

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

**FORM 10-Q
QUARTERLY REPORT PURSUANT TO SECTION 13 or 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
FOR THE QUARTER ENDED MARCH 31, 2020**

1-2360

(Commission file number)

INTERNATIONAL BUSINESS MACHINES CORPORATION

(Exact name of registrant as specified in its charter)

New York

(State of incorporation)

13-0871985

(IRS employer identification number)

One New Orchard Road

Armonk, New York

(Address of principal executive offices)

10504

(Zip Code)

914-499-1900

(Registrant's telephone number)

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

Title of each class	Trading symbol	Name of each exchange on which registered
Capital stock, par value \$.20 per share	IBM	New York Stock Exchange NYSE Chicago
2.750% Notes due 2020	IBM 20B	New York Stock Exchange
1.875% Notes due 2020	IBM 20A	New York Stock Exchange
0.500% Notes due 2021	IBM 21B	New York Stock Exchange
2.625% Notes due 2022	IBM 22A	New York Stock Exchange
1.250% Notes due 2023	IBM 23A	New York Stock Exchange
0.375% Notes due 2023	IBM 23B	New York Stock Exchange
1.125% Notes due 2024	IBM 24A	New York Stock Exchange
2.875% Notes due 2025	IBM 25A	New York Stock Exchange
0.950% Notes due 2025	IBM 25B	New York Stock Exchange
0.875% Notes due 2025	IBM 25C	New York Stock Exchange
0.300% Notes due 2026	IBM 26B	New York Stock Exchange
1.250% Notes due 2027	IBM 27B	New York Stock Exchange
0.300% Notes due 2028	IBM 28B	New York Stock Exchange
1.750% Notes due 2028	IBM 28A	New York Stock Exchange
1.500% Notes due 2029	IBM 29	New York Stock Exchange
1.750% Notes due 2031	IBM 31	New York Stock Exchange
0.650% Notes due 2032	IBM 32A	New York Stock Exchange
1.200% Notes due 2040	IBM 40	New York Stock Exchange
7.00% Debentures due 2025	IBM 25	New York Stock Exchange
6.22% Debentures due 2027	IBM 27	New York Stock Exchange
6.50% Debentures due 2028	IBM 28	New York Stock Exchange
7.00% Debentures due 2045	IBM 45	New York Stock Exchange
7.125% Debentures due 2096	IBM 96	New York Stock Exchange

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

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

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

Large accelerated filer ☒

Non-accelerated filer ☐

Accelerated filer ☐

Smaller reporting company ☐

Emerging growth company ☐

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

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

The registrant had 887,891,957 shares of common stock outstanding at March 31, 2020.

Index

	<u>Page</u>
Part I - Financial Information:	
Item 1. Consolidated Financial Statements (Unaudited):	
Consolidated Income Statement for the three months ended March 31, 2020 and 2019	3
Consolidated Statement of Comprehensive Income for the three months ended March 31, 2020 and 2019	4
Consolidated Balance Sheet at March 31, 2020 and December 31, 2019	5
Consolidated Statement of Cash Flows for the three months ended March 31, 2020 and 2019	7
Consolidated Statement of Equity for the three months ended March 31, 2020 and 2019	8
Notes to Consolidated Financial Statements	9
Item 2. Management's Discussion and Analysis of Results of Operations and Financial Condition	44
Item 4. Controls and Procedures	74
Part II - Other Information:	
Item 1. Legal Proceedings	75
Item 2. Unregistered Sales of Equity Securities and Use of Proceeds and Issuer Repurchases of Equity Securities	75
Item 6. Exhibits	76

Part I - Financial Information

Item 1. Consolidated Financial Statements:

INTERNATIONAL BUSINESS MACHINES CORPORATION AND SUBSIDIARY COMPANIES CONSOLIDATED INCOME STATEMENT (UNAUDITED)

(Dollars in millions except per share amounts)	Three Months Ended March 31,	
	2020	2019
Revenue:		
Services	\$ 11,373	\$ 11,915 *
Sales	5,895	5,862 *
Financing	302	404
Total revenue	<u>17,571</u>	<u>18,182</u>
Cost:		
Services	7,843	8,272 *
Sales	1,624	1,603 *
Financing	181	264
Total cost	<u>9,649</u>	<u>10,139</u>
Gross profit	7,922	8,043
Expense and other (income):		
Selling, general and administrative	5,955	4,691
Research, development and engineering	1,625	1,433
Intellectual property and custom development income	(116)	(101)
Other (income) and expense	182	(73)
Interest expense	326	210
Total expense and other (income)	<u>7,972</u>	<u>6,160</u>
Income/(loss) from continuing operations before income taxes	(49)	1,883
Provision for/(benefit from) income taxes	(1,226)	289
Income from continuing operations	\$ 1,176	\$ 1,593
Income/(loss) from discontinued operations, net of tax	(1)	(2)
Net income	<u>\$ 1,175</u>	<u>\$ 1,591</u>
Earnings/(loss) per share of common stock:		
Assuming dilution:		
Continuing operations	\$ 1.31	\$ 1.78
Discontinued operations	0.00	0.00
Total	<u>\$ 1.31</u>	<u>\$ 1.78</u>
Basic:		
Continuing operations	\$ 1.32	\$ 1.79
Discontinued operations	0.00	0.00
Total	<u>\$ 1.32</u>	<u>\$ 1.79</u>
Weighted-average number of common shares outstanding: (millions)		
Assuming dilution	895.0	893.9
Basic	888.0	889.6

* Reclassified to conform to current period presentation. Refer to note 1, "Basis of Presentation," for additional information.

(Amounts may not add due to rounding.)

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

**INTERNATIONAL BUSINESS MACHINES CORPORATION
AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
(UNAUDITED)**

(Dollars in millions)	Three Months Ended March 31,	
	2020	2019
Net income	\$ 1,175	\$ 1,591
Other comprehensive income/(loss), before tax:		
Foreign currency translation adjustments	(919)	171
Net changes related to available-for-sale securities:		
Unrealized gains/(losses) arising during the period	0	(1)
Reclassification of (gains)/losses to net income	—	—
Total net changes related to available-for-sale securities	0	(1)
Unrealized gains/(losses) on cash flow hedges:		
Unrealized gains/(losses) arising during the period	(180)	(352)
Reclassification of (gains)/losses to net income	91	98
Total unrealized gains/(losses) on cash flow hedges	(90)	(254)
Retirement-related benefit plans:		
Prior service costs/(credits)	(4)	—
Net (losses)/gains arising during the period	8	(4)
Curtailments and settlements	8	1
Amortization of prior service (credits)/costs	1	(3)
Amortization of net (gains)/losses	570	464
Total retirement-related benefit plans	582	458
Other comprehensive income/(loss), before tax	(427)	375
Income tax (expense)/benefit related to items of other comprehensive income	(260)	(67)
Other comprehensive income/(loss), net of tax	(686)	308
Total comprehensive income/(loss)	\$ 489	\$ 1,899

(Amounts may not add due to rounding.)

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

**INTERNATIONAL BUSINESS MACHINES CORPORATION
AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEET
(UNAUDITED)**

ASSETS

(Dollars in millions)	At March 31, 2020	At December 31, 2019
Assets:		
Current assets:		
Cash and cash equivalents	\$ 11,218	\$ 8,172
Restricted cash	152	141
Marketable securities	647	696
Notes and accounts receivable — trade (net of allowances of \$337 in 2020 and \$299 in 2019)	6,927	7,870
Short-term financing receivables (net of allowances of \$186 in 2020 and \$188 in 2019)	12,126	14,192
Other accounts receivable (net of allowances of \$28 in 2020 and \$33 in 2019)	1,616	1,733
Inventory, at lower of average cost or net realizable value:		
Finished goods	298	220
Work in process and raw materials	1,488	1,399
Total inventory	1,786	1,619
Deferred costs	1,948	1,896
Prepaid expenses and other current assets	2,509	2,101
Total current assets	38,931	38,420
Property, plant and equipment	31,089	32,028
Less: Accumulated depreciation	21,464	22,018
Property, plant and equipment — net	9,626	10,010
Operating right-of-use assets — net	4,871	4,996
Long-term financing receivables (net of allowances of \$52 in 2020 and \$33 in 2019)	7,708	8,712
Prepaid pension assets	6,933	6,865
Deferred costs	2,459	2,472
Deferred taxes	8,782	5,182
Goodwill	57,517	58,222
Intangible assets — net	14,666	15,235
Investments and sundry assets	1,911	2,074
Total assets	\$ 153,403	\$ 152,186

(Amounts may not add due to rounding.)

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

LIABILITIES AND EQUITY

(Amounts may not add due to rounding.)
(The accompanying notes are an integral part of the financial statements.)

**INTERNATIONAL BUSINESS MACHINES CORPORATION
AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF CASH FLOWS
(UNAUDITED)**

(Dollars in millions)	Three Months Ended March 31,	
	2020	2019
Cash flows from operating activities:		
Net income	\$ 1,175	\$ 1,591
Adjustments to reconcile net income to cash provided by operating activities		
Depreciation	1,012	1,143
Amortization of intangibles	622	303
Stock-based compensation	189	113
Net (gain)/loss on asset sales and other	315	(176)
Changes in operating assets and liabilities, net of acquisitions/divestitures	1,162	1,785
Net cash provided by operating activities	4,476	4,759
Cash flows from investing activities:		
Payments for property, plant and equipment	(630)	(539)
Proceeds from disposition of property, plant and equipment	46	81
Investment in software	(153)	(156)
Acquisition of businesses, net of cash acquired	(13)	(1)
Divestitures of businesses, net of cash transferred	26	33
Non-operating finance receivables — net	(20)	193
Purchases of marketable securities and other investments	(1,096)	(1,138)
Proceeds from disposition of marketable securities and other investments	938	674
Net cash provided by/(used in) investing activities	(902)	(853)
Cash flows from financing activities:		
Proceeds from new debt	6,055	5,979
Payments to settle debt	(5,285)	(1,768)
Short-term borrowings/(repayments) less than 90 days — net	586	21
Common stock repurchases	—	(920)
Common stock repurchases for tax withholdings	(44)	(61)
Financing — other	13	9
Cash dividends paid	(1,440)	(1,397)
Net cash provided by/(used in) financing activities	(115)	1,863
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(403)	(102)
Net change in cash, cash equivalents and restricted cash	3,057	5,668
Cash, cash equivalents and restricted cash at January 1	8,314	11,604
Cash, cash equivalents and restricted cash at March 31	\$ 11,371	\$ 17,272

(Amounts may not add due to rounding.)

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

**INTERNATIONAL BUSINESS MACHINES CORPORATION
AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENT OF EQUITY
(UNAUDITED)**

(Dollars 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
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		1,175			1,175		1,175
Other comprehensive income/(loss)				(686)	(686)		(686)
Total comprehensive income/(loss)					<u>\$ 489</u>		<u>\$ 489</u>
Cash dividends paid — common stock (\$1.62 per share)		(1,440)			(1,440)		(1,440)
Common stock issued under employee plans (935,486 shares)	197				197		197
Purchases (310,454 shares) and sales (156,471 shares) of treasury stock under employee plans — net		3	(24)		(21)		(21)
Changes in noncontrolling interests						(15)	(15)
Equity – March 31, 2020	<u>\$ 56,092</u>	<u>\$ 162,626</u>	<u>\$ (169,437)</u>	<u>\$ (29,283)</u>	<u>\$ 19,999</u>	<u>\$ 129</u>	<u>\$ 20,128</u>

*Reflects the adoption of the FASB guidance on credit losses. Refer to note 2, "Accounting Changes."

(Dollars 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
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		1,591			1,591		1,591
Other comprehensive income/(loss)				308	308		308
Total comprehensive income/(loss)					<u>\$ 1,899</u>		<u>\$ 1,899</u>
Cash dividends paid — common stock (\$1.57 per share)		(1,397)			(1,397)		(1,397)
Common stock issued under employee plans (1,391,989 shares)	137				137		137
Purchases (454,710 shares) and sales (82,862 shares) of treasury stock under employee plans — net		2	(50)		(48)		(48)
Other treasury shares purchased, not retired (6,856,678 shares)			(900)		(900)		(900)
Changes in other equity		(5)			(5)		(5)
Changes in noncontrolling interests						(8)	(8)
Equity - March 31, 2019	<u>\$ 55,287</u>	<u>\$ 159,396</u>	<u>\$ (169,021)</u>	<u>\$ (29,182)</u>	<u>\$ 16,481</u>	<u>\$ 126</u>	<u>\$ 16,607</u>

(Amounts may not add due to rounding.)

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

Notes to Consolidated Financial Statements

1. 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). The financial statements and footnotes are unaudited. In the opinion of the company's management, these statements include all adjustments, which are only of a normal recurring nature, necessary to present a fair statement of the company's results of operations, financial position and cash flows.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amount of assets, liabilities, revenue, costs, expenses and other comprehensive income/(loss) that are reported in the Consolidated Financial Statements and accompanying disclosures. 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. As a result, actual results may be different from these estimates.

In the first quarter of 2020, the company realigned offerings and the related management system to reflect divestitures completed in the second half of 2019 and tighter integration of certain industry-related consulting services. These changes impacted a few of the company's reportable segments, but did not impact the Consolidated Financial Statements. Refer to note 4, "Segments," for additional information on the company's reportable segments. The periods presented in this Form 10-Q are reported on a comparable basis. On April 6, 2020, Arvind Krishna became Chief Executive Officer of IBM and announced a number of management changes which did not impact the company's reportable segments.

For the three months ended March 31, 2020, the company recorded a benefit from income taxes of \$1,226 million. The tax benefit was primarily related to the tax impacts of an intra-entity sale of certain of the company's intellectual property, which required the recognition of a \$3,442 million deferred tax asset. The recognition of this deferred tax asset and the related impacts, resulted in a net one-time benefit in the quarter of \$939 million. The company also recorded other discrete tax benefits in the quarter primarily related to changes in tax law. In the first quarter of 2019, the company reported a provision for income taxes of \$289 million.

On July 9, 2019, the company completed the acquisition of all of the outstanding shares of Red Hat, Inc. (Red Hat). Refer to note 5, "Acquisitions & Divestitures," and note 10, "Intangible Assets Including Goodwill," for additional information.

Noncontrolling interest amounts of \$4.5 million and \$7.0 million, net of tax, for the three months ended March 31, 2020 and 2019, respectively, are included as a reduction within other (income) and expense in the Consolidated Income Statement.

Interim results are not necessarily indicative of financial results for a full year. The information included in this Form 10-Q should be read in conjunction with the company's 2019 Annual Report.

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 period amounts have been reclassified to conform to the current period presentation. Specifically, beginning in the third-quarter 2019, revenues and related costs for post-contract support provided for perpetual (one-time charge) software licenses have been reclassified from Services Revenue to Sales Revenue and Services Cost to Sales Cost within the Consolidated Income Statement. The revenue and cost amounts reclassified were \$0.5 billion and \$0.1 billion, respectively, for the three months ended March 31, 2019. This reclassification had no impact on total revenue, total cost, net income, financial position or cash flows for any periods presented. Other immaterial reclassifications have been annotated where applicable.

Notes to Consolidated Financial Statements — (continued)

2. Accounting Changes:

New Standards to be Implemented

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 is effective January 1, 2021 and early adoption is permitted.

Effect on Financial Statements or Other Significant Matters—The company is evaluating the impact of the guidance and adoption date.

Standards Implemented

Reference Rate Reform

Standard/Description—Issuance date: March 2020. This guidance provides optional expedients and exceptions for applying GAAP to contract modifications, hedging relationships, and other transactions that reference London Interbank Offered Rate (LIBOR) or 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. However, it is still uncertain when the transition from LIBOR to another reference rate will occur or whether SOFR will become the accepted market alternative to LIBOR. The company is continuing to evaluate the potential impact of the replacement of the LIBOR benchmark on its interest rate risk management activities.

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.

Notes to Consolidated Financial Statements — (continued)

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 option 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. Refer to note 8, “Financing Receivables,” and note 12, “Commitments,” for additional information.

Leases

Standard/Description—Issuance date: February 2016, with amendments in 2018 and 2019. This guidance requires lessees to recognize right-of-use (ROU) assets and lease liabilities for most leases in the Consolidated Balance Sheet. For lessors, it also eliminated the use of third-party residual value guarantee insurance in the lease classification test, and overall aligns with revenue recognition guidance. Due to changes in lease termination guidance, when equipment is returned to the company prior to the end of the lease term, the carrying amounts of lease receivables are reclassified to loan receivables. The guidance also requires qualitative and quantitative disclosures to assess the amount, timing and uncertainty of cash flows arising from leases.

Effective Date and Adoption Considerations—The company adopted the guidance on its effective date of January 1, 2019, using the transition option whereby prior comparative periods were not retrospectively presented in the Consolidated Financial Statements. The company elected the package of practical expedients not to reassess prior conclusions related to contracts containing leases, lease classification and initial direct costs and the lessee practical expedient to combine lease and non-lease components for all asset classes. The company made a policy election to not recognize ROU assets and lease liabilities for short-term leases for all asset classes.

Effect on Financial Statements or Other Significant Matters—The guidance had a material impact on the Consolidated Balance Sheet as of the effective date. As a lessee, at adoption, the company recognized operating and financing ROU assets of \$4.8 billion and \$0.2 billion, respectively, and operating and financing lease liabilities of \$5.1 billion and \$0.2 billion, respectively. The transition adjustment recognized in retained earnings on January 1, 2019 was not material. None of the other changes to the guidance had a material impact in the company’s consolidated financial results at the effective date.

For all other standards that the company adopted in 2019, there was no material impact in the consolidated financial results.

Notes to Consolidated Financial Statements — (continued)

3. Revenue Recognition:

Disaggregation of Revenue

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

Revenue by Major Products/Service Offerings

(Dollars in millions)

For the three months ended March 31:

	2020	2019
Cognitive Applications	\$ 1,182	\$ 1,238 *
Cloud & Data Platforms	2,536	1,917
Transaction Processing Platforms	1,520	1,812
Total Cloud & Cognitive Software	5,238	4,967 *
Consulting	2,071	2,001 *
Application Management	1,840	1,908
Global Process Services	225	247
Total Global Business Services	4,136	4,155 *
Infrastructure & Cloud Services	4,916	5,209
Technology Support Services	1,550	1,665
Total Global Technology Services	6,467	6,875
Systems Hardware	997	914
Operating Systems Software	371	414
Total Systems	1,368	1,328
Global Financing**	299	406
Other	62	451 *
Total revenue	\$ 17,571	\$ 18,182

* Recast to conform to current period presentation. Refer to note 4, “Segments,” for additional information.

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

Revenue by Geography

(Dollars in millions)

For the three months ended March 31:

	2020	2019
Americas	\$ 8,166	\$ 8,493
Europe/Middle East/Africa	5,517	5,727
Asia Pacific	3,888	3,961
Total	\$ 17,571	\$ 18,182

Remaining Performance Obligations

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

Notes to Consolidated Financial Statements — (continued)

terminations, changes in the scope of contracts, periodic revalidations, adjustments for revenue that has not materialized and adjustments for currency.

At March 31, 2020, the aggregate amount of the transaction price allocated to RPO related to customer contracts that are unsatisfied or partially unsatisfied was \$118 billion. Approximately 60 percent of the amount was expected to be recognized as revenue in the subsequent two years, approximately 35 percent in the subsequent three to five years and the balance (mostly Infrastructure & Cloud Services) thereafter.

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

For the three months ending March 31, 2020, revenue was reduced by \$14 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.

Reconciliation of Contract Balances

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

(Dollars in millions)	At March 31, 2020	At December 31, 2019
Notes and accounts receivable — trade (net of allowances of \$337 and \$299 at March 31, 2020 and December 31, 2019, respectively)	\$ 6,927	\$ 7,870
Contract assets (1)	488	492
Deferred income (current)	13,377	12,026
Deferred income (noncurrent)	3,769	3,851

(1) Included within prepaid expenses and other current assets in the Consolidated Balance Sheet.

The amount of revenue recognized during the three months ended March 31, 2020 that was included within the deferred income balance at December 31, 2019 was \$4.2 billion and was primarily related to services and software.

