International Business Machines Corp IBM (NYSE) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
193.11 USD	212.00 USD	148.40 USD	286.20 USD	Medium	Wide	Negative	Exemplary	AA-	Application Software

IBM Transformation Still Evolving, but on Track After 2Q Results; Shares Still Look Undervalued

Updated Forecasts and Estimates from 18 Jul 2014

Peter Wahlstrom, CFA
Director
peter.wahlstrom@morningstar.com
+1 (312) 696-6320

The primary analyst covering this company does not own its stock.

Research as of 18 Jul 2014
Estimates as of 18 Jul 2014
Pricing data through 22 Sep 2014
Rating updated as of 22 Sep 2014

Currency amounts expressed with "$" are in U.S. dollars (USD) unless otherwise denoted.

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Investment Thesis 17 Apr 2014

IBM holds a defensible position in enterprise software, services, and hardware. While each of these businesses is an industry leader in its own right, the combination of these products and services provides the firm with an unrivaled solution creation and delivery ability that is the key to its wide economic moat.

IBM's iconic turnaround from the early 1990s, which cost reductions and a shift toward software and higher-value services primarily drove, provided a good start for the firm's ongoing transition. Although mainframes remain an important source of IBM's competitive advantage and profits, its fortunes no longer rest exclusively on the long-term success of these proprietary platforms. IBM has adroitly navigated the secular trend toward distributed, open-standards computing by diversifying its hardware platforms, broadening its software portfolio, and building a formidable services organization. The result has been solid long-term financial performance. Since 2002, IBM's revenue, gross profit, and operating profit have compounded at annual rates of 3%, 6%, and 12%, respectively, while returns on invested capital have remained firmly above the firm's cost of capital. Other tech giants have grown faster over the past decade, but few technology companies can point to a track record that is as consistent or shareholder-friendly as IBM's.

Still, IBM is not impervious to emerging long-term threats. Cloud computing is shifting the enterprise IT landscape and creating new challenges for incumbent vendors. As computer resources are increasingly delivered by cloud providers rather than traditional enterprise IT departments, demand for IBM's high-end servers and related software could dampen. Additionally, the middleware and systems management markets will undergo significant change as software-as-a-service gains wider adoption. Finally, large vendors continue to push into each others' territories as they look to deliver a larger portion of the IT stack. Despite these emerging threats, IBM's product development and entrenched customer relationships will ensure that the firm maintains its competitive advantage for the foreseeable future.

Vital Statistics

Market Cap (USD Mil)	192,645
52-Week High (USD)	199.21
52-Week Low (USD)	172.19
52-Week Total Return %	3.8
YTD Total Return %	4.6
Last Fiscal Year End	31 Dec 2013
5-Yr Forward Revenue CAGR %	1.5
5-Yr Forward EPS CAGR %	8.2
Price/Fair Value	0.91

Valuation Summary and Forecasts

Fiscal Year:	2012	2013	*2014(E)*	*2015(E)*
Price/Earnings	12.6	11.5	*10.9*	*10.2*
EV/EBITDA	8.7	9.2	*8.7*	*8.4*
EV/EBIT	10.6	11.4	*10.5*	*10.0*
Free Cash Flow Yield %	7.2	7.0	*10.0*	*9.6*
Dividend Yield %	1.8	2.1	*2.3*	*2.4*

Financial Summary and Forecasts (USD Mil)

Fiscal Year:	2012	2013	*2014(E)*	*2015(E)*
Revenue	104,507	99,751	*98,554*	*100,032*
Revenue YoY %	-2.3	-4.6	*-1.2*	*1.5*
EBIT	22,360	19,926	*21,796*	*22,905*
EBIT YoY %	4.5	-10.9	*9.4*	*5.1*
Net Income, Adjusted	17,624	17,958	*18,079*	*18,445*
Net Income YoY %	11.2	1.9	*0.7*	*2.0*
Diluted EPS	15.25	16.28	*17.68*	*18.86*
Diluted EPS YoY %	16.8	6.7	*8.6*	*6.6*
Free Cash Flow	11,815	7,446	*16,611*	*17,957*
Free Cash Flow YoY %	-16.4	-37.0	*123.1*	*8.1*

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

Profile

IBM is one of the largest IT companies with an array of offerings, including system hardware, infrastructure software, outsourcing, and systems integration services. The firm has operations in more than 170 countries and generates about 65% of revenue from abroad.

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Morningstar Analysis

IBM Transformation Still Evolving, but on Track After 2Q Results; Shares Still Look Undervalued 18 Jul 2014

IBM posted second-quarter results that were modestly ahead of our expectations, and the firm is on track to meet our full-year outlook. While the glass may have seemed half empty last quarter, investors may be more likely to view this quarter's results as half full, even though the story hasn't fundamentally changed when we take a look through our long-term lens. Although IBM is still a firm in transition, we don't believe it is the same company that CEO Virginia Rometty inherited just a few short years ago, and we generally agree with management's overarching strategy. We plan to review our financial model after the quarter's results and, combined with the time value of money, may modestly increase our fair value estimate.

Second-quarter revenue was down 1% on an adjusted basis (excluding divestitures) to $24.3 billion, and while systems and technology remained a drag on the top line, the reported 11% drop wasn't as extreme as we had anticipated. Instead, management remains focused (as well it should) on its strategic growth businesses, which it characterized as being up double digits year over year. As we think about the broader IBM revenue "engine," software is the segment that is clearly pulling more of the weight, with services treading water (but lagging) and hardware still caught in the cyclical undertow. If the senior leaders can steer the IBM vessel toward calmer waters, we think this can still be a GDP-plus grower on the top line, on a normalized basis--but it's probably going to take some time. Operating profitability in the quarter was slightly better than we anticipated, and while we had expected some reduction in selling, general, and administrative expenses, the gross margin gains (50 basis points year over year) was encouraging. All-in, IBM reported non-GAAP diluted EPS of $4.32, up 34% year over year, and $0.09 ahead of our estimate.

With shares fundamentally undervalued, and the firm still generating meaningful operating cash, we're fine with the share repurchases ($3.6 billion during the quarter), and we think the level of capital spending, acquisitions, and R&D is appropriate. We are clearly intrigued by the announced exclusive Apple partnership to target mobility and analytics in the enterprise, and the firm's semiconductor investments could also represent long-term wins for the firm. However, we continue to believe that there are some other things that need to return to form before investors are willing to give IBM full credit for success of its ongoing transformation toward a software-led business model. Conceptually, this means that the firm would need to go beyond taking advantage of secular trends such as social, mobile, cloud, and analytics (consistent with the objectives in management's road map). However, the added benefit should also be higher gross profit margins and better fixed-cost leverage, which is being heavily discounted in the marketplace (in our view). Still, the long-range hardware business outlook remains somewhat hazy, and this has ties to and implications for both the software and services revenue, so we'll continue to keep an eye on this segment despite what appears to be smaller revenue and profit contribution.

Management reiterated its fiscal 2014 non-GAAP EPS target of $18, a number which we sit slightly below. Part of this is due to uncertainty in currency and tax, but we also don't think that success of the firm hinges on performance in any one year. Case in point, while we are still shy of $20 in adjusted EPS next year, we remain positive on valuation of the firm, and think that there are still a number of positive attributes of this story which are potentially underappreciated, such as the stickiness of the firm's middleware offering, and long-term upside associated with IBM's Big Data and analytics platform. With shares sitting at more than a 10% discount to our fair value estimate, it's one of only a handful of high-quality wide-moat technology firms that we call fundamentally undervalued.

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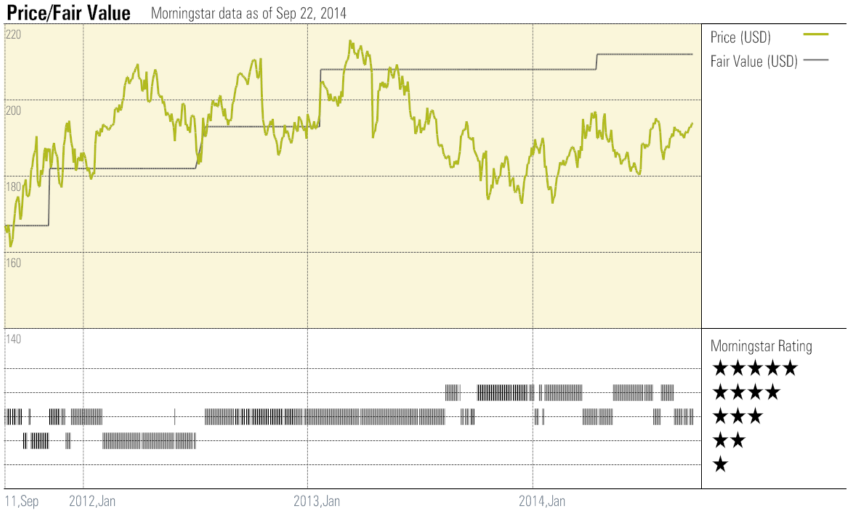
Price/Fair Value Morningstar data as of Sep 22, 2014



Valuation, Growth and Profitability 17 Apr 2014

Our fair value estimate is $212 per share, up from $208 per share previously as we account for the time value of money. Our new fair value estimate implies 2014 price/adjusted earnings of approximately 12 times, EV/EBITDA of 10 times, and free cash flow yield of approximately 8%. We forecast 2% annualized revenue growth and 3% annualized operating profit growth through 2018. Management continues to allocate significant resources toward expanding its software portfolio, and we expect this segment to grow just under 5% per year through 2018, with relatively stable gross margin. Certain segments of IBM's software portfolio are fairly mature, including database and portions of its middleware and systems management portfolio. Other areas, such as business intelligence, are poised for above-average growth over the next several years as companies apply new analytic tools to massive, growing volumes of unstructured data. Based on our current forecasts, software will account for 29% of IBM's total revenue and 52% of gross profit in 2018 (up from today's contribution of 24% and 45%, respectively).

