
Carrying amount of the hedged item	\$ (227)	\$(1,302)
Cumulative hedging adjustments included in the carrying amount—assets/(liabilities)	(2)	(2)
Long-term debt		
Carrying amount of the hedged item	(508)	(2,097)
Cumulative hedging adjustments included in the carrying amount—assets/(liabilities)*	(309)	(424)

* Includes (\$302) million and (\$353) million of hedging adjustments on discontinued hedging relationships at December 31, 2021 and 2020, respectively.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

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		
	2021	2020	2019	2021	2020	2019
Cost of services	\$19,147	\$17,689	\$19,009	\$ 43	\$ 23	\$ 68
Cost of sales	6,184	6,048 *	6,467 *	(16)	2	51
Cost of financing	534	577 *	704 *	1	12	(42)
SG&A expense	18,745	20,561	18,724	176	141	267
Other (income) and expense	873	802	(1,012)	(205)	101	(15)
Interest expense	1,155	1,288	1,344	3	35	(93)

* Reclassified to conform to 2021 presentation.

(\$ 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⁾		
		2021	2020	2019	2021	2020	2019
Derivative instruments in fair value hedges ⁽¹⁾							
Interest rate contracts	Cost of financing	\$ (1)	\$ 20	\$ 44	\$ 18	\$ 4	\$ (32)
	Interest expense	(2)	58	98	53	11	(71)
Derivative instruments not designated as hedging instruments							
Foreign exchange contracts	Other (income) and expense	(48)	1	(53)	N/A	N/A	N/A
Equity contracts	SG&A expense	201	142	214	N/A	N/A	N/A
Total		\$150	\$220	\$302	\$ 71	\$ 14	\$(103)

(\$ 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⁾		
	2021	2020	2019		2021	2020	2019	2021	2020	2019
Derivative instruments in cash flow hedges										
Interest rate contracts	\$ —	\$ —	\$(168)	Cost of financing	\$ (4)	\$ (5)	\$ (3)	\$ —	\$ —	\$ —
				Interest expense	(13)	(13)	(8)	—	—	—
Foreign exchange contracts	344	(349)	(521)	Cost of services	43	23	68	—	—	—
				Cost of sales	(16)	2	51	—	—	—
				Cost of financing	(18)	(23)	(86)	—	—	—
				SG&A expense	(24)	0	53	—	—	—
				Other (income) and expense	(157)	101	39	—	—	—
				Interest expense	(52)	(65)	(190)	—	—	—
Instruments in net investment hedges ⁽⁴⁾										
Foreign exchange contracts	1,644	(2,127)	(95)	Cost of financing	—	—	—	6	16	35
				Interest expense	—	—	—	17	45	77
Total	\$1,989	\$(2,477)	\$(784)		\$(243)	\$ 21	\$ (75)	\$ 23	\$60	\$112

⁽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, 2021, 2020 and 2019, 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 V. 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:	2021	2020	2019
Cost	\$ 145	\$ 126	\$ 85
SG&A expense	555	550	419
RD&E expense	218	197	125
Pre-tax stock-based compensation cost	919	873	628
Income tax benefits	(223)	(198)	(143)
Net stock-based compensation cost	\$ 695	\$ 675	\$ 484

Red Hat was acquired on July 9, 2019. The 2021 and 2020 results include a full year of compensation expense for issuances and conversions of stock-based compensation for Red Hat compared to six months in 2019.

The company's total unrecognized compensation cost related to non-vested awards at December 31, 2021 was \$1.4 billion and is expected to be recognized over a weighted-average period of approximately 2.4 years.

Capitalized stock-based compensation cost was not material at December 31, 2021, 2020 and 2019.

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, 2021, 96 million unused shares were available to be granted.

Separation of Kyndryl

In connection with the separation of Kyndryl, as required by the Company's stock-based incentive award plans, the number of shares underlying remaining unvested stock awards was adjusted. The company also adjusted the exercise price and number of shares underlying outstanding stock options. All adjustments were made with the intent to preserve the intrinsic value of each award immediately before and after the separation. The adjustments to the number of shares and exercise price, as applicable, were determined using a ratio of 1.03 which was calculated by using the IBM share price based on the market closing price before and market opening price after the separation. The number of stock awards issued as a result of the adjustment was 0.8 million. The number of stock options issued and the respective decrease in exercise price as a result of the adjustment was immaterial. The terms of the outstanding awards remain the same and continue to vest over the original vesting periods. Any unvested stock awards held by employees of Kyndryl were cancelled at the time of separation. The adjustments to shares underlying unvested stock awards did not result in material stock-based compensation cost.