4. Segments:

During the first quarter of 2020, the company realigned offerings and the related management system to reflect divestitures completed in the second half of 2019 and tighter integration of certain industry-related consulting services. Accordingly, the company updated its Cloud & Cognitive Software segment, Global Business Services segment and the Other – divested businesses category in the first quarter of 2020 and recast the related historical information for consistency with the go-forward performance. Total recast revenue for full-year 2019 was approximately \$0.3 billion of IBM's total \$77 billion. There was no change to the Global Technology Services, Systems or Global Financing segments, and there was no impact to IBM's consolidated results. The following table displays the segment updates:

Management System Change	Resulting Segment Implications
Divestitures of IBM's Risk Analytics and Regulatory Offerings and Sales Performance Management Offerings	- Cloud & Cognitive Software (Cognitive Applications) + Other—divested businesses
Realignment of certain industry-related consulting offerings to the Global Business Services segment	- Cloud & Cognitive Software (Cognitive Applications) + Global Business Services (Consulting)

Notes to Consolidated Financial Statements — (continued)

SEGMENT INFORMATION

<u>(Dollars in millions)</u>	<u>Cloud & Cognitive Software</u>	<u>Global Business Services</u>	<u>Global Technology Services</u>	<u>Systems</u>	<u>Global Financing</u>	<u>Total Segments</u>
For the three months ended						
March 31, 2020:						
External revenue	\$ 5,238	\$ 4,136	\$ 6,467	\$ 1,368	\$ 299	\$ 17,508
Internal revenue	813	46	294	148	212	1,514
Total revenue	<u>\$ 6,052</u>	<u>\$ 4,183</u>	<u>\$ 6,761</u>	<u>\$ 1,516</u>	<u>\$ 511</u>	<u>\$ 19,023</u>
Pre-tax income/(loss) from continuing operations	<u>\$ 933</u>	<u>\$ 271</u>	<u>\$ (178)</u>	<u>\$ (217)</u>	<u>\$ 194</u>	<u>\$ 1,003</u>
Revenue year-to-year change	4.2 %	(1.1)%	(5.6)%	1.7 %	(27.6)%	(1.9)%
Pre-tax income year-to-year change	(47.7)%	(9.1)%	(164.7)%	7.6 %	(32.7)%	(59.0)%
Pre-tax income/(loss) margin	15.4 %	6.5 %	(2.6)%	(14.3)%	37.9 %	5.3 %
For the three months ended						
March 31, 2019:						
External revenue	\$ 4,967 *	\$ 4,155 *	\$ 6,875	\$ 1,328	\$ 406	\$ 17,731 *
Internal revenue	841	74	290	163	300	1,668
Total revenue	<u>\$ 5,808 *</u>	<u>\$ 4,229 *</u>	<u>\$ 7,164</u>	<u>\$ 1,491</u>	<u>\$ 706</u>	<u>\$ 19,398 *</u>
Pre-tax income/(loss) from continuing operations	<u>\$ 1,785 *</u>	<u>\$ 298 *</u>	<u>\$ 275</u>	<u>\$ (202)</u>	<u>\$ 288</u>	<u>\$ 2,445 *</u>
Pre-tax income/(loss) margin	30.7 %*	7.0 %*	3.8 %	(13.5)%	40.8 %	12.6 %*

Reconciliations to IBM as Reported:

<u>(Dollars in millions)</u>		
For the three months ended March 31:	2020	2019
Revenue:		
Total reportable segments	\$ 19,023	\$ 19,398 *
Other—divested businesses	18	377 *
Other revenue	44	74
Eliminations of internal transactions	<u>(1,514)</u>	<u>(1,668)</u>
Total consolidated revenue	<u>\$ 17,571</u>	<u>\$ 18,182</u>
Pre-tax income from continuing operations:		
Total reportable segments	\$ 1,003	\$ 2,445 *
Amortization of acquired intangible assets	(473)	(173)
Acquisition-related (charges)/income	0	(39)
Non-operating retirement-related (costs)/income	(264)	(138)
Eliminations of internal transactions	(55)	(89)
Other—divested businesses	25	(56)*
Unallocated corporate amounts	<u>(284)</u>	<u>(67)</u>
Total pre-tax income from continuing operations	<u>\$ (49)</u>	<u>\$ 1,883</u>

*Recast to conform to current year presentation.

Notes to Consolidated Financial Statements — (continued)

5. 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.

During the three months ended March 31, 2020, the company completed one acquisition in the Cloud & Cognitive Software segment. The acquisition did not have a material impact in the Consolidated Financial Statements.

On July 9, 2019, the company 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 delivering the hybrid multi-cloud 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 March 31, 2020. An immaterial net purchase price adjustment was recorded in the first-quarter 2020 related to current tax liabilities.

(Dollars in millions)	Amortization Life (in years)	Allocated Amount
Current assets*		\$ 3,186
Property, plant and equipment/noncurrent assets		939
Intangible assets:		
Goodwill	N/A	23,137
Client relationships	10	7,215
Completed technology	9	4,571
Trademarks	20	1,686
Total assets acquired		<u>\$ 40,735</u>
Current liabilities**		1,390
Noncurrent liabilities		4,265
Total liabilities assumed		<u>\$ 5,655</u>
Total purchase price		<u><u>\$ 35,080</u></u>

* 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 is 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 March 31, 2020.

Notes to Consolidated Financial Statements — (continued)

(Dollars in billions) Segment	Goodwill Allocated*
Cloud & Cognitive Software	\$ 18.5
Global Technology Services	3.1
Global Business Services	1.1
Systems	0.4
Total	\$ 23.1

*It is expected that approximately seven percent of the goodwill will be deductible for tax purposes.

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 Red Hat's acquisition date. Any such revisions or changes may be material. The primary area of the purchase price allocation that is subject to revision relates to certain tax matters.

Divestitures

Select IBM Software Products – On June 30, 2019, IBM and HCL Technologies Limited (HCL) closed a transaction, in which HCL acquired select standalone Cloud & Cognitive Software products for \$1,775 million, inclusive of \$150 million of contingent consideration. The transaction included commercial software, intellectual property and services offerings. In addition, the transaction includes transition services for IT and other services.

The company received cash of \$812 million at closing and \$40 million of the contingent consideration in the third quarter of 2019. In addition, during the three months ended March 31, 2020, the company transferred a participating interest in the outstanding receivable to a third-party bank and received \$164 million in cash. The company expects to receive the remaining \$648 million (net of any additional contingent consideration) by June 30, 2020. The outstanding contingent consideration is expected to be earned within 24 months of the closing. IBM will remit payment to HCL predominantly for servicing certain customer contracts until such contracts are terminated or entitlements are assumed by HCL. Cash of \$139 million was remitted during the three months ended March 31, 2020 related to deferred revenue that existed prior to closing. IBM expects to remit an additional \$185 million of cash to HCL by the end of 2021. The total pre-tax gain recognized on this transaction as of March 31, 2020 was \$625 million. The total gain on sale may change in the future due to contingent consideration or changes in other transaction estimates, however, material changes are not expected.

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, the company is providing Centerbridge with transition services including IT, supply chain management, and other services. 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 and recognized an immaterial pre-tax gain on the U.S. closing. The company 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 and the company recognized an immaterial pre-tax gain. The company expects to close the remaining countries by May 31, 2020. The timing of the remaining closing is subject to change as more information becomes available. The amount of the pre-tax gain for the remaining countries will not be determinable until the valuation of the final balance sheet transferred is completed, however, it is not expected to be material.

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.

Notes to Consolidated Financial Statements — (continued)

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 divested businesses are reported in Other–divested businesses as described in note 4, "Segments."

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

6. Earnings Per Share of Common Stock:

The following table provides the computation of basic and diluted earnings per share of common stock for the three months ended March 31, 2020 and 2019.

	For the Three Months Ended	
	March 31, 2020	March 31, 2019
Number of shares on which basic earnings per share is calculated:		
Weighted-average shares outstanding during period	887,969,345	889,581,542
Add — Incremental shares under stock-based compensation plans	5,740,415	3,372,460
Add — Incremental shares associated with contingently issuable shares	1,329,477	956,524
Number of shares on which diluted earnings per share is calculated	<u>895,039,238</u>	<u>893,910,526</u>
Income from continuing operations (millions)	\$ 1,176	\$ 1,593
Income/(loss) from discontinued operations, net of tax (millions)	(1)	(2)
Net income on which basic earnings per share is calculated (millions)	<u>\$ 1,175</u>	<u>\$ 1,591</u>
Income from continuing operations (millions)	\$ 1,176	\$ 1,593
Net income applicable to contingently issuable shares (millions)	(2)	—
Income from continuing operations on which diluted earnings per share is calculated (millions)	\$ 1,174	\$ 1,593
Income/(loss) from discontinued operations, net of tax, on which basic and diluted earnings per share is calculated (millions)	(1)	(2)
Net income on which diluted earnings per share is calculated (millions)	<u>\$ 1,173</u>	<u>\$ 1,591</u>
Earnings/(loss) per share of common stock:		
Assuming dilution		
Continuing operations	\$ 1.31	\$ 1.78
Discontinued operations	0.00	0.00
Total	<u>\$ 1.31</u>	<u>\$ 1.78</u>
Basic		
Continuing operations	\$ 1.32	\$ 1.79
Discontinued operations	0.00	0.00
Total	<u>\$ 1.32</u>	<u>\$ 1.79</u>

Stock options to purchase 1,136,899 shares and 1,137,019 shares were outstanding as of March 31, 2020 and 2019, respectively, but were not included in the computation of diluted earnings per share because the options' exercise price during the respective period was greater than the average market price of the common shares, and, therefore, the effect would have been antidilutive.

Notes to Consolidated Financial Statements — (continued)

7. Financial Assets & Liabilities:

Fair Value Measurements

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 in time deposits, certificates of deposit, U.S. government and agency debt, and corporate debt securities that are designated as available-for-sale. The primary objective of the company’s debt investment portfolio is to maintain principal by investing in short-term highly liquid securities with a credit rating of investment grade Aa2 or higher.

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. No impairment for credit losses and no material non-credit impairment was recorded for the three months ended March 31, 2020. Prior to the adoption of the new standard, available-for-sale securities were measured for

Notes to Consolidated Financial Statements — (continued)

impairment using an other-than-temporary impairment model. No impairment was recorded for the three months ended March 31, 2019.

Certain non-financial assets such as property, plant and equipment, operating right-of-use assets, land, goodwill and intangible assets are also subject to nonrecurring fair value measurements if they are deemed to be impaired. The impairment models used for non-financial assets depend on the type of asset. There were no material impairments of non-financial assets for the three months ended March 31, 2020 and 2019, respectively.

The following table presents the company's financial assets and financial liabilities that are measured at fair value on a recurring basis at March 31, 2020 and December 31, 2019.

(Dollars in millions)	Fair Value Hierarchy Level	At March 31, 2020		At December 31, 2019	
		Assets (7)	Liabilities (8)	Assets (7)	Liabilities (8)
Cash equivalents (1)					
Time deposits and certificates of deposit (2)	2	\$ 7,166	\$ N/A	\$ 4,392	\$ N/A
Money market funds	1	526	N/A	427	N/A
Total cash equivalents		\$ 7,692	\$ N/A	\$ 4,819	\$ N/A
Equity investments (3)	1	1	N/A	0	N/A
Debt securities-current (2)(4)	2	647	N/A	696	N/A
Debt securities-noncurrent (2)(5)	2	33	N/A	65	N/A
Derivatives designated as hedging instruments					
Interest rate contracts	2	104	—	56	—
Foreign exchange contracts	2	384	446	175	635
Derivatives not designated as hedging instruments					
Foreign exchange contracts	2	30	16	10	33
Equity contracts (6)	1,2	1	50	1	4
Total		\$ 8,892	\$ 511	\$ 5,823	\$ 673

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

(2) Available-for-sale securities with an amortized cost basis that approximates fair value.

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

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

(5) Primarily includes corporate debt securities with a maximum maturity of two years 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 March 31, 2020 were \$427 million and \$92 million, respectively, and at December 31, 2019 were \$149 million and \$94 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 March 31, 2020 were \$253 million and \$259 million, respectively, and at December 31, 2019 were \$167 million and \$506 million, respectively.

N/A - not applicable

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.

Notes to Consolidated Financial Statements — (continued)

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 March 31, 2020 and December 31, 2019, the difference between the carrying amount and estimated fair value for loans and long-term receivables was immaterial. If measured at fair value in the financial statements, these financial instruments would be classified as Level 3 in the fair value hierarchy.

Long-Term Debt

Fair value of publicly-traded long-term debt is based on quoted market prices for the identical liability when traded as an asset in an active market. For other long-term debt (including long-term finance lease liabilities) for which a quoted market price is not available, an expected present value technique that uses rates currently available to the company for debt with similar terms and remaining maturities is used to estimate fair value. The carrying amount of long-term debt was \$52,685 million and \$54,102 million, and the estimated fair value was \$56,760 million and \$58,431 million at March 31, 2020 and December 31, 2019, 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.

8. 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 Systems products and are for terms ranging generally from two to six years. Commercial financing 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.

Effective January 1, 2020, the company adopted the new accounting standard related to credit losses, using the transition option whereby prior comparative periods were not retrospectively presented in the Consolidated Financial Statements. Refer to note 2, "Accounting Changes," for additional information. Under this new guidance, the amortized cost basis of a financial asset represents the original amount of the financing receivable (including residual value) adjusted for unearned income, deferred initial direct costs, cash collected, write-offs and any foreign exchange adjustments. The allowance for credit losses represents future expected credit losses over the life of the receivables based on past experience, current information and forward-looking economic considerations. Prior to the effective date, financing receivables were measured at recorded investment, which does not include residual value. As a result of the company's transition option, all prior periods are presented at recorded investment, while current period information is presented at amortized cost.

Notes to Consolidated Financial Statements — (continued)

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

(Dollars in millions) At March 31, 2020:	Investment in Sales-Type and Direct Financing Leases	Commercial Financing Receivables	Client Loan and Installment Payment Receivables (Loans)	Total
Financing receivables, gross	\$ 5,479	\$ 2,334	\$ 12,605	\$ 20,418
Unearned income	(471)	(3)	(517)	(991)
Residual value*	646	—	—	646
Amortized cost	\$ 5,654	\$ 2,331	\$ 12,087	\$ 20,072
Allowance for credit losses	(79)	(12)	(147)	(238)
Total financing receivables, net	\$ 5,575	\$ 2,319	\$ 11,940	\$ 19,834
Current portion	\$ 2,112	\$ 2,319	\$ 7,695	\$ 12,126
Noncurrent portion	\$ 3,463	\$ —	\$ 4,245	\$ 7,708

* Includes guaranteed and unguaranteed residual value.

(Dollars in millions) At December 31, 2019:	Investment in Sales-Type and Direct Financing Leases	Commercial Financing Receivables	Client Loan and Installment Payment Receivables (Loans)	Total
Financing receivables, gross	\$ 6,077	\$ 3,836	\$ 13,592	\$ 23,504
Unearned income	(509)	(4)	(570)	(1,083)
Recorded investment	\$ 5,567	\$ 3,831	\$ 13,022	\$ 22,421
Allowance for credit losses	(72)	(11)	(138)	(221)
Unguaranteed residual value	652	—	—	652
Guaranteed residual value	53	—	—	53
Total financing receivables, net	\$ 6,199	\$ 3,820	\$ 12,884	\$ 22,904
Current portion	\$ 2,334	\$ 3,820	\$ 8,037	\$ 14,192
Noncurrent portion	\$ 3,865	\$ —	\$ 4,847	\$ 8,712

The company utilizes certain of its financing receivables as collateral for nonrecourse borrowings. Financing receivables pledged as collateral for borrowings were \$914 million and \$1,062 million at March 31, 2020 and December 31, 2019, respectively.

The company did not have any financing receivables held for sale at March 31, 2020 and December 31, 2019.

Allowance for Credit Losses – Financing Receivables

Refer to note A, “Significant Accounting Policies,” in the company's 2019 Annual Report for a full description of its accounting policies for trade and financing receivables, contract assets and related allowances. The descriptions below include any changes to those policies due to the new standard.

Effective with the adoption of the new credit losses standard, the company's estimates of its allowances for expected credit losses include consideration of: past events, including any historical default, historical concessions and resulting troubled debt restructurings, current economic conditions, taking into account any non-freestanding mitigating credit enhancements and certain forward-looking information, including reasonable and supportable forecasts.

Collectively Evaluated Financing Receivables

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

Notes to Consolidated Financial Statements — (continued)

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.

Macroeconomic variables attributed to the expected credit losses for client financing receivables may vary by class of financing receivables based on historical experiences, portfolio composition and current environment. In addition to a qualitative review of credit risk factors across the portfolio, 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 expected allowance for credit losses. The company also considers the impact of current conditions and economic forecasts relating to specific industries, geographical areas, and client-specific exposures on 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. With evolving global impacts from the COVID-19 pandemic, external economic models have been revised with increased frequency and with alternative scenarios. The company's allowances at March 31, 2020, reflect the qualitative process described above. Any changes to economic models that occurred after the balance sheet date will be reflected in future periods.

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

At January 1, 2020, upon adoption of the new standard, the company recorded an additional allowance for client and commercial financing receivables (including related off-balance sheet commitments) of \$64 million. This was primarily driven by an increase in the client financing receivables allowance. Refer to note 12, "Commitments," for additional information regarding off-balance sheet commitments.

Client Financing Receivables

The following tables present the amortized cost basis or recorded investment for the client financing receivables portfolio segment at March 31, 2020 and December 31, 2019, further segmented by three classes: Americas, Europe/Middle East/Africa (EMEA) and Asia Pacific. The commercial financing receivables portfolio segment is excluded from this presentation, as it is short term in nature and the current estimated risk of loss and resulting impact to the company's financing results is not material.

Notes to Consolidated Financial Statements — (continued)

(Dollars in millions)

At March 31, 2020:

	Americas	EMEA	Asia Pacific	Total
Amortized cost				
Lease receivables	\$ 3,609	\$ 1,122	\$ 923	\$ 5,654
Loan receivables	6,151	3,663	2,273	12,087
Ending balance	<u>\$ 9,760</u>	<u>\$ 4,785</u>	<u>\$ 3,196</u>	<u>\$ 17,741</u>
<u>Allowance for credit losses</u>				
Beginning balance at December 31, 2019	\$ 120	\$ 54	\$ 36	\$ 210
Adjustment for adoption of new standard	21	15	5	41
Beginning balance at January 1, 2020				
Lease receivables	\$ 44	\$ 27	\$ 18	\$ 89
Loan receivables	98	42	22	163
Total	<u>\$ 142</u>	<u>\$ 69</u>	<u>\$ 41</u>	<u>\$ 252</u>
Write-offs	\$ (16)	\$ (1)	\$ (2)	\$ (19)
Recoveries	0	—	1	1
Provision	3	7	(1)	9
Other*	(13)	(2)	(1)	(16)
Ending balance at March 31, 2020	<u>\$ 117</u>	<u>\$ 73</u>	<u>\$ 36</u>	<u>\$ 226</u>
Lease receivables	\$ 41	\$ 23	\$ 15	\$ 79
Loan receivables	\$ 75	\$ 50	\$ 22	\$ 147

* Primarily represents translation adjustments.

