

Intl Business Machines (IBM)

\$122.26 (As of 09/09/20)

Price Target (6-12 Months): **\$129.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 10/09/19)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

4-Sell

Zacks Style Scores:

VGM:B

Value: A

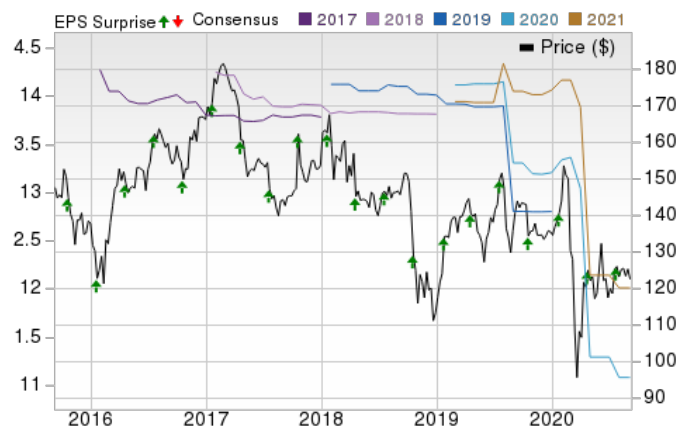
Growth: C

Momentum: D

Summary

IBM is witnessing solid uptake of cloud-based solutions and digital transformation offerings. Moreover, Red Hat buyout is enabling IBM in enhancing containerized software capabilities and strengthening competitive position in the hybrid cloud market. Improving position in the hosted cloud, security and analytics domains bodes well. Also, gains from z15 is a positive. However, stiff competition in the cloud computing market from Amazon Web Services, Microsoft Azure, and Oracle Cloud, and high-debt levels remain woes. Additionally, adoption of cognitive applications and transaction processing platforms in May was affected by coronavirus pandemic, which remains a headwind. For 2020, IBM refrained from providing any guidance, citing uncertainty stemming from coronavirus crisis. Notably, IBM stock has underperformed the industry on a year-to-date basis.

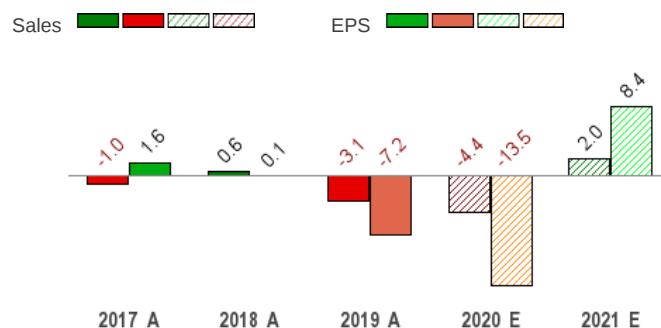
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$158.75 - \$90.56
20-Day Average Volume (Shares)	3,715,957
Market Cap	\$108.9 B
Year-To-Date Price Change	-8.8%
Beta	1.17
Dividend / Dividend Yield	\$6.52 / 5.3%
Industry	Computer - Integrated Systems
Zacks Industry Rank	Top 42% (106 out of 251)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	1.9%
Last Sales Surprise	2.3%
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	10/21/2020
Earnings ESP	0.0%
P/E TTM	10.7
P/E F1	11.0
PEG F1	2.8
P/S TTM	1.4

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	17,922 E	18,685 E	18,646 E	20,468 E	75,169 E
2020	17,571 A	18,123 A	17,762 E	20,283 E	73,727 E
2019	18,182 A	19,161 A	18,028 A	21,777 A	77,147 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$1.89 E	\$2.60 E	\$2.60 E	\$4.55 E	\$12.01 E
2020	\$1.84 A	\$2.18 A	\$2.54 E	\$4.50 E	\$11.08 E
2019	\$2.25 A	\$3.17 A	\$2.68 A	\$4.71 A	\$12.81 A

*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 09/09/2020. The reports text is as of 09/10/2020.

Overview

International Business Machines Corporation has gradually evolved as a provider of cloud and data platforms.

Red Hat acquisition, in particular, has helped IBM in strengthening competitive position in the hybrid cloud market. With Red Hat buyout, the company offers Linux operating system — Red Hat Enterprise Linux — and hybrid cloud platform — Red Hat OpenShift — that aids enterprises with digital transformation.

Besides, the company provides advanced information technology solutions, computer systems, quantum computing and super computing solutions, enterprise software, storage systems and microelectronics.

Moreover, IBM has the leading position with the highest number of patent wins, which is a testament to its technical expertise in innovative research and development. In 2019, the company maintained the lead spot for the 27th year, with 9,262 patents.

Armonk, NY-based, IBM reported revenues of \$77.15 billion in 2019.

The company's five reporting segments are as follows:

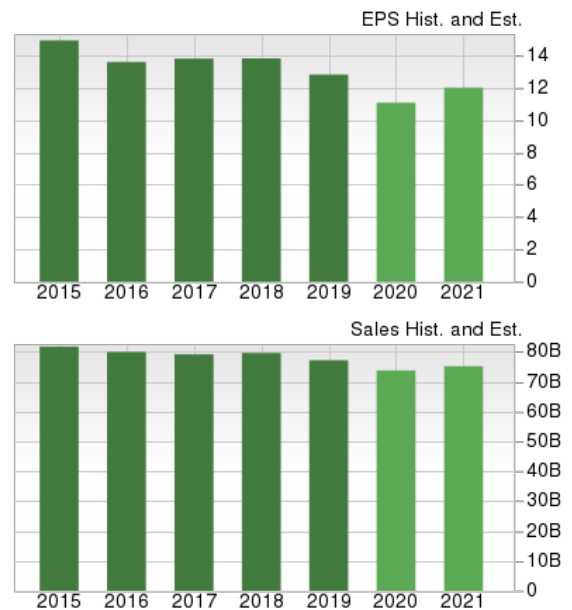
Cloud & Cognitive Software segment (30% of 2019 revenues) includes cloud and data platform, Cognitive application and transaction processing. Watson Platform, Watson Health and Watson Internet of Things (IoT) are notable offerings, which are included in Solutions Software.