Stock Awards

Stock awards for the period presented were made in the form of Restricted Stock Units (RSUs), including Retention Restricted Stock Units (RRSUs), or Performance Share Units (PSUs).

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

The following table summarizes RSU and PSU activity under the Plans during the years ended December 31, 2021, 2020 and 2019.

	RSUs		PSUs	
	Weighted-Average Grant Price	Number of Units	Weighted-Average Grant Price	Number of Units
Balance at January 1, 2019	\$130	9,802,704	\$136	2,419,695
Awards granted	119	5,650,861	117	1,395,534
Awards released	136	(3,145,016)	140	(846,672)
Awards canceled/forfeited/performance adjusted	128	(981,921)	131	(112,107)*
Balance at December 31, 2019	\$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 **

* Includes adjustments of (223,397), (70,089) and (8,544) PSUs for 2021, 2020 and 2019, 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.

The total fair value of RSUs and PSUs granted and vested during the years ended December 31, 2021, 2020 and 2019 were as follows:

(\$ in millions)			
For the year ended December 31:	2021	2020	2019
RSUs			
Granted	\$1,195	\$1,220	\$674
Vested	549	478	428
PSUs			
Granted	\$ 201	\$ 186	\$164
Vested	75	86	118

In connection with vesting and release of RSUs and PSUs, the tax benefits realized by the company for the years ended December 31, 2021, 2020 and 2019 were \$175 million, \$139 million and \$131 million, respectively.

Stock Options

In 2016, the company made one grant of 1.5 million premium-priced stock options. As of December 31, 2021, these options were vested with a weighted-average exercise price of \$135 per share and had a remaining weighted-average contractual life of approximately 4.1 years. The options are exercisable within a range of \$125 to \$149. These vested options have an intrinsic value of \$4.5 million as of December 31, 2021.

The company has not granted options since 2016. No material stock options were exercised, forfeited or canceled during the years ended December 31, 2021, 2020 and 2019. Beginning in 2022, options will be granted by the company as part of its executive compensation programs.

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, 2021 and 2020 were approximately 1,351 million and 1,350 million shares, respectively.

Acquisitions

In connection with the acquisition of Red Hat in July 2019, the company issued and assumed 6.4 million stock awards with a fair value of \$845 million. A share conversion ratio of 1.35 was applied to convert Red Hat's outstanding equity awards for Red Hat's common stock into IBM stock awards. At December 31, 2021, there were 0.7 million of these stock awards outstanding with a weighted-average grant price of \$127 per share.

In connection with various other acquisition transactions, there was an additional 0.6 million stock options outstanding at December 31, 2021, as a result of the company's conversion of stock-based awards previously granted by acquired entities. The weighted-average exercise price of these awards was \$26 per share.

IBM Employees Stock Purchase Plan

The company maintains a non-compensatory Employees Stock Purchase Plan (ESPP). The ESPP enables eligible participants to purchase shares of IBM common stock at a 5 percent discount off the average market price on the day of purchase 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 one million shares under the ESPP during each year ended December 31, 2021, 2020 and 2019. 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 16.8 million shares were available for purchase under the ESPP at December 31, 2021.

Effective April 1, 2022, the company will increase the discount from 5 percent to 15 percent off the average market price on the date of purchase for eligible participants under its ESPP. This change is expected to result in the ESPP being considered compensatory under the accounting requirements for stock-based compensation.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

NOTE W. 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 (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	Benefit accruals ceased December 31, 2007
	Excess Personal Pension Plan (PPP)		Unfunded, provides benefits in excess of IRS limitations for qualified plans	Cash balance formula based on percentage of employees' annual salary, as well as an interest crediting rate	
	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 ⁽¹⁾	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

⁽¹⁾ 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.

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)

	U.S. Plans			Non-U.S. Plans			Total		
For the year ended December 31:	2021	2020	2019	2021	2020	2019	2021	2020	2019
Defined benefit pension plans	\$ 303	\$167	\$(153)	\$1,119	\$1,057	\$ 842	\$1,422	\$1,224	\$ 689
Retention Plan	16	11	11	—	—	—	16	11	11
Total defined benefit pension plans (income)/cost	\$ 319	\$178	\$(142)	\$1,119	\$1,057	\$ 842	\$1,438	\$1,235	\$ 700
IBM 401(k) Plus Plan and non-U.S. plans	\$ 561	\$585	\$ 588	\$ 409	\$ 403	\$ 389	\$ 971	\$ 988	\$ 976
Excess 401(k)	21	27	26	—	—	—	21	27	26
Total defined contribution plans cost	\$ 582	\$612	\$ 613	\$ 409	\$ 403	\$ 389	\$ 992	\$1,015	\$1,002
Nonpension postretirement benefit plans cost	\$ 127	\$145	\$ 154	\$ 44	\$ 57	\$ 64	\$ 172	\$ 202	\$ 218
Total retirement-related benefits net periodic cost	\$1,029	\$934	\$ 624	\$1,573	\$1,517	\$1,295	\$2,601	\$2,451	\$1,920