Notes to Consolidated Financial Statements — (continued)

(Dollars in millions)

At December 31, 2019:

	Americas	EMEA	Asia Pacific	Total
Recorded investment				
Lease receivables	\$ 3,419	\$ 1,186	\$ 963	\$ 5,567
Loan receivables	6,726	3,901	2,395	13,022
Ending balance	<u>\$ 10,144</u>	<u>\$ 5,087</u>	<u>\$ 3,359</u>	<u>\$ 18,590</u>
Recorded investment collectively evaluated for impairment	\$ 10,032	\$ 5,040	\$ 3,326	\$ 18,399
Recorded investment individually evaluated for impairment	\$ 112	\$ 47	\$ 32	\$ 191
<u>Allowance for credit losses</u>				
Beginning balance at January 1, 2019				
Lease receivables	\$ 53	\$ 22	\$ 24	\$ 99
Loan receivables	105	43	32	179
Total	<u>\$ 158</u>	<u>\$ 65</u>	<u>\$ 56</u>	<u>\$ 279</u>
Write-offs	\$ (42)	\$ (3)	\$ (18)	\$ (63)
Recoveries	1	0	1	2
Provision	5	(7)	(3)	(5)
Other*	(1)	0	(1)	(2)
Ending balance at December 31, 2019	<u>\$ 120</u>	<u>\$ 54</u>	<u>\$ 36</u>	<u>\$ 210</u>
Lease receivables	\$ 33	\$ 23	\$ 16	\$ 72
Loan receivables	\$ 88	\$ 31	\$ 20	\$ 138
Related allowance, collectively evaluated for impairment	\$ 25	\$ 11	\$ 4	\$ 39
Related allowance, individually evaluated for impairment	\$ 96	\$ 43	\$ 32	\$ 171

* Primarily represents translation adjustments.

Write-offs of lease receivables and loan receivables were \$16 million and \$47 million, respectively, for the year ended December 31, 2019. Provisions for credit losses recorded for lease receivables and loan receivables were a release of \$6 million and an addition of \$2 million, respectively, for the year ended December 31, 2019.

Past Due Financing Receivables

The company considers a client's financing receivable balance past due when any installment is aged over 90 days. The following tables summarize information about the amortized cost basis or recorded investment in lease and loan financing receivables, including amortized cost or recorded investment aged over 90 days and still accruing, billed invoices aged over 90 days and still accruing, and amortized cost or recorded investment not accruing.

Notes to Consolidated Financial Statements — (continued)

(Dollars in millions) At March 31, 2020:	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)
Americas	\$ 3,609	\$ 144	\$ 110	\$ 8	\$ 40
EMEA	1,122	20	6	0	16
Asia Pacific	923	24	13	1	10
Total lease receivables	<u>\$ 5,654</u>	<u>\$ 188</u>	<u>\$ 129</u>	<u>\$ 9</u>	<u>\$ 65</u>
Americas	\$ 6,151	\$ 115	\$ 62	\$ 11	\$ 54
EMEA	3,663	74	7	3	69
Asia Pacific	2,273	27	10	1	17
Total loan receivables	<u>\$ 12,087</u>	<u>\$ 215</u>	<u>\$ 80</u>	<u>\$ 16</u>	<u>\$ 140</u>
Total	<u>\$ 17,741</u>	<u>\$ 403</u>	<u>\$ 209</u>	<u>\$ 26</u>	<u>\$ 206</u>

(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 \$148 million. Financing income recognized on these receivables was immaterial for the three months ended March 31, 2020.

(Dollars in millions) At December 31, 2019:	Total Recorded Investment	Recorded Investment > 90 Days (1)	Recorded Investment > 90 Days and Accruing (1)	Billed Invoices > 90 Days and Accruing	Recorded Investment Not Accruing (2)
Americas	\$ 3,419	\$ 187	\$ 147	\$ 11	\$ 41
EMEA	1,186	28	13	2	17
Asia Pacific	963	19	7	1	11
Total lease receivables	<u>\$ 5,567</u>	<u>\$ 234</u>	<u>\$ 168</u>	<u>\$ 14</u>	<u>\$ 69</u>
Americas	\$ 6,726	\$ 127	\$ 71	\$ 11	\$ 72
EMEA	3,901	77	8	3	72
Asia Pacific	2,395	26	6	2	21
Total loan receivables	<u>\$ 13,022</u>	<u>\$ 231</u>	<u>\$ 85</u>	<u>\$ 15</u>	<u>\$ 166</u>
Total	<u>\$ 18,590</u>	<u>\$ 465</u>	<u>\$ 253</u>	<u>\$ 29</u>	<u>\$ 235</u>

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

(2) Of the recorded investment not accruing, \$191 million was individually evaluated for impairment with a related allowance of \$171 million.

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 annually 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 or recorded investment for financing receivables, excluding commercial financing receivables, by credit quality indicator at March 31, 2020 and December 31, 2019, respectively. Receivables with a credit quality indicator ranging from Aaa to Baa3 are considered investment grade. All others are considered non-investment grade. Effective January 1, 2020, under the new guidance for credit losses, the company discloses its credit quality by year of origination. Additionally, under the new guidance, the amortized cost is presented on a gross basis, whereas under the prior guidance, the company presented the recorded investment net of the allowance

Notes to Consolidated Financial Statements — (continued)

for credit losses. The credit quality indicators do not reflect any mitigation actions taken to transfer credit risk to third parties.

(Dollars in millions) At March 31, 2020:	Americas		EMEA		Asia Pacific	
	Aaa – Baa3	Ba1 – D	Aaa – Baa3	Ba1 – D	Aaa – Baa3	Ba1 – D
Vintage year:						
2020	\$ 1,422	\$ 883	\$ 633	\$ 806	\$ 251	\$ 163
2019	2,213	1,601	966	1,043	1,607	678
2018	1,148	736	400	359	208	82
2017	722	386	141	191	79	37
2016	292	309	94	68	36	20
2015 and prior	18	30	45	40	20	16
Total	\$ 5,815	\$ 3,945	\$ 2,278	\$ 2,506	\$ 2,200	\$ 996

(Dollars in millions) At December 31, 2019:	Lease Receivables			Loan Receivables		
	Americas	EMEA	Asia Pacific	Americas	EMEA	Asia Pacific
Credit rating:						
Aaa – Aa3	\$ 465	\$ 54	\$ 43	\$ 1,028	\$ 193	\$ 189
A1 – A3	750	181	454	1,186	395	892
Baa1 – Baa3	955	409	147	1,882	1,527	619
Ba1 – Ba2	746	326	154	1,513	921	388
Ba3 – B1	215	140	101	471	564	205
B2 – B3	242	50	47	522	253	72
Caa – D	13	2	2	36	18	10
Total	\$ 3,385	\$ 1,162	\$ 947	\$ 6,638	\$ 3,871	\$ 2,376

Troubled Debt Restructurings

The company did not have any significant troubled debt restructurings during the three months ended March 31, 2020 or for the year ended December 31, 2019.

9. Leases:

Accounting for Leases as a Lessor

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

(Dollars in millions) For the three months ended March 31:	2020	2019
Lease income — sales-type and direct financing leases		
Sales-type lease selling price	\$ 211	\$ 149
Less: Carrying value of underlying assets, excluding unguaranteed residual value	76	55
Gross profit	135	94
Interest income on lease receivables	74	79
Total sales-type and direct financing lease income	\$ 208	\$ 172
Lease income — operating leases	71	90
Variable lease income	30	18
Total lease income	\$ 310	\$ 280

Notes to Consolidated Financial Statements — (continued)

10. Intangible Assets Including Goodwill:

Intangible Assets

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

		At March 31, 2020		
(Dollars in millions)		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount*
Intangible asset class				
Capitalized software	\$	1,760	\$ (764)	\$ 997
Client relationships		8,854	(1,669)	7,185
Completed technology		6,225	(1,566)	4,658
Patents/trademarks		2,287	(483)	1,804
Other**		56	(33)	22
Total	\$	19,181	\$ (4,515)	\$ 14,666

		At December 31, 2019		
(Dollars in millions)		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount*
Intangible asset class				
Capitalized software	\$	1,749	\$ (743)	\$ 1,006
Client relationships		8,921	(1,433)	7,488
Completed technology		6,261	(1,400)	4,861
Patents/trademarks		2,301	(445)	1,856
Other**		56	(31)	24
Total	\$	19,287	\$ (4,052)	\$ 15,235

* Amounts as of March 31, 2020 and December 31, 2019 include a decrease in net intangible asset balances of \$92 million and \$42 million, respectively, due to foreign currency translation.

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

The net carrying amount of intangible assets decreased \$569 million during the first three months of 2020, primarily due to intangible asset amortization. The aggregate intangible amortization expense was \$622 million and \$303 million for the first quarter ended March 31, 2020 and 2019, respectively. The increase in intangible amortization expense was primarily due to an increase in the gross carrying amount of intangible assets from the Red Hat acquisition which closed in the third quarter of 2019. In addition, in the first three months of 2020, the company retired \$154 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 March 31, 2020:

(Dollars in millions)	Capitalized Software	Acquired Intangibles	Total
Remainder of 2020	\$ 415	\$ 1,372	\$ 1,787
2021	399	1,738	2,137
2022	170	1,676	1,846
2023	12	1,363	1,375
2024	0	1,313	1,313
Thereafter	—	6,208	6,208

Notes to Consolidated Financial Statements — (continued)

Goodwill

The changes in the goodwill balances by segment, for the three months ended March 31, 2020 and for the year ended December 31, 2019 are as follows:

(Dollars in millions) Segment	Balance 1/1/2020	Goodwill Additions	Purchase Price Adjustments	Divestitures	Foreign Currency Translation And Other Adjustments**	Balance 3/31/2020
Cloud & Cognitive Software	\$ 43,037	\$ 10	\$ 12	\$ —	\$ (438)	\$ 42,620
Global Business Services	5,775	—	—	—	(102)	5,672
Global Technology Services	7,141	—	—	—	(167)	6,974
Systems	2,270	—	—	—	(19)	2,251
Other—divested businesses	—	—	—	—	—	—
Total	<u>\$ 58,222</u>	<u>\$ 10</u>	<u>\$ 12</u>	<u>\$ —</u>	<u>\$ (727)</u>	<u>\$ 57,517</u>

(Dollars in millions) Segment	Balance 1/1/2019	Goodwill Additions	Purchase Price Adjustments	Divestitures	Foreign Currency Translation And Other Adjustments**	Balance 12/31/2019
Cloud & Cognitive Software*	\$ 24,463	\$ 18,399	\$ 133	\$ —	\$ 41	\$ 43,037
Global Business Services	4,711	1,059	1	(1)	5	5,775
Global Technology Services	3,988	3,119	—	—	34	7,141
Systems	1,847	525	(110)	—	7	2,270
Other—divested businesses*	1,256	—	—	(1,256)	—	—
Total	<u>\$ 36,265</u>	<u>\$ 23,102</u>	<u>\$ 24</u>	<u>\$ (1,257)</u>	<u>\$ 87</u>	<u>\$ 58,222</u>

* Recast to conform to 2020 presentation.

** Primarily driven by foreign currency translation.

There were no goodwill impairment losses recorded during the first three months of 2020 or full year 2019 and the company has no accumulated impairment losses. As a result of the changes in the current economic environment related to the COVID-19 pandemic, the company considered whether there was a potential triggering event requiring the evaluation of whether goodwill should be tested for impairment. The company assessed the qualitative risk factors for the Systems reporting unit (given the results of the 2019 annual impairment test) and determined that it was not more likely than not that the fair value of the reporting unit was less than its carrying amount as of March 31, 2020.

Purchase price adjustments recorded in the first three months of 2020 and full-year 2019 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 during the first three months of 2020 and full-year 2019 were not material.

11. Borrowings:

Short-Term Debt

(Dollars in millions)	At March 31, 2020	At December 31, 2019
Commercial paper	\$ 2,519	\$ 304
Short-term loans	934	971
Long-term debt—current maturities	8,190	7,522
Total	<u>\$ 11,642</u>	<u>\$ 8,797</u>

Notes to Consolidated Financial Statements — (continued)

The weighted-average interest rate for commercial paper at March 31, 2020 and December 31, 2019 was 1.1 percent and 1.6 percent, respectively. The weighted-average interest rate for short-term loans was 4.7 percent and 6.1 percent at March 31, 2020 and December 31, 2019, respectively.

Long-Term Debt

Pre-Swap Borrowing

(Dollars in millions)	Maturities	Balance 3/31/2020	Balance 12/31/2019
U.S. dollar debt (weighted-average interest rate at March 31, 2020):*			
2.3%	2020	\$ 2,766	\$ 4,326
2.4%	2021	5,556	8,498
2.6%	2022	6,257	6,289
3.3%	2023	2,413	2,388
3.3%	2024	5,049	5,045
6.7%	2025	645	636
3.3%	2026	4,350	4,350
4.7%	2027	969	969
6.5%	2028	313	313
3.5%	2029	3,250	3,250
5.9%	2032	600	600
8.0%	2038	83	83
4.5%	2039	2,745	2,745
4.0%	2042	1,107	1,107
7.0%	2045	27	27
4.7%	2046	650	650
4.3%	2049	3,000	3,000
7.1%	2096	316	316
		<u>\$ 40,097</u>	<u>\$ 44,594</u>
Other currencies (weighted-average interest rate at March 31, 2020, in parentheses):*			
Euro (1.1%)	2020–2040	\$ 18,126	\$ 14,306
Pound sterling (2.7%)	2020–2022	1,311	1,390
Japanese yen (0.3%)	2022–2026	1,349	1,339
Other (4.1%)	2020–2022	288	375
		<u>\$ 61,170</u>	<u>\$ 62,003</u>
Finance lease obligations (2.4%)	2021–2030	246	204
		<u>\$ 61,417</u>	<u>\$ 62,207</u>
Less: net unamortized discount		881	881
Less: net unamortized debt issuance costs		151	142
Add: fair value adjustment**		491	440
		<u>\$ 60,875</u>	<u>\$ 61,624</u>
Less: current maturities		8,190	7,522
Total		<u>\$ 52,685</u>	<u>\$ 54,102</u>

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

** The portion of the company's fixed-rate debt obligations that was hedged was 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

Notes to Consolidated Financial Statements — (continued)

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 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 half of 2019, the company issued an aggregate of \$20 billion of U.S. dollar fixed- and floating-rate notes and \$5.7 billion of Euro fixed-rate notes. The proceeds were primarily used for the acquisition of Red Hat. For additional information on this transaction, refer to note 5, "Acquisitions & Divestitures." 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.

Pre-swap annual contractual obligations of long-term debt outstanding at March 31, 2020, are as follows:

(Dollars in millions)	Total
Remainder of 2020	\$ 5,731
2021	6,897
2022	7,180
2023	5,342
2024	6,302
Thereafter	29,964
Total	<u>\$ 61,417</u>

Interest on Debt

(Dollars in millions)	2020	2019
For the three months ended March 31:		
Cost of financing	\$ 119	\$ 179
Interest expense	326	210
Interest capitalized	5	2
Total interest paid and accrued	<u>\$ 449</u>	<u>\$ 391</u>

Lines of Credit

IBM has a \$10.25 billion Five-Year Credit Agreement with a maturity date of July 20, 2024. In addition, the company and IBM Credit LLC have a \$2.5 billion 364-day Credit Agreement and a \$2.5 billion Three-Year Credit Agreement, with maturity dates of July 16, 2020 and July 20, 2022, respectively.

At March 31, 2020, there were no borrowings by the company, or its subsidiaries, under these credit facilities.

12. Commitments:

The company's extended lines of credit to third-party entities include unused amounts of \$2.1 billion and \$1.8 billion at March 31, 2020 and December 31, 2019, 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

Notes to Consolidated Financial Statements — (continued)

future financing to its clients in connection with client purchase agreements for \$6.0 billion and \$6.3 billion at March 31, 2020 and December 31, 2019, respectively. Effective January 1, 2020, the company adopted the new standard on credit losses, which resulted in the recognition of a related allowance for non-cancellable off-balance sheet commitments. Refer to note 2, “Accounting Changes,” for additional information. The allowance for these commitments is recorded in other liabilities in the Consolidated Balance Sheet and was not material at March 31, 2020. The company collectively evaluates the allowance for these arrangements using a provision methodology consistent with the portfolio of the commitments. Refer to note 8, “Financing Receivables,” for additional information.

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 typically indemnification provisions 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 March 31, 2020 and December 31, 2019 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

(Dollars in millions)	2020	2019
Balance at January 1	\$ 113	\$ 118
Current period accruals	20	19
Accrual adjustments to reflect actual experience	(6)	(1)
Charges incurred	(26)	(29)
Balance at March 31	<u>\$ 100</u>	<u>\$ 107</u>

Notes to Consolidated Financial Statements — (continued)

Extended Warranty Liability

(Dollars in millions)	2020	2019
Balance at January 1	\$ 477	\$ 533
Revenue deferred for new extended warranty contracts	40	36
Amortization of deferred revenue	(57)	(64)
Other*	(13)	(3)
Balance at March 31	<u>\$ 447</u>	<u>\$ 503</u>
Current portion	\$ 219	\$ 242
Noncurrent portion	\$ 228	\$ 261

* Other primarily consists of foreign currency translation adjustments.

13. 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. 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 quarter ended March 31, 2020 were not material to the Consolidated Financial Statements.

In accordance with the relevant accounting guidance, the company provides disclosures of matters for which the likelihood of material loss is at least reasonably possible. In addition, the company also discloses matters based on its consideration of other matters and qualitative factors, including the experience of other companies in the industry, and investor, customer and employee relations considerations.

With respect to certain of the claims, suits, investigations and proceedings discussed herein, the company believes at this time that the likelihood of any material loss is remote, given, for example, the procedural status, court rulings, and/or the strength of the company's defenses in those matters. With respect to the remaining claims, suits, investigations and proceedings discussed in this note, except as specifically discussed herein, the company is unable to provide estimates of reasonably possible losses or range of losses, including losses in excess of amounts accrued, if any, for the following reasons. Claims, suits, investigations and proceedings are inherently uncertain, and it is not possible to predict the ultimate outcome of these matters. It is the company's experience that damage amounts claimed in litigation against it are unreliable and unrelated to possible outcomes, and as such are not meaningful indicators of the company's potential liability. Further, the company is unable to provide such an estimate due to a number of other factors with respect to these claims, suits, investigations and proceedings, including considerations of the procedural status of the matter in question, the presence of complex or novel legal theories, and/or the ongoing discovery and development of information

Notes to Consolidated Financial Statements — (continued)

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.

The company is a defendant in an action filed on March 6, 2003 in state court in Salt Lake City, Utah by the SCO Group (SCO v. IBM). The company removed the case to Federal Court in Utah. Plaintiff is an alleged successor in interest to some of AT&T's UNIX IP rights, and alleges copyright infringement, unfair competition, interference with contract and breach of contract with regard to the company's distribution of AIX and Dynix and contribution of code to Linux and the company has asserted counterclaims. On September 14, 2007, plaintiff filed for bankruptcy protection, and all proceedings in this case were stayed. The court in another suit, the SCO Group, Inc. v. Novell, Inc., held a trial in March 2010. The jury found that Novell is the owner of UNIX and UnixWare copyrights; the judge subsequently ruled that SCO is obligated to recognize Novell's waiver of SCO's claims against IBM and Sequent for breach of UNIX license agreements. On August 30, 2011, the Tenth Circuit Court of Appeals affirmed the district court's ruling and denied SCO's appeal of this matter. In June 2013, the Federal Court in Utah granted SCO's motion to reopen the SCO v. IBM case. In February 2016, the Federal Court ruled in favor of IBM on all of SCO's remaining claims, and SCO appealed. On October 30, 2017, the Tenth Circuit Court of Appeals affirmed the dismissal of all but one of SCO's remaining claims, which was remanded to the Federal Court in Utah.

On March 9, 2017, the Commonwealth of Pennsylvania's Department of Labor and Industry sued IBM in Pennsylvania state court regarding a 2006 contract for the development of a custom software system to manage the Commonwealth's unemployment insurance benefits programs. The matter is pending in a Pennsylvania court.

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. The matter is pending in the London High Court with trial beginning in January 2020.

In May 2015, a putative class action was commenced in the United States District Court for the Southern District of New York related to the company's October 2014 announcement that it was divesting its global commercial semiconductor technology business, alleging violations of the Employee Retirement Income Security Act (ERISA). Management's Retirement Plans Committee and three current or former IBM executives are named as defendants. On September 29, 2017, the Court granted the defendants' motion to dismiss the first amended complaint. On December 10, 2018, the Second Circuit Court of Appeals reversed the District Court order. On January 14, 2020, the Supreme Court of the United States vacated the decision and remanded the case to the Second Circuit.

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

Notes to Consolidated Financial Statements — (continued)

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 \$750 million. The company believes it will prevail on these matters and that this amount is not a meaningful indicator of liability.