We forecast below-GDP growth for IBM's services business, which is partially due to the already massive size of this business and partially due to management's discipline in pruning low-margin contracts from its portfolio. Although competitive pressures are mounting in lower-end outsourcing portions of the services market, we think IBM's technical and business expertise and growing software portfolio will allow the firm to maintain blended gross margins of roughly 34% as it focuses on more complex projects and generates more recurring maintenance revenue.

Cloud computing and increasing competitive pressures from Oracle and Cisco will pressure IBM's hardware segment, and we expect almost no organic growth in hardware revenue over the next five years. Despite the firm's ongoing rightsizing and expected sale of System x to Lenovo in late 2014 we still think there could be some gross margin headwinds over the medium term. We forecast gross margin in hardware to fall from the mid-30% range in 2013 to the low-30% range in 2018.

We forecast IBM's operating expenses to grow slightly slower than revenue over the next five years, based on our expectation that management will maintain firm control over IBM's business and financial model.

Scenario Analysis

IBM's management has a track record of consistently improving operating margins over nearly a decade. Aggressive cost controls and an ongoing shift toward software have enabled the company to deliver progressive margin growth over the past three years, even as revenue took a hit in the wake of the economic recession. We have considered the implications of variability in operating margins on our valuation of the firm.

Our base-case valuation of $212 assumes pretax margins improve by roughly 300 basis points to approximately 23% over the course of our explicit 5-year forecast. Part of this

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improvement is due to mix-shift-based gross margin improvement, as margin declines in hardware will be more than offset by faster growth in IBM's high-margin software business. The other portion is due to slight benefits from operating leverage and good expense management.

Our bull-case valuation of $270 reflects the implications of stronger gross margins in hardware and services. In this scenario, we assume that recent global services margins further expand, as management continues to shift its portfolio to higher-margin services and increases its focus on automation. Such margin improvement, combined with high-margin software sales accounting for a greater portion of the revenue mix, should enable pretax margins to climb to the mid-20% range over the next five years.

Finally, our bear-case valuation of $145 incorporates a decline in overall operating margins, with growth in software sales insufficient to offset a return to pre-recession margins in the global services business. Margin contributions from work force rebalancing efforts could run out of steam, as the company needs to maintain sufficient personnel in developed countries to continue to win high-value projects and deliver results in line with clients' expectations. In this scenario, the expected increase in software sales will prove insufficient in holding up overall operating margins, leading to pretax margins declining to the midteens to high-teens percentage range over the next five years.

Economic Moat

We assign IBM a wide economic moat rating. IBM has large and well-established hardware, software, and services businesses, each of which has high switching costs and recurring revenue streams. IBM's server hardware business is focused at the high end of the server market and includes a mix of proprietary mainframe systems and industry-standard x86 servers. Although we do not expect the mainframe market to grow, migrating mainframe-based applications to alternative architectures can be expensive and risky. As a result, IBM's mainframe business will remain steady and profitable. IBM's infrastructure-management software also tends to be very sticky, as IT personnel rely on it to operate their data centers and are reluctant to switch to new, less familiar systems. Software maintenance contracts provide profitable recurring revenue, and unlike the proprietary server business, the firm's software business continues to grow. Finally, about half of IBM's services business is composed of long-term outsourcing contracts that are sticky and provide recurring annual revenue.

While each business holds it own competitive advantages, the combination of these businesses provides IBM with economies of scale in product development and distribution, and an edge in acquiring new customers that further reinforces the wide moat around the company. Additionally, though we generally don't attach much value to brands in the enterprise technology sector, IBM's established brand image as a trusted leader in computing provides the firm with a significant competitive advantage in acquiring new services business. To repurpose the mantra of a bygone era: No one has ever been fired for outsourcing to IBM.

Moat Trend

We assign IBM a negative moat trend rating based on our view that cloud computing represents a long-run threat to the firm's existing competitive advantages.

First, software-as-a-service and infrastructure-as-a-service could reduce IT complexity over time and lessen corporations' reliance on IBM's high-end application software maintenance and infrastructure management services.

Second, cloud service providers are savvy buyers of IT

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Morningstar Analysis

infrastructure equipment that tend to eschew proprietary systems. As cloud computing gains greater adoption, we expect IBM to experience increasing pricing pressure on its high-end, proprietary hardware systems such as mainframes, high-end Power systems and storage.

Third, software-as-a-service breaks the traditional on-premise software model and could diminish customers' reliance on IBM's middleware and database offerings. We expect IBM to incrementally move into enterprise application software over time to offset long-run pressures on IBM's middleware portfolio, and we believe that IBM is at a competitive disadvantage relative to Oracle and SAP in the application market.

While we believe that cloud computing will pose long-run headwinds, we maintain our view that IBM's sticky hardware and software products, combined with economies of scale in research and new product development, should enable the company to maintain its technological leadership position for a long time.

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Bulls Say/Bears Say

Bulls Say

- Mainframes tend to be popular in the financial services and telecom sectors. Increasing emerging-market investments in these areas provide growth opportunities for the mainframe business.
- IBM has been continually adjusting its product portfolio to focus on the noncommodified portions of IT, enabling the company to generate healthy profits.
- IBM's services relationships provide great insight into customer requirements, which benefits new product development and research initiatives.

Bears Say

- The mainframe's addressable market will shrink as new virtualization technologies enable IT personnel to cost effectively deploy and manage workloads across collections of commodity x86 servers.
- The advent of cloud computing is making large amounts of computing capacity available for rent on-demand and will reduce customers' purchases of IBM's high-end systems.
- Customer appetite for multimillion-dollar IT systems has been dampened by the economic downturn and will not return for a long time.

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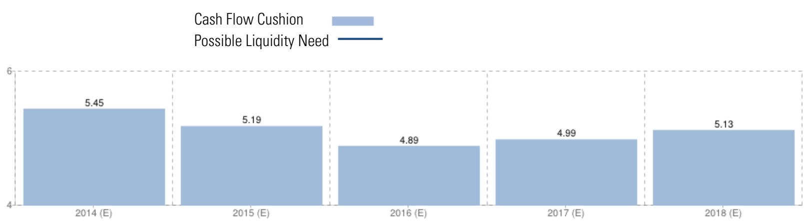
Credit Analysis

Five Year Adjusted Cash Flow Forecast (USD Mil)

	2014(E)	2015(E)	2016(E)	2017(E)	2018(E)
Cash and Equivalents (beginning of period)	11,066	8,967	8,909	8,335	8,585
Adjusted Available Cash Flow	705	2,257	1,747	2,604	2,733
Total Cash Available before Debt Service	11,771	11,224	10,656	10,938	11,318
Principal Payments	—	—	—	—	—
Interest Payments	-437	-440	-437	-434	-431
Other Cash Obligations and Commitments	-1,724	-1,724	-1,741	-1,758	-1,776
Total Cash Obligations and Commitments	-2,161	-2,164	-2,178	-2,193	-2,207

Cumulative Annual Cash Flow Cushion



Adjusted Cash Flow Summary

	USD Millions	% of Commitments
Beginning Cash Balance	11,066	101.5
Sum of 5-Year Adjusted Free Cash Flow	10,046	92.1
Sum of Cash and 5-Year Cash Generation	21,112	193.6
Revolver Availability	—	—
Asset Adjusted Borrowings (Repayment)	—	—
Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments	21,112	193.6
Sum of 5-Year Cash Commitments	-10,902	—

Credit Rating Pillars–Peer Group Comparison

	IBM	Sector	Universe
Business Risk	2	4.5	5.1
Cash Flow Cushion	5	3.8	6.0
Solvency Score	3	3.2	4.7
Distance to Default	3	1.9	3.9
Credit Rating	AA-	A	BBB+

Source: Morningstar Estimates

Note: Scoring is on a scale 1-10, 1 being Best, 10 being Worst

Financial Health & Capital Structure

IBM has a fairly strong balance sheet with roughly $9 billion in cash and equivalents, and about $44 billion in debt as-of March 2014. We note that a large chunk of the debt supports the firm's customer financing operations where IBM targets a 7/1 debt/equity ratio. The firm's free cash flow is roughly 15% of sales and enables it to comfortably service its debt. In April 2013, the board raised the dividend 12% to $0.95 per share per quarter, demonstrating its confidence in the firm's ability to continue generating strong cash flows. The firm has also been returning cash to shareholders through regular share repurchases, totaling more than $50 billion during the last five years.