Global Business Services segment (21.6%) includes consulting, global process services, application management. These professional services offer value and innovation to clients through solutions that leverage industry, technology and business strategy and process know-how.

Global Technology Services segment (35.5%) includes infrastructure services, technical support services, integration software. It provides comprehensive IT infrastructure and platform services that helps to build business value for clients.

Systems segment (9.9%) includes systems hardware and operating systems software. It offers clients with infrastructure platforms to help address the new requirements of hybrid cloud and enterprise.

Global Financing (1.8%) includes financing, primarily conducted through IBM Credit LLC (IBM Credit) and used equipment sales.



Source: Zacks Investment Research

Reasons To Buy:

- ▲ IBM's growth is expected to be driven primarily by analytics, cloud computing, and security in the long haul. A combination of a better business mix, improving operating leverage through productivity gains and increased investment in growth opportunities will drive profitability. IBM's research and development (R&D) initiatives set it apart from its peers. On an annual basis, the company invests around 7-8% on R&D for reaping the high growth and high-value opportunities. Notably, the company was awarded the maximum number of U.S. patents for the 27th consecutive year in 2019, totaling 9,262 patents, reflecting a year-over-year rise of 2%. The patents represent inventions in artificial intelligence, cloud, cybersecurity and other strategic growth areas.
- ▲ With the strength of its global on-demand model (responding to customer demand with flexibility and speed), IBM has been gaining a lot of traction in emerging markets. As growth and investment opportunities in developed countries continue to slow down, we believe that emerging economies will play a key role for the company.
- ▲ IBM has been building its portfolio through strategic acquisitions (over 150 companies since 2000), which are generating incremental revenues, strengthening its technology leadership, and resulting in a more favorable mix of business. The company's strategy of making accretive acquisitions that can be easily integrated into its current business has expanded its product portfolio into higher-growth segments, such as cloud computing, analytics, and security. The acquisitions have also increased its scale of operations globally.
- ▲ IBM completed the acquisition of Red Hat for \$34 billion in cash on Jul 9, 2019. The deal is part of the company's efforts to bolster Open Hybrid Architecture Initiative. The deal marks IBM's largest acquisition ever and the combined company is likely to alter the dynamics of "the cloud market for business." Specifically, IBM hopes to leverage Red Hat to help it become the world's largest hybrid cloud platform provider. The company anticipates Red Hat buyout to improve revenue growth approximately by a CAGR of two points over a five-year period. IBM Cloud remains the key to winning back investors' optimism regarding strength of the company's business model. IBM's cloud revenue as a percentage of total revenue has increased from 4% in 2013 to 25% in 2019. In fact, revenues from Red Hat in second-quarter 2020 improved 18% (at cc) on a normalized basis. Currently, more than 2,400 clients are utilizing Red Hat and IBM's hybrid cloud platform, and around 600 IBM Services clients are leveraging Red Hat technology. We remain optimistic regarding improving utility of hybrid cloud services based on architecture built by IBM and Red Hat, by notable clients including American Express, Bharti Airtel, Vodafone, Banco Sabadell, Broadridge Financial Solutions, and Caixa Bank. We believe IBM's attempt to bolster its hybrid cloud business is likely to pave the way for the company's growth prospects. Apart from the aforementioned factors, Red Hat's expanding foothold across Asia Pacific is also anticipated to bolster IBM's TAM.
- ▲ IBM has been returning cash to shareholders for over a decade. From 2000 to 2019, IBM has returned more than \$182 billion to shareholders in the form of dividends and share repurchases. In second-quarter 2020, IBM returned \$1.5 billion to shareholders through dividends. The company reported cash flow from operations of \$3.6 billion and generated free cash flow of \$2.3 billion in the second quarter. Strong free cash flow generation is expected to provide the financial flexibility required for strategic investments in the changing business environment. The company's ability to generate solid free cash flow is expected to help it sustain current dividend payout (0.57) level at least in the near term.

Expanding product portfolio, accretive acquisitions, strong free cash flow generating ability and aggressive share buyback are key positives.

Reasons To Sell:

- ▼ IBM faces stiff competition in most of its markets. In the hardware enterprise servers and storage segment, the company competes against Dell, Oracle, Hewlett-Packard, and NetApp. The IT services business is also becoming increasingly competitive due to its high-margin nature and the company is facing pricing pressure from Hewlett-Packard. Although it possesses massive data centers, we believe that the company will continue facing tough competition from Amazon Web Services (AWS) and Microsoft's Azure. In the services and software space, the company competes with Accenture. The company competes with Oracle in the middleware software market. Although IBM continues to extend and build its capabilities in the analytics arena, competition from Oracle in this space is intensifying.
- ▼ IBM's ongoing heavily time-consuming business model transition to cloud is a headwind at least in the near term. Weakness in its traditional business and foreign exchange volatility remain significant concerns. Also, higher profit on lower revenues indicates that the company has been lowering costs to maintain profits. We believe that the scope for further cost cutting is limited. Consequently, if costs are further reduced, there could be a negative impact on product quality. It could also delay the launch of new products, causing it to lag its peers.
- ▼ IBM's frequent acquisitions have escalated integration risks. Moreover, we note that the buyouts negatively impacted the company's balance sheet in the form of high level of goodwill and net intangible assets, which totaled \$72.1 billion, representing 46.8% of total assets as of Jun 30, 2020.
- ▼ Moreover, highly leveraged balance sheet has been troubling IBM over time. As of Jun 30, 2020, net debt amounted to \$50.4 billion. Notably, total debt to total capital of 75.8% is higher than the industry's figure of 67.2%, indicating a higher liability in repaying the debt. Further, times interest earned is 5.9X, compared with the prior-quarter's figure of 6.6X. Although the company generates significant cash flow, the high debt level can not only jeopardize its ability to sustain dividend payout but also pursue accretive acquisitions.