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)

	Benefit Obligations		Fair Value of Plan Assets		Funded Status *	
At December 31:	2021	2020	2021	2020	2021	2020
U.S. Plans						
Overfunded plans						
Qualified PPP	\$46,458	\$50,375	\$51,852	\$54,386	\$ 5,395	\$ 4,011
Underfunded plans						
Excess PPP	\$ 1,441	\$ 1,556	\$ —	\$ —	\$ (1,441)	\$ (1,556)
Retention Plan	283	306	—	—	(283)	(306)
Nonpension postretirement benefit plan	3,404	3,791	8	15	(3,395)	(3,776)
Total underfunded U.S. plans	\$ 5,128	\$ 5,652	\$ 8	\$ 15	\$ (5,119)	\$ (5,638)
Non-U.S. Plans						
Overfunded plans						
Qualified defined benefit pension plans**	\$21,617	\$20,504	\$26,071	\$24,051	\$ 4,454	\$ 3,546
Nonpension postretirement benefit plans	—	9	—	9	—	0
Total overfunded non-U.S. plans	\$21,617	\$20,513	\$26,071	\$24,060	\$ 4,454	\$ 3,546
Underfunded plans						
Qualified defined benefit pension plans**	\$17,360	\$23,207	\$13,908	\$18,257	\$ (3,452)	\$ (4,950)
Nonqualified defined benefit pension plans	6,120	6,736	—	—	(6,120)	(6,736)
Nonpension postretirement benefit plans	638	747	31	31	(607)	(716)
Total underfunded non-U.S. plans	\$24,118	\$30,690	\$13,939	\$18,288	\$ (10,179)	\$ (12,402)
Total overfunded plans	\$68,075	\$70,888	\$77,924	\$78,445	\$ 9,850	\$ 7,557
Total underfunded plans	\$29,246	\$36,342	\$13,947	\$18,302	\$ (15,300)	\$ (18,040)

* 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).

** Non-U.S. qualified plans represent plans funded outside of the U.S. Non-U.S. nonqualified plans are unfunded.

At December 31, 2021, the company's qualified defined benefit pension plans worldwide were 107 percent funded compared to the benefit obligations, with the U.S. Qualified PPP 112 percent funded. Overall, including nonqualified plans, the company's defined benefit pension plans worldwide were 98 percent funded.

Defined Benefit Pension and Nonpension Postretirement Benefit Plan Financial Information

The following tables through page 128 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		
	2021	2020	2019	2021	2020	2019
For the year ended December 31:						
Service cost	\$ —	\$ —	\$ —	\$ 300	\$ 328	\$ 304
Interest cost ⁽¹⁾	1,109	1,501	1,882	424	541	814
Expected return on plan assets ⁽¹⁾	(1,802)	(2,169)	(2,599)	(1,115)	(1,229)	(1,530)
Amortization of transition assets ⁽¹⁾	—	—	—	—	—	0
Amortization of prior service costs/(credits) ⁽¹⁾	16	16	16	(12)	(9)	(25)
Recognized actuarial losses ⁽¹⁾	996	829	559	1,392	1,336	1,190
Curtailments and settlements ⁽¹⁾	—	—	—	94	49	38
Multi-employer plans	—	—	—	17	23	23
Other costs/(credits)	—	—	—	18	18	28
Total net periodic (income)/cost	\$ 319	\$ 178	\$ (142)	\$ 1,119	\$ 1,057	\$ 842

(\$ in millions)

	Nonpension Postretirement Benefit Plans					
	U.S. Plan			Non-U.S. Plans		
	2021	2020	2019	2021	2020	2019
For the year ended December 31:						
Service cost	\$ 7	\$ 9	\$ 10	\$ 4	\$ 4	\$ 4
Interest cost ⁽¹⁾	65	103	145	27	35	54
Expected return on plan assets ⁽¹⁾	—	—	—	(3)	(4)	(5)
Amortization of transition assets ⁽¹⁾	—	—	—	—	—	—
Amortization of prior service costs/(credits) ⁽¹⁾	4	4	(2)	0	0	0
Recognized actuarial losses ⁽¹⁾	52	29	1	15	21	10
Curtailments and settlements ⁽¹⁾	—	—	—	0	0	0
Other costs/(credits)	—	—	—	0	0	—
Total net periodic cost	\$127	\$145	\$154	\$44	\$57	\$64

⁽¹⁾ These components of net periodic pension costs are included in other (income) and expense in the Consolidated Income Statement.