14. Equity Activity:

Reclassifications and Taxes Related to Items of Other Comprehensive Income

(Dollars in millions)	Before Tax Amount	Tax (Expense)/ Benefit	Net of Tax Amount
For the three months ended March 31, 2020:			
Other comprehensive income/(loss):			
Foreign currency translation adjustments	\$ (919)	\$ (122)	\$ (1,041)
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	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>
Unrealized gains/(losses) on cash flow hedges:			
Unrealized gains/(losses) arising during the period	\$ (180)	\$ 45	\$ (135)
Reclassification of (gains)/losses to:			
Cost of services	(10)	2	(7)
Cost of sales	(9)	2	(6)
Cost of financing	8	(2)	6
SG&A expense	(10)	2	(7)
Other (income) and expense	89	(22)	67
Interest expense	22	(5)	16
Total unrealized gains/(losses) on cash flow hedges	<u>\$ (90)</u>	<u>\$ 23</u>	<u>\$ (67)</u>
Retirement-related benefit plans (1):			
Prior service costs/(credits)	\$ (4)	\$ 1	\$ (3)
Net (losses)/gains arising during the period	8	(2)	6
Curtailments and settlements	8	(3)	6
Amortization of prior service (credits)/costs	1	1	1
Amortization of net (gains)/losses	570	(157)	412
Total retirement-related benefit plans	<u>\$ 582</u>	<u>\$ (160)</u>	<u>\$ 422</u>
Other comprehensive income/(loss)	<u><u>\$ (427)</u></u>	<u><u>\$ (260)</u></u>	<u><u>\$ (686)</u></u>

(1) These accumulated other comprehensive income/ (AOCI) components are included in the computation of net periodic pension cost. Refer to note 17, "Retirement-Related Benefits," for additional information.

Notes to Consolidated Financial Statements — (continued)

Reclassifications and Taxes Related to Items of Other Comprehensive Income

(Dollars in millions)			
For the three months ended March 31, 2019:			
	Before Tax Amount	Tax (Expense)/ Benefit	Net of Tax Amount
Other comprehensive income/(loss):			
Foreign currency translation adjustments	\$ 171	\$ 0	\$ 172
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	<u>\$ (1)</u>	<u>\$ 0</u>	<u>\$ (1)</u>
Unrealized gains/(losses) on cash flow hedges:			
Unrealized gains/(losses) arising during the period	\$ (352)	\$ 84	\$ (268)
Reclassification of (gains)/losses to:			
Cost of services	(10)	3	(7)
Cost of sales	(18)	5	(13)
Cost of financing	29	(7)	22
SG&A expense	(22)	6	(16)
Other (income) and expense	87	(22)	65
Interest expense	33	(8)	24
Total unrealized gains/(losses) on cash flow hedges	<u>\$ (254)</u>	<u>\$ 61</u>	<u>\$ (193)</u>
Retirement-related benefit plans (1):			
Net (losses)/gains arising during the period	\$ (4)	\$ 1	\$ (2)
Curtailments and settlements	1	0	1
Amortization of prior service (credits)/costs	(3)	1	(2)
Amortization of net (gains)/losses	464	(130)	334
Total retirement-related benefit plans	<u>\$ 458</u>	<u>\$ (128)</u>	<u>\$ 330</u>
Other comprehensive income/(loss)	<u><u>\$ 375</u></u>	<u><u>\$ (67)</u></u>	<u><u>\$ 308</u></u>

(1) These AOCI components are included in the computation of net periodic pension cost. Refer to note 17, "Retirement-Related Benefits," for additional information.

Notes to Consolidated Financial Statements — (continued)

Accumulated Other Comprehensive Income/(Loss) (net of tax)

<u>(Dollars in millions)</u>	<u>Net Unrealized Gains/(Losses) on Cash Flow Hedges</u>	<u>Foreign Currency Translation Adjustments*</u>	<u>Net Change Retirement- Related Benefit Plans</u>	<u>Net Unrealized Gains/(Losses) on Available- For-Sale Securities</u>	<u>Accumulated Other Comprehensive Income/(Loss)</u>
January 1, 2020	\$ (179)	\$ (3,700)	\$ (24,718)	\$ 0	\$ (28,597)
Other comprehensive income before reclassifications	(135)	(1,041)	3	0	(1,174)
Amount reclassified from accumulated other comprehensive income	68	—	419	—	488
Total change for the period	<u>\$ (67)</u>	<u>\$ (1,041)</u>	<u>\$ 422</u>	<u>\$ 0</u>	<u>\$ (686)</u>
March 31, 2020	<u>\$ (246)</u>	<u>\$ (4,741)</u>	<u>\$ (24,296)</u>	<u>\$ 0</u>	<u>\$ (29,283)</u>

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

<u>(Dollars in millions)</u>	<u>Net Unrealized Gains/(Losses) on Cash Flow Hedges</u>	<u>Foreign Currency Translation Adjustments*</u>	<u>Net Change Retirement- Related Benefit Plans</u>	<u>Net Unrealized Gains/(Losses) on Available- For-Sale Securities</u>	<u>Accumulated Other Comprehensive Income/(Loss)</u>
January 1, 2019	\$ 284	\$ (3,690)	\$ (26,083)	\$ 0	\$ (29,490)
Other comprehensive income before reclassifications	(268)	172	(2)	(1)	(99)
Amount reclassified from accumulated other comprehensive income	75	—	333	—	407
Total change for the period	<u>\$ (193)</u>	<u>\$ 172</u>	<u>\$ 330</u>	<u>\$ (1)</u>	<u>\$ 308</u>
March 31, 2019	<u>\$ 90</u>	<u>\$ (3,519)</u>	<u>\$ (25,753)</u>	<u>\$ (1)</u>	<u>\$ (29,182)</u>

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

15. 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 accounts payable for the obligation to return cash collateral at March 31, 2020 was \$2 million and no amount was recognized at December 31, 2019. No amount was recognized in other accounts receivable for the right to reclaim cash collateral at March 31, 2020 and \$26 million was recognized at December 31, 2019. The company restricts the use of cash collateral received to rehypothecation, and therefore reports it in restricted cash in the Consolidated Balance Sheet. No amount was rehypothecated at March 31, 2020 and December 31, 2019. Additionally, if derivative exposures covered by a qualifying master netting agreement had been netted in the Consolidated Balance Sheet at March 31, 2020 and December 31, 2019, the total derivative asset and liability positions each would have been reduced by \$249 million and \$194 million, respectively.

Notes to Consolidated Financial Statements — (continued)

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 March 31, 2020 and December 31, 2019, the total notional amount of the company's interest-rate swaps was \$3.0 billion at both periods. The weighted-average remaining maturity of these instruments at March 31, 2020 and December 31, 2019 was approximately 1.9 years and 2.2 years, respectively. These interest-rate contracts were accounted for as fair value hedges. The company did not have any cash flow hedges relating to this program outstanding at March 31, 2020 and December 31, 2019.

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. In the second quarter of 2019, the company issued an aggregate of \$20 billion of indebtedness (refer to note 11, "Borrowings," for additional information). Following the receipt of the net proceeds from this debt offering, the company terminated \$5.5 billion of forward starting interest-rate swaps. There were no instruments outstanding at March 31, 2020 and December 31, 2019.

In connection with cash flow hedges of forecasted interest payments related to the company's borrowings, the company recorded net losses of \$188 million and net losses of \$192 million (before taxes) at March 31, 2020 and December 31, 2019, respectively, in AOCI. The company estimates that \$18 million (before taxes) of the deferred net losses on derivatives in AOCI at March 31, 2020 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 March 31, 2020 and December 31, 2019, the carrying value of debt designated as hedging instruments was \$16.7 billion and \$7.3 billion, respectively. The \$9.4 billion increase is part of the company's risk management strategy and is primarily due to the designation of new debt issuances and previously hedged Euro denominated debt. The company also uses cross-currency swaps and foreign exchange forward contracts for this risk management purpose. At March 31, 2020 and December 31, 2019, the total notional amount of derivative instruments designated as net investment hedges was \$8.4 billion and \$7.9 billion, respectively. At March 31, 2020 and December 31, 2019, the weighted-average remaining maturity of these instruments was approximately 0.2 years and 0.1 years, respectively.

Notes to Consolidated Financial Statements — (continued)

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. The maximum remaining length of time over which the company hedged its exposure is approximately four years. At March 31, 2020 and December 31, 2019, the total notional amount of forward contracts designated as cash flow hedges of forecasted royalty and cost transactions was \$9.6 billion and \$9.7 billion, respectively. At March 31, 2020 and December 31, 2019, the weighted-average remaining maturity of these instruments was approximately 0.7 years and 0.8 years, respectively.

At March 31, 2020 and December 31, 2019, in connection with cash flow hedges of anticipated royalties and cost transactions, the company recorded net gains of \$174 million and net gains of \$145 million (before taxes), respectively, in AOCI. The company estimates that \$180 million (before taxes) of deferred net gains on derivatives in AOCI at March 31, 2020 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 March 31, 2020, the maximum length of time remaining over which the company hedged its exposure is approximately eight years. At March 31, 2020 and December 31, 2019, the total notional amount of cross-currency swaps designated as cash flow hedges of foreign currency denominated debt was \$2.4 billion and \$8.2 billion, respectively. The \$5.7 billion decrease in cross-currency swaps is part of the company's risk management strategy and the previously hedged foreign currency denominated debt has been designated as a hedge of net investment in foreign subsidiaries.

At March 31, 2020 and December 31, 2019, in connection with cash flow hedges of foreign currency denominated borrowings, the company recorded net losses of \$308 million and net losses of \$185 million (before taxes), respectively, in AOCI. The company estimates that \$21 million (before taxes) of deferred net losses on derivatives in AOCI at March 31, 2020 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 March 31, 2020 and December 31, 2019, the total notional amount of derivative instruments in economic hedges of foreign currency exposure was \$4.3 billion and \$7.1 billion, respectively.

Equity Risk Management

The company is exposed to market price changes in certain broad market indices and in the company's own stock primarily related to certain obligations to employees. Changes in the overall value of these employee compensation obligations are recorded in SG&A expense in the Consolidated Income Statement. Although not designated as accounting hedges, the company utilizes derivatives, including equity swaps and futures, to economically hedge the

Notes to Consolidated Financial Statements — (continued)

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 March 31, 2020 and December 31, 2019, the total notional amount of derivative instruments in economic hedges of these compensation obligations was \$1.1 billion and \$1.3 billion, respectively.

Cumulative Basis Adjustments for Fair Value Hedges

At March 31, 2020 and December 31, 2019, the following amounts were recorded in the Consolidated Balance Sheet related to cumulative basis adjustments for fair value hedges:

(Dollars in millions)	March 31, 2020	December 31, 2019
Short-term debt:		
Carrying amount of the hedged item	\$ (1,314)	\$ —
Cumulative hedging adjustments included in the carrying amount - assets/(liabilities)	(15)	—
Long-term debt:		
Carrying amount of the hedged item	\$ (2,147)	\$ (3,411)
Cumulative hedging adjustments included in the carrying amount - assets/(liabilities)	(475)(1)	(440)(1)

(1) Includes (\$391) million and (\$404) million of hedging adjustments on discontinued hedging relationships at March 31, 2020 and December 31, 2019, respectively.

The Effect of Derivative Instruments in the Consolidated Income Statement

The total amounts of income and expense line items presented in the Consolidated Income Statement in which the effects of fair value hedges, cash flow hedges, net investment hedges and derivatives not designated as hedging instruments are recorded and the total effect of hedge activity on these income and expense line items are as follows:

(Dollars in millions)	Total		Gains/(Losses) of Total Hedge Activity	
For the three months ended March 31:	2020	2019	2020	2019
Cost of services	\$ 7,843	\$ 8,272 *	\$ 10	\$ 10
Cost of sales	1,624	1,603 *	9	18
Cost of financing	181	264	3	(18)
SG&A expense	5,955	4,691	(191)	141
Other (income) and expense	182	(73)	(101)	(69)
Interest expense	326	210	10	(20)

* Reclassified to conform to current period presentation.

Notes to Consolidated Financial Statements — (continued)

		Gain (Loss) Recognized in Consolidated Income Statement				
		Consolidated	Recognized on		Attributable to Risk	
		Income Statement	Derivatives		Being Hedged (2)	
(Dollars in millions)						
For the three months ended March 31:		Line Item	2020	2019	2020	2019
Derivative instruments in fair value hedges (1):						
Interest rate contracts		Cost of financing	\$ 18	\$ 36	\$ (13)	\$ (33)
		Interest expense	49	39	(37)	(36)
Derivative instruments not designated as hedging instruments:						
Foreign exchange contracts		Other (income) and expense	(11)	18	N/A	N/A
Equity contracts		SG&A expense	(201)	119	N/A	N/A
Total			\$ (146)	\$ 212	\$ (50)	\$ (69)

(Dollars in millions) For the three months ended March 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)	
	2020	2019		2020	2019	2020	2019
Derivative instruments in cash flow hedges:							
Interest rate contracts	\$ —	\$ (171)	Cost of financing Interest expense	\$ (1) (3)	\$ — —	\$ — —	\$ — —
Foreign exchange contracts	(180)	(181)	Cost of services	10	10	—	—
			Cost of sales	9	18	—	—
			Cost of financing	(7)	(29)	—	—
			SG&A expense	10	22	—	—
			Other (income) and expense	(89)	(87)	—	—
			Interest expense	(18)	(33)	—	—
Instruments in net investment hedges (4):							
Foreign exchange contracts	485	19	Cost of financing Interest expense	— —	— —	7 20	8 9
Total	\$ 304	\$ (333)		\$ (91)	\$ (98)	\$ 27	\$ 17

(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.

N/A - not applicable

For the three months ending March 31, 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.

Notes to Consolidated Financial Statements — (continued)

16. Stock-Based Compensation:

Stock-based compensation cost is measured at grant date, based on the fair value of the award, and is recognized over the employee requisite service period. The following table presents total stock-based compensation cost included in income from continuing operations.

(Dollars in millions)

For the three months ended March 31:

	2020	2019
Cost	\$ 27	\$ 20
Selling, general and administrative	117	74
Research, development and engineering	45	19
Pre-tax stock-based compensation cost	\$ 189	\$ 113
Income tax benefits	(45)	(25)
Total net stock-based compensation cost	\$ 144	\$ 88

Pre-tax stock-based compensation cost for the three months ended March 31, 2020 increased \$76 million compared to the corresponding period in the prior year. This was primarily due to increases related to the conversions of stock-based compensation previously issued by Red Hat (\$65 million), and restricted stock units (\$17 million), partially offset by decreases in performance share units (\$6 million).

Total unrecognized compensation cost related to non-vested awards at March 31, 2020 was \$1.2 billion and is expected to be recognized over a weighted-average period of approximately 2.5 years.

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

17. Retirement-Related Benefits:

The company offers defined benefit pension plans, defined contribution pension plans, as well as nonpension postretirement plans primarily consisting of retiree medical benefits. The following table provides the pre-tax cost for all retirement-related plans.

(Dollars in millions)			Yr. to Yr. Percent Change
For the three months ended March 31:	2020	2019	
Retirement-related plans — cost			
Defined benefit and contribution pension plans — cost	\$ 584	\$ 437	33.7 %
Nonpension postretirement plans — cost	52	54	(4.1)
Total	\$ 636	\$ 491	29.5 %

Notes to Consolidated Financial Statements — (continued)

The following table provides the components of the cost/(income) for the company's pension plans.

Cost/(Income) of Pension Plans

(Dollars in millions) For the three months ended March 31:	U.S. Plans		Non-U.S. Plans	
	2020	2019	2020	2019
Service cost	\$ —	\$ —	\$ 95	\$ 93
Interest cost (1)	375	472	129	208
Expected return on plan assets (1)	(542)	(650)	(309)	(399)
Amortization of prior service costs/(credits) (1)	4	4	(5)	(6)
Recognized actuarial losses (1)	207	140	342	314
Curtailments and settlements (1)	—	—	8	1
Multi-employer plans	—	—	7	9
Other costs/(credits) (1)	—	—	5	5
Total net periodic pension (income)/cost of defined benefit plans	\$ 44	\$ (34)	\$ 274	\$ 223
Cost of defined contribution plans	155	149	110	98
Total defined benefit and contribution pension plans cost recognized in the Consolidated Income Statement	\$ 199	\$ 115	\$ 385	\$ 322

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

The following table provides the components of the cost for the company's nonpension postretirement plans.

Cost of Nonpension Postretirement Plans

(Dollars in millions) For the three months ended March 31:	U.S. Plan		Non-U.S. Plans	
	2020	2019	2020	2019
Service cost	\$ 2	\$ 3	\$ 1	\$ 1
Interest cost (1)	26	36	10	12
Expected return on plan assets (1)	—	—	(1)	(1)
Amortization of prior service costs/(credits) (1)	1	(1)	0	0
Recognized actuarial losses (1)	7	1	6	3
Curtailments and settlements (1)	—	—	0	0
Total nonpension postretirement plans cost recognized in Consolidated Income Statement	\$ 36	\$ 39	\$ 16	\$ 15

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

The company does not anticipate any significant changes to the expected plan contributions in 2020 from the amounts disclosed in the 2019 Annual Report.

The table below includes contributions to the following plans:

(Dollars in millions) For the three months ended March 31:	Plan Contributions	
	2020	2019
U.S. nonpension postretirement benefit plan	\$ 136	\$ 194
Non-U.S. DB and multi-employer plans	82	94
Total plan contributions	\$ 217	\$ 288

During the three months ended March 31, 2020 and 2019, \$255 million and \$256 million, respectively, was contributed in U.S. Treasury securities, which is considered a non-cash transaction (includes the Active Medical Trust).

Notes to Consolidated Financial Statements — (continued)

18. Subsequent Events:

On April 28, 2020, the company announced that the Board of Directors approved an increase in the quarterly dividend to \$1.63 per common share. The dividend is payable June 10, 2020 to shareholders of record on May 8, 2020.

Item 2.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
OF RESULTS OF OPERATIONS AND FINANCIAL CONDITION
FOR THE THREE MONTHS ENDED MARCH 31, 2020**

Snapshot**Financial Results Summary — Three Months Ended March 31:**

(Dollars and shares in millions except per share amounts) For the three months ended March 31:	2020	2019	Yr. to Yr. Percent/ Margin Change*
Revenue	\$ 17,571	\$ 18,182	(3.4)%**
Gross profit margin	45.1 %	44.2 %	0.9 pts.
Total expense and other (income)	\$ 7,972	\$ 6,160	29.4 %
Income/(loss) from continuing operations before income taxes	\$ (49)	\$ 1,883	nm
Provision for/(benefit from) income taxes from continuing operations	\$ (1,226)	\$ 289	nm
Income from continuing operations	\$ 1,176	\$ 1,593	(26.2)%
Income from continuing operations margin	6.7 %	8.8 %	(2.1)pts.
Net income	\$ 1,175	\$ 1,591	(26.1)%
Earnings per share from continuing operations - assuming dilution	\$ 1.31	\$ 1.78	(26.4)%
Weighted-average shares outstanding - assuming dilution	895.0	893.9	0.1 %
	<u>At 3/31/2020</u>	<u>At 12/31/2019</u>	
Assets	\$ 153,403	\$ 152,186	0.8 %
Liabilities	\$ 133,275	\$ 131,202	1.6 %
Equity	\$ 20,128	\$ 20,985	(4.1)%

* 2020 results were impacted by Red Hat acquisition-related activity.

** (1.9) percent adjusted for currency; 0.1 percent excluding divested businesses and adjusted for currency.

nm - not meaningful

Organization of Information:

In the first quarter of 2020, we realigned offerings and the related management system to reflect divestitures completed in the second half of 2019 and tighter integration of certain industry-specific consulting services. These changes impacted Cloud & Cognitive Software and Global Business Services, but did not impact the Consolidated Financial Statements. Total recast revenue for full-year 2019 was approximately \$0.3 billion of IBM's total \$77 billion. Refer to note 4, "Segments," for additional information on our reportable segments. The periods presented in this Form 10-Q are reported on a comparable basis. We provided recast historical segment information reflecting these changes in a Form 8-K dated April 21, 2020. Additionally, on April 6, 2020, Arvind Krishna became Chief Executive Officer of IBM and announced a number of management changes which did not impact our reportable segments.