Time consuming transition to cloud, weakness in traditional businesses, cash crunch and increasing competition are primary headwinds.

Last Earnings Report

IBM Q2 Earnings and Revenues Top Estimates

International Business Machines Corporation (IBM) reported second-quarter 2020 non-GAAP earnings of \$2.18 per share, which surpassed the Zacks Consensus Estimate by 1.9%. However, the bottom line fell 31% on a year-over-year basis.

Revenues of \$18.12 billion outpaced the Zacks Consensus Estimate by 2.3% but declined 5.4% (as reported) on a year-over-year basis. At constant currency (cc), the top line fell 3.9%. Meanwhile, adjusting for currency and divested businesses, revenues were down 1.9%.

Revenues from signings declined 14% (at cc) in the second quarter to \$8.2 billion. Backlog was down 1% at cc (down 4% at actual) on a year-over-year basis and amounted to \$107.1 billion.

Nevertheless, total Cloud revenues were \$6.3 billion during the quarter, up 30% year over year. Adjusting for currency and divested businesses, total cloud revenues increased 34%.

Synergies from Red Hat Acquisition

Revenues from Red Hat in the second quarter totaled \$1.09 billion, reflecting an increase of 17% (up 18% at cc) on a normalized basis. The buyout has helped IBM to enhance containerized software capabilities and accelerate service engagement. Moreover, OpenShift and Ansible have supported advancements in application and technology developments. Currently, more than 2,400 clients are using Red Hat and IBM's hybrid cloud platform, and around 600 IBM Services clients are leveraging Red Hat technology.

Management is optimistic about enhancing utility of hybrid cloud services based on architecture built by IBM and Red Hat, by notable clients including American Express, Bharti Airtel, Vodafone, Banco Sabadell, Broadridge Financial Solutions, and Caixa Bank.

Geographic Revenue Details

Revenues from Americas remained flat year over year at cc (excluding divestiture impacts) and were \$8.5 billion. Revenues from Europe, Middle-East and Africa were \$5.7 billion, down 3% year over year. Meanwhile, revenues from Asia-Pacific declined 4% on a year-over-year basis and were \$4 billion.

Cloud & Cognitive Software Segment

Cloud & Cognitive Software segment's revenues-external rose 3% year over year (up 5% on cc basis) to \$5.7 billion. The upside can be attributed to synergies from Red Hat acquisition and growth in cloud, Data & AI, security and IoT solutions. Markedly, cloud revenues soared 116% to \$1.6 billion.

Revenues in the Cloud and Data platforms increased 29% year over year (up 30% on cc basis) to \$2.8 billion. The platform is gaining from Red Hat's acquisition synergies and traction in Cloud Paks suite.

Adoption of cognitive applications and transaction processing platforms was affected by the coronavirus outbreak. In May, the decline was worse than anticipated, and recovery in June failed to bring the tally to "normal levels." Revenues from the Cognitive Applications declined 8% year over year to \$1.2 billion. Revenues from the Transaction Processing Software, which includes software that runs mission-critical workloads, declined 14% on a year-over-year basis to \$1.7 billion.

Global Business Services Segment

Revenues in the Global Business Services-external segment totaled \$3.9 billion, which declined 7% (down 6% at cc) from the year-ago quarter.

Consulting revenues declined 3% year over year at cc to \$1.9 billion. Application Management and Global Process Services revenues declined 8% and 12% (at cc) year over year to \$1.7 billion and \$0.2 billion, respectively.

Global Technology Services Segment

Revenues from Technology Services-external fell 8% (down 5% at cc) from the year-ago quarter to \$6.3 billion.

Segmental revenues pertaining to cloud advanced 20% at cc from the prior-year quarter's reported figure to \$2.4 billion.

Infrastructure & Cloud Services and Technical Support Services revenues declined 5% and 6% (at cc) year over year to \$4.8 billion and \$1.5 billion, respectively.

Systems Revenues

Systems revenues-external rose 6% at cc on a year-over-year basis to \$1.9 billion, primarily owing to growth in the IBM Z and Storage Systems.

Systems Hardware revenues increased 13% (at cc) year over year to \$1.5 billion. Operating Systems Software declined 13% (at cc) year over year to \$0.4 billion.

IBM Z revenues surged 68% year over year courtesy of gains from innovation in z15 mainframe, and higher demand for data privacy and resiliency solutions across hybrid cloud. However, Power revenues fell 28% from the year-ago quarter.

Quarter Ending	06/2020
Report Date	Jul 20, 2020
Sales Surprise	2.32%
EPS Surprise	1.87%
Quarterly EPS	2.18
Annual EPS (TTM)	11.41

Storage revenues improved 3% year over year owing to growth in high-end storage systems.