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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	
	2021	2020	2021	2020	2021	2020	2021	2020
Change in benefit obligation								
Benefit obligation at January 1	\$52,237	\$50,232	\$50,447	\$45,947	\$ 3,791	\$ 3,857	\$ 756	\$ 830
Service cost	—	—	300	328	7	9	4	4
Interest cost	1,109	1,501	424	541	65	103	27	35
Plan participants' contributions	—	—	19	18	50	56	—	—
Acquisitions/divestitures, net	—	1	(70)	63	—	—	6	0
Actuarial losses/(gains)	(1,582)	4,071	(876)	2,794	(141)	135	(78)	(2)
Benefits paid from trust	(3,459)	(3,445)	(2,090)	(1,908)	(369)	(369)	(6)	(4)
Direct benefit payments	(125)	(123)	(516)	(391)	(1)	0	(28)	(24)
Foreign exchange impact	—	—	(2,548)	3,085	—	—	(42)	(83)
Amendments/curtailments/ settlements/other	1	0	7	(29)	3	—	(1)	(1)
Benefit obligation at December 31	\$48,182	\$52,237	\$45,097	\$50,447	\$ 3,404	\$ 3,791	\$ 638	\$ 756
Change in plan assets								
Fair value of plan assets at January 1	\$54,386	\$51,784	\$42,308	\$38,891	\$ 15	\$ 3	\$ 40	\$ 52
Actual return on plan assets	924	6,046	1,686	2,559	—	0	(14)	2
Employer contributions	—	—	86	166	313	325	6	—
Acquisitions/divestitures, net	—	1	(87)	106	—	—	—	—
Plan participants' contributions	—	—	19	18	50	56	—	—
Benefits paid from trust	(3,459)	(3,445)	(2,090)	(1,908)	(369)	(369)	(6)	(4)
Foreign exchange impact	—	—	(1,939)	2,479	—	—	6	(10)
Amendments/curtailments/ settlements/other	1	—	(4)	(2)	0	0	0	0
Fair value of plan assets at December 31	\$51,852	\$54,386	\$39,979	\$42,308	\$ 8	\$ 15	\$ 31	\$ 40
Funded status at December 31	\$ 3,671	\$ 2,149	\$ (5,118)	\$ (8,140)	\$ (3,395)	\$ (3,776)	\$ (607)	\$ (716)
Accumulated benefit obligation*	\$48,182	\$52,237	\$44,628	\$50,019	N/A	N/A	N/A	N/A

* 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	
	2021	2020	2021	2020	2021	2020	2021	2020
At December 31:								
Prepaid pension assets	\$ 5,395	\$ 4,011	\$ 4,455	\$ 3,546	\$ 0	\$ 0	\$ 0	\$ 0
Current liabilities—compensation and benefits	(123)	(122)	(359)	(342)	(364)	(346)	(19)	(46)
Noncurrent liabilities—retirement and nonpension postretirement benefit obligations	(1,601)	(1,740)	(9,215)	(11,344)	(3,031)	(3,430)	(588)	(670)
Funded status—net	\$ 3,671	\$ 2,149	\$ (5,118)	\$ (8,140)	\$ (3,395)	\$ (3,776)	\$ (607)	\$ (716)

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.

Notes to Consolidated Financial Statements

International Business Machines Corporation and Subsidiary Companies

(\$ in millions)

	Defined Benefit Pension Plans				Nonpension Postretirement Benefit Plans			
	U.S. Plans		Non-U.S. Plans		U.S. Plan		Non-U.S. Plans	
	2021	2020	2021	2020	2021	2020	2021	2020
Net loss at January 1	\$15,972	\$16,608	\$16,310	\$16,361	\$ 656	\$551	\$263	\$284
Current period loss/(gain)	(704)	194	(1,411)	1,334	(141)	135	(65)	0
Curtailments and settlements	—	—	(94)	(49)	—	—	0	0
Amortization of net loss included in net periodic (income)/cost	(996)	(829)	(1,392)	(1,336)	(52)	(29)	(15)	(21)
Net loss at December 31	\$14,273	\$15,972	\$13,412	\$16,310	\$ 464	\$656	\$183	\$263
Prior service costs/(credits) at January 1	\$ 24	\$ 41	\$ 325	\$ 280	\$ 30	\$ 34	\$ (4)	\$ (4)
Current period prior service costs/(credits)	—	—	60	36	—	—	0	—
Curtailments, settlements and other	—	—	—	0	—	—	—	—
Amortization of prior service (costs)/credits included in net periodic (income)/cost	(16)	(16)	12	9	(4)	(4)	0	0
Prior service costs/(credits) at December 31	\$ 8	\$ 24	\$ 397	\$ 325	\$ 26	\$ 30	\$ (4)	\$ (4)
Transition (assets)/liabilities at January 1	\$ —	\$ —	\$ 0	\$ 0	\$ —	\$ —	\$ 0	\$ 0
Amortization of transition assets/(liabilities) included in net periodic (income)/cost	—	—	—	0	—	—	0	0
Transition (assets)/liabilities at December 31	\$ —	\$ —	\$ 0	\$ 0	\$ —	\$ —	\$ 0	\$ 0
Total loss recognized in accumulated other comprehensive income/(loss)*	\$14,281	\$15,997	\$13,809	\$16,635	\$ 490	\$687	\$179	\$259