On July 9, 2019, IBM acquired 100 percent of the outstanding shares of Red Hat, Inc. (Red Hat). Red Hat is reported within the Cloud & Cognitive Software segment, in Cloud & Data Platforms. Compared to the prior-year period, the Consolidated Income Statement for the three months ended March 31, 2020 includes impacts from purchase accounting adjustments, higher interest expense, higher intangible assets amortization and other acquisition-related activities. Refer to note 5, "Acquisitions & Divestitures," for additional information.

Management Discussion – (continued)

Currency:

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 the company refers to growth rates at constant currency or adjusts 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 its business performance. Financial results adjusted for currency are calculated by translating current period activity in local currency using the comparable prior year period’s currency conversion rate. This approach is used for countries where the functional currency is the local currency. Generally, when the dollar either strengthens or weakens against other currencies, the growth at constant currency rates or adjusting for currency will be higher or lower than growth reported at actual exchange rates. Refer to “Currency Rate Fluctuations” for additional information.

Revenue Adjusted for Divested Businesses and Constant Currency:

To provide better transparency on the recurring performance of the ongoing business, the company provides revenue growth rates excluding divested businesses and at constant currency. These divested businesses are included in the category “Other–divested businesses.”

Operating (non-GAAP) Earnings:

In an effort to provide better transparency into the operational results of the business, supplementally, the company 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 and discontinued operations and their related tax impacts. Due to the unique, non-recurring nature of the enactment of the U.S. Tax Cuts and Jobs Act (U.S. tax reform), management characterizes the one-time provisional charge recorded in the fourth quarter of 2017 and adjustments to that charge as non-operating. Adjustments include true-ups, accounting elections, any changes to regulations, laws, audit adjustments, etc. that affect the recorded one-time charge. 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. The company includes 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. Our reportable segment financial results reflect pre-tax operating earnings from continuing operations, consistent with our management and measurement system. In addition, these non-GAAP measures provide a perspective consistent with areas of interest we routinely receive from investors and analysts.

Management Discussion – (continued)

The following table provides the company's operating (non-GAAP) earnings for the first quarter of 2020 and 2019.

(Dollars in millions except per share amounts)			
For the three months ended March 31:			
	2020	2019	Yr. to Yr. Percent Change*
Net income as reported	\$ 1,175	\$ 1,591	(26.1)%
Income/(loss) from discontinued operations, net of tax	(1)	(2)	(58.7)
Income from continuing operations	\$ 1,176	\$ 1,593	(26.2)%
Non-operating adjustments (net of tax):			
Acquisition-related charges	371	164	126.7
Non-operating retirement-related costs/(income)	250	111	124.9
U.S. tax reform charges	(149)	141	nm
Operating (non-GAAP) earnings**	\$ 1,649	\$ 2,009	(17.9)%
Diluted operating (non-GAAP) earnings per share	\$ 1.84	\$ 2.25	(18.2)%

* 2020 results were impacted by Red Hat acquisition-related activity.

** Refer to page 73 for a more detailed reconciliation of net income to operating earnings.

nm - not meaningful

Environmental Dynamics

On March 11, 2020, the World Health Organization (WHO) declared the novel coronavirus (COVID-19) a global pandemic. This resulted in significant governmental measures being initiated around the globe, including travel bans and border closings, shelter-in-place orders, closures of non-essential businesses and social distancing requirements in efforts to slow down and control the spread of the virus.

The health of IBM employees, our clients, business partners and community remain our primary focus. We are actively engaged to ensure our preparedness plans and response activities are aligned with recommendations of the WHO, the U.S. Centers for Disease Control and Prevention and governmental regulations.

IBM's technical and industry leaders are considering all options to help government and health agencies monitor and manage the outbreak. IBM's Summit supercomputer is helping researchers at the U.S. Department of Energy identify drug compounds that could disable the coronavirus. IBM's Watson Health unit is working directly with health organizations around the world to better understand the nature of COVID-19. The IBM Clinical Development system has been made available, without charge, to national health agencies to reduce the time and cost of clinical trials by providing data and analysis from web-enabled devices. Our cognitive Operational Risk Insight tool has also been made available to not-for-profit organizations. IBM has extended its online education resources for teachers, students and parents on IBM Skills, offering them the ability to tap into new knowledge, skills and online credentials, anytime, anywhere and for free. We are also working with the City of New York through delivery of 300,000 tablets with educational software and free cellular data connections to help students learn remotely. In just a matter of a few weeks, we have already committed over \$200 million in terms of contributions and volunteer time.

The COVID-19 pandemic is an unprecedented, global challenge and it has placed every company in uncharted waters. In this current environment, the underlying fundamentals of our business remain sound:

- IBM has always focused on the enterprise space, and within that our business is more concentrated in large enterprises;
- We run our clients' most critical processes, such as core banking systems, supply chains, and claims processing;
- From an industry perspective, the majority of our revenue comes from clients in financial services, telecom, and the public sector – including government and healthcare;

Management Discussion – (continued)

- We have long-term relationships with our clients, in the form of multi-year services contracts, recurring software streams, and financing arrangements. Approximately 60 percent of our annual revenue is in recurring businesses;
- While we are not immune to disruptions in our transactional content or volume reductions, our client profile and annuity base provide some level of stability, not only in our revenue, but also in profit and cash, as we manage through these challenging times;
- Our innovative technology and our industry-specific expertise are assets to our clients; and,
- Our balance sheet remains strong with solid liquidity and access to capital and we remain committed to our dividend to provide value to shareholders.

The long-term economic effects of the pandemic remain unknown. However, this environment has only reinforced the need for clients to modernize their businesses for the new world, with cloud and AI at the core of their digital reinventions. Our hybrid cloud and AI platforms, together with our expertise in running critical processes, ideally position us to guide clients on their journeys.

Financial Performance Summary — Three Months Ended March 31:

Overall for the first quarter of 2020, through February we were tracking roughly in line with our expectations. As we proceeded through March and the COVID-19 health situation and resulting social distancing became more widespread, we saw a noticeable change in clients' priorities. There was effectively a pause as clients understandably dealt with their most pressing needs. This was most pronounced in our software business where the vast majority of transactions typically close in the last two weeks of the quarter. For those clients that did engage at the end of the quarter, there was a shift to maintaining the stability of their operations and preservation of cash. Clients moved ahead with spending that addressed immediate and essential needs, including running mission critical processes and securing a remote workforce.

In the first quarter of 2020, we reported \$17.6 billion in revenue, \$1.2 billion in income from continuing operations and operating (non-GAAP) earnings of \$1.6 billion, resulting in diluted earnings per share from continuing operations of \$1.31 as reported and \$1.84 on an operating (non-GAAP) basis. We also generated \$4.5 billion in cash from operations, \$1.4 billion in free cash flow and delivered shareholder returns of \$1.4 billion in dividends.

Total consolidated revenue decreased 3.4 percent as reported but increased 0.1 percent excluding divested businesses and adjusted for currency. Cloud & Cognitive Software increased 5.5 percent as reported and 7 percent adjusted for currency with strong performance in Red Hat, Internet of Things (IoT), data and AI and in security services. Within this segment, Cloud & Data Platforms, which includes Red Hat grew 32.2 percent (34 percent adjusted for currency) but was partially offset by declines in Cognitive Applications and Transaction Processing Platforms. Global Business Services (GBS) decreased 0.5 percent as reported but grew 1 percent adjusted for currency driven by Consulting which grew 3.5 percent (5 percent adjusted for currency). This growth was led by offerings that help clients with their digital reinventions, including cloud advisory and application modernization, and offerings that leverage AI to bring intelligence into business processes. Global Technology Services (GTS) decreased 5.9 percent as reported (4 percent adjusted for currency), with declines in Infrastructure & Cloud Services and Technology Support Services. Systems grew 3.0 percent as reported (4 percent adjusted for currency). In an environment where client behavior shifted at the end of the quarter, our hardware portfolio held up well reflecting the importance of IBM Z and high-end storage for mission-critical operations, as well as product cycle dynamics.

Total cloud revenue was \$5.4 billion in the first quarter of 2020 with strong growth of 19 percent as reported, 21 percent adjusted for currency and 23 percent excluding divested businesses and adjusted for currency. Over the trailing 12 months, total cloud revenue was \$22.0 billion, up 13 percent (15 percent adjusted for currency) year to year. With the cloud architecture of Linux, containers and Kubernetes, our acquisition and integration of Red Hat has bolstered our position in hybrid cloud.

Management Discussion – (continued)

From a geographic perspective, Americas revenue declined 3.8 percent year to year as reported but was flat excluding divested businesses and adjusted for currency. Europe/Middle East/Africa (EMEA) decreased 3.7 percent but grew 1 percent excluding divested businesses and adjusted for currency. Asia Pacific declined 1.9 percent year to year as reported but was flat excluding divested businesses and adjusted for currency.

Total consolidated gross margin of 45.1 percent increased 0.9 points year to year, reflecting strong margin performance in our services businesses and the contribution of Red Hat. Operating (non-GAAP) gross margin of 46.2 percent increased 1.5 points versus the prior year, primarily driven by the same factors as above.

Total expense and other (income) increased 29.4 percent in the first quarter of 2020 versus the prior-year period primarily driven by higher spending including Red Hat, amortization of intangible assets associated with the acquisition of Red Hat, interest expense, workforce rebalancing charges, and non-operating retirement-related costs, partially offset by lower expense from divested businesses. Total operating (non-GAAP) expense and other (income) increased 26.1 percent year to year, driven primarily by the factors above excluding the higher amortization of intangible assets and non-operating retirement-related costs.

The pre-tax loss from continuing operations in the first quarter of 2020 was \$49 million, compared to pre-tax income from continuing operations of \$1.9 billion in the first quarter of 2019. The pre-tax margin was (0.3) percent, a decrease of 10.6 points versus the prior-year period. The current period was impacted by Red Hat acquisition-related spending. It also included charges of approximately \$0.9 billion primarily for structural actions to improve competitiveness in GTS and accelerate our shift to a cognitive enterprise. The continuing operations benefit from income taxes in the first quarter of 2020 was \$1.2 billion compared to a tax provision of \$0.3 billion in the first quarter of 2019. The current year benefit from income taxes was primarily driven by a net tax benefit related to an intra-entity sale of certain of the company's intellectual property and the related impacts. Net income of \$1.2 billion decreased 26.1 percent and the net income margin was 6.7 percent, a decrease of 2.1 points year to year.

Operating (non-GAAP) pre-tax income from continuing operations of \$0.7 billion decreased 69.2 percent year to year and the operating (non-GAAP) pre-tax margin from continuing operations decreased 8.4 points to 3.9 percent. The operating (non-GAAP) benefit from income taxes was \$1.0 billion in the first quarter of 2020, compared to a tax provision of \$0.2 billion in the first quarter of 2019. The operating (non-GAAP) benefit from income taxes was primarily driven by the same factor described above. Operating (non-GAAP) income from continuing operations of \$1.6 billion decreased 17.9 percent with an operating (non-GAAP) income margin from continuing operations of 9.4 percent, down 1.7 points year to year.

Diluted earnings per share from continuing operations of \$1.31 in the first quarter of 2020 decreased 26.4 percent and operating (non-GAAP) diluted earnings per share of \$1.84 decreased 18.2 percent versus the first quarter of 2019.

In the quarter, we continued to take actions to enhance our balance sheet and liquidity position. At March 31, 2020, the balance sheet remained strong with the flexibility to support and invest in the business, with a strong cash position and ample credit available during these uncertain times. Cash, restricted cash and marketable securities at quarter end were \$12.0 billion, an increase of \$3.0 billion from December 31, 2019.

Key drivers in the balance sheet and total cash flows were:

Total assets increased \$1.2 billion (\$4.4 billion adjusted for currency) from December 31, 2019 driven by:

- An increase in deferred tax assets of \$3.6 billion primarily due to an intra-entity sale of IP; and
- An increase in cash, restricted cash and marketable securities of \$3.0 billion; partially offset by
- A decrease in financing receivables of \$3.1 billion primarily as a result of collections of seasonally higher year-end balances.

Management Discussion – (continued)

Total liabilities increased \$2.1 billion (\$4.2 billion adjusted for currency) from December 31, 2019 driven by:

- An increase in total debt of \$1.4 billion primarily driven by an increase in commercial paper;
- An increase in other liabilities of \$1.3 billion primarily driven by an increase in deferred tax liabilities related to the intra-entity IP sale; and
- An increase in deferred income of \$1.3 billion driven by annual customer billings; partially offset by
- Decreases in retirement-related liabilities of \$0.7 billion and accounts payable of \$0.7 billion.

Total equity of \$20.1 billion decreased \$0.9 billion from December 31, 2019 as a result of:

- Dividends of \$1.4 billion and a decrease from foreign currency translation of \$1.0 billion; partially offset by
- An increase in net income of \$1.2 billion.

We generated \$4.5 billion in cash flow provided by operating activities, a decrease of \$0.3 billion compared to the first quarter of 2019 which included an increase in interest payments on debt of \$0.2 billion. In both the first quarter of 2020 and the prior-year period, investing activities were a net use of cash of \$0.9 billion. Financing activities were a use of cash of \$0.1 billion in the first quarter of 2020 compared to a source of cash \$1.9 billion in the prior year. The \$2.0 billion change year to year was primarily driven by a decrease in net cash sourced from debt transactions.

On April 20, 2020, given the level of uncertainty around the duration of the COVID-19 health crisis and the potential rate and pace of economic recovery, IBM withdrew full-year 2020 expectations. We expect to reassess this position based on the clarity of the macroeconomic recovery after the second quarter. Refer to the “Looking Forward” section for additional information.

Management Discussion – (continued)

First Quarter in Review

Results of Continuing Operations

Segment Details

The following is an analysis of the first quarter of 2020 versus the first quarter of 2019 reportable segment external revenue and gross margin results. Segment pre-tax income/(loss) includes transactions between segments that are intended to reflect an arm's-length transfer price and excludes certain unallocated corporate items.

(Dollars in millions) For the three months ended March 31:	2020	2019	Yr. to Yr. Percent/Margin Change	Yr. to Yr. Percent Change Adjusted For Currency
Revenue:				
Cloud & Cognitive Software	\$ 5,238	\$ 4,967 *	5.5 %**	6.8 %
Gross margin	75.4 %	75.6 %*	(0.1)pts.**	
Global Business Services	4,136	4,155 *	(0.5)%	0.9 %
Gross margin	27.2 %	26.2 %*	1.0 pts.	
Global Technology Services	6,467	6,875	(5.9)%	(4.0)%
Gross margin	34.0 %	33.7 %	0.3 pts.	
Systems	1,368	1,328	3.0 %	4.1 %
Gross margin	50.2 %	46.2 %	4.1 pts.	
Global Financing	299	406	(26.2)%	(24.9)%
Gross margin	40.7 %	34.9 %	5.8 pts.	
Other	62	451 *	(86.1)%	(86.1)%
Gross margin	(254.3)%	29.1 %*	(283.4)pts.	
Total consolidated revenue	\$ 17,571	\$ 18,182	(3.4)%***	(1.9)%
Total consolidated gross profit	\$ 7,922	\$ 8,043	(1.5)%**	
Total consolidated gross margin	45.1 %	44.2 %	0.9 pts.	
Non-operating adjustments:				
Amortization of acquired intangible assets	188	76	147.6 %	
Acquisition-related charges	—	—	—	
Operating (non-GAAP) gross profit	\$ 8,110	\$ 8,119	(0.1)%**	
Operating (non-GAAP) gross margin	46.2 %	44.7 %	1.5 pts.**	

* Recast to reflect segment changes.

** 2020 results were impacted by Red Hat purchase accounting and acquisition-related activity.

***0.1 percent excluding divested businesses and adjusted for currency.

Cloud & Cognitive Software

(Dollars in millions) For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change	Yr. to Yr. Percent Change Adjusted For Currency
Cloud & Cognitive Software external revenue:	\$ 5,238	\$ 4,967 *	5.5 %**	6.8 %
Cloud & Data Platforms	\$ 2,536	\$ 1,917	32.2 %**	33.8 %
Cognitive Applications	1,182	1,238 *	(4.5)	(3.4)
Transaction Processing Platforms	1,520	1,812	(16.1)	(14.8)

* Recast to reflect segment changes.

** 2020 results were impacted by Red Hat purchase accounting.

Management Discussion – (continued)

Cloud & Cognitive Software revenue of \$5,238 million increased 5.5 percent as reported (7 percent adjusted for currency) in the first quarter of 2020 compared to the prior year. We had strong performance in Red Hat, IoT, data and AI and in security services. We entered 2020 with a robust offering portfolio and solid pipeline and had strong growth through February. As the global health crisis broadened, in March, software transactions stalled as our clients shifted their focus to resiliency efforts. The most notable impacts were in Cognitive Applications and Transaction Processing Platforms.

In the first quarter, Cloud & Data Platforms revenue of \$2,536 million increased 32.2 percent as reported (34 percent adjusted for currency) compared to the prior year, led by Red Hat and the synergies we are realizing by bringing together Red Hat and IBM software. The number of Red Hat large deals was up from fourth quarter and first quarter included the signing of the two largest deals in its history. The number of clients using Red Hat and IBM container solutions grew to over 2,200 as Red Hat and IBM emerged as the leading container platform.

Cognitive Applications first-quarter revenue of \$1,182 million declined 4.5 percent as reported (3 percent adjusted for currency) compared to the prior year. In March, many transformational deals were paused, especially in the retail industry.

Transaction Processing Platforms revenue of \$1,520 million decreased 16.1 percent as reported (15 percent adjusted for currency) in the first quarter compared to the prior year. In March, clients shifted away from new capital expenditures to preserve cash and prioritize their operating cash needs. These are typically large engagements, and in this environment, clients elected to defer purchases which impacted perpetual license sales late in the quarter.

Within Cloud & Cognitive Software, cloud revenue of \$1.3 billion grew 84 percent as reported (86 percent adjusted for currency) in the first quarter of 2020. We have modernized our software to be cloud-native and optimized on OpenShift, which provides a compelling hybrid cloud platform for clients on their digital journeys to the cloud. Given the shift in client software demands, we are focused on areas that facilitate the shift to cloud, including Red Hat and other cloud and data platform offerings, Cloud Paks for operational efficiency and QRadar on Cloud for security threats.

			Yr. to Yr. Percent/ Margin Change**
(Dollars in millions)			
For the three months ended March 31:	2020	2019*	
Cloud & Cognitive Software:			
External gross profit	\$ 3,951	\$ 3,753	5.3 %
External gross profit margin	75.4 %	75.6 %	(0.1)pts.
Pre-tax income	\$ 933	\$ 1,785	(47.7)%
Pre-tax margin	15.4 %	30.7 %	(15.3)pts.

* Recast to reflect segment changes.

** 2020 results were impacted by Red Hat purchase accounting and acquisition-related activity.

In the first quarter, Cloud & Cognitive Software gross profit margin of 75.4 percent was flat on a year-to-year basis.

Pre-tax income of \$933 million decreased 47.7 percent in the first quarter compared to the prior year. The pre-tax margin of 15.4 points decreased 15.3 points in the first quarter. The margin decline was primarily driven by Red Hat acquisition-related activity, and workforce rebalancing actions taken in the first quarter of 2020 which had 2.7 points of impact on the pre-tax margin.

Management Discussion – (continued)

Global Business Services

(Dollars in millions)			Yr. to Yr. Percent Change	Yr. to Yr. Percent Change Adjusted For Currency
For the three months ended March 31:		2020	2019	
Global Business Services external revenue:		\$ 4,136	\$ 4,155 *	(0.5)% 0.9 %
Consulting		\$ 2,071	\$ 2,001 *	3.5 % 4.7 %
Application Management		1,840	1,908	(3.6) (2.1)
Global Process Services		225	247	(8.8) (6.9)

* Recast to reflect segment changes.

Global Business Services revenue of \$4,136 million decreased 0.5 percent as reported, but increased 1 percent adjusted for currency in the first quarter of 2020 compared to the prior year, driven primarily by solid growth in Consulting.

