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Mastercard Incorporated Class A (MA-US) IT Services

- We reiterate our Strong Buy rating on MA as it continues to benefit from the global growth in consumer spending, together with the increase in electronic financial transactions and ongoing global expansion.
- MA continues to drive accelerating Business Performance as it benefits from global growth in consumer spending, and the ongoing secular shift to electronic payments.
- MA continues to add value to payment processing through innovation, acquisitions, and strategic partnerships.
- MA has created key strategic partnerships to both increase its service offerings and global presence.
- MA continues to drive growth and business diversification through global expansion.
- MA continues to invest in new technology to enhance its digital capabilities
- MA's strong balance sheet and cash flow continue to drive growth and enhance shareholder value creation.
- MA is on our Research Focus List and in our Focus Opportunity Portfolio

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Company Note
Mastercard Incorporated Class A (MA-US)
IT Services

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Research Action:

Reiterate rating

Rating: Strong Buy
Prior Rating: Strong Buy
Price 11/10/2017: \$149.54
52 Week High / \$152.00
Low: \$99.51
Key Data: (TTM as of Sep-17)
Excess Cash per Share: \$6.93
Annual Dividend: \$0.88
Dividend Yield: 0.59%
Avg. Volume (30 Day): 3.4M
Shares Outstanding: 1,058.6M
Float: 945.7M
Equity MV: \$158,303.0M
Sales TTM: \$11,941.0M
Beta: 1.13
EBITDAR: \$7,486.1M
NOPAT: \$5,089.1M
Total Invested Capital: \$12,370.4M
Return on Capital: 47.62%
Cost of Capital: 6.63%
Economic Profit: \$4,380.8M
Market Value Added: \$149,757.1M
Current Operations Value: \$76,781.0M
Future Growth Value: \$85,346.5M

- **We reiterate our Strong Buy rating on MA as it continues to benefit from the global growth in consumer spending, together with the increase in electronic financial transactions and ongoing global expansion.** MA continues to drive accelerating Business Performance as it adds greater value to payment processing through innovation, acquisitions, and strategic partnerships. We view MA as one of the most technologically advanced and innovative companies in the payment processing space. MA is increasing security by using new applications of artificial intelligence for consumers and card issuers. We believe MA's strong brand equity and market-leading position together with its innovative ability and global opportunities will continue to drive, greater Return on Capital, gains in Economic Profit, and increasing shareholder value creation. MA further enhances shareholder value through ongoing dividend increases and share repurchases. We believe further upside in the shares exists from current levels.
- **MA continues to drive accelerating Business Performance as it benefits from global growth in consumer spending, and the ongoing secular shift to electronic payments.** For the LTM ending September 2017, MA's Net Sales Revenue increased 13.32% Y/Y from \$10.54 billion to \$11.94 billion. We forecast a further increase of 14% to \$13.63 billion over the NTM. Economic Operating Cash Flow (EBITDAR) increased 13.32% Y/Y from \$6.61 billion to \$7.49 billion over the LTM. We forecast a further increase of 13% to \$8.46 billion over the NTM. Net Operating Profit After Tax (NOPAT) increased 10.57% Y/Y from \$4.6 billion to \$5.1 billion over the LTM. We forecast a further increase of 15% to \$5.85 billion over the NTM. Return on Capital declined slightly from 53.52% to 47.62% over the LTM. We forecast a re-acceleration to 54.2% over the NTM. Economic Profit increased 7.68% Y/Y from \$4.1 billion to \$4.38 billion over the LTM. We forecast a further increase of 14% to \$4.98 billion over the NTM.

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- **MA continues to add value to payment processing through innovation, acquisitions, and strategic partnerships.** MA continues to make strategic acquisitions to increase security and take it beyond credit card processing. MA recently acquired anti-money laundering (AML) and real-time cross-channel fraud prevention security provider Brighterion and biometrics and behavior analytic solution provider NuData Security. Both these companies increase MA's capabilities in behavior biometrics and artificial intelligence to preemptively reduce fraudulent transactions and false turndowns. Brighterion increases MA's AML capabilities through real-time cross-channel fraud prevention. MA's recent acquisition Vocalink expands its capabilities beyond electronic card payment processing. Vocalink operates fast payment ACH technology for the real-time clearing and settlement of funds eliminating the need for check-based payments. ACH is used at an increasing rate for P2P and B2B transactions. ACH capabilities will enable MA to gain share in B2B payments as well as increased connectivity to ERP systems, to more efficiently allow a business to process payments with its vendors and clients.
- **MA has created key strategic partnerships to both increase its service offerings and global presence.** MA has established a global partnership with PayPal (PYPL-US, Non-rated), making MasterCard a clear and equal payment option within the PayPal wallet. MA now offers this capability with PayPal beyond the U.S. and Asia to also include, Africa, Canada, Europe, Latin America, and the Middle East. The PayPal partnership includes the ability to offer a more, convenient and secure check-out experience for MasterPass users by adding MasterCard to PayPal's Braintree service. This enables MA to expand its digital acceptance footprint and allow consumers to cash out their PayPal balances through MasterCard Send. MA is now PayPal's partner for all its credit and debit co-brands globally and offers additional commercial and prepaid solutions. MA has also announced a new prepaid program with the world's largest domestic payroll processor ADP (ADP-US, Non-rated), allowing corporations to pay their employees through ADP on a MasterCard debit card. MA continues to increase its commercial presence with its MasterCard B2B hub that enables businesses to simplify its accounts payable process. MA just added Fifth Third Bank (FITB-US, Non-rated) as its first customer.