Segmental revenues pertaining to cloud advanced 22% at cc from the prior-year quarter's reported figure to \$0.8 billion.

Finally, Global Financing (includes financing and used equipment sales) revenues-external fell 25% year over year and 23% at cc to \$265 million.

Operating Details

Non-GAAP gross margin expanded 160 basis points (bps) year over year and came in at 49%. The gross margin benefited from synergies from Red Hat acquisition, high-value software, and systems contributions.

Non-GAAP R, D&E expenses increased 12.4% year over year to \$1.58 billion.

Non-GAAP selling, general and administration (S, G&A) expenses declined 6.5% year over year to \$4.96 billion.

Non-GAAP pre-tax income margin from continuing operations was 12.8% compared with year-ago period's 16.6%.

Balance Sheet & Cash Flow Details

As of Jun 30, 2020, IBM had \$14.3 billion in total cash and marketable securities compared with \$12 billion as of Mar 31, 2020.

As of Jun 30, 2020, total debt (which includes \$21.9 billion from Global Financing debt) was \$64.7 billion, compared with \$64.3 billion as of Mar 31, 2020.

The company reported cash flow from operations of \$3.6 billion during the second quarter, compared with \$4.5 billion reported in the first quarter.

IBM generated free cash flow of \$2.3 billion in the second quarter, compared with \$1.4 billion reported in the first quarter.

Moreover, the company returned \$1.5 billion to shareholders through dividends.

Guidance

For 2020, IBM refrained from providing any guidance, citing uncertainty stemming from coronavirus crisis.

Recent News

On Sep 8, IBM inked a deal with oil and gas giant, Schlumberger to migrate the latter's DELFI cognitive explorations and production (E&P) platform on to its hybrid cloud. IBM will be using its Red Hat OpenShift container solutions for the migration.

On Aug 28, IBM announced that it will utilize the AI capabilities of Watson and its Red Hat Open Shift cloud platform to help United States Tennis Association (USTA) provide its fans with an interactive digital experience to enjoy US Open 2020 off-site.

On Aug 17, IBM rolled out its latest OpenShift version, Red Hat OpenShift 4.5., which includes OpenShift Virtualization platform at no extra cost.

On Aug 17, IBM unveiled its latest chip processor — IBM POWER 10 — which will be manufactured by Samsung Electronics. The chip is primarily meant for use across data center operations and will be based on Samsung's 7-nanometer (nm) process technology. IBM POWER 10 boasts of three times enhanced performance than its predecessor, IBM POWER 9. This will help data centers achieve greater operational efficiency.

On Aug 12, IBM and Workday expanded partnership with the roll out of a joint return-to-workplace focused solution to help enterprises reopen safely. The integrated solution combines IBM's Watson Works, and Workday's Adaptive Planning and HCM solutions.

On Aug 11, IBM inked a multi-year deal with Coca-Cola European Partners ("CCEP") to help the latter move to an open hybrid cloud environment. IBM will deploy its Red Hat OpenShift and Red Hat Enterprise Linux solutions to assist CCEP in achieving operational efficiency by reducing expenses and streamlining its IT infrastructure.

On Jul 28, IBM board of directors declared quarterly cash dividend of \$1.63 per common share, payable Sep 10, 2020 to shareholders of record as of Aug 10, 2020.

On Jul 22, IBM announced that a number of global banks including BNP Paribas, and around 30 new technology providers have selected IBM Cloud for Financial Services. The company announced availability of the IBM Cloud Policy Framework for Financial Services developed in collaboration with Bank of America.

On Jul 21, IBM and Celero, Canada-based solutions integrator for credit unions, inked a seven-year, outsourcing agreement worth multi-million dollars, in a bid to enhance and transform Celero's data center and related network architecture, and shift infrastructure services to a hybrid cloud environment.

Valuation

IBM shares are down 8.7% in the year-to-date period and 14.8% over the trailing 12-month period. While stocks in the Zacks sub-industry are down 13.8%, same in the Zacks Computer & Technology sector are up 22.8% in the year-to-date period. Over the past year, the Zacks sub-industry is down 18.3% and the sector is up 34.2%.

The S&P 500 index is up 5.6% in the year-to-date period and 13.9% in the past year.

The stock is currently trading at 10.43X forward 12-month earnings, which compares to 10.11X for the Zacks sub-industry, 26.4X for the Zacks sector and 22.61X for the S&P 500 index.

Over the past five years, the stock has traded as high as 13.12X and as low as 7X, with a 5-year median of 10.51X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$129 price target reflects 11X forward 12-month earnings.

The table below shows summary valuation data for IBM

Valuation Multiples - IBM					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	10.43	10.11	26.4	22.61
	5-Year High	13.12	18.34	27.93	23.44
	5-Year Low	7	7.94	16.75	15.26
	5-Year Median	10.51	10.34	19.93	17.63
P/S F12M	Current	1.46	1.25	4.28	4.16
	5-Year High	2.19	1.87	4.49	4.29
	5-Year Low	1.07	0.76	2.7	3.11
	5-Year Median	1.68	1.47	3.42	3.66
EV/EBITDA TTM	Current	9.38	8.05	14.56	14.73
	5-Year High	11.85	10.86	15.79	15.6
	5-Year Low	5.4	3.92	8.27	9.51
	5-Year Median	8.8	8.55	11.8	13

As of 09/09/2020

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Top 42% (106 out of 251)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Blackbaud, Inc. (BLKB)	Outperform	1
salesforce.com, inc. (CRM)	Outperform	1
Accenture PLC (ACN)	Neutral	3
Amazon.com, Inc. (AMZN)	Neutral	3
HP Inc. (HPQ)	Neutral	3
Microsoft Corporation (MSFT)	Neutral	3
Oracle Corporation (ORCL)	Neutral	3
SAP SE (SAP)	Neutral	2

The positions listed should not be deemed a recommendation to buy, hold or sell.