In the first quarter, Consulting revenue of \$2,071 million grew 3.5 percent as reported and 5 percent adjusted for currency, led by offerings that help clients with their digital reinventions, including cloud advisory and application modernization, and offerings that leverage AI to bring intelligence into business processes. We have standardized our cloud application modernization offerings on OpenShift and built the world's largest Red Hat consulting practice. In the quarter, we had good growth in many transformational offerings, including next-generation enterprise applications. However, as the pandemic intensified in March, clients began to deprioritize some of these projects. In this environment, we are aligning our business to the near-term opportunity. This includes addressing our clients' challenges, such as engaging customers virtually, modernizing and migrating applications to the cloud, empowering a remote workforce, and focusing on cybersecurity and IT resiliency.

Application Management revenue of \$1,840 million declined 3.6 percent as reported and 2 percent adjusted for currency compared to the first quarter of 2019. We had continued growth in Cloud Application Management which was offset by declines in the more traditional on-premise services as certain contracts completed.

Global Process Services first-quarter revenue of \$225 million decreased 8.8 percent as reported and 7 percent adjusted for currency. As we continued to shift to new platforms around intelligent workflows, we had modest growth in certain cognitive process automation offerings which was offset by declines in traditional business process outsourcing.

Within GBS, cloud revenue of \$1.3 billion grew 6 percent as reported (8 percent adjusted for currency) in the first quarter of 2020.

Looking forward in GBS, we have a solid base of business and a growing backlog, though in the near term, we expect customers to continue to delay and replan some projects.

(Dollars in millions)				Yr. to Yr. Percent/ Margin Change*
For the three months ended March 31:		2020	2019*	
Global Business Services:				
External gross profit		\$ 1,125	\$ 1,087	3.5 %
External gross profit margin		27.2 %	26.2 %	1.0 pts.
Pre-tax income		\$ 271	\$ 298	(9.1)%
Pre-tax margin		6.5 %	7.0 %	(0.6)pts.

* Recast to reflect segment changes.

Management Discussion – (continued)

GBS first-quarter gross profit margin of 27.2 percent grew 1.0 points on a year-to-year basis, primarily driven by the margin expansion in Consulting with our shift to higher-value offerings. We continued to benefit from delivery efficiencies, productivity and utilization improvement and from currency through the leverage of our global delivery resource model. Pre-tax income decreased to \$271 million and the pre-tax margin decreased 0.6 points to 6.5 percent in the first quarter of 2020 compared to the prior year, primarily driven by workforce rebalancing actions recorded in the first quarter of 2020, which had 2.4 points of impact on the pre-tax margin.

Global Technology Services

(Dollars in millions)			Yr. to Yr. Percent Change	Yr. to Yr. Percent Change Adjusted For Currency
For the three months ended March 31:	2020	2019		
Global Technology Services external revenue:	\$ 6,467	\$ 6,875	(5.9)%	(4.0)%
Infrastructure & Cloud Services	\$ 4,916	\$ 5,209	(5.6)%	(3.9)%
Technology Support Services	1,550	1,665	(6.9)	(4.6)

Global Technology Services revenue of \$6,467 million decreased 5.9 percent as reported (4 percent adjusted for currency) in the first quarter of 2020 compared to the prior year, driven by declines in both business areas. GTS continued its actions to accelerate the shift to higher value segments of the market and took structural actions in the first quarter to improve competitiveness. GTS continued to advance its joint offering and go-to-market capabilities with GBS, which is providing differentiated solutions to our clients. As clients shift mission-critical workloads to the cloud, they are looking for this integration across the application and infrastructure stack. GTS total signings and cloud signings grew at a double-digit rate.

In the first quarter, Infrastructure & Cloud Services revenue of \$4,916 million decreased 5.6 percent as reported (4 percent adjusted for currency) compared to the prior-year period. We are adopting new delivery methods to support our clients as they focus on infrastructure solutions which enhance IT resiliency and business continuity, address new cybersecurity risks, and reconfigure their IT environments for cost efficiency and business agility. While we expect an impact due to lower business volumes in the near term, this will ultimately lead to an acceleration in the shift of mission-critical workloads to a hybrid multi-cloud platform, built on open standards.

Technology Support Services first-quarter revenue of \$1,550 million decreased 6.9 percent as reported (5 percent adjusted for currency).

Within GTS, cloud revenue of \$2.3 billion grew 10 percent as reported (12 percent adjusted for currency) in the first quarter of 2020.

(Dollars in millions)			Yr. to Yr. Percent/ Margin Change
For the three months ended March 31:	2020	2019	
Global Technology Services:			
External gross profit	\$ 2,196	\$ 2,316	(5.2)%
External gross profit margin	34.0 %	33.7 %	0.3 pts.
Pre-tax income/(loss)	\$ (178)	\$ 275	nm
Pre-tax margin	(2.6)%	3.8 %	(6.5)pts.

nm - not meaningful

Global Technology Services gross profit margin increased 0.3 points to 34.0 percent in the first quarter of 2020 as compared to the prior year. The increase in margin was primarily driven by actions taken to improve our competitiveness such as continued scaling of our agile services delivery model to improve productivity. GTS had a pre-tax loss of \$178

Management Discussion – (continued)

million in the first quarter of 2020 as compared to pre-tax income of \$275 million in the first quarter of 2019. A significant portion of the first quarter's structural actions addressed GTS. This improves our position for the future, but resulted in a pre-tax loss in the first quarter. In this dynamic environment, we are going to continue to evaluate the cost competitiveness of the portfolio and we will take further actions if needed. The workforce rebalancing actions taken in the first quarter of 2020 had 5.8 points of impact on the pre-tax margin.

Services Backlog and Signings

(Dollars in billions)	At March 31, 2020	At March 31, 2019	Yr. to Yr. Percent Change	Yr. to Yr. Percent Change Adjusted For Currency
Total backlog	\$ 107.8	\$ 111.6	(3.4)%	(0.1)%

The estimated total services backlog at March 31, 2020 was \$107.8 billion, a decrease of 3.4 percent as reported and flat adjusted for currency.

Total services backlog includes Infrastructure & Cloud Services, Security Services, Consulting, Global Process Services, Application Management and Technology Support Services. Total backlog is intended to be a statement of overall work under contract which is either non-cancellable, or which historically has very low likelihood of termination, given the criticality of certain services to the company's clients. Total backlog does not include as-a-Service arrangements that allow for termination under contractual commitment terms. Backlog estimates are subject to change and are affected by several factors, including terminations, changes in the scope of contracts, periodic revalidations, adjustments for revenue not materialized and adjustments for currency.

Services signings are management's initial estimate of the value of a client's commitment under a services contract. 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.

Signings include Infrastructure & Cloud Services, Security Services, Consulting, Global Process Services and Application Management contracts. Contract extensions and increases in scope are treated as signings only to the extent of the incremental new value. Total Services 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, such as in Infrastructure & Cloud Services or Global Process Services. Technology Support Services (TSS) are generally not included in signings as the maintenance contracts tend to be more steady state, where revenues equal renewals. Certain longer-term TSS contracts that have characteristics similar to outsourcing contracts are included in signings.

Contract portfolios purchased in an acquisition are treated as positive backlog adjustments provided those contracts meet IBM's requirements for initial signings. A new signing will be recognized if a new services agreement is signed incidental or coincidental to an acquisition or divestiture.

Management believes that the estimated values of services backlog and signings disclosed herein provide insight into our potential future revenue, which is used by management as a tool to monitor the performance of the business and viewed as useful decision-making information for investors. The conversion of signings and backlog into revenue may vary based on the types of services and solutions, customer decisions, and as well as other factors, which may include, but are not limited to, macroeconomic environment or external events.

Management Discussion – (continued)

(Dollars in millions)				
For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change	Yr. to Yr. Percent Change Adjusted For Currency
Total signings	\$ 8,928	\$ 7,637	16.9 %	18.7 %

Systems

(Dollars in millions)				
For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change	Yr. to Yr. Percent Change Adjusted For Currency
Systems external revenue:	\$ 1,368	\$ 1,328	3.0 %	4.1 %
Systems Hardware	\$ 997	\$ 914	9.1 %	10.2 %
IBM Z			59.5	60.9
Power Systems			(32.7)	(31.8)
Storage Systems			17.6	18.6
Operating Systems Software	371	414	(10.5)	(9.3)

Systems revenue of \$1,368 million increased 3.0 percent as reported and 4 percent adjusted for currency in the first quarter of 2020 compared to the prior year. Systems Hardware revenue of \$997 million grew 9.1 percent as reported and 10 percent adjusted for currency. Operating Systems Software revenue of \$371 million decreased 10.5 percent as reported (9 percent adjusted for currency) compared to the prior year.

IBM Z revenue grew 59.5 percent as reported and 61 percent adjusted for currency year to year, reflecting the strong performance of the z15 mainframe during the second full quarter of its availability. The z15 proved to be a crucial element of our clients' enterprise operations, providing a stable, secure and scalable platform in this current environment.

Power Systems revenue decreased 32.7 percent as reported (32 percent adjusted for currency) year to year. This decline reflects the product cycle, as well as the fact that this platform is skewed toward smaller enterprises, which were impacted more severely by the dynamics in March 2020 from the global pandemic.

Storage Systems revenue grew 17.6 percent as reported and 19 percent adjusted for currency, primarily driven by high-end storage systems. These systems are specifically designed for our clients' mission-critical applications operating in a hybrid multi-cloud environment, providing comprehensive next-level cybersecurity, data availability and system resiliency.

Within Systems, cloud revenue of \$0.4 billion increased 9 percent as reported (10 percent adjusted for currency) in the first quarter of 2020.

Management Discussion – (continued)

(Dollars in millions)			Yr. to Yr. Percent/ Margin Change
For the three months ended March 31:	2020	2019	
Systems:			
External Systems Hardware gross profit	\$ 380	\$ 264	43.6 %
External Systems Hardware gross profit margin	38.1 %	28.9 %	9.2 pts.
External Operating Systems Software gross profit	\$ 307	\$ 349	(11.9)%
External Operating Systems Software gross profit margin	82.9 %	84.2 %	(1.3)pts.
External total gross profit	\$ 687	\$ 613	12.1 %
External total gross profit margin	50.2 %	46.2 %	4.1 pts.
Pre-tax loss	\$ (217)	\$ (202)	7.6 %
Pre-tax margin	(14.3)%	(13.5)%	(0.8)pts.

Systems gross profit margin increased 4.1 points to 50.2 percent in the first quarter of 2020 compared to the prior year, primarily driven by a mix to IBM Z and margin expansion across all three hardware platforms. Systems Hardware margin of 38.1 percent increased 9.2 points compared to the prior year for the same reasons.

The pre-tax loss of \$217 million in the first quarter of 2020 increased \$15 million compared to the first quarter of 2019. The pre-tax margin decreased 0.8 points to (14.3) points year to year, primarily driven by workforce rebalancing actions taken in the first quarter of 2020 which had 3.5 points of impact on the pre-tax margin.

Global Financing

(Dollars in millions)			Yr. to Yr. Percent/ Margin Change
For the three months ended March 31:	2020	2019	
External revenue	\$ 299	\$ 406	(26.2)%
Internal revenue	212	300	(29.4)
Total revenue	\$ 511	\$ 706	(27.6)%
Pre-tax income	\$ 194	\$ 288	(32.7)%

In the first quarter, Global Financing total revenue of \$511 million declined 27.6 percent compared to the prior year. External revenue decreased 26.2 percent (25 percent adjusted for currency) due to a decrease in external financing (down 30.0 percent to \$235 million) and external used equipment sales (down 7.7 percent to \$64 million). Internal revenue decreased 29.4 percent, driven by a decrease in internal used equipment sales (down 31.2 percent to \$129 million) and internal financing (down 26.5 percent to \$83 million).

The decrease in external financing revenue reflects the wind down of the OEM IT commercial financing operations. The decrease in internal financing revenue in the first quarter of 2020 compared to the same period in 2019 was primarily due to lower average asset balances.

Sales of used equipment represented 37.8 percent of Global Financing's revenue in the first quarter of 2020 compared to 36.5 percent in the first quarter of 2019. The percentage increase was due to a decline in financing revenue. The gross profit margin on used sales was 52.0 percent and 52.3 percent in the first quarter of 2020 and 2019, respectively.

Global Financing pre-tax income decreased 32.7 percent to \$194 million in the first quarter of 2020 compared to the same period in 2019, due to lower gross profit of \$115 million as a result of the revenue decline, partially offset by a decrease in expense of \$20 million, which was in line with the segment's revenue performance.

Management Discussion – (continued)

Global Financing return on equity was 29.4 percent for the three months ended March 31, 2020, compared to 13.7 percent for the three months ended March 31, 2019. The increase in return on equity in the first quarter of 2020 was driven by higher year-to-year net income, as the prior year included higher tax expense due to U.S. tax reform. Refer to page 72 for the details of the after-tax income and return on equity calculation.

Geographic Revenue

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

			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
(Dollars in millions)					
For the three months ended March 31:	2020	2019			
Total Revenue	\$ 17,571	\$ 18,182	(3.4)%	(1.9)%	0.1 %
Americas	\$ 8,166	\$ 8,493	(3.8)%	(2.7)%	(0.3)%
Europe/Middle East/Africa (EMEA)	5,517	5,727	(3.7)	(1.1)	0.7
Asia Pacific	3,888	3,961	(1.9)	(1.1)	0.2

Total revenue of \$17,571 million decreased 3.4 percent as reported (2 percent adjusted for currency), but was flat excluding divested businesses and adjusted for currency in the first quarter compared to the prior year.

Americas revenue of \$8,166 million decreased 3.8 percent as reported (3 percent adjusted for currency), but was flat excluding divested businesses and adjusted for currency. Within Americas, the U.S. decreased 3.1 percent compared to the prior year. Canada increased 1.0 percent as reported and 2 percent adjusted for currency. Latin America decreased 11.9 percent as reported and 3 percent adjusted for currency, with Brazil declining 15.4 percent as reported and 4 percent adjusted for currency.

In EMEA, total revenue of \$5,517 million decreased 3.7 percent as reported (1 percent adjusted for currency), but grew 1 percent excluding divested businesses and adjusted for currency. Within EMEA, the UK decreased 11.8 percent as reported (10 percent adjusted for currency) and Germany declined 10.7 percent as reported (8 percent adjusted for currency). Italy decreased 0.4 percent as reported, but grew 3 percent adjusted for currency. France decreased 0.9 percent as reported, but grew 2 percent adjusted for currency. The Middle East and Africa region decreased 3.9 percent as reported (2 percent adjusted for currency).

Asia Pacific revenue of \$3,888 million decreased 1.9 percent as reported (1 percent adjusted for currency), but was flat excluding divested businesses and adjusted for currency. Within Asia Pacific, Japan increased 2.3 percent as reported and 1 percent adjusted for currency compared to the prior year. Australia decreased 16.4 percent as reported (9 percent adjusted for currency), and China decreased 3.7 percent as reported (2 percent adjusted for currency). India grew 5.5 percent as reported and 9 percent adjusted for currency.

Management Discussion – (continued)

Expense

Total Expense and Other (Income)

(Dollars in millions)			Yr. to Yr. Percent Change*
For the three months ended March 31:	2020	2019	
Total consolidated expense and other (income)	\$ 7,972	\$ 6,160	29.4 %
Non-operating adjustments:			
Amortization of acquired intangible assets	\$ (285)	\$ (98)	192.0 %
Acquisition-related charges	0	(39)	(99.2)
Non-operating retirement-related (costs)/income	(264)	(138)	92.0
Operating (non-GAAP) expense and other (income)	\$ 7,422	\$ 5,886	26.1 %
Total consolidated expense-to-revenue ratio	45.4 %	33.9 %	11.5 pts.
Operating (non-GAAP) expense-to-revenue ratio	42.2 %	32.4 %	9.9 pts.

* 2020 results were impacted by Red Hat acquisition-related activity.

The following Red Hat-related expenses are included in the current period, with no corresponding expense in the prior-year period: Red Hat operational spending, interest expense from debt issuances to fund the acquisition and other acquisition-related activity, primarily amortization of acquired intangible assets associated with the transaction.

Total expense and other (income) increased 29.4 percent in the first quarter of 2020 versus the prior year primarily driven by higher spending including Red Hat, higher amortization of acquired intangible assets associated with the Red Hat transaction, higher workforce rebalancing charges and higher non-operating retirement-related costs, partially offset by lower expense from divested businesses. Total operating (non-GAAP) expense and other (income) increased 26.1 percent year to year, driven primarily by the factors described above excluding the higher amortization of acquired intangible assets and higher non-operating retirement-related costs.

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

Selling, General and Administrative Expense

(Dollars in millions)			Yr. to Yr. Percent Change
For the three months ended March 31:	2020	2019	
Selling, general and administrative expense:			
Selling, general and administrative — other	\$ 4,341	\$ 4,048	7.2 %
Advertising and promotional expense	428	432	(0.9)
Workforce rebalancing charges	728	19	nm
Amortization of acquired intangible assets	284	97	193.2
Stock-based compensation	117	74	57.3
Expected credit loss expense	56	20	188.9
Total consolidated selling, general and administrative expense	\$ 5,955	\$ 4,691	27.0 %
Non-operating adjustments:			
Amortization of acquired intangible assets	\$ (284)	\$ (97)	193.2 %
Acquisition-related charges	0	(27)	(98.8)
Operating (non-GAAP) selling, general and administrative expense	\$ 5,670	\$ 4,566	24.2 %

nm — not meaningful

Total selling, general and administrative (SG&A) expense increased 27.0 percent in the first quarter of 2020 versus the prior year driven primarily by the following factors:

Management Discussion – (continued)

- Higher workforce rebalancing charges (15 points);
- Higher spending from Red Hat (12 points), driving up total spending (7 points); and
- Higher amortization of acquired intangible assets associated with the Red Hat transaction (4 points).

Operating (non-GAAP) expense increased 24.2 percent year to year primarily driven by the same factors excluding the amortization of acquired intangible assets associated with the Red Hat transaction.

Expected credit loss expense increased \$37 million year to year in the first three months of 2020 primarily driven by an increase in specific reserves. The receivables provision coverage was 2.1 percent at March 31, 2020, an increase of 40 basis points from both December 31, 2019 and March 31, 2019. The higher coverage rate at March 31, 2020 also reflects the adoption of the new guidance for credit losses.

Research, Development and Engineering

(Dollars in millions)			
For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change
Research, development and engineering expense	\$ 1,625	\$ 1,433	13.4 %
Non-operating adjustment:			
Acquisition-related charges	\$ —	\$ —	—
Operating (non-GAAP) research, development and engineering expense	\$ 1,625	\$ 1,433	13.4 %

Research, development and engineering (RD&E) expense was 9.2 percent of revenue in the first quarter of 2020 compared to 7.9 percent in the prior-year period.

RD&E expense in the first quarter of 2020 increased 13.4 percent year to year primarily driven by:

- Higher spending (14 points) including Red Hat spending (16 points).

Intellectual Property and Custom Development Income

(Dollars in millions)			
For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change
Intellectual Property and Custom Development Income:			
Licensing of intellectual property including royalty-based fees	\$ 34	\$ 50	(32.3)%
Custom development income	76	51	49.1
Sales/other transfers of intellectual property	7	0	nm
Total	\$ 116	\$ 101	14.8 %

nm — not meaningful

Total intellectual property and custom development income increased 14.8 percent year to year driven by custom development income which grew 49.1 percent driven by new agreements in the first quarter of this year. This was partially offset by a decrease in licensing of intellectual property including royalty-based fees. 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.