Enterprise Risk

IBM's high-end computing hardware business (namely mainframes and power systems) faces ever-increasing competitive pressure from commodity x86-based servers. Cloud computing makes vast computing capacity available on-demand and could lower revenue and profit opportunities for IBM's high-end hardware business. IBM's custom, best-of-breed approach to meeting customers' needs is being challenged by Oracle's potentially cheaper integrated solutions that aim to meet 80% of customers' requirements without expensive customization. The firm's limited application software portfolio places it at a competitive disadvantage, relative to Oracle, in delivering integrated business solutions.

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Management & Ownership

Management Activity

Name	Position	Shares Held	Report Date*	InsiderActivity
STEVEN A. MILLS	Other Corporate Officer/Senior VP	153,913	07 May 2014	—
ROBERT J. LEBLANC	Senior VP, Divisional	51,521	25 Aug 2014	7,586
JON C. IWATA	Senior VP, Divisional	36,896	29 Jul 2014	4,000
ERICH CLEMENTI	Senior VP, Divisional	32,337	25 Feb 2014	—
ROBERT J PICCIANO	Senior VP, Divisional	29,989	01 Feb 2014	—
DR. JOHN E. KELLY,III	Other Corporate Officer/Senior VP	28,726	15 Aug 2014	23,321
MR. JAMES P. BRAMANTE	Senior VP, Divisional	28,257	27 Feb 2013	—
BRUNO V. DI LEO ALLEN	Senior VP, Divisional	26,758	14 Feb 2014	—
COLLEEN F. ARNOLD	Senior VP, Divisional	23,849	05 May 2014	—

*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

Fund Ownership

Top Owners	% of Shares Held	% of Fund Assets	Change (k)	Portfolio Date
Vanguard Total Stock Mkt Idx	1.65	0.88	190	31 Aug 2014
Vanguard Five Hundred Index Fund	0.99	1.02	89	31 Aug 2014
Vanguard Institutional Index Fund	0.98	1.03	56	31 Aug 2014
SPDR® S&P 500 ETF	0.97	1.03	25	19 Sep 2014
Vanguard Dividend Appreciation Index	0.50	3.96	-8	31 Aug 2014
Concentrated Holders				
Acatis - Gané Value Event Fonds UI	0.06	9.16	—	31 Aug 2014
KZI Overseas Stocks	—	8.55	0	30 Jun 2014
Assumption/Louisbourg US Equity	—	8.49	8	30 Jun 2014
Patris Valorização FIAA	—	8.38	0	31 Aug 2014
First Trust NASDAQ Technology Div Fd	0.03	7.91	3	19 Sep 2014

Institutional Transactions

Top 5 Buyers	% of Shares Held	% of Fund Assets	Shares Bought/ Sold (k)	Portfolio Date
Stonewall Insurance Company	0.30	17.96	3,171	31 Dec 2013
Berkshire Hathaway Inc	7.03	11.82	1,819	30 Jun 2014
Renaissance Technologies Corp	0.17	0.70	1,447	30 Jun 2014
New Jersey Division of Pensions and Benefits	0.11	0.28	1,420	30 Jun 2010
J.P.Morgan Securities Inc.	0.25	0.86	1,078	30 Jun 2014
Top 5 Sellers				
Wellington Management Company, LLP	0.53	0.26	-3,011	30 Jun 2014
Fisher Asset Management, LLC	0.01	0.04	-3,000	30 Jun 2014
Grantham, Mayo, Van Otterloo & Co., LLC	0.81	3.97	-1,511	30 Jun 2014
Vanguard Group, Inc.	5.39	0.77	-1,218	30 Jun 2014
Cornerstone Investment Partners LLC	—	0.01	-1,029	30 Jun 2014

Management 17 Apr 2014

We view IBM's stewardship of shareholder capital as Exemplary. IBM's management team has adroitly navigated the secular trend toward distributed, open standards computing by diversifying its hardware platforms, broadening its software portfolio, and building a formidable services organization. The result has been solid long-term financial performance. Since 2002, IBM's revenue, gross profit, and operating profit have compounded at annual rates of 3%, 6%, and 12%, respectively, while returns on invested capital have remained firmly above the firm's cost of capital. Other technology firms have grown faster over the past decade, but few technology companies can point to a track record that is as consistent or shareholder-friendly as IBM's.

Virginia M. Rometty took over as CEO of IBM in January 2012 and was added as chairwoman of the board in late 2012. Rometty was formerly senior vice president and group executive for sales, marketing, and strategy and has been with the company since 1981. Rometty stated early in her tenure as CEO her intention to continue to execute to IBM's long-run operating strategy of shifting its portfolio to higher-value software and services. Additionally, IBM's board of directors has stated that it expects the firm to generate at least $20 per share in non-GAAP earnings in 2015, and that the board plans to repurchase $50 billion of stock and pay out $20 billion in dividends to shareholders through 2015. Management's historical track record of achieving its stated long-run targets and the board's transparency relating to IBM's future strategic and financial road maps lead us to assign the firm an Exemplary stewardship rating.

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Analyst Notes

Two 'Gold Standards'? IBM Strikes Partnership With Apple; Incremental Long-Term Positive 15 Jul 2014
After Tuesday's market close, Apple and IBM announced an exclusive partnership to further promote and deliver iOS to the enterprise customer. The arrangement is designed to bring IBM’s big data and analytics to iOS, develop over 100 industry-specific enterprise apps and solutions built solely for iOS devices, and allow Apple to leverage IBM’s sales force and enterprise customer relationships into additional iPhone and iPad device sales to corporations.

Our DCF-based valuation for IBM remains at $212 per share, as does our wide economic moat rating, though we view the partnership as an incremental positive. IBM faces a number of headwinds, but we continue to believe that shares are fundamentally undervalued

From IBM's perspective, the cornerstone of the agreement will be its new MobileFirst for iOS solution, which we believe could be a catalyst that spurs growth (and monetizes) the ongoing shift towards BYOD in the workplace. Both senior leaders talked about this being a partnership between the two "gold standards," IBM on the enterprise side, and Apple on the consumer/device side. IBM CEO Virginia Rometty was quick to tout three strategic features that it brings to the partnership; strength in (1) analytics, (2) security, and (3) cloud.

IBM has built a $16 billion big data and analytics business. Given management's plan to commercialize its Watson project (as announced earlier this year), this deal with Apple fits right in. With the goal of bringing predictive and analytical (big data) tools to the enterprise user, a significant new market could slowly materialize for IBM, and help the firm achieve its long-term target of turning Watson into a $10 billion business by itself.

On security, we wholeheartedly agree that this has been a major inhibitor of some mobile enterprise deals, but IBM's QRadar product has proven to perform well, and is ranked in the "Leaders" quadrant by third party research provider Gartner. IBM's security business has been growing at a double-digit rate. If this arrangement works out, we see further sustained growth through the next five years, at least.

In cloud, we think IBM is well-positioned, but it's a competitive marketplace, and this deal with Apple may be the extra jolt that it needs. With IBM's cloud business growing at a 70% clip, and the overall cloud market expected to grow at more than 20% annually over the next five years, IBM has a stronger marketing hand to play, but we like the recurring service-based nature of the contract (even if it is at potentially lower margin).

Apple should clearly benefit from the partnership by leveraging IBM’s sales force and enterprise customer relations to sell even more iPhone and iPads to corporations. Meanwhile, by lending its expertise in building and customizing native iOS apps to IBM, Apple may also collect a portion of any high-margin service revenue earned by IBM from enterprise customers.

Finally, we view Apple’s assistance in building "made-for-business" apps in the same vein as recently announced HealthKit and HomeKit for iOS 8, where Apple hopes to build the iOS ecosystem to the point where it is a central hub used to manage a variety of software, services and other outside devices.

IBM has carved out a wide economic moat, and Ms. Rometty appears to be charting her own course as CEO (just as Mr. Cook is doing at Apple). The business today already looks quite different than the one she inherited just a few short years ago. While there have been questions surrounding the firm's hardware business and lagging services

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Analyst Notes

performance, we think there's enough to get excited about at IBM over the medium-term.

We don't expect consolidated revenues to grow at much more than a GDP rate, but business mix shift towards software, plus incremental efficiency and enhancements, should translate into healthy margin expansion over time. If management executes to plan, we think adjusted diluted EPS can grow at a double-digit rate, on average, and with shares trading in 4-star territory (and offering a 2.3% dividend yield, long-term investors should be rewarded.

IBM to Invest $3 Billion in Chip Research to Support Cloud and Analytics Growth 10 Jul 2014
Late Wednesday, IBM announced that it will focus a larger percentage of its already sizable research and development budget on programs that seek to address some of the physical challenges of current semiconductor manufacturing. The total expected investment is expected to be $3 billion over the next five years, and our response is neutral to generally favorable. Even if this investment is incremental to the firm's existing $6 billion annual R&D budget, adding this slug over five years doesn't move the needle on our $212 fair value estimate.

We reiterate our wide economic moat rating, as we continue to believe that IBM's intangible assets and switching costs should help to drive economic profits for an extended period. Although this new chip initiative could pay off handsomely and support the moat, IBM is not alone in looking for unique and innovative ways to keep pace with Moore's Law. The announcement referenced so-called "7 nanometer and beyond" silicon technology; put in perspective, 7nm technology is three generations of manufacturing into the future from IBM's current flagship processor, the Power8, built with a 22nm process. This is a medium-term bet on management's strategy and the capability of IBM's engineers, which is really difficult to quantify at this point. While Intel has talked about 5nm manufacturing and Applied Materials has even mentioned 3nm, the headwinds are formidable and a lot of the work is exploratory at this point. Importantly, we don't view IBM as making these investments to sit in the mainstream of chips and, if successful, the leading-edge products may only find a home in the premium niche, which means that it probably won't move the needle on our valuation.