Industry Comparison Industry: Computer - Integrated Systems				Industry Peers		
	IBM	X Industry	S&P 500	AMZN	HPQ	MSFT
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	4	-	-	3	3	3
VGM Score	B	-	-	A	A	C
Market Cap	108.88 B	571.57 M	23.35 B	1,637.21 B	27.06 B	1,598.97 B
# of Analysts	6	3	14	14	6	14
Dividend Yield	5.33%	0.00%	1.63%	0.00%	3.58%	0.97%
Value Score	A	-	-	D	A	D
Cash/Price	0.13	0.16	0.07	0.04	0.17	0.08
EV/EBITDA	8.54	-20.28	13.13	42.79	6.14	22.24
PEG F1	2.78	2.68	2.97	3.39	4.02	2.41
P/B	5.26	2.42	3.22	22.21	NA	13.52
P/CF	6.19	7.08	12.52	48.75	7.03	28.01
P/E F1	11.01	19.98	21.45	102.15	9.00	33.05
P/S TTM	1.44	1.54	2.48	5.09	0.48	11.18
Earnings Yield	9.05%	2.52%	4.45%	0.98%	11.12%	3.02%
Debt/Equity	2.68	0.16	0.70	0.45	-3.01	0.50
Cash Flow (\$/share)	19.75	0.01	6.93	67.05	2.80	7.54
Growth Score	C	-	-	A	A	A
Historical EPS Growth (3-5 Years)	-3.28%	-3.01%	10.41%	97.34%	-1.60%	19.44%
Projected EPS Growth (F1/F0)	-13.54%	-10.76%	-4.73%	39.06%	-2.23%	10.99%
Current Cash Flow Growth	2.09%	2.09%	5.22%	31.33%	8.32%	17.66%
Historical Cash Flow Growth (3-5 Years)	-3.76%	-3.43%	8.49%	49.26%	-18.40%	10.19%
Current Ratio	1.04	1.95	1.35	1.18	0.81	2.52
Debt/Capital	72.83%	13.87%	42.95%	31.00%	NA	33.49%
Net Margin	10.44%	-1.33%	10.25%	4.10%	4.51%	30.96%
Return on Equity	51.06%	-3.34%	14.59%	20.47%	-237.44%	39.45%
Sales/Assets	0.50	0.80	0.50	1.42	1.71	0.50
Projected Sales Growth (F1/F0)	-4.43%	0.00%	-1.42%	31.62%	-4.90%	8.53%
Momentum Score	D	-	-	A	D	D
Daily Price Change	0.87%	0.67%	1.39%	3.77%	1.29%	4.26%
1-Week Price Change	-2.21%	-2.33%	-1.28%	-3.15%	-3.12%	-6.40%
4-Week Price Change	-3.50%	-0.49%	-1.22%	3.36%	4.79%	1.00%
12-Week Price Change	-1.52%	2.10%	5.76%	23.76%	17.12%	8.78%
52-Week Price Change	-14.86%	-7.91%	-0.03%	79.30%	3.36%	55.22%
20-Day Average Volume (Shares)	3,715,957	135,647	1,805,652	4,358,748	10,728,542	32,511,108
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	-0.08%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.00%	0.00%	4.37%	0.00%
EPS F1 Estimate 12-Week Change	-1.88%	5.99%	3.99%	59.79%	4.68%	2.74%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	0.00%	0.13%	0.00%

Source: Zacks Investment Research

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we maintain a balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	A
Growth Score	C
Momentum Score	D
VGM Score	B

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

Disclosures

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Additional Disclosure

This material represents an assessment of the market and economic environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. Forward-looking statements are subject to certain risks and uncertainties. Any statements that refer to expectations, projections or characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. Actual results, performance, or achievements may differ materially from those expressed or implied.

Returns quoted represent past performance which is no guarantee of future results. Investment returns and principal value will fluctuate so that when shares are redeemed, they may be worth more or less than their original cost. Current performance may be higher or lower than the performance shown.

Investing involves risk; principal loss is possible. There is no guarantee that companies that can issue dividends will declare, continue to pay or increase dividends.

Glossary of Terms and Definitions

52-Week High-Low: The range of the highest and lowest prices at which a stock has traded during the past year. This range is determined based on the stock's daily closing price which may differ from the intra-day high or low. Many investors use it as a technical indicator to determine a stock's current value and future price movement. The idea here is that if price breaks out from the 52-week range, in either direction, the momentum may continue in the same direction.

20-Day Average Volume (Shares): The average number of shares of a company traded in a day over the last 20 days. It is a direct indication of a security's overall liquidity. The higher the average daily trading volume, the easier it is to enter or exit the stock at a desired price with more buyers and sellers being available.

Daily Price Change: This is the percentage difference between a trading day's closing price and the prior trading day's closing price. This item is updated at 9 p.m. EST each day.

1-Week Price Change: This is the percentage change in a stock's closing price over the last 5 trading days. This change reflects the collective buying and selling sentiment over the 1-week period.

A strong weekly price increase for the stock, especially when accompanied by increased volume, is an indication of it gaining momentum.

4-Week Price Change: This is the percentage change in a stock's closing price over the last 20 trading days or past 4 weeks. This is a medium-term price change metric and an indication of the stock gaining momentum.