* Refer to note T, "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		
	2021	2020	2019	2021	2020	2019
Weighted-average assumptions used to measure net periodic (income)/cost for the year ended December 31						
Discount rate	2.20 %	3.10 %	4.10 %	0.87 %	1.20 %	1.86 %
Expected long-term returns on plan assets	3.75 %	4.50 %	5.25 %	2.85 %	3.36 %	4.38 %
Rate of compensation increase	N/A	N/A	N/A	2.59 %	2.32 %	2.20 %
Interest crediting rate	1.10 %	2.70 %	3.60 %	0.26 %	0.28 %	0.30 %
Weighted-average assumptions used to measure benefit obligations at December 31						
Discount rate	2.60 %	2.20 %	3.10 %	1.26 %	0.87 %	1.20 %
Rate of compensation increase	N/A	N/A	N/A	3.02 %	2.59 %	2.32 %
Interest crediting rate	1.10 %	1.10 %	2.70 %	0.26 %	0.26 %	0.28 %

N/A—Not applicable

	Nonpension Postretirement Benefit Plans					
	U.S. Plan			Non-U.S. Plans		
	2021	2020	2019	2021	2020	2019
Weighted-average assumptions used to measure net periodic cost for the year ended December 31						
Discount rate	1.80 %	2.80 %	3.90 %	4.55 %	5.08 %	4.88 %
Expected long-term returns on plan assets	N/A	N/A	N/A	6.62 %	7.73 %	7.70 %
Interest crediting rate	1.10 %	2.70 %	3.60 %	N/A	N/A	N/A
Weighted-average assumptions used to measure benefit obligations at December 31						
Discount rate	2.30 %	1.80 %	2.80 %	5.35 %	4.55 %	5.08 %
Interest crediting rate	1.10 %	1.10 %	2.70 %	N/A	N/A	N/A

N/A—Not applicable

Item	Description of Assumptions
Discount Rate	Changes in discount rate assumptions impact net periodic (income)/cost and the PBO. 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. 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.
Expected Long-Term Returns on Plan Assets	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 129 to 130. These rates of return are developed and tested for reasonableness against historical returns by the company. 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. 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. The projected long-term rate of return on plan assets for 2022 is 4.0 percent for U.S. and 2.97 percent for non-U.S. DB Plans.
Rate of Compensation Increases and Mortality Assumptions	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. Mortality assumptions are based on life expectancy and death rates for different types of participants and are periodically updated based on actual experience.
Interest Crediting Rate	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.
Healthcare Cost Trend Rate	For nonpension postretirement benefit plans, the company reviews external data and its own historical trends for healthcare costs to determine the healthcare cost trend rates. The healthcare cost trend rate has an insignificant effect on plan costs or the benefit obligation due to the terms of the plan which limit the company's obligation to the participants. The company's U.S. healthcare cost trend rate assumption for 2022 is 6.0 percent. The company assumes that trend rate will decrease to 5.0 percent over the next six years.

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 2021 and none are planned for 2022. The Qualified PPP portfolio's target allocation is 10 percent equity securities, 82 percent fixed-income securities, 3 percent real estate and 4 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 \$4,049 million of the Qualified PPP portfolio as of December 31, 2021 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 \$1,066 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 16 percent equity securities, 71 percent fixed-income securities, 3 percent real estate and 10 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.

[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, 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⁾	—	—	—	9,078	—	—	—	18,652
Other ⁽¹¹⁾	—	—	—	(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 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 \$8 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 \$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 table presents the company's defined benefit pension plans' asset classes and their associated fair value at December 31, 2020. 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.