One key risk, in our view, is if IBM has assumed some level of success from these programs in its strategic growth expectations, whether cloud or Big Data, which are projected to grow at 25% and 6% annually through 2017. We project IBM's consolidated top line to grow at roughly 2.5% per year over the next five years, so the hurdle is seemingly low. However, we also bake in a fair amount of success of IBM's cloud and analytics initiatives, especially on the incremental margin line, so any material disconnect between expectations of future technological breakthroughs and reality could negatively affect cash flow. That said, for a company that we expect to achieve double-digit earnings per share growth for the next few years, even if driven by below-the-line items and buybacks, the 2.3% dividend yield is fairly attractive, as is valuation (at 10.5 times our 2015 adjusted earnings estimate), and we view the shares as fundamentally undervalued.

IBM's Investor Day Is Sufficient as Firm Continues to Navigate Challenging Marketplace 15 May 2014
We attended IBM's investor briefing in New York on Wednesday, and while we believe management has laid out a realistic long-term vision and is reasonably well positioned, the firm still faces some headwinds. The session could be summarized in a single word, "sufficient"--the same one that CFO Martin Schroeter used to describe the firm's free cash flow realization goal. In a vacuum, the free cash flow conversion rate of 90%-plus could be viewed as quite good, yet when compared with the firm's historical performance over a 3- and 10-year period (102% and 110%,

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Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
193.11 USD	212.00 USD	148.40 USD	286.20 USD	Medium	Wide	Negative	Exemplary	AA-	Application Software

Analyst Notes

respectively), the statement loses some of its luster. There is no update to our financial model or wide economic moat rating following this meeting, and we view the shares as undervalued relative to our $212 fair value estimate, but still in 3-star territory.

Overall, there were few surprises in IBM's presentation, and management appears to be tweaking its strategy at most. The three overarching themes of data, cloud IT, and engagement were outlined clearly, but management was also frank about some of the challenges that it faces (China and other growth markets and hardware, in particular). From our perspective, IBM's economic moat is derived from switching costs and intangibles that are present in each of the firm's three primary segments (software, services, and hardware). However, it's the combination of these businesses that provides IBM with economies of scale in product development and distribution and an edge in acquiring new customers that reinforces the wide moat around the company.

For IBM, the path to becoming a software and services-based enterprise has been long and choppy at times, but as management prudently invests and executes on its initiatives, we think there is still an opportunity to gain share. We do have questions about how IBM's long-term top line will compare with peers or certain market segment opportunities (some projections called for double-digit four-year compound annual growth rates), and we don't bake much organic revenue growth into our base-case model. However, we think strategic moves like leveraging the SoftLayer acquisition across functions, moving middleware to the cloud (BlueMix), and commercializing Watson have huge potential. Similarly, even though a business is mature, IBM is one of a handful of firms with the resources to consistently reinvent and leverage existing products and services to drive further cash flow. On the flip side, we like that management remains focused on returns and isn't afraid to divest itself of a noncore business if criteria aren't met. This has happened before and it will most likely happen again.

Management reiterated its intention to deliver $20 per share in non-GAAP operating earnings per share in 2015 and provided a walk-through of the moving parts. Like some others, we still sit slightly (2%) below management's goal, but the timing and magnitude of nonoperating items such as share repurchases and tax headwinds are factors (both positive and negative) that we're generally willing to look past. We still like IBM's cash flow profile, and while top-line growth has been hard to come by, we don't discount the firm's ability to carve out incremental efficiencies and drive solid operating profit growth over the medium term.

IBM's Announced 16% Dividend Hike a Bit Higher Than we Expected; Capital Allocation Remains in Focus 29 Apr 2014

Today, IBM announced a 15.8% increase to its quarterly dividend, to $1.10 from $0.95 previously, which was slightly above our expectation of a 10% hike. With its 19th annual increase, IBM's payout ratio ticks slightly above 25%, from 20% just a few years ago, and should bring the annual dividend payment to nearly $4.4 billion. There is no change to our fair value estimate or wide moat based on today's release. However, as the firm preps for its investor day in mid-May, we continue to believe that management's capital allocation strategy will (even if indirectly) remain in focus.

As IBM navigates the shift to becoming more of a specialized, software-based service provider, we generally agree with the strategic bets that the firm is making, with its smarter planet, growth markets, business analytics, and cloud/data center initiatives. However, at a time the firm is generating an estimated $17 billion in free cash annually but spending $6 billion and $4 billion on R&D and capital expenditures, respectively, we believe that many investors are hoping for these investments to result in more than low-

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single-digit top-line growth over the medium term.

At the meeting in a couple of weeks, we expect to hear how prior investments are gaining traction, more about the IBM growth road map (specifically in growth markets and cloud), and the firm's capital allocation plans. In short, a fair portion of our DCF-based valuation for IBM considers variables such as leverage, normalized earnings before interest, or EBI, growth, and return on new invested capital, or RONIC. Based on what we hear at that meeting, it may help to decipher why a 16% increase in the annual dividend was the appropriate move this year. We agree with the notion that a firm should not invest if it can't generate an adequate return on a particular project. However, with five-year average ROICs in excess of 35%, some investors may be interested in the decision to commit to anything more than a nominal increase in the dividend, rather than the seeing the payout ratio push closer to 30% (which is what we assume four years from now).

From our perspective, shares of IBM appear modestly undervalued, but this is a very large enterprise, and it's been admittedly difficult to get each of the segments headed in the same (forward) direction. In order to unlock incremental value and have the stock gravitate more towards our bull-case scenario (and a valuation closer to $270 per share), we'll be looking for signs of share gains in cloud and analytics, strength in growth markets (resulting in consolidated top-line growth of 4% per year) and incremental margin gains (led by software) to drive operating margins in the 25% range over the medium term.

Path to Top-Line Growth Still Unclear Following IBM's Mixed 1Q Results; no Change to Our View 17 Apr 2014
IBM again posted mixed results for its first quarter, and while the firm continues to invest in high-potential areas, growth has been uneven at best, and some investors were likely disappointed in the print. As we roll our financial model there may be a modest increase our fair value estimate, due to time value of money. However, the overarching story remains the same and we consider any tweaks to our projections based on the quarter and management's commentary to be negligible at this point. Our wide moat and negative trend ratings remain intact. We expect to hear more about the firm's software strategy and its evolving role in hardware at the analyst/investor day next month, but from our perspective, we believe that our medium-term financial projections (2% top-line and 3% annualized pretax profit growth) are achievable and shares appear roughly 10% undervalued.

First-quarter revenue slipped to $22.5 billion, down 4% year over year, (off 1% excluding divestitures), and while there were some bright spots across software this quarter (including middleware), services wasn't particularly clean, and systems and technology were a drag on the top line. We think that IBM is charting an appropriate path in software, and it was encouraging to see the reported first-quarter annual run rate of $2.3 billion for cloud (up 100% year over year), for example. However, with some clients on the service side becoming more selective with "electives" and seeking pricing concessions on some lower-value-add contracts, and hardware yet to find a floor, it's clear that the company still faces revenue challenges. Overall profitability was generally in line with expectations, as nongross margin gains (up 90 basis points year over year, owing largely to mix benefits) and slightly lower R&D expenses were offset by the planned $870 million work force rebalancing hit in the quarter. All-in, IBM reported non-GAAP diluted EPS of $2.54, down from $3.00 in the prior-year period.

Similarly, free cash flow excluding finance receivables took a hit in the quarter and was down $1.1 billion to $600 million. Although the cash flow contribution was in line with management's initial outlook, there were plenty of questions surrounding the firm's ability to make up the

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Analyst Notes

difference over the balance of the year. We agree that there are opportunities in working capital (accounts receivable) and the mainframe cycle (more remote microcode activations), alongside the expected payback of the work force rebalancing charge (not to mention general seasonality of cash flows), but there is clearly some skepticism in the marketplace. Given the firm's inability to generate meaningful operating income growth in the current environment, management will need to remain creative and pull additional levers, like share repurchases (which it did in the first quarter, buying back $8.2 billion) in order to achieve its 2015 non-GAAP earnings target of $20 per share.

Taking a step back, we believe that the long-term IBM story still hinges largely on the firm's evolution toward a software-led business model. Conceptually, this means that the firm would not only be able to take advantage of secular trends such as social, mobile, cloud, and analytics (consistent with management's roadmap objectives), which should drive the top line over time. However, the added benefit should also be higher gross profit margins and better fixed-cost leverage, which is being heavily discounted in the marketplace, in our view. Still, the long-range hardware business outlook remains somewhat hazy, and this has ties to and implications for both the software and services segment, so we'll continue to keep an eye on this segment despite its (optically) smaller revenue and profit contribution.