12-Week Price Change: This is the percentage change of a stock's closing price over the last 60 trading days or past 12 weeks. Similar to 4-week price change, this is a medium-term price change metric. It shows whether a stock has been enjoying strong investor demand, or if it has been in consolidation, or distress over this period.

52-Week Price Change: This is the percentage change in a stock's closing price over the last 260 trading days or past 52 weeks. This long-term price change metric is a good reference point for investors. Some investors seek stocks with the best percentage price change over the last 52 weeks, expecting the momentum to continue.

Market Cap: The number of outstanding common shares of a company times its latest price per share. This figure represents a company's size, which indicates various characteristics, including price stability and risk, in which investors could be interested.

Year-To-Date Price Change: Change in a stock's daily closing price in the period of time beginning the first day of the current calendar year through to the previous trading day.

of Analysts: Number of EPS estimates used in calculating the current-quarter consensus. These estimates come from the brokerage analysts tracking this stock. However, the number of such analysts tracking this stock may not match the number of estimates, as all brokerage analysts may not come up with an estimate or provide it to us.

Beta: A measure of risk commonly used to compare the volatility of a stock to the overall market. The S&P 500 Index is the base for calculating beta and carries a value of 1. A stock with beta below 1 is less risky than the market as a whole. And a stock with beta above 1 is riskier.

Dividend: The portion of earnings a company is expected to distribute to its common shareholders in the next 12 months for each share they own. Dividends are usually paid quarterly. Dividend payments reflect positively on a company and help maintain investors' trust. Investors typically find dividend-paying stocks appealing because the dividend adds to any market price appreciation to result in higher return on investment (ROI). Moreover, a steady or increasing dividend payment provides investors a cushion in a down market.

Dividend Yield: The ratio of a company's annual dividend to its share price. The annual dividend used in the ratio is calculated based on the most recent dividend paid by the company. Dividend yield is an estimate of the dividend-only return from a stock in the next 12 months. Since dividend itself doesn't change frequently, dividend yield usually changes with a stock's price movement. As a result, often an unusually high dividend yield is a result of weak stock price.

S&P 500 Index: The Standard & Poor's 500 (S&P 500) Index is an unmanaged group of securities considered to be representative of the stock market in general. It is a market-capitalization-weighted index of stocks of the 500 largest U.S. companies. Each stock's weight in the index is proportionate to its market value.

Industry: One of the 250+ groups that Zacks classifies all stocks into based on the nature of business. These groups are termed as expanded (aka "X") industries and map to their respective (economic) sectors; Zacks has 16 sectors.

Zacks Industry Rank: The Zacks Industry Rank is determined by calculating the average Zacks Rank for all stocks in the industry and then assigning an ordinal rank to it. For example, an industry with an average Zacks Rank of 1.6 is better than an industry with an average Zacks Rank of 2.3. So, the industry with the better average Zacks Rank would get a better Zacks Industry Rank. If an industry has the best average Zacks Rank, it would be considered the top industry (1 out of 250+), which would place it at the top 1% of Zacks-ranked industries. Studies have shown that roughly half of a stock's price movement can be attributed to the industry group it belongs to. In fact, the top 50% of Zacks-ranked industries outperforms the bottom 50% by a factor of more than 2 to 1.

Last EPS Surprise: The percentage deviation of a company's last reported earnings per share from the Zacks Consensus Estimate. Companies with a positive earnings surprise are more likely to surprise again in the future (or miss again if they recently missed).

Last Sales Surprise: The percentage deviation of a company's last reported sales from the Zacks Consensus Estimate.

Expected Report Date: This is an estimated date of a company's next earnings release. The information originated or gathered by Zacks Investment Research from its information providers or publicly available sources is the basis of this estimate.

Earnings ESP: The Zacks Earnings ESP compares the Most Accurate Estimate to the Zacks Consensus Estimate for the yet-to-be reported quarter. The Most Accurate Estimate is the most recent version of the Zacks Consensus EPS Estimate. The idea here is that analysts revising their estimates closer to an earnings release have the latest information, which could potentially be more accurate than what they and others contributing to the consensus had predicted earlier. Thus, a positive or negative Earnings ESP reading theoretically indicates the likely deviation of the actual earnings from the consensus estimate. However, the model's predictive power is significant for positive ESP readings only. A positive Earnings ESP is a strong predictor of an earnings beat, particularly when combined with a Zacks Rank #1 (Strong Buy), #2 (Buy) or #3 (Hold). Our research shows that stocks with this combination produce a positive surprise nearly 70% of the time.

Periods:

TTM: Trailing 12 months. Using TTM figures is an effective way of analyzing the most-recent financial data in an annualized format that helps neutralize the effects of seasonality and other quarter-to-quarter variation.

F1: Current fiscal year. This period is used to analyze the estimates for the ongoing full fiscal year.

F2: Next fiscal year. This period is used to analyze the estimates for the next full fiscal year.

F12M: Forward 12 months. Using F12M figures is an effective way of analyzing the near-term (the following four unreported quarters) estimates in an annualized manner. Instead of typically representing estimates for the full fiscal year, which may not represent the nitty-gritty of each quarter, F12M figures suggest an all-inclusive annualized estimate for the following four quarters. The annualization helps neutralize the potential effects of seasonality and other quarter-to-quarter variations.

P/E Ratio: The price-to-earnings ratio measures a company's current market price per share relative to its earnings per share (EPS). Usually, the trailing-12-month (TTM) EPS, current-fiscal-year (F1) EPS estimate, or forward-12-month (F12M) EPS estimate is used as the denominator. In essence, this ratio shows what the market is willing to pay today for each dollar of EPS. In other words, this ratio gives a sense of what the relative value of the company is at the already reported level of earnings or at a future level of earnings.