Management Discussion – (continued)

Other (Income) and Expense

(Dollars in millions)			
For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change
Other (income) and expense:			
Foreign currency transaction losses/(gains)	\$ (126)	\$ (172)	(26.8)%
(Gains)/losses on derivative instruments	101	69	46.2
Interest income	(51)	(70)	(27.5)
Net (gains)/losses from securities and investment assets	(5)	(4)	33.4
Retirement-related costs/(income)	264	138	92.0
Other	0	(32)	nm
Total consolidated other (income) and expense	<u>\$ 182</u>	<u>\$ (73)</u>	<u>nm</u>
Non-operating adjustments:			
Amortization of acquired intangible assets	\$ (1)	\$ (1)	—
Acquisition-related charges	—	24	(100.0)%
Non-operating retirement-related (costs)/income	(264)	(138)	92.0
Operating (non-GAAP) other (income) and expense	<u>\$ (83)</u>	<u>\$ (187)</u>	<u>(55.8)%</u>

nm - not meaningful

Total consolidated other (income) and expense was expense of \$182 million in the first quarter of 2020 compared to income of \$73 million in the prior year. The year-to-year change was primarily driven by:

- Higher non-operating retirement-related costs (\$127 million). Refer to “Retirement-Related Plans” for additional information; and
- Lower net exchange gains (including derivative instruments) of \$78 million. Our hedging programs help mitigate currency impacts in the Consolidated Income Statement.

Operating (non-GAAP) other (income) and expense was income of \$83 million in the first quarter of 2020 and decreased \$104 million compared to the prior-year period. The year-to-year change was driven primarily by the lower net exchange gains described above.

Interest Expense

(Dollars in millions)			
For the three months ended March 31:	2020	2019	Yr. to Yr. Percent Change
Interest expense	<u>\$ 326</u>	<u>\$ 210</u>	<u>54.8 %</u>
Non-operating adjustment:			
Acquisition-related charges	\$ —	\$ (36)	(100.0)
Operating (non-GAAP) interest expense	<u>\$ 326</u>	<u>\$ 174</u>	<u>86.8 %</u>

Interest expense increased \$115 million in the first quarter of 2020 compared to the prior-year period. Interest expense is presented in cost of financing in the Consolidated Income Statement if the related external borrowings are to support the Global Financing external business. Overall interest expense (excluding capitalized interest) for the first quarter of 2020 was \$444 million, an increase of \$55 million versus the comparable prior-year period, primarily driven by a higher average debt balance, partially offset by lower average interest rates in the current year.

Operating (non-GAAP) interest expense increased \$151 million in the first quarter of 2020 compared to the prior year. The prior-year period excluded Red Hat pre-closing debt financing costs.

Management Discussion – (continued)

Retirement-Related Plans

The following table provides the total pre-tax cost for all retirement-related plans. The operating cost amounts 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. The non-operating cost amounts are included in other (income) and expense.

(Dollars in millions)			Yr. to Yr. Percent Change
For the three months ended March 31:	2020	2019	
Retirement-related plans — cost:			
Service cost	\$ 99	\$ 97	1.9 %
Multi-employer plans	7	9	(13.3)
Cost of defined contribution plans	265	248	7.0
Total operating costs/(income)	<u>\$ 371</u>	<u>\$ 353</u>	<u>5.1 %</u>
Interest cost	\$ 540	\$ 728	(25.8)%
Expected return on plan assets	(852)	(1,051)	(18.9)
Recognized actuarial losses	563	458	23.0
Amortization of prior service costs/(credits)	1	(3)	nm
Curtailments/settlements	8	1	782.5
Other costs	5	5	10.8
Total non-operating costs/(income)	<u>\$ 264</u>	<u>\$ 138</u>	<u>92.0 %</u>
Total retirement-related plans — cost	<u>\$ 636</u>	<u>\$ 491</u>	<u>29.5 %</u>

nm - not meaningful

Total pre-tax retirement-related plan cost increased by \$145 million compared to the first quarter of 2019, primarily driven by lower expected return on plan assets (\$198 million) and an increase in recognized actuarial losses (\$105 million), partially offset by lower interest costs (\$188 million).

As described in the “Operating (non-GAAP) Earnings” section, management characterizes certain retirement-related costs as operating and others as non-operating. Utilizing this characterization, operating retirement-related costs in the first quarter of 2020 were \$371 million, an increase of \$18 million compared to the first quarter of 2019, primarily driven by higher defined contribution plans cost (\$17 million). Non-operating costs of \$264 million in the first quarter of 2020 increased \$127 million year to year, driven by lower expected return on plan assets (\$198 million) and an increase in recognized actuarial losses (\$105 million), partially offset by lower interest costs (\$188 million).

Taxes

The continuing operations benefit from income taxes for the first quarter of 2020 was \$1,226 million, compared to a tax provision of \$289 million in the first quarter of 2019. The operating (non-GAAP) benefit from income taxes for the first quarter of 2020 was \$961 million, compared to a tax provision of \$224 million in the first quarter of 2019.

The benefit from income taxes in the first quarter of 2020 was primarily driven by a net tax benefit related to an intra-entity sale of certain of the company’s intellectual property and the related impacts of \$939 million and an adjustment to the U.S. tax reform charge due to a foreign tax law change in the first quarter of 2020. The operating (non-GAAP) benefit from income taxes was primarily driven by the same factors, except for the adjustment to the U.S. tax reform charge.

IBM’s full-year tax provision and effective tax rate are impacted by recurring factors including the geographic mix of income before taxes, state and local taxes, the effects of various global income tax strategies and any discrete tax events, such as the settlement of income tax audits and changes in or new interpretations of tax laws. The GAAP tax

Management Discussion – (continued)

provision and effective tax rate could also be affected by adjustments to the previously recorded charges for U.S. tax reform attributable to any changes in law, new regulations and guidance, audit adjustments, among others.

The company is no longer subject to income tax examination of its U.S. federal tax returns for years prior to 2013. The company's U.S. income tax returns for 2013 and 2014 continue to be examined by the IRS with specific focus on certain cross-border transactions in 2013. 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 2014. 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 March 31, 2020, the company has recorded \$704 million as prepaid income taxes representing cash tax deposits paid over time to protect the company's right to appeal various income tax assessments made by the India Tax Authorities. Tax years still subject to examination 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 amount of unrecognized tax benefits at March 31, 2020 is \$8,392 million which can be reduced by \$585 million associated with timing adjustments, U.S. tax credits, potential transfer pricing adjustments, and state income taxes. The net amount of \$7,807 million, if recognized, would favorably affect the company's effective tax rate.

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.

			Yr. to Yr. Percent Change
For the three months ended March 31:			
	2020	2019	
Earnings per share of common stock from continuing operations:			
Assuming dilution	\$ 1.31	\$ 1.78	(26.4)%
Basic	\$ 1.32	\$ 1.79	(26.3)%
Diluted operating (non-GAAP)	\$ 1.84	\$ 2.25	(18.2)%
Weighted-average shares outstanding: (in millions)			
Assuming dilution	895.0	893.9	0.1 %
Basic	888.0	889.6	(0.2)%

Actual shares outstanding at March 31, 2020 were 887.9 million. The weighted-average number of common shares outstanding assuming dilution during the first quarter of 2020 was 1.1 million shares (0.1 percent) higher than the same period of 2019.

Financial Position

Dynamics

At March 31, 2020, the balance sheet remained strong with flexibility to support the business. We continue to manage the investment portfolio to meet our capital preservation and liquidity objectives. In this unprecedented environment as a result of the COVID-19 pandemic, while we are supporting our clients and improving the flexibility and competitive position of our operations, we are also taking actions to enhance our balance sheet strength and liquidity position. We accessed the debt markets in early February 2020 with \$4,117 million of issuances, while reducing \$4,491 million of current and 2021 refinancing needs. In addition, while we do not rely on commercial paper for our funding requirements, it was prudent in the first quarter to take advantage of our access to the market. At March 31, 2020, we

Management Discussion – (continued)

had \$2,519 million of commercial paper, which increased both our cash and debt balances. Cash, restricted cash and marketable securities at quarter end were \$12,017 million, an increase of \$3,008 million since December 31, 2019. Total debt of \$64,327 million at March 31, 2020 increased \$1,428 million from December 31, 2019. Within total debt, \$22,254 million is Global Financing debt, which is in support of IBM products and services and has a stable credit portfolio.

Our pension plans were well funded at the end of 2019, with worldwide qualified plans funded at 102 percent. Overall pension funded status as of the end of March was fairly consistent with year-end 2019, and we currently have no change to expected plan contributions in 2020.

In the first three months of 2020, we generated \$4,476 million in net cash from operations, compared to \$4,759 million in the first three months of 2019. We have consistently generated strong cash flows from operations and continue to have access to additional sources of liquidity through the capital markets and our \$15,250 million of unused credit facilities. We do not currently have plans to draw on these facilities, however they are available as back-up liquidity. We expect to continue to be opportunistic in the capital markets and remain fully committed to a target leverage profile consistent with a mid to high single A credit rating. Refer to “Liquidity and Capital Resources” for additional information. In summary, we have a strong cash position and ample credit available during these uncertain times to support and invest in our business.

The assets and debt associated with the Global Financing business are a significant part of our financial position. The financial position amounts appearing on pages 5 and 6 are the consolidated amounts including Global Financing.

Global Financing Financial Position Key Metrics:

<u>(Dollars in millions)</u>	<u>At March 31, 2020</u>	<u>At December 31, 2019</u>
Cash and cash equivalents	\$ 1,605	\$ 1,697
Net investment in sales-type and direct financing leases ⁽¹⁾	5,598	6,224
Equipment under operating leases — external clients ⁽²⁾	197	238
Client loans	11,940	12,884
Total client financing assets	17,735	19,346
Commercial financing receivables	2,319	3,820
Intercompany financing receivables ^{(3) (4)}	3,771	3,870
Total assets	\$ 26,566	\$ 29,568
Debt	\$ 22,254	\$ 24,727
Total equity	\$ 2,472	\$ 2,749

(1) Includes deferred initial direct costs which are eliminated in IBM’s consolidated results.

(2) Includes intercompany mark-up, priced on an arm’s-length basis, on products purchased from the company’s product divisions which is eliminated in IBM’s consolidated results.

(3) Entire amount eliminated for purposes of IBM’s consolidated results and therefore does not appear on pages 5 and 6.

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

At March 31, 2020, substantially all client and commercial financing assets were IT related assets, and approximately 58 percent of the total external portfolio was with investment grade clients with no direct exposure to consumers, an increase of 3 points year to year. This investment grade percentage is based on the credit ratings of the companies in the portfolio.

We have a long-standing practice of taking mitigating actions, in certain circumstances, to transfer credit risk to third parties, including credit insurance, financial guarantees, non-recourse borrowings, transfers of receivables recorded as true sales in accordance with accounting guidance or sales of equipment under operating lease.

Management Discussion – (continued)

IBM Working Capital

(Dollars in millions)	At March 31, 2020	At December 31, 2019
Current assets	\$ 38,931	\$ 38,420
Current liabilities	40,673	37,701
Working capital	\$ (1,743)	\$ 718
Current ratio	0.96:1	1.02:1

Working capital decreased \$2,461 million from the year-end 2019 position. The key changes are described below:

Current assets increased \$511 million (\$1,739 million adjusted for currency) due to:

- An increase of \$3,008 million (\$3,416 million adjusted for currency) in cash, restricted cash, and marketable securities; and
- An increase in prepaid expenses and other current assets of \$408 million (\$516 million adjusted for currency) primarily driven by an increase in derivative assets; partially offset by
- A decline in receivables of \$3,125 million (\$2,514 million adjusted for currency) primarily as a result of collections of higher year-end balances.

Current liabilities increased \$2,972 million (\$3,947 million adjusted for currency) as a result of:

- An increase in short-term debt of \$2,845 million (\$2,909 million adjusted for currency) due to reclassifications of \$3,490 million from long-term debt to reflect upcoming maturities and a net increase in commercial paper of \$2,214 million partially offset by maturities of \$2,851 million; and
- An increase in deferred income of \$1,351 million (\$1,672 million adjusted for currency) driven by annual customer billings; partially offset by
- A decrease in accounts payable of \$724 million (\$630 million adjusted for currency) reflecting declines from seasonally higher year-end balances; and
- A decrease in taxes payable of \$491 million (\$385 million adjusted for currency).

Receivables and Allowances

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

(Dollars in millions)		Additions / (Releases) **	Write-offs ***	Other +	March 31, 2020
January 1, 2020 *					
\$	612	\$ 56	\$ (38)	\$ (27)	\$ 603

* Opening balance does not equal the allowance at December 31, 2019 due to the adoption of the guidance for the allowance for credit losses. Refer to note 2, "Accounting Changes," for additional information.

** Additions for Allowance for Credit Losses are charged to expense.

*** Refer to note A, "Significant Accounting Policies," in our 2019 Annual Report for additional information regarding allowance for credit loss write-offs.

+ Primarily represents translation adjustments.

The total IBM receivables provision coverage was 2.1 percent at March 31, 2020, an increase of 30 basis points compared to January 1, 2020. The increase was primarily driven by the overall decline in gross financing receivables due to seasonally higher balances at year end. New additions in the first three months of 2020 were primarily due to certain

Management Discussion – (continued)

specific reserves. The majority of the write-offs during the three months ended March 31, 2020 related to receivables which had been previously reserved.

Global Financing Receivables and Allowances

The following table presents external Global Financing receivables excluding the allowance for credit losses and immaterial miscellaneous receivables.

(Dollars in millions)	At March 31, 2020	At December 31, 2019
Amortized cost/Recorded investment (1)(2)	\$ 20,096	\$ 22,446
Specific allowance for credit losses	157	177
Unallocated allowance for credit losses	81	45
Total allowance for credit losses	238	221
Net financing receivables	\$ 19,858	\$ 22,224
Allowance for credit losses coverage	1.2 %	1.0 %

- (1) Prior to the January 1, 2020 adoption of the guidance on credit losses, the presentation was recorded investment, subsequent to adoption the presentation is amortized cost. Both presentations include deferred initial direct costs which are eliminated in IBM's consolidated results.
- (2) The amortized cost basis of a financial asset represents the original amount of the financing receivable (including residual value) adjusted for unearned income, deferred initial direct costs, cash collected, write-offs and any foreign exchange adjustments. Recorded investment excluded residual value.

The percentage of Global Financing receivables reserved increased from 1.0 percent at December 31, 2019, to 1.2 percent at March 31, 2020. The increase in unallocated reserves was impacted by the adoption of the guidance on credit losses in the current year. Specific reserves decreased 11.2 percent from \$177 million at December 31, 2019, to \$157 million at March 31, 2020.

Roll Forward of Global Financing Receivables Allowance for Credit Losses

(Dollars in millions)	January 1, 2020*	Additions / (Releases)**	Write-offs ***	Other +	March 31, 2020
	\$ 262	\$ 10	\$ (19)	\$ (16)	\$ 238

* Opening balance does not equal the allowance at December 31, 2019 due to the adoption of the guidance for the allowance for credit losses. Refer to note 2, "Accounting Changes," for additional information.

** Additions for Allowance for Credit Losses are charged to expense.

*** Refer to note A, "Significant Accounting Policies," in our 2019 Annual Report for additional information regarding allowance for credit loss write-offs.

+ Primarily represents translation adjustments.

Global Financing's expected credit loss expense (including impacts from off-balance sheet commitments which are recorded in other liabilities) was an addition of \$11 million for the three months ended March 31, 2020, compared to an addition of \$3 million for the same period in 2019. The increase was driven by higher unallocated reserves in EMEA in the current year.

Noncurrent Assets and Liabilities

(Dollars in millions)	At March 31, 2020	At December 31, 2019
Noncurrent assets	\$ 114,473	\$ 113,767
Long-term debt	\$ 52,685	\$ 54,102
Noncurrent liabilities (excluding debt)	\$ 39,917	\$ 39,398

Management Discussion – (continued)

Noncurrent assets increased \$706 million (\$2,656 million adjusted for currency) due to:

- An increase in deferred taxes of \$3,600 million (\$3,771 million adjusted for currency) primarily due to an intra-entity sale of IP; partially offset by
- A decrease in long-term financing receivables of \$1,004 million (\$821 million adjusted for currency) as a result of reductions from seasonally higher year-end balances; and
- A decrease in net intangible assets and goodwill of \$1,274 million (\$455 million adjusted for currency) resulting from intangibles amortization and currency impacts.

Long-term debt decreased \$1,417 million (\$1,186 million adjusted for currency) due to:

- Reclassifications to short-term debt of \$3,490 million to reflect upcoming maturities; and
- Maturities of \$2,019 million mainly to early redeem certain outstanding bonds; partially offset by
- Issuances of \$4,342 million.

Noncurrent liabilities (excluding debt) increased \$518 million (\$1,418 million adjusted for currency) due to:

- An increase in other liabilities of \$1,348 million (\$1,675 million adjusted for currency) primarily driven by an increase in deferred tax liabilities related to the intra-entity IP sale; partially offset by
- A decrease in retirement and postretirement plans of \$668 million (\$330 million adjusted for currency).

Debt

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

<u>(Dollars in millions)</u>	<u>At March 31, 2020</u>	<u>At December 31, 2019</u>
Total company debt	\$ 64,327	\$ 62,899
Total Global Financing segment debt	\$ 22,254	\$ 24,727
Debt to support external clients	19,092	21,487
Debt to support internal clients	3,162	3,239
Non-Global Financing debt	\$ 42,073	\$ 38,173

Total debt of \$64,327 million increased \$1,428 million from December 31, 2019, driven by new debt issuances of \$4,464 million; partially offset by debt maturities and retirements of \$4,870 million. Within total debt, commercial paper was a net increase of \$2,214 million.

Non-Global Financing debt of \$42,073 million increased \$3,901 million from December 31, 2019 and decreased \$5,983 million since June 30, 2019.

Global Financing debt of \$22,254 million decreased \$2,473 million from December 31, 2019, primarily due to lower funding requirements.

Global Financing provides financing predominantly for IBM's external client assets, as well as for assets under contract by other IBM units. These assets, primarily for Global Technology Services, generate long-term, stable revenue

Management Discussion – (continued)

streams similar to the Global Financing asset portfolio. Based on their attributes, these Global Technology Services assets are leveraged with the balance of the Global Financing asset base.

The debt used to fund Global Financing assets is composed of intercompany loans and external debt. 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 Global Financing debt-to-equity ratio remained at 9.0 to 1 at March 31, 2020.

We measure Global Financing as a stand-alone entity, and accordingly, interest expense relating to debt supporting Global Financing's external client and internal business is included in the "Global Financing Results of Operations" and in note 4, "Segments." In the Consolidated Income Statement, the external debt-related interest expense supporting Global Financing's internal financing to IBM is reclassified from cost of financing to interest expense.

Equity

Total equity decreased \$856 million from December 31, 2019, primarily due to increases in foreign currency translation losses (\$1,041 million) decreases from dividends paid (\$1,440 million); partially offset by increases from net income (\$1,175 million) and retirement-related plans (\$422 million).

Cash Flow

Our cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows on page 7, are summarized in the following table. These amounts include the cash flows associated with the Global Financing business.

(Dollars in millions)

For the three months ended March 31:

	2020	2019
Net cash provided by/(used in) continuing operations:		
Operating activities	\$ 4,476	\$ 4,759
Investing activities	(902)	(853)
Financing activities	(115)	1,863
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(403)	(102)
Net change in cash, cash equivalents and restricted cash	<u>\$ 3,057</u>	<u>\$ 5,668</u>

Net cash provided by operating activities decreased \$283 million as compared to the first three months of 2019 driven primarily by:

- An increase in interest payments on debt of approximately \$190 million; and
- Performance-related declines within net income.

Net cash used in investing activities increased \$49 million driven primarily by:

- A decrease of \$212 million in cash provided by net non-operating finance receivables; and
- An increase in cash used for net capital expenditures of \$123 million; partially offset by
- A decrease in cash used for net purchases of marketable securities and other investments of \$306 million.

Management Discussion – (continued)

Financing activities were a net use of cash of \$115 million in the first three months of 2020 compared to a net source of cash of \$1,863 million in the first three months of 2019. The year-to-year increase in the use of cash of \$1,978 million was driven primarily by:

- A decrease in net cash provided by debt transactions of \$2,876 million primarily driven by a higher level of net additions in the prior year to fund the acquisition of Red Hat; partially offset by
- A decrease in cash used for gross common share repurchases of \$920 million.