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Morningstar Analyst Forecasts

Financial Summary and Forecasts

Fiscal Year Ends in December

Growth (% YoY)	3-Year Hist. CAGR	2011	2012	2013	*2014* (Forecast)	*2015* (Forecast)	*5-Year Proj. CAGR*
Revenue	*0.0*	7.1	-2.3	-4.6	*-1.2*	*1.5*	*1.5*
EBIT	*-0.3*	6.5	4.5	-10.9	*9.4*	*5.1*	*4.9*
EBITDA	*-0.4*	5.2	3.2	-9.0	*6.6*	*4.5*	*4.1*
Net Income	*6.6*	6.9	11.2	1.9	*0.7*	*2.0*	*2.5*
Diluted EPS	*12.2*	13.4	16.8	6.7	*8.6*	*6.6*	*8.2*
Earnings Before Interest, after Tax	*-7.0*	3.8	0.3	-22.7	*30.9*	*1.8*	*8.1*
Free Cash Flow	*-9.1*	42.6	-16.4	-37.0	*123.1*	*8.1*	*21.1*

Profitability	3-Year Hist. Avg	2011	2012	2013	*2014*	*2015*	*5-Year Proj. Avg*
Operating Margin %	*20.5*	20.0	21.4	20.0	*22.1*	*22.9*	*23.1*
EBITDA Margin %	*25.0*	24.5	25.9	24.7	*26.6*	*27.4*	*27.6*
Net Margin %	*16.6*	14.8	16.9	18.0	*18.3*	*18.4*	*18.7*
Free Cash Flow Margin %	*10.7*	13.2	11.3	7.5	*16.9*	*18.0*	*17.6*
ROIC %	*29.0*	32.5	31.1	23.4	*31.4*	*32.2*	*33.3*
Adjusted ROIC %	*40.3*	42.8	43.9	34.3	*47.1*	*48.8*	*50.7*
Return on Assets %	*13.9*	14.2	14.1	13.4	*13.7*	*14.1*	*14.5*
Return on Equity %	*79.5*	74.1	85.2	79.2	*76.8*	*79.7*	*78.2*

Leverage	3-Year Hist. Avg	2011	2012	2013	*2014*	*2015*	*5-Year Proj. Avg*
Debt/Capital	*0.63*	0.61	0.64	0.64	*0.65*	*0.64*	*0.62*
Total Debt/EBITDA	*1.35*	1.20	1.23	1.61	*1.51*	*1.41*	*1.34*
EBITDA/Interest Expense	*61.33*	63.77	59.03	61.20	*60.04*	*62.27*	*64.95*

Valuation Summary and Forecasts

	2012	2013	*2014(E)*	*2015(E)*
Price/Fair Value	0.99	0.90	—	—
Price/Earnings	12.6	11.5	*10.9*	*10.2*
EV/EBITDA	8.7	9.2	*8.7*	*8.4*
EV/EBIT	10.6	11.4	*10.5*	*10.0*
Free Cash Flow Yield %	7.2	7.0	*10.0*	*9.6*
Dividend Yield %	1.8	2.1	*2.3*	*2.4*

Key Valuation Drivers

Cost of Equity %	10.0
Pre-Tax Cost of Debt %	1.5
Weighted Average Cost of Capital %	8.7
Long-Run Tax Rate %	22.0
Stage II EBI Growth Rate %	3.2
Stage II Investment Rate %	20.0
Perpetuity Year	20

Additional estimates and scenarios available for download at http://select.morningstar.com.

Discounted Cash Flow Valuation

	USD Mil	Firm Value (%)	Per Share Value
Present Value Stage I	70,636	27.4	70.42
Present Value Stage II	111,885	43.4	111.54
Present Value Stage III	75,341	29.2	75.11
Total Firm Value	**257,861**	**100.0**	**257.07**
Cash and Equivalents	11,066	—	11.03
Debt	-39,718	—	-39.60
Preferred Stock	—	—	—
Other Adjustments	-20,860	—	-20.80
Equity Value	**208,350**	**—**	**207.71**
Projected Diluted Shares	1,003		
Fair Value per Share (USD)	—		

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.

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Morningstar Analyst Forecasts

Income Statement (USD Mil)

Fiscal Year Ends in December

				Forecast	
	2011	2012	2013	*2014*	*2015*
Revenue	**106,916**	**104,507**	**99,751**	***98,554***	***100,032***
Cost of Goods Sold	56,778	54,209	51,246	*48,883*	*49,116*
Gross Profit	**50,138**	**50,298**	**48,505**	***49,671***	***50,916***
Selling, General & Administrative Expenses	23,594	23,553	23,502	*23,121*	*23,268*
Research & Development	6,258	6,302	6,226	*5,954*	*5,943*
Other Operating Expense (Income)	-1,108	-1,917	-1,149	*-1,200*	*-1,200*
Depreciation & Amortization (if reported separately)	—	—	—	—	—
Operating Income (ex charges)	**21,394**	**22,360**	**19,926**	***21,796***	***22,905***
Restructuring & Other Cash Charges	—	—	—	—	—
Impairment Charges (if reported separately)	—	—	—	—	—
Other Non-Cash (Income)/Charges	—	—	—	—	—
Operating Income (incl charges)	**21,394**	**22,360**	**19,926**	***21,796***	***22,905***
Interest Expense	411	458	402	*437*	*440*
Interest Income	20	—	—	—	—
Pre-Tax Income	**21,003**	**21,902**	**19,524**	***21,359***	***22,465***
Income Tax Expense	5,148	5,298	3,041	*4,385*	*5,167*
Other After-Tax Cash Gains (Losses)	—	—	—	—	—
Other After-Tax Non-Cash Gains (Losses)	—	—	—	—	—
(Minority Interest)	—	—	—	—	—
(Preferred Dividends)	—	—	—	—	—
Net Income	**15,855**	**16,604**	**16,483**	***16,974***	***17,298***
Weighted Average Diluted Shares Outstanding	1,214	1,155	1,103	*1,022*	*978*
Diluted Earnings Per Share	**13.06**	**14.37**	**14.94**	***16.60***	***17.68***
Adjusted Net Income	15,855	17,624	17,958	*18,079*	*18,445*
Diluted Earnings Per Share (Adjusted)	**13.06**	**15.25**	**16.28**	***17.68***	***18.86***
Dividends Per Common Share	2.62	3.27	3.68	*4.27*	*4.78*
EBITDA	**26,209**	**27,036**	**24,604**	***26,231***	***27,406***
Adjusted EBITDA	**26,209**	**27,036**	**24,604**	***26,231***	***27,406***

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Morningstar Analyst Forecasts

Balance Sheet (USD Mil)

Fiscal Year Ends in December

				Forecast	
	2011	2012	2013	*2014*	*2015*
Cash and Equivalents	11,922	11,129	11,066	*8,967*	*8,909*
Investments	—	—	—	—	—
Accounts Receivable	29,561	30,578	31,836	*30,145*	*30,323*
Inventory	2,595	2,287	2,310	*2,133*	*2,179*
Deferred Tax Assets (Current)	—	—	—	—	—
Other Short Term Assets	6,850	5,439	6,139	*5,836*	*5,762*
Current Assets	**50,928**	**49,433**	**51,351**	***47,081***	***47,173***
Net Property Plant, and Equipment	13,883	13,996	13,821	*14,758*	*15,708*
Goodwill	26,213	29,247	31,184	*31,584*	*31,984*
Other Intangibles	3,392	3,787	3,871	*3,188*	*2,488*
Deferred Tax Assets (Long-Term)	3,503	3,973	3,051	*3,020*	*2,990*
Other Long-Term Operating Assets	4,895	5,021	4,639	*4,610*	*4,666*
Long-Term Non-Operating Assets	13,619	13,756	18,306	*18,306*	*18,306*
Total Assets	**116,433**	**119,213**	**126,223**	***122,548***	***123,315***
Accounts Payable	8,517	7,952	7,461	*7,144*	*7,164*
Short-Term Debt	8,463	9,181	6,862	*6,862*	*6,862*
Deferred Tax Liabilities (Current)	—	4,948	4,633	*4,633*	*4,633*
Other Short-Term Liabilities	25,143	21,544	21,198	*20,630*	*20,940*
Current Liabilities	**42,123**	**43,625**	**40,154**	***39,269***	***39,599***
Long-Term Debt	22,857	24,088	32,856	*32,856*	*31,856*
Deferred Tax Liabilities (Long-Term)	—	—	—	—	—
Other Long-Term Operating Liabilities	12,843	12,098	14,042	*12,641*	*13,456*
Long-Term Non-Operating Liabilities	18,374	20,418	16,242	*16,242*	*16,242*
Total Liabilities	**96,197**	**100,229**	**103,294**	***101,008***	***101,153***
Preferred Stock	—	—	—	—	—
Common Stock	48,129	50,110	51,594	*51,594*	*51,594*
Additional Paid-in Capital	—	—	—	—	—
Retained Earnings (Deficit)	104,857	117,640	130,042	*142,653*	*155,275*
(Treasury Stock)	-110,963	-123,131	-137,242	*-151,242*	*-163,242*
Other Equity	-21,884	-25,759	-21,602	*-21,602*	*-21,602*
Shareholder's Equity	**20,139**	**18,860**	**22,792**	***21,403***	***22,025***
Minority Interest	97	124	137	*137*	*137*
Total Equity	**20,236**	**18,984**	**22,929**	***21,540***	***22,162***