It is one of the most widely-used multiples for determining the value of a company and helps comparing its valuation with that of a competitor, the industry group or a benchmark.

PEG Ratio: The price/earnings to growth ratio is a stock's P/E ratio using current fiscal year (F1) EPS estimate divided by its expected EPS growth rate over the coming 3 to 5 years. This ratio essentially determines a stock's value by factoring in the company's expected earnings growth and is thus believed to provide a more complete picture than just the P/E ratio, particularly for faster-growing companies.

P/S Ratio: The price-to-sales ratio is calculated as a company's current price per share divided by trailing 12 months (TTM) sales or revenues per share. This ratio shows what the market is willing to pay today for each dollar of TTM sales per share. The P/S ratio is at times the only valuation metric when the company has yet to become profitable.

Cash/Price Ratio: The cash-to-price ratio or Cash Yield is calculated as cash and marketable securities per share divided by the company's current share price. Like the earnings yield, which shows the anticipated yield (or return) on a stock from earnings for each dollar invested, the cash yield does the same, with cash being the source of return instead of earnings. For example, a cash/price ratio of 0.08 suggests a return of 8% or 8 cents for every \$1 investment.

EV/EBITDA Ratio: The EV/EBITDA ratio, also known as Enterprise Multiple, is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by EBITDA (earnings before interest, taxes, depreciation and amortization). Usually, trailing-12-month (TTM) or forward-12-month (F12M) EBITDA is used as the denominator.

EV/Sales Ratio: The enterprise value-to-sales ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by annual sales. It is an expansion of the P/S valuation, which uses market value instead of enterprise value. The EV/Sales ratio is perceived as more accurate than P/S, in part, because the market capitalization does not take a company's debt into account when valuing it.

EV/CF Ratio: The enterprise value-to-cash flow ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by the trailing-12-month (TTM) operating cash flow. It's a measure of how long it would take to buy the entire business if you were able to use all the company's operating cash flow.

The EV/CF ratio is perceived as more accurate than the P/CF ratio, in part, because the market price does not take a company's debt into account when valuing it.

EV/FCF Ratio: The enterprise value-to-free cash flow metric compares a company's enterprise value to its trailing-12-month (TTM) free cash flow (FCF). This metric is very similar to the EV/CF ratio, but is considered a more exact measure owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding growth activities and payments to shareholders.

P/EBITDA Ratio: The P/EBITDA ratio is calculated as a company's per share market value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This metric is very similar to the EV/EBITDA ratio, but is considered a little less exact measure as it uses market price, which does not take a company's debt into account. However, since EBITDA is often considered a proxy for cash income, the metric is used as a measure of what the market is willing to pay today for each dollar of the company's cash profitability in the trailing 12 months (TTM) or forward 12 months (F12M).

P/B Ratio: The price-to-book ratio is calculated as a company's current price per share divided by its book value (total assets – liabilities – preferred stocks) per share. In short, the book value is how much a company is worth. In other words, it reflects the total value of a company's assets that its common shareholders would receive if it were to be liquidated. So, the P/B ratio indicates whether you're paying higher or lower than what would remain if the company went bankrupt immediately. Investors typically use this metric to determine how a company's stock price stacks up to its intrinsic value.

P/TB Ratio: The price-to-tangible-book value ratio is calculated as a the per share market value of a company divided by the value of its tangible assets (total assets – liabilities – preferred stocks – intangible assets) per share. Tangible book value is the same thing as book value except it excludes the value of intangible assets to get a step closer to the baseline value of the company.

P/CF Ratio: The price-to-cash flow ratio measures a company's per share market price relative to its trailing-12-month (TTM) operating cash flow per share. This metric is used to determine whether a company is undervalued or overvalued relative to another stock, industry or sector. And like the P/E ratio, a lower number is typically considered better from the value perspective.

One of the reasons why P/CF ratio is often preferred over P/E ratio is the fact that operating cash flow adds back non-cash expenses such as depreciation and amortization to net income. This feature helps valuing stocks that have positive cash flow but are not profitable because of large noncash charges.

P/FCF Ratio: The price-to-free cash flow ratio is an extension of P/CF ratio, which uses trailing-12-month (TTM) free cash flow per share instead of operating cash flow per share. This metric is considered a more exact measure than P/CF ratio, as free cash flow subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding activities that generate additional revenues.

Earnings Yield: The earnings yield is calculated as current fiscal year (F1) EPS estimate divided by the company's current share price. The ratio, which is the inverse of the P/E ratio, measures the anticipated yield (or return) from earnings for each dollar invested in a stock today.

For example, earnings yield for a stock, which is trading at \$35 and expected to earn \$3 per share in the current fiscal year (F1), would be 0.0857 ($3/35 = 0.0857$) or 8.57%. In other words, for \$1 invested in the stock today, the yield from earnings is anticipated to be 8.57 cents.

Investors most commonly compare the earnings yield of a stock to that of a broad market index (such as the S&P 500) and prevailing interest rates, such as the current 10-year Treasury yield. Since bonds and stocks compete for investors' dollars, stock investors typically demand a higher yield for the extra risk they assume compared to investors of U.S. Treasury-backed securities that offer virtually risk-free returns. This additional return is referred to as the risk premium.

Debt/Equity Ratio: The debt-to-equity ratio is calculated as a company's total liabilities divided by its shareholder equity. This metric is used to gauge a company's financial leverage. In other words, it is a measure of the degree to which a company is financing its operations through debt versus its own funds. The higher the ratio, the higher the risk for shareholders.