Looking Forward

Long-term strategic model

IBM is focused on chapter 2 of clients' digital reinventions, which includes shifting mission-critical workloads to the cloud and scaling AI. To address the cloud opportunity, enterprises need to be able to move and manage data, services and workflows across multiple clouds and on-premises. They also need to be able to address security concerns, data protection and protocols, availability and cloud management. This is best addressed with a hybrid, multi-cloud, open approach, based on a foundation of Linux, with containers and Kubernetes. On July 9, 2019, we closed the acquisition of Red Hat, which significantly changed the cloud landscape and will accelerate our high value business model. Together, IBM and Red Hat offer the leading hybrid, multi-cloud platform built on open source technologies.

2020

On April 20, 2020, given the level of uncertainty around the duration of the COVID-19 health crisis and the potential rate and pace of economic recovery, IBM withdrew full-year 2020 expectations. We expect to reassess this position based on the clarity of the macroeconomic recovery after the second quarter. We maintain confidence in our strategy and our portfolio, which is focused on hybrid cloud and AI and believe the challenges clients are facing today will accelerate their transitions to digital environments. However, we do expect changes to client buying patterns in the near term. In this environment, we have taken quick and prudent actions to manage cost and expense, further improve our liquidity position and focus on opportunities to emerge stronger. While there are a wide range of outcomes for the year, each of which we are prepared for, in each scenario, we expect to have solid free cash flow and ample liquidity to support our business and secure our dividend.

Looking forward to the second quarter of 2020, in services, approximately 80 percent of GBS revenue and 90 percent of GTS revenue in a quarter historically comes from the opening backlog, though our contracts adjust for flexible volumes in our clients' businesses. We have made progress in our backlog and although it was down on an actual basis, it was essentially flat at constant currency (with GBS up and GTS down modestly) compared to the prior-year period.

Over the last few years, our software transactional content in the second quarter is about 20 to 25 percent of our software revenue. We have a solid pipeline of deals for second-quarter 2020, however, our software performance will depend on how we yield against that pipeline. Since the COVID-19 crisis started to impact our software performance at the end of the first quarter, if that same client buying behavior continues, it is reasonable to expect it could be more impactful to performance in the second quarter.

The Systems hardware business is essentially all transactional. Similar to software, we have a good pipeline in IBM Z and storage. While the current environment is expected to impact closure rates, we expect less of an impact to IBM Z and storage given the essential nature of the purchases and additional capacity requirements, especially in certain industries.

Management Discussion – (continued)

In cost and expense, we expect to closely manage our spending and capitalize on new and efficient ways of operating. We expect the structural actions taken in the first quarter to yield gross annualized savings of approximately \$1.8 billion starting in the second half of 2020. We are likely to take additional actions in the second quarter.

As our clients adjust to this crisis, they need a partner they can trust, and IBM is that partner. This is not just about helping our clients navigate this crisis but also ensuring that they emerge even stronger and more resilient. To that end, we have taken concrete steps to focus on near-term opportunities to address the shifting needs of clients, such as leveraging hybrid cloud, using AI for automation and enabling remote work. We have also quickly mobilized to help with the global battle against COVID-19 with much work already underway.

For the period ended March 31, 2020, we assessed certain accounting-related matters that generally require consideration of current information reasonably available to us and forecasted financial data in the context of unknown future impacts to IBM as a result of the COVID-19 pandemic. The accounting matters assessed included but were not limited to, the allowances for credit losses, the carrying values of goodwill and intangible assets and other long-lived assets, our net investments in sales-type or direct financing leases, any significant lease modifications, valuation allowances for tax assets and revenue recognition. These assessments did not result in any material impacts to our consolidated financial results as of and for the quarter ended March 31, 2020. We will continue to assess these matters in future periods. However, given the inherent uncertainty of the future impacts from the magnitude and/or duration of the pandemic, there can be no assurance that impacts will not be material to our consolidated financial results in future periods.

Our pension plans are well funded coming into this environment and our expectations for our retirement-related plan contributions remain consistent with year-end 2019. We expect 2020 pre-tax retirement-related plan cost to be approximately \$2.7 billion, an increase of approximately \$600 million compared to 2019. This estimate reflects current pension plan assumptions at December 31, 2019. Within total retirement-related plan cost, operating retirement-related plan cost is expected to be approximately \$1.5 billion, approximately flat versus 2019. Non-operating retirement-related plan cost is expected to be approximately \$1.2 billion, an increase of approximately \$600 million compared to 2019, primarily driven by lower income from expected return on assets. Contributions for all retirement-related plans are expected to be approximately \$2.3 billion in 2020, an increase of approximately \$100 million compared to 2019.

Currency Rate Fluctuations

Changes in the relative values of non-U.S. currencies to the U.S. dollar (USD) affect our financial results and financial position. At March 31, 2020, currency changes resulted in assets and liabilities denominated in local currencies being translated into fewer dollars than at year-end 2019. 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 temporarily mitigate, but do 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 the first three months of 2020. Based on the currency rate movements in the first three months of 2020, total revenue decreased 3.4 percent as reported and 1.9 percent at constant currency versus the first three months of 2019. On an income from continuing operations before

Management Discussion – (continued)

income tax basis, these translation impacts mitigated by the net impact of hedging activities resulted in a theoretical maximum (assuming no pricing or sourcing actions) increase of approximately \$60 million in the first three months of 2020 on an as-reported basis and an increase of approximately \$50 million on an operating (non-GAAP) basis. The same mathematical exercise also resulted in an increase of approximately \$60 million in the first three months of 2019 on an as-reported basis and an increase of approximately \$50 million on an operating (non-GAAP) basis. We view these amounts as a theoretical maximum impact to its 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, the company manages currency risk in these entities by linking prices and contracts to U.S. dollars.

Liquidity and Capital Resources

In our 2019 Annual Report, on pages 57 to 59, there is a discussion of our liquidity including two tables that present three years of data. The table presented on page 58 includes net cash from operating activities, cash and cash equivalents, restricted cash and short-term marketable securities, and the size of our global credit facilities for each of the past three years. For the three months ended, or at, as applicable, March 31, 2020, those amounts are \$4.5 billion of net cash from operating activities, \$12.0 billion of cash and cash equivalents, restricted cash and short-term marketable securities and \$15.3 billion in global credit facilities, respectively. While we have no current plans to draw on these credit facilities, they are available as back-up liquidity.

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, the company suspended its share repurchase program at the time of the Red Hat acquisition closing. Refer to note 11, “Borrowings,” for additional details of financing this transaction.

The major rating agencies’ ratings on our debt securities at March 31, 2020 appear in the following table and remain unchanged from December 31, 2019.

	STANDARD AND POOR’S	MOODY’S INVESTORS SERVICE
IBM and IBM Credit LLC ratings:		
Senior long-term debt	A	A2
Commercial paper	A-1	Prime-1

We remain committed to a target leverage profile consistent with a mid to high single A credit rating within a couple of years.

We do not have “ratings trigger” provisions in our debt covenants or documentation, which would allow the holders to declare an event of default and seek to accelerate payments thereunder in the event of a change in credit rating. Our debt covenants are well within the required levels. Our contractual agreements governing derivative instruments contain standard market clauses which can trigger the termination of the agreement if our credit rating were to fall below investment grade. At March 31, 2020, the fair value of those instruments that were in a liability position was \$511 million, before any applicable netting, and this position is subject to fluctuations in fair value period to period based on the level of our outstanding instruments and market conditions. We have no other contractual arrangements that, in the event of a change in credit rating, would result in a material adverse effect on our financial position or liquidity.

In July 2017, the UK's Financial Conduct Authority, which regulates the London Interbank Offered Rate (LIBOR), announced that it intends to phase out LIBOR by the end of 2021. Various central bank committees and working groups

Management Discussion – (continued)

continue to discuss replacement of benchmark rates, the process for amending existing LIBOR-based contracts, and the potential economic impacts of 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. It is still uncertain when the transition from LIBOR to another reference rate will occur or whether SOFR will become the accepted market alternative to LIBOR. We are continuing to evaluate the potential impact of the replacement of the LIBOR benchmark interest rate, including risk management, internal operational readiness and monitoring the FASB standard-setting process for additional updates to address financial reporting issues that might arise in connection with transition from LIBOR to a new benchmark rate.

We prepare our Consolidated Statement of Cash Flows in accordance with applicable accounting standards for cash flow presentation on page 7 of this Form 10-Q and highlight causes and events underlying sources and uses of cash in that format on pages 67 and 68. For the purpose of running its business, IBM manages, monitors and analyzes cash flows in a different manner.

Management uses free cash flow as a measure to evaluate its operating results, plan 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 Global Financing receivables and net capital expenditures, including the investment in software. A key objective of the Global Financing business is to generate strong returns on equity, and increasing receivables is the basis for growth. Accordingly, management considers Global 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 Global Financing receivables. Free cash flow guidance is derived using an estimate of profit, working capital and operational cash flows. As previously noted, we view Global Financing receivables as a profit-generating investment which we seek to maximize and therefore it is not considered when formulating guidance for free cash flow. As a result, we do not estimate a GAAP Net Cash from Operations expectation metric.

The following is management's view of cash flows for the first three months of 2020 and 2019 prepared in a manner consistent with the description above.

(Dollars in millions)

For the three months ended March 31:

	2020	2019
Net cash from operating activities per GAAP	\$ 4,476	\$ 4,759
Less: change in Global Financing receivables	2,381	2,458
Net cash from operating activities, excluding Global Financing receivables	\$ 2,095	\$ 2,302
Capital expenditures, net	(737)	(614)
Free cash flow	\$ 1,358	\$ 1,688
Acquisitions	(13)	(1)
Divestitures	26	33
Share repurchase	—	(920)
Common stock repurchases for tax withholdings	(44)	(61)
Dividends	(1,440)	(1,397)
Non-Global Financing debt	3,503	5,890
Other (includes Global Financing net receivables and Global Financing debt)	(382)	690
Change in cash, cash equivalents, restricted cash and short-term marketable securities	\$ 3,008	\$ 5,922

In the first three months of 2020, we generated free cash flow of \$1.4 billion, a decrease of \$0.3 billion versus the prior year. In the first quarter of 2020, we also continued to return value to shareholders with \$1.4 billion in dividends.

Events that could temporarily change the historical cash flow dynamics discussed previously and in our 2019 Annual Report include significant changes in operating results, material changes in geographic sources of cash,

Management Discussion – (continued)

unexpected adverse impacts from litigation, future pension funding requirements, 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 13, “Contingencies,” in this Form 10-Q. With respect to pension funding, we expect to make legally mandated pension plan contributions to certain non-U.S. defined benefit plans of approximately \$300 million in 2020. Contributions related to all retirement-related plans are expected to be approximately \$2.3 billion in 2020. 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 2020, 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 dividend.

Global Financing Return on Equity Calculation

(Dollars in millions)	For Three Months Ended March 31,	
	2020	2019
Numerator		
Global Financing after-tax income*	\$ 192	\$ 116
Annualized after-tax income (1)	\$ 766	\$ 463
Denominator		
Average Global Financing equity (2)**	\$ 2,610	\$ 3,372
Global Financing return on equity (1)/(2)	29.4 %	13.7 %

* Calculated based upon an estimated tax rate principally based on Global 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 Global Financing for the last two quarters.

Management Discussion – (continued)

GAAP Reconciliation

The tables below provide a reconciliation of the company's income statement results as reported under GAAP to its operating earnings presentation which is a non-GAAP measure. The company'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 the company's rationale for presenting operating earnings information.

(Dollars in millions except per share amounts) For the three months ended March 31, 2020:	GAAP	Acquisition- Related Adjustments	Retirement- Related Adjustments	U.S. Tax Reform Impacts	Operating (non-GAAP)
Gross profit	\$ 7,922	\$ 188	\$ —	\$ —	\$ 8,110
Gross profit margin	45.1 %	1.1 pts.	— pts.	— pts.	46.2 %
S,G&A	\$ 5,955	\$ (285)	\$ —	\$ —	\$ 5,670
R,D&E	1,625	—	—	—	1,625
Other (income) and expense	182	(1)	(264)	—	(83)
Interest expense	326	—	—	—	326
Total expense and other (income)	7,972	(285)	(264)	—	7,422
Pre-tax income/(loss) from continuing operations	(49)	473	264	—	688
Pre-tax margin from continuing operations	(0.3)%	2.7 pts.	1.5 pts.	— pts.	3.9 %
Provision for (benefit from) income taxes* **	\$ (1,226)	\$ 102	\$ 14	\$ 149	\$ (961)
Income from continuing operations	\$ 1,176	\$ 371	\$ 250	\$ (149)	\$ 1,649
Income margin from continuing operations	6.7 %	2.1 pts.	1.4 pts.	(0.8)pts.	9.4 %
Diluted earnings per share from continuing operations	\$ 1.31	\$ 0.42	\$ 0.28	\$ (0.17)	\$ 1.84

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

** The effective tax rate is not displayed, as the calculated rate for the three months ended March 31, 2020 is not meaningful.

(Dollars in millions except per share amounts) For the three months ended March 31, 2019:	GAAP	Acquisition- Related Adjustments	Retirement- Related Adjustments	U.S. Tax Reform Impacts	Operating (non-GAAP)
Gross profit	\$ 8,043	\$ 76	\$ —	\$ —	\$ 8,119
Gross profit margin	44.2 %	0.4 pts.	— pts.	— pts.	44.7 %
S,G&A	\$ 4,691	\$ (124)	\$ —	\$ —	\$ 4,566
R,D&E	1,433	—	—	—	1,433
Other (income) and expense	(73)	23	(138)	—	(187)
Interest expense	210	(36)	—	—	174
Total expense and other (income)	6,160	(137)	(138)	—	5,886
Pre-tax income from continuing operations	1,883	212	138	—	2,233
Pre-tax margin from continuing operations	10.4 %	1.2 pts.	0.8 pts.	— pts.	12.3 %
Provision for income taxes*	\$ 289	\$ 49	\$ 26	\$ (141)	\$ 224
Effective tax rate	15.4 %	0.7 pts.	0.2 pts.	(6.3)pts.	10.0 %
Income from continuing operations	\$ 1,593	\$ 164	\$ 111	\$ 141	\$ 2,009
Income margin from continuing operations	8.8 %	0.9 pts.	0.6 pts.	0.8 pts.	11.0 %
Diluted earnings per share from continuing operations	\$ 1.78	\$ 0.18	\$ 0.13	\$ 0.16	\$ 2.25

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

Management Discussion – (continued)

Forward-Looking and Cautionary Statements

Except for the historical information and discussions contained herein, statements contained in this Form 10-Q may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based on the company's current assumptions regarding future business and financial performance. These statements involve a number of risks, uncertainties and other factors that could cause actual results to differ materially, including, but not limited to, the following: a downturn in economic environment and client spending budgets; the company's failure to meet growth and productivity objectives; a failure of the company's innovation initiatives; damage to the company's reputation; risks from investing in growth opportunities; failure of the company's intellectual property portfolio to prevent competitive offerings and the failure of the company to obtain necessary licenses; cybersecurity and data privacy considerations; fluctuations in financial results; impact of local legal, economic, political and health conditions; adverse effects from environmental matters, tax matters and the company's pension plans; ineffective internal controls; the company's use of accounting estimates; impairment of the company's goodwill or amortizable intangible assets; the company's ability to attract and retain key employees and its reliance on critical skills; impacts of relationships with critical suppliers; product quality issues; impacts of business with government clients; currency fluctuations and customer financing risks; impact of changes in market liquidity conditions and customer credit risk on receivables; reliance on third party distribution channels and ecosystems; the company's ability to successfully manage acquisitions, alliances and dispositions, including integration challenges, failure to achieve objectives, the assumption of liabilities, and higher debt levels; legal proceedings and investigatory risks; risk factors related to IBM securities; and other risks, uncertainties and factors discussed in the company's Form 10-Qs, Form 10-K and in the company's other filings with the U.S. Securities and Exchange Commission or in materials incorporated therein by reference. Any forward-looking statement in this Form 10-Q speaks only as of the date on which it is made. Except as required by law, the company assumes no obligation to update or revise any forward-looking statements.

Item 4. Controls and Procedures

The company's management evaluated, with the participation of the Chief Executive Officer and Chief Financial Officer, the effectiveness of the company's disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that the company's disclosure controls and procedures were effective as of the end of the period covered by this report. There has been no change in the company's internal control over financial reporting that occurred during the quarter covered by this report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting.

Part II — Other Information

Item 1. Legal Proceedings

Refer to note 13, “Contingencies,” in this Form 10-Q.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds and Issuer Repurchases of Equity Securities

The following table provides information relating to the company’s repurchase of common stock for the first quarter of 2020.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Approximate Dollar Value of Shares that May Yet Be Purchased Under The Program*
January 1, 2020 - January 31, 2020	—	\$ —	—	\$ 2,007,611,768
February 1, 2020 - February 29, 2020	—	\$ —	—	\$ 2,007,611,768
March 1, 2020 - March 31, 2020	—	\$ —	—	\$ 2,007,611,768
Total	—	\$ —	—	

* On October 30, 2018, the Board of Directors authorized \$4.0 billion in funds for use in the company’s common stock repurchase program. The company stated that it would repurchase shares on the open market or in private transactions depending on market conditions. The common stock repurchase program does not have an expiration date. This table does not include shares tendered to satisfy the exercise price in connection with cashless exercises of employee stock options or shares tendered to satisfy tax withholding obligations in connection with employee equity awards.

The company’s acquisition of Red Hat on July 9, 2019 was funded through a combination of debt and cash, with incremental debt issued earlier this year. The company suspended its share repurchase program at the time of closing. At March 31, 2020 there was approximately \$2.0 billion in authorized funds remaining for purchases under this program.

Item 6. Exhibits

Exhibit Number

10.1	Form of LTPP equity award agreement for performance share units and the terms and conditions of LTPP Equity Awards, effective March 2, 2020, in connection with the foregoing award agreements.
31.1	Certification by principal executive officer pursuant to Rule 13A-14(a) or 15D-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification by principal financial officer pursuant to Rule 13A-14(a) or 15D-14(a) of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification by principal executive officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification by principal financial officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document – the instance document does not appear on the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File – the cover page interactive data file does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

International Business Machines Corporation
(Registrant)

Date: April 28, 2020_____

By: /s/ Robert F. Del Bene
Robert F. Del Bene
Vice President and Controller

CERTIFICATION PURSUANT TO RULE 13A-14(a) OR 15D-14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002

I, Arvind Krishna, certify that:

1. I have reviewed this quarterly report on Form 10-Q of International Business Machines Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 28, 2020

/s/Arvind Krishna

Arvind Krishna
Chief Executive Officer

CERTIFICATION PURSUANT TO RULE 13A-14(a) OR 15D-14(a) OF THE SECURITIES
EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002

I, James J. Kavanaugh, certify that:

1. I have reviewed this quarterly report on Form 10-Q of International Business Machines Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c. evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
 - a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 28, 2020

/s/ James J. Kavanaugh

James J. Kavanaugh
Senior Vice President and Chief Financial Officer

INTERNATIONAL BUSINESS MACHINES CORPORATION

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of International Business Machines Corporation (the “Company”) on Form 10-Q for the period ending March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Arvind Krishna, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. ss. 1350, as adopted pursuant to ss. 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Arvind Krishna

Arvind Krishna
Chief Executive Officer
April 28, 2020

A signed original of this written statement required by Section 906 has been provided to IBM and will be retained by IBM and furnished to the Securities and Exchange Commission or its staff upon request.

INTERNATIONAL BUSINESS MACHINES CORPORATION

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of International Business Machines Corporation (the “Company”) on Form 10-Q for the period ending March 31, 2020, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, James J. Kavanaugh, Senior Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. ss. 1350, as adopted pursuant to ss. 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ James J. Kavanaugh

James J. Kavanaugh
Senior Vice President and Chief Financial Officer
April 28, 2020

A signed original of this written statement required by Section 906 has been provided to IBM and will be retained by IBM and furnished to the Securities and Exchange Commission or its staff upon request.

EXHIBIT OMITTED FROM THIS DOCUMENT

Form of LTPP equity award agreement for performance share units and the terms and conditions of LTPP Equity Awards, effective March 2, 2020, in connection with the foregoing award agreements.

Copies of this exhibit may be obtained without charge from Computershare Trust Company, N.A., P.O. Box 505005, Louisville, Kentucky 40233-5005.