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Morningstar Analyst Forecasts

Cash Flow (USD Mil)

Fiscal Year Ends in December	2011	2012	2013	*Forecast 2014*	*Forecast 2015*
Net Income	15,855	16,604	16,483	*16,974*	*17,298*
Depreciation	3,589	3,392	3,327	*3,252*	*3,301*
Amortization	1,226	1,284	1,351	*1,183*	*1,200*
Stock-Based Compensation	697	688	614	*654*	*649*
Impairment of Goodwill	—	—	—	—	—
Impairment of Other Intangibles	—	—	—	—	—
Deferred Taxes	1,212	797	-1,610	*31*	*30*
Other Non-Cash Adjustments	-342	-729	-236	—	—
(Increase) Decrease in Accounts Receivable	-1,279	-2,230	-1,407	*1,691*	*-178*
(Increase) Decrease in Inventory	-163	280	-57	*177*	*-46*
Change in Other Short-Term Assets	—	—	—	*353*	*124*
Increase (Decrease) in Accounts Payable	451	-500	-529	*-317*	*21*
Change in Other Short-Term Liabilities	-1,400	—	-453	*-568*	*309*
Cash From Operations	**19,846**	**19,586**	**17,483**	***23,429***	***22,709***
(Capital Expenditures)	-4,108	-4,082	-3,623	*-4,139*	*-4,201*
Net (Acquisitions), Asset Sales, and Disposals	-1,203	-3,348	-2,759	*-1,000*	*-1,000*
Net Sales (Purchases) of Investments	—	-1,574	265	—	—
Other Investing Cash Flows	—	—	-1,208	*-1,372*	*759*
Cash From Investing	**-5,311**	**-9,004**	**-7,325**	***-6,511***	***-4,442***
Common Stock Issuance (or Repurchase)	-11,601	-10,455	-12,785	*-14,000*	*-12,000*
Common Stock (Dividends)	-3,177	-3,773	-4,058	*-4,363*	*-4,676*
Short-Term Debt Issuance (or Retirement)	817	-441	621	—	—
Long-Term Debt Issuance (or Retirement)	1,533	2,693	6,340	—	*-1,000*
Other Financing Cash Flows	—	—	—	*-654*	*-649*
Cash From Financing	**-12,428**	**-11,976**	**-9,882**	***-19,017***	***-18,325***
Exchange Rates, Discontinued Ops, etc. (net)	-135	-117	28	—	—
Net Change in Cash	**1,972**	**-1,511**	**304**	***-2,099***	***-58***

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Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Valuation Analysis

Company/Ticker	Price/Fair Value	Price/Earnings 2013	2014(E)	2015(E)	EV/EBITDA 2013	2014(E)	2015(E)	Price/Free Cash Flow 2013	2014(E)	2015(E)	Price/Book 2013	2014(E)	2015(E)	Price/Sales 2013	2014(E)	2015(E)
Oracle Corporation ORCL USA	0.94	12.7	*14.6*	*12.7*	8.2	*9.7*	*8.7*	11.6	*13.1*	*12.2*	3.5	*4.0*	*3.6*	4.2	*4.9*	*4.4*
Cisco Systems Inc CSCO USA	0.96	12.7	*12.1*	*12.2*	7.4	*7.7*	*7.1*	11.8	*11.5*	*11.3*	2.3	*2.2*	*2.2*	2.8	*2.7*	*2.6*
Hewlett-Packard Co HPQ USA	1.26	8.0	*10.0*	*9.1*	4.5	*5.7*	*5.8*	5.5	*10.6*	*9.6*	1.7	*2.2*	*1.9*	0.4	*0.6*	*0.6*
EMC Corp EMC USA	1.14	13.6	*15.6*	*13.3*	7.8	*9.8*	*8.9*	9.2	*14.7*	*11.4*	2.3	*2.7*	*2.8*	2.2	*2.4*	*2.3*
Accenture PLC ACN USA	0.98	17.2	*17.5*	*16.0*	9.1	*9.9*	*9.3*	16.4	*16.4*	*11.5*	9.7	*10.8*	*9.9*	1.7	*1.8*	*1.7*
Average		12.8	*14.0*	*12.7*	7.4	*8.6*	*8.0*	10.9	*13.3*	*11.2*	3.9	*4.4*	*4.1*	2.3	*2.5*	*2.3*
International Business Machines	**0.91**	**11.5**	***10.9***	***10.2***	**9.2**	***8.7***	***8.4***	**14.3**	***10.0***	***10.4***	**8.7**	***9.0***	***8.7***	**2.0**	***2.0***	***1.9***

Returns Analysis

Company/Ticker	Last Historical Year Total Assets (Mil)	ROIC % 2013	2014(E)	2015(E)	Adjusted ROIC % 2013	2014(E)	2015(E)	Return on Equity % 2013	2014(E)	2015(E)	Return on Assets % 2013	2014(E)	2015(E)	Dividend Yield % 2013	2014(E)	2015(E)
Oracle Corporation ORCL USA	— USD	22.3	*20.3*	*20.1*	39.3	*35.4*	*37.0*	24.7	*23.9*	*25.1*	13.6	*12.7*	*13.1*	0.9	*1.2*	*1.4*
Cisco Systems Inc CSCO USA	— USD	14.6	*9.9*	*13.0*	29.6	*20.1*	*26.6*	18.1	*13.6*	*14.9*	10.4	*7.6*	*8.0*	2.4	*3.0*	*3.4*
Hewlett-Packard Co HPQ USA	105,676 USD	16.7	*13.8*	*13.2*	30.9	*25.1*	*23.6*	20.6	*18.1*	*17.1*	4.8	*5.0*	*5.3*	2.4	*1.6*	*1.6*
EMC Corp EMC USA	45,849 USD	9.6	*10.9*	*11.8*	13.3	*14.2*	*15.0*	12.9	*12.7*	*14.7*	6.9	*6.2*	*7.1*	0.8	*1.4*	*1.3*
Accenture PLC ACN USA	16,867 USD	49.8	*58.7*	*63.3*	74.1	*92.0*	*103.5*	71.2	*64.5*	*65.9*	19.3	*19.0*	*19.6*	2.3	*2.4*	*2.7*
Average		22.6	*22.7*	*24.3*	37.4	*37.4*	*41.1*	29.5	*26.6*	*27.5*	11.0	*10.1*	*10.6*	1.8	*1.9*	*2.1*
International Business Machines	**126,223** USD	**23.4**	***31.4***	***32.2***	**34.3**	***47.1***	***48.8***	**79.2**	***76.8***	***79.7***	**13.4**	***13.7***	***14.1***	**2.1**	***2.3***	***2.4***

Growth Analysis

Company/Ticker	Last Historical Year Revenue (Mil)	Revenue Growth % 2013	2014(E)	2015(E)	EBIT Growth % 2013	2014(E)	2015(E)	EPS Growth % 2013	2014(E)	2015(E)	Free Cash Flow Growth % 2013	2014(E)	2015(E)	Dividend/Share Growth % 2013	2014(E)	2015(E)
Oracle Corporation ORCL USA	37,180 USD	-0.1	*3.0*	*4.1*	1.9	*3.8*	*7.0*	8.0	*7.3*	*8.2*	19.7	*7.0*	*-0.4*	25.0	*60.0*	*13.6*
Cisco Systems Inc CSCO USA	48,607 USD	5.5	*-3.0*	*2.1*	8.8	*-14.2*	*12.3*	9.0	*1.9*	*-1.0*	-54.3	*71.5*	*29.1*	—	—	—
Hewlett-Packard Co HPQ USA	112,298 USD	-6.7	*-1.0*	*-1.5*	-12.3	*0.8*	*1.9*	-32.9	*20.8*	*9.1*	17.3	*-30.6*	*2.2*	10.2	—	—
EMC Corp EMC USA	23,222 USD	6.9	*5.9*	*7.0*	7.4	*-1.7*	*14.0*	8.3	*3.1*	*17.1*	76.4	*-50.4*	*109.1*	—	—	—
Accenture PLC ACN USA	28,563 USD	2.5	*4.3*	*5.6*	5.0	*5.5*	*6.4*	9.5	*7.6*	*9.1*	-68.6	*101.1*	*58.7*	20.2	*15.0*	*15.0*
Average		1.6	*1.8*	*3.5*	2.2	*-1.2*	*8.3*	0.4	*8.1*	*8.5*	-1.9	*19.7*	*39.7*	18.5	*37.5*	*14.3*
International Business Machines	**99,751** USD	**-4.6**	***-1.2***	***1.5***	**-10.9**	***9.4***	***5.1***	**6.7**	***8.6***	***6.6***	**-37.0**	***123.1***	***8.1***	**12.7**	***16.0***	***12.0***

International Business Machines Corp IBM (NYSE) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
193.11 USD	212.00 USD	148.40 USD	286.20 USD	Medium	Wide	Negative	Exemplary	AA-	Application Software

Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

Profitability Analysis

Company/Ticker	Last Historical Year Net Income (Mil)	Gross Margin % 2013	2014(E)	2015(E)	EBITDA Margin % 2013	2014(E)	2015(E)	Operating Margin % 2013	2014(E)	2015(E)	Net Margin % 2013	2014(E)	2015(E)	Free Cash Flow Margin % 2013	2014(E)	2015(E)
Oracle Corporation ORCL USA	12,957 USD	80.9	*81.1*	*81.8*	46.7	*46.7*	*46.6*	38.8	*39.2*	*40.3*	34.9	*34.5*	*36.0*	36.5	*37.5*	*36.3*
Cisco Systems Inc CSCO USA	10,866 USD	60.6	*58.9*	*60.3*	28.9	*26.5*	*28.2*	24.1	*21.3*	*23.4*	22.4	*23.0*	*22.1*	24.1	*23.5*	*23.4*
Hewlett-Packard Co HPQ USA	5,908 USD	23.1	*23.4*	*23.9*	11.4	*11.6*	*11.5*	7.3	*7.4*	*7.6*	5.3	*6.4*	*7.0*	7.5	*5.8*	*6.5*
EMC Corp EMC USA	3,986 USD	62.3	*62.5*	*63.0*	26.0	*24.0*	*24.7*	18.8	*17.5*	*18.6*	17.2	*16.0*	*16.7*	23.8	*16.7*	*20.1*
Accenture PLC ACN USA	2,999 USD	32.9	*32.5*	*33.0*	16.3	*16.4*	*16.5*	14.2	*14.4*	*14.5*	10.5	*10.6*	*10.6*	10.3	*10.7*	*14.4*
Average		52.0	*51.7*	*52.4*	25.9	*25.0*	*25.5*	20.6	*20.0*	*20.9*	18.1	*18.1*	*18.5*	20.4	*18.8*	*20.1*
International Business Machines	**17,958** USD	**48.6**	***50.4***	***50.9***	**24.7**	***26.6***	***27.4***	**20.0**	***22.1***	***22.9***	**18.0**	***18.3***	***18.4***	**13.9**	***19.6***	***18.5***

Leverage Analysis

Company/Ticker	Last Historical Year Total Debt (Mil)	Debt/Equity % 2013	2014(E)	2015(E)	Debt/Total Cap % 2013	2014(E)	2015(E)	EBITDA/Interest Exp. 2013	2014(E)	2015(E)	Total Debt/EBITDA 2013	2014(E)	2015(E)	Assets/Equity 2013	2014(E)	2015(E)
Oracle Corporation ORCL USA	18,494 USD	41.4	*48.3*	*46.5*	29.3	*32.6*	*31.7*	21.8	*19.6*	*28.1*	1.1	*1.3*	*1.2*	1.8	*1.9*	*1.9*
Cisco Systems Inc CSCO USA	16,211 USD	27.4	*36.9*	*35.7*	21.5	*27.0*	*26.3*	24.1	*22.1*	*17.8*	1.2	*1.7*	*1.5*	1.7	*1.9*	*1.8*
Hewlett-Packard Co HPQ USA	22,587 USD	82.8	*66.6*	*53.2*	45.3	*40.0*	*34.7*	20.5	*21.9*	*23.5*	1.8	*1.6*	*1.5*	3.9	*3.4*	*3.1*
EMC Corp EMC USA	7,159 USD	32.1	*32.4*	*33.3*	24.3	*24.5*	*25.0*	38.7	*23.6*	*26.0*	1.2	*1.2*	*1.1*	2.1	*2.0*	*2.1*
Accenture PLC ACN USA	26 USD	0.5	*0.5*	*0.5*	0.5	*0.5*	*0.5*	332.0	*348.2*	*370.1*	0.0	*0.0*	*0.0*	3.4	*3.4*	*3.3*
Average		36.8	*36.9*	*33.8*	24.2	*24.9*	*23.6*	87.4	*87.1*	*93.1*	1.1	*1.2*	*1.1*	2.6	*2.5*	*2.4*
International Business Machines	**39,718** USD	**174.3**	***185.6***	***175.8***	**63.5**	***65.0***	***63.7***	**61.2**	***60.0***	***62.3***	**1.6**	***1.5***	***1.4***	**5.5**	***5.7***	***5.6***

Liquidity Analysis

Company/Ticker	Market Cap (Mil)	Cash per Share 2013	2014(E)	2015(E)	Current Ratio 2013	2014(E)	2015(E)	Quick Ratio 2013	2014(E)	2015(E)	Cash/Short-Term Debt 2013	2014(E)	2015(E)	Payout Ratio % 2013	2014(E)	2015(E)
Oracle Corporation ORCL USA	176,325 USD	3.02	*3.86*	*3.86*	3.24	*3.35*	*3.37*	3.22	*3.33*	*3.36*	—	—	—	13.3	*20.2*	*21.0*
Cisco Systems Inc CSCO USA	127,327 USD	9.41	*9.86*	*9.99*	2.95	*3.39*	*2.88*	2.89	*3.31*	*2.81*	15.42	*102.51*	*13.53*	33.2	*47.9*	*51.1*
Hewlett-Packard Co HPQ USA	68,063 USD	6.24	*7.04*	*8.12*	1.11	*1.19*	*1.24*	0.97	*1.05*	*1.10*	2.03	*2.72*	*3.11*	21.6	*20.8*	*19.2*
EMC Corp EMC USA	60,211 USD	8.14	*7.80*	*7.94*	2.05	*2.01*	*1.85*	1.94	*1.89*	*1.73*	10.56	*9.69*	*9.40*	22.4	*29.4*	*24.8*
Accenture PLC ACN USA	52,281 USD	7.90	*6.30*	*7.03*	1.45	*1.40*	*1.40*	1.45	*1.40*	*1.40*	—	—	—	34.6	*40.0*	*42.1*
Average		6.94	*6.97*	*7.39*	2.16	*2.27*	*2.15*	2.09	*2.20*	*2.08*	9.34	*38.31*	*8.68*	25.0	*31.7*	*31.6*
International Business Machines	**192,645** USD	**10.03**	***8.77***	***9.11***	**1.28**	***1.20***	***1.19***	**1.22**	***1.14***	***1.14***	**1.61**	***1.31***	***1.30***	**24.6**	***25.7***	***27.0***

Research Methodology for Valuing Companies

Components of Our Methodology
- Economic Moat™ Rating
- Moat Trend™ Rating
- Moat Valuation
- Three-Stage Discounted Cash Flow
- Weighted Average Cost of Capital
- Fair Value Estimate
- Scenario Analysis
- Uncertainty Ratings
- Margin of Safety
- Consider Buying/Selling
- Stewardship Rating

The Morningstar Rating for stocks identifies companies trading at a discount or premium to our analysts' assessment of their fair value. A number of components drive this rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's intrinsic value based on a discounted cash-flow model, (3) the margin of safety bands we apply to our Fair Value Estimate, and (4) the current stock price relative to our fair value estimate.

The concept of the Morningstar Economic Moat™ Rating plays a vital role not only in our qualitative assessment of a firm's investment potential, but also in our valuation process. We assign three moat ratings—none, narrow, or wide—as well as the Morningstar Moat Trend™ Rating—positive, stable, or negative—to each company we cover. There are two major requirements for firms to earn either a narrow or wide moat rating: (1) the prospect of earning above-average returns on capital; and (2) some competitive edge that prevents these returns from quickly eroding. The assumptions we make about a firm's moat determine the length of "economic outperformance" that we assume in the latter stages of our valuation model. We also quantify the value of each firm's moat, which represents the difference between a firm's enterprise value and the value of the firm if no future net investment were to occur. Said differently, moat value identifies the value generated by the firm as a result of any future net new investment. Our Moat Trend Rating reflects our assessment of whether each firm's competitive advantage is either getting stronger or weaker, since we think of moats as dynamic, rather than static.

At the heart of our valuation system is a detailed projection of a company's future cash flows. The first stage of our three-stage discounted cash flow model can last from 5 to 10 years and contains numerous detailed assumptions about various financial and operating items. The second stage of our model—where a firm's return on new invested capital (RONIC) and earnings growth rate implicitly fade until the perpetuity year—can last anywhere from 0 years (for no-moat firms) to 20 years (for wide-moat companies). In our third stage, we assume the firm's RONIC equals its weighted average cost of capital, and we calculate a continuing value using a standard

Morningstar Research Methodology for Valuing Companies

Analyst conducts company and industry research:
- Financial statement analysis
- Channel checks
- Trade-show visits
- Industry and company reports and journals
- Conference calls
- Management and site visits

Strength of competitive advantage is rated: None, Narrow, or Wide

Advantages that confer an economic moat:

High Switching Costs (Microsoft)

Cost advantage (Wal-Mart)

Intangible assets (Johnson & Johnson)

Network Effect (Mastercard)

Efficient Scale (Lockheed Martin)

Analyst considers past financial results and focuses on competitive position and future prospects to forecast future cash flows.

Assumptions are entered into Morningstar's proprietary discounted cash-flow model.

Analyst uses a discounted cash-flow model to develop a Fair Value Estimate, which serves as the foundation for the Morningstar Rating for stocks.

The analyst then evaluates the range of potential intrinsic values for the company and assigns an Uncertainty Rating: Low, Medium, High, Very High, or Extreme.

The Uncertainty Rating determines the margin of safety required before we would recommend the stock. The higher the uncertainty, the wider the margin of safety.

The current stock price relative to Morningstar's Fair Value Estimate, adjusted for uncertainty, determines the Morningstar Rating for stocks.