However, this ratio is difficult to compare across industry groups where ideal amounts of debt vary. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-equity ratio should be compared with other companies in the same industry.

Cash Flow (\$/share): Cash flow per share is calculated as operating cash flow (after-tax earnings + depreciation + other non-cash charges) divided by common shares outstanding. It is used by many investors as a measure of a company's financial strength. Since cash flow per share takes into consideration a company's ability to generate cash by adding back non-cash expenses, it is regarded by some as a more accurate measure of a company's financial situation than earnings per share, which could be artificially deflated.

Current Ratio: The current ratio or liquidity ratio is a company's current assets divided by its current liabilities. It measures a company's ability to pay short-term obligations. A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average would indicate a higher risk of distress or default. A higher number is usually better. However, a very high current ratio compared to the industry average could be an indication of inefficient use of assets by management.

Debt/Capital Ratio: Debt-to-capital ratio is a company's total debt (interest-bearing debt + both short- and long-term liabilities) divided its total capital (interest-bearing debt + shareholders' equity). It is a measure of a company's financial leverage. All else being equal, the higher the debt-to-capital ratio, the riskier the stock.

However, this ratio can vary widely from industry to industry, the ideal amount of required debt being different. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-capital ratio should be compared with the same for its industry.

Net Margin: Net margin is calculated as net income divided by sales. It shows how much of each dollar in sales generated by a company translates into profit. For example, if a company's net margin is 15%, its net income is 15 cents for every \$1 of sales it makes.

A change in margin can reflect either a change in business conditions, or a company's cost controls, or both. If a company's expenses are growing faster than sales, its net margin will decline. However, different net margin rates are considered good for different industries, so it's better to compare net margin rates of companies in the same industry group.

Return on Equity: Return on equity (ROE) is calculated as trailing-12-month net income divided by trailing-12-month average shareholder equity (including reinvested earnings). This metric is considered a measure of how effectively management is using a company's assets to generate profits. For example, if a company's ROE is 10%, it creates 10 cents profits for every \$1 shareholder equity, which is basically the company's assets minus debt. A company's ROE deemed good or bad depends on what's normal for its peers or industry group.

Sales/Assets Ratio: The sales-to-assets ratio or asset utilization ratio or asset turnover ratio is calculated as a company's annual sales divided by average assets (average of assets at the beginning of the year and at the year's end). This metric helps investors understand how effectively a company is using its assets to generate sales. For example, a sales-to-assets ratio of 2.5 indicates that the company generated \$2.50 in sales for every \$1 of assets on its books.

The higher the sales-to-assets ratio, the better the company is performing. However, similar to many other ratios, the asset turnover ratio tends to be higher for companies in certain industries/sectors than in others. So, a company's sales-to-assets ratio should be compared with the same for its industry/sector.

Historical EPS Growth (3-5 Years): This is the average annual (trailing-12-month) EPS growth rate over the last 3-5 years. This metric helps investors see how a company's EPS has grown from a long-term perspective.

Note: There are many factors that can influence short-term numbers — a recession will reduce this number, while a recovery will inflate it. The longterm perspective helps smooth out short-term events.

Projected EPS Growth (F1/F0): This is the estimated EPS growth rate for the current financial year. It is calculated as the consensus estimate for the current fiscal year (F1) divided by the reported EPS for the last completed fiscal year (F0).

Current Cash Flow Growth: It measures the latest year-over-year change in operating cash flow. Cash flow growth tells an investor how quickly a company is generating inflows of cash from operations. A positive change in the cash flow is desired and shows that more 'cash' is coming in than going out.

Historical Cash Flow Growth (3-5 Years): This is the annualized change in cash flow over the last 3-5 years. The change in a longer period helps put the current reading into proper perspective. By looking at the rate, rather than the actual dollar value, the comparison across the industry and peers becomes easier.

Projected Sales Growth (F1/F0): This metric looks at the estimated sales growth for the current year. It is calculated as sales estimate for the current fiscal year (F1) divided by the reported sales for the last completed fiscal year (F0).

Like EPS growth, a higher rate is better for sales growth. A look at a company's projected sales growth instantly tells you what the outlook is for their products and services. However, different sales growth rates are considered good for different industries, so it's better to compare sales growth rates of companies in the same industry group.

EPS F1 Estimate 1-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past week. The change in a company's consensus EPS estimate (or earnings estimate revision) has proven to be strongly correlated with the near-term price movement of its shares. It is an integral part of the Zacks Rank.

If a stock's consensus EPS estimate is \$1.10 now versus \$1.00 a week ago, that will be reflected as a 10% upward revision. If, on the other hand, it went from \$1.00 to 90 cents, that would be a 10% downward revision.

EPS F1 Estimate 4-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past four weeks.

A stock's earnings estimate revision in a 1-week period is important. But it's more meaningful to look at the longer-term revision. And, of course, the 4-week change helps put the 1-week change into proper perspective.

EPS F1 Estimate 12-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past 12 weeks.

This metric essentially shows how the consensus EPS estimate has changed over a period longer than 1 week or 4 weeks.

EPS Q1 Estimate Monthly Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal quarter over the past four weeks.

While the revision in consensus EPS estimate for the current fiscal year is strongly correlated with the near-term price movement of its shares, the estimate revision for the current fiscal quarter is an important metric as well, especially over the short term, and particularly as a stock approaches its earnings date. If a stock's Q1 EPS estimate decreases ahead of its earnings release, it's usually a negative sign, whereas an increase is a positive sign.