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(\$ 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⁾	\$2,714	\$ 0	\$ —	\$ 2,714	\$466	\$ 0	\$ —	\$ 466
Equity mutual funds ⁽²⁾	105	—	—	105	0	—	—	0
Fixed income								
Government and related ⁽³⁾	—	21,375	—	21,375	—	9,599	2	9,601
Corporate bonds ⁽⁴⁾	—	18,217	542	18,759	—	3,690	—	3,690
Mortgage and asset-backed securities	—	612	—	612	—	3	—	3
Fixed income mutual funds ⁽⁵⁾	470	—	—	470	—	—	—	—
Insurance contracts ⁽⁶⁾	—	—	—	—	—	6,378	—	6,378
Cash and short-term investments ⁽⁷⁾	76	1,001	—	1,077	337	651	—	988
Real estate	—	—	—	—	—	—	298	298
Derivatives ⁽⁸⁾	(3)	18	—	15	66	510	—	575
Other mutual funds ⁽⁹⁾	—	—	—	—	21	—	—	21
Subtotal	3,363	41,222	542	45,128	891	20,832	300	22,023
Investments measured at net asset value using the NAV practical expedient ⁽¹⁰⁾	—	—	—	9,579	—	—	—	20,321
Other ⁽¹¹⁾	—	—	—	(321)	—	—	—	(37)
Fair value of plan assets	\$3,363	\$41,222	\$542	\$54,386	\$891	\$20,832	\$300	\$42,308

⁽¹⁾ Represents U.S. and international securities. The U.S. Plan includes IBM common stock of \$6 million. Non-U.S. Plans include IBM common stock of \$1 million.

⁽²⁾ Invests in predominantly equity securities.

⁽³⁾ Includes debt issued by national, state and local governments and agencies.

⁽⁴⁾ Non-U.S. Plans include IBM corporate bonds of \$5 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 \$15 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 \$40 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, 2021 and 2020 for the U.S. Plan.

(\$ in millions)

	Total *
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

* Corporate bonds.

(\$ in millions)

	Total *
Balance at January 1, 2020	\$518
Return on assets held at end of year	29
Return on assets sold during the year	0
Purchases, sales and settlements, net	(5)
Transfers, net	0
Balance at December 31, 2020	\$542

* Corporate bonds.

The following tables present the reconciliation of the beginning and ending balances of Level 3 assets for the years ended December 31, 2021 and 2020 for the non-U.S. Plans.

(\$ 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

(\$ in millions)

	Government and Related	Private Real Estate	Total
Balance at January 1, 2020	\$ 2	\$328	\$330
Return on assets held at end of year	0	(29)	(29)
Return on assets sold during the year	—	2	2
Purchases, sales and settlements, net	—	(14)	(14)
Transfers, net	—	4	4
Foreign exchange impact	0	7	7
Balance at December 31, 2020	\$ 2	\$ 298	\$300

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 2021 and 2020.

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 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 payments for 2021 and 2020. The cash contributions to the multi-employer plans represent the

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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:	2021	2020
Non-U.S. DB plans	\$ 86	\$ 166
Nonpension postretirement benefit plans	319	325
Multi-employer plans	17	23
DC plans	992	1,015
Direct benefit payments	671	538
Total	\$2,085	\$2,066

In 2021 and 2020, \$416 million and \$452 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 2021 and 2020, contributions of \$424 million and \$288 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 2022, 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 2022, 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 Spain and Japan. This amount generally represents legally mandated minimum contributions.

Financial market performance in 2022 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. These payments have been estimated based on the same assumptions used to measure the plans' PBO at December 31, 2021 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
2022	\$ 3,488	\$124	\$1,968	\$ 342	\$ 5,922
2023	3,450	123	1,949	320	5,842
2024	3,419	121	1,959	328	5,827
2025	3,348	119	1,976	331	5,774
2026	3,244	116	1,972	337	5,670
2027-2031	14,524	532	9,438	1,624	26,117

The 2022 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, 2021.

(\$ in millions)

	U.S. Plan Payments	Qualified Non-U.S. Plans Payments	Nonqualified Non-U.S. Plans Payments	Total Expected Benefit Payments
2022	\$ 377	\$ 16	\$ 25	\$ 418
2023	380	17	25	422
2024	363	18	24	405
2025	339	19	24	382
2026	316	20	24	360
2027-2031	1,156	115	115	1,386

The 2022 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 127.

(\$ in millions)

	2021		2020	
At December 31:	Benefit Obligation	Plan Assets	Benefit Obligation	Plan Assets
Plans with PBO in excess of plan assets	\$25,204	\$13,908	\$31,805	\$18,257
Plans with ABO in excess of plan assets	24,853	13,908	31,465	18,257
Plans with plan assets in excess of PBO	68,075	77,924	70,879	78,436

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 127.