The Morningstar Rating for stocks is updated each evening after the market closes.

Research Methodology for Valuing Companies

Detailed Methodology Documents and Materials*
- Comprehensive Equity Research Methodology
- Uncertainty Methodology
- Cost of Equity Methodology
- Morningstar DCF Valuation Model
- Stewardship Rating Methodology

* Please contact a sales representative for more information.

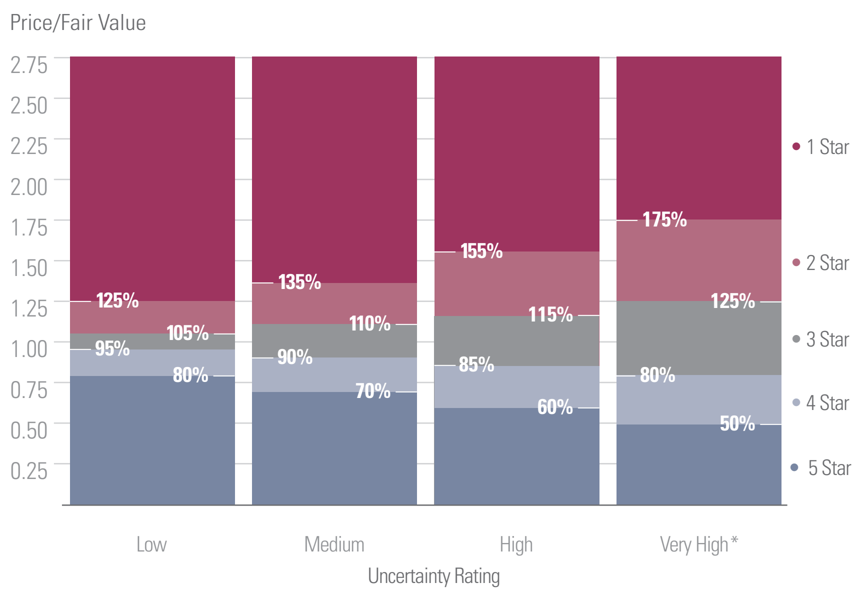
perpetuity formula. In deciding on the rate at which to discount future cash flows, we ignore stock-price volatility. Instead, we rely on a system that measures the estimated volatility of a firm's underlying future free cash flows, taking into account fundamental factors such as the diversity of revenue sources and the firm's fixed cost structure.

We also employ a number of other tools to augment our valuation process, including scenario analysis, where we assess the likelihood and performance of a business under different economic and firm-specific conditions. Our analysts typically model three to five scenarios for each company we cover, stress-testing the model and examining the distribution of resulting fair values.

The Morningstar Uncertainty Rating captures the range of these potential fair values, based on an assessment of a company's future sales range, the firm's operating and financial leverage, and any other contingent events that may impact the business. Our analysts use this range to assign an appropriate margin of safety—or the discount/premium to a fair value we apply in setting our consider buying/consider selling prices. Firms trading below our consider-buying prices receive our highest rating of five stars, whereas firms trading above our consider-selling prices receive our lowest rating of one star.

Our corporate Stewardship Rating represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

Morningstar Margin of Safety and Star Rating Bands



* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

Morningstar's Approach to Rating Corporate Credit

- Offers a proprietary measure of the credit quality of companies on our coverage list.
- Encapsulates our in-depth modeling and quantitative work in one letter grade.
- Allows investors to rank companies by each of the four underlying components of our credit ratings, including both analyst-driven and quantitative measures.
- Provides access to all the underlying forecasts that go into the rating, available through our institutional service.

Purpose

The Morningstar Corporate Credit Rating measures the ability of a firm to satisfy its debt and debt-like obligations. The higher the rating, the less likely we think the company is to default on these obligations.

The Morningstar Corporate Credit Rating builds on the modeling expertise of our securities research team. For each company, we publish:

- Five years of detailed pro-forma financial statements
- Annual estimates of free cash flow
- Annual forecasts of return on invested capital
- Scenario analyses, including upside and downside cases
- Forecasts of leverage, coverage, and liquidity ratios for five years
- Estimates of off balance sheet liabilities

These forecasts are key inputs into the Morningstar Corporate Credit Rating and are available to subscribers at select.morningstar.com.

Methodology

We feel it's important to perform credit analysis through different lenses—qualitative and quantitative, as well as fundamental and market-driven. We therefore evaluate each company in four broad categories.

Business Risk

Business Risk captures the fundamental uncertainty around a firm's business operations and the cash flow generated by those operations. Key components of the Business Risk rating include the Morningstar Economic Moat™ Rating and the Morningstar Uncertainty Rating.

Cash Flow Cushion™

Morningstar's proprietary Cash Flow Cushion™ ratio is a fundamental indicator of a firm's future financial health The measure reveals how many times a company's internal cash generation plus total excess liquid cash will cover its debt-like contractual commitments over the next five years. The Cash Flow Cushion acts as a predictor of financial distress, bringing to light potential refinancing, operational, and liquidity risks inherent to the firm.

Morningstar Research Methodology for Determining Corporate Credit Ratings

Competitive Analysis ▸

Analyst conducts company and industry research:

- Management interviews
- Conference calls
- Trade show visits
- Competitor, supplier, distributor, and customer interviews
- Assign Economic Moat™ Rating

Cash-Flow Forecasts ▸

Analyst considers company financial statements and competitive dynamics to forecast future free cash flows to the firm.

Analyst derives estimate of Cash-Flow Cushion™.

Scenario Analysis ▸

Analysts run bull and bear cases through the model to derive alternate estimates of enterprise value.

Based on competitive analysis, cash-flow forecasts, and scenario analysis, the analyst assigns Business Risk.

Quantitative Checks ▸

We gauge a firm's health using quantitative tools supported by our own backtesting and academic research.

- Morningstar Solvency Score™
- Distance to Default

Rating Committee ▸

Senior personnel review each company to determine the appropriate final credit rating.

- Review modeling assumptions
- Approve company-specific adjustments

BB C BBB AAA CCC A CC D B AA

AAA	Extremely Low Default Risk
AA	Very Low Default Risk
A	Low Default Risk
BBB	Moderate Default Risk
BB	Above Average Default Risk
B	High Default Risk
CCC	Currently Very High Default Risk
CC	Currently Extreme Default Risk
C	Imminent Payment Default
D	Payment Default
UR	Under Review
UR+	Positive Credit Implication
UR-	Negative Credit Implication

Morningstar's Approach to Rating Corporate Credit

The advantage of the Cash Flow Cushion ratio relative to other fundamental indicators of credit health is that the measure focuses on the future cash-generating performance of the firm derived from Morningstar's proprietary discounted cash flow model. By making standardized adjustments for certain expenses to reflect their debt-like characteristics, we can compare future projected free cash flows with debt-like cash commitments coming due in any particular year. The forward-looking nature of this metric allows us to anticipate changes in a firm's financial health and pinpoint periods where cash shortfalls are likely to occur.

Morningstar Solvency Score™

The Morningstar Solvency Score™ is a quantitative score derived from both historical and forecasted financial ratios. It includes ratios that focus on liquidity (a company's ability to meet short term cash outflows), profitability (a company's ability to generate profit per unit of input), capital structure (how does the company finance its operations), and interest coverage (how much of profit is used up by interest payments).

Distance to Default

Morningstar's quantitative Distance to Default measure ranks companies on the likelihood that they will tumble into financial distress. The measure is a linear model of the percentile of a firm's leverage (ratio of Enterprise Value to Market Value), the percentile of a firm's equity volatility relative to the rest of the universe and the interaction of these two percentiles. This is a proxy methodology for the common definition of Distance to Default which relies on option-based pricing models. The proxy has the benefit of increased breadth of coverage, greater simplicity of calculation, and more predictive power.

For each of these four categories, we assign a score, which we then translate into a descriptive rating along the scale of Very Good / Good / Fair / Poor / Very Poor.

Overall Credit Rating

The four component ratings roll up into a single preliminary credit rating. To determine the final credit rating, a credit committee of at least five senior research personnel reviews each preliminary rating.

We review credit ratings on a regular basis and as events warrant. Any change in rating must be approved by the Credit Rating Committee.

Investor Access

Morningstar Corporate Credit Ratings are available on Morningstar.com. Our credit research, including detailed cash-flow models that contain all of the components of the Morningstar Corporate Credit Rating, is available to subscribers at select.morningstar.com.

International Business Machines Corp IBM (NYSE) | ★★★

Last Price	Fair Value	Consider Buy	Consider Sell	Uncertainty	Economic Moat™	Moat Trend™	Stewardship	Morningstar Credit Rating	Industry Group
193.11 USD	212.00 USD	148.40 USD	286.20 USD	Medium	Wide	Negative	Exemplary	AA-	Application Software

The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic value. Five-star stocks sell for the biggest risk-adjusted discount whereas one-star stocks trade at premiums to their intrinsic value. Based on a fundamentally focused methodology and a robust, standardized set of procedures and core valuation tools used by Morningstar's Equity Analysts, four key components drive the Morningstar Rating: 1. Assessment of the firm's economic moat, 2. Estimate of the stock's fair value, 3. Uncertainty around that fair value estimate and 4. Current market price. Further information on Morningstar's methodology is available from http://global.morningstar.com/equitydisclosures.

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