(\$ in millions)

	2021		2020	
At December 31:	Benefit Obligation	Plan Assets	Benefit Obligation	Plan Assets
Plans with APBO in excess of plan assets	\$4,042	\$40	\$4,537	\$45
Plans with plan assets in excess of APBO	—	—	9	9

NOTE X. SUBSEQUENT EVENTS

On February 1, 2022, the company announced that the Board of Directors approved a quarterly dividend of \$1.64 per common share. The dividend is payable March 10, 2022 to shareholders of record on February 11, 2022.

On February 9, 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 with maturities ranging from 5 to 30 years and coupons ranging from 2.20 to 3.43 percent.

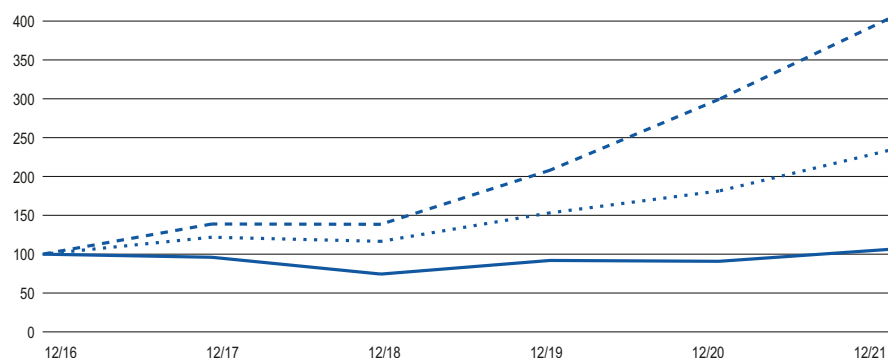
Performance Graph

International Business Machines Corporation and Subsidiary Companies

COMPARISON OF FIVE-YEAR CUMULATIVE TOTAL RETURN FOR IBM, S&P 500 STOCK INDEX AND S&P INFORMATION TECHNOLOGY INDEX

The following graph compares the 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.



(U.S. Dollar)		2016	2017	2018	2019	2020	2021
—	International Business Machines	\$100.00	\$ 96.02	\$ 74.38	\$ 91.92	\$ 90.83	\$106.10
....	S & P 500	100.00	121.83	116.49	153.17	181.35	233.41
- - - -	S & P Information Technology	100.00	138.83	138.43	208.05	299.37	402.73

Selected Quarterly Data

International Business Machines Corporation and Subsidiary Companies

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This section provides summarized quarterly data for 2021 and 2020. In the fourth quarter of 2021, the separation of Kyndryl was completed and the historical results of Kyndryl are now reported as discontinued operations. The quarterly results presented below have been reclassified to conform to this presentation and allow for a meaningful comparison of continuing operations. Refer to note C, "Separation of Kyndryl," for additional details.

(\$ in millions except per share amounts)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
2021					
Revenue	\$13,187	\$14,218	\$13,251	\$16,695	\$57,350
Gross profit	\$ 7,027	\$ 7,852	\$ 7,106	\$ 9,500	\$31,486
Income from continuing operations	\$ 403	\$ 810	\$ 1,037	\$ 2,462	\$ 4,712
Income/(loss) from discontinued operations, net of tax	\$ 552	\$ 515	\$ 93	\$ (129)	\$ 1,030
Net income	\$ 955	\$ 1,325	\$ 1,130	\$ 2,332	\$ 5,743
Operating (non-GAAP) earnings*	\$ 1,013	\$ 1,456	\$ 1,670	\$ 3,035	\$ 7,174
Earnings/(loss) per share of common stock**					
Assuming dilution:					
Continuing operations	\$ 0.45	\$ 0.90	\$ 1.14	\$ 2.72	\$ 5.21
Discontinued operations	\$ 0.61	\$ 0.57	\$ 0.10	\$ (0.14)	\$ 1.14
Total	\$ 1.06	\$ 1.47	\$ 1.25	\$ 2.57	\$ 6.35
Basic:					
Continuing operations	\$ 0.45	\$ 0.91	\$ 1.16	\$ 2.74	\$ 5.26
Discontinued operations	\$ 0.62	\$ 0.57	\$ 0.10	\$ (0.14)	\$ 1.15
Total	\$ 1.07	\$ 1.48	\$ 1.26	\$ 2.60	\$ 6.41
Diluted operating (non-GAAP)*	\$ 1.12	\$ 1.61	\$ 1.84	\$ 3.35	\$ 7.93

(\$ in millions except per share amounts)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
2020					
Revenue	\$12,956	\$13,604	\$12,937	\$15,682	\$55,179
Gross profit	\$ 6,779	\$ 7,610	\$ 7,237	\$ 9,238	\$30,865
Income from continuing operations	\$ 787	\$ 919	\$ 1,036	\$ 1,190	\$ 3,932
Income/(loss) from discontinued operations, net of tax	\$ 388	\$ 442	\$ 662	\$ 166	\$ 1,658
Net income	\$ 1,175	\$ 1,361	\$ 1,698	\$ 1,356	\$ 5,590
Operating (non-GAAP) earnings*	\$ 1,279	\$ 1,502	\$ 1,653	\$ 1,686	\$ 6,120
Earnings/(loss) per share of common stock**					
Assuming dilution:					
Continuing operations	\$ 0.88	\$ 1.03	\$ 1.15	\$ 1.32	\$ 4.38
Discontinued operations	\$ 0.43	\$ 0.49	\$ 0.74	\$ 0.19	\$ 1.85
Total	\$ 1.31	\$ 1.52	\$ 1.89	\$ 1.51	\$ 6.23
Basic:					
Continuing operations	\$ 0.89	\$ 1.03	\$ 1.16	\$ 1.33	\$ 4.42
Discontinued operations	\$ 0.44	\$ 0.50	\$ 0.74	\$ 0.19	\$ 1.86
Total	\$ 1.32	\$ 1.53	\$ 1.90	\$ 1.52	\$ 6.28
Diluted operating (non-GAAP)*	\$ 1.43	\$ 1.68	\$ 1.84	\$ 1.88	\$ 6.82

* Refer to page 138 under the heading "GAAP Reconciliation" for the reconciliation of non-GAAP financial information for the first three quarterly periods of 2021 and 2020. Also see "GAAP Reconciliation," on pages 36 and 29 for the reconciliation of non-GAAP financial information for the fourth-quarter and full-year 2021 and 2020, respectively.

** Earnings Per Share (EPS) in each quarter is computed using the weighted-average number of shares outstanding during that quarter while EPS for the full year is computed using the weighted-average number of shares outstanding during the year. Thus, the sum of the four quarters' EPS does not equal the full-year EPS.

Selected Quarterly Data

International Business Machines Corporation and Subsidiary Companies

GAAP Reconciliation

The table below provides a reconciliation of our income and diluted earnings per share from continuing operations 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	Operating (non-GAAP)
2021					
First Quarter					
Income from continuing operations	\$ 403	\$ 330	\$ 299	\$ (19)	\$1,013
Diluted earnings per share from continuing operations	\$ 0.45	\$0.37	\$0.33	\$(0.02)	\$ 1.12
Second Quarter					
Income from continuing operations	\$ 810	\$ 368	\$ 264	\$ 14	\$1,456
Diluted earnings per share from continuing operations	\$ 0.90	\$0.41	\$0.29	\$ 0.01	\$ 1.61
Third Quarter					
Income from continuing operations	\$1,037	\$ 370	\$ 262	\$ —	\$1,670
Diluted earnings per share from continuing operations	\$ 1.14	\$0.41	\$0.29	\$ —	\$ 1.84
2020					
First Quarter					
Income from continuing operations	\$ 787	\$ 362	\$ 278	\$ (149)	\$1,279
Diluted earnings per share from continuing operations	\$ 0.88	\$0.40	\$0.31	\$(0.17)	\$ 1.43
Second Quarter					
Income from continuing operations	\$ 919	\$ 362	\$ 220	\$ —	\$1,502
Diluted earnings per share from continuing operations	\$ 1.03	\$0.40	\$0.25	\$ —	\$ 1.68
Third Quarter					
Income from continuing operations	\$1,036	\$ 352	\$ 244	\$ 21	\$1,653
Diluted earnings per share from continuing operations	\$ 1.15	\$0.39	\$0.27	\$ 0.02	\$ 1.84

Stockholder Information

International Business Machines Corporation and Subsidiary Companies

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IBM Stockholder Services

Stockholders with questions about their accounts should contact:

Computershare Trust Company, N.A., P.O. Box 505005, Louisville, Kentucky 40233-5005, (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 26, 2022, 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 505005, Louisville, Kentucky 40233-5005 (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 2021 Annual Report will be available for sight-impaired stockholders in June 2022.

The IBM Corporate Responsibility Report reflects IBM's belief that corporate responsibility drives long-term value not just in our business, but also for IBM stakeholders. Highlights from the Corporate Responsibility Report are available online at www.ibm.org/responsibility/2020.

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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