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- **MA continues to drive growth and business diversification through global expansion.** MA generates 62% of its revenue internationally from regions including Asia-Pacific, Africa, Canada, Europe, Latin America and the Middle East. Strategic alliances with international banks, corporations, and governments in these regions drive MA's expansion into the growing e-commerce opportunities. These markets are growing faster than the U.S. MA's strong international presence continues to drive increasing cross-border payment volume. MA continues to create new partnerships with global banks, including Santander in Poland and Banque Travelex in France. MasterCard will be Costco's (COST-US, Buy-rated) exclusive co-brand credit card partner in Japan starting in 2018. MA has also entered into a new comprehensive agreement in Asia with Uber that includes activation and usage campaigns as well as MasterPass integration in selected markets. In the Middle East, MA has signed a long-term exclusive consumer debit and prepaid deal with National Commercial Bank, one of Saudi Arabia's largest banks. National Commercial Bank will be the first issuer of MasterPass for its cardholders and enhance its service offering with MasterCard Advisors and loyalty services.
- **MA continues to invest in new technology to enhance its digital capabilities.** MA's MasterPass enables the delivery of digital payment services across all devices and in all channels. MA is also developing a tokenization technology with its MasterCard Digital Enablement Service (MDES) which supports contactless payments and digital secure remote payment capabilities. MA continues to integrate artificial intelligence capabilities across its global network to increase fraud detection and better verify identity and reduce false payment turn-downs. MA recently announced the availability of the first biometric card which combines EMV Chip technology with fingerprint scanning to verify identity. Earlier this year MA and Samsung launched the world's first authentication technology using iris scanning to authenticate online purchases with mobile phones. MA is also working with wearable device manufacturers to enable contactless payment capabilities. MA recently announced that it is adding payment capabilities to the newly launched Garmin (GRMN-US, Buy-rated) Vivoactive fitness watch allowing contactless payment through the watch's functionality. MA is currently piloting a fully digital experience at the shared workspace community WeWork. You can now use your MasterCard to pay on a metered basis for the time you are sitting at your WeWork's desk as well as purchase food with MasterPass all without taking out your card or digital wallet. MasterPass is also powering payments through a virtual reality shopping app recently launched with Swarovski, and an augmented reality shopping experience with Saks Fifth Avenue that uses iris authentication to make purchases.

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- **MA's strong balance sheet and cash flow continue to drive growth and enhance shareholder value creation.** MA currently has over \$7.4 billion of excess cash, \$6.93 a share together with our projected \$8.46 billion in Economic Operating Cash Flow enabling it to continue investing in innovation, making, strategic acquisitions and returning cash to shareholders. MA just increased its quarterly dividend 13.6% from \$0.22 a share to \$0.25 a share. MA continues to repurchase a significant amount of outstanding shares. In December 2016, MA announced an open market purchase of \$4 billion worth of stock. That followed a similar announcement in December 2015 for the same amount.
- **MA is on our Research Focus List and in our Focus Opportunity Portfolio.** We believe MA's leading industry position, strong brand equity, significant Return on Capital and expanding growth opportunities continue to enhance its ability to generate increasing Economic Profit and greater shareholder value creation.

Investment Thesis

MA continues to benefit from the ongoing transition to card and electronic-based payments driven by safety, convenience, loyalty programs, and purchase protections that card-based payments offer. MA is one of the most technologically advanced and innovative companies in the payment processing space. MA's significant brand equity and innovative ability continues to create an opportunity to drive growth and gain greater market share in the global electronic payments market. We believe MA continues to exhibit a very strong ability to generate increasing Returns on Capital and greater Economic Profit significantly increasing shareholder value creation. MA's steady cash flow will continue to drive its history of returning cash to shareholders through ongoing dividend increases and share repurchases.

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Company Overview

Mastercard, Inc (MA-US) is the number two global card network service provider offering a multitude of services to financial institutions that support credit, debit, mobile, web-based and other types of electronic payments and related services in more than 150 currencies in 210 countries. MA's global transaction and electronic payment processing solutions include facilitating the authorization, clearing, and settlement process of electronic transactions, as well as processing cross-border and currency conversion transactions. 38% of MA's revenue comes from its domestic operations, and 62% are from international operations. MA's payment card brands including MasterCard, Maestro, and Cirrus. MA also operates the Cirrus ATM network.

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Mastercard Incorporated Class A (MA-US)
IT Services
Financial Data

Report Basis Reported Period Ending	LTM 09/30/2012	LTM 09/30/2013	LTM 09/30/2014	LTM 09/30/2015	LTM 09/30/2016	LTM 09/30/2017	LTM 09/30/2018	5 Yr Average	3 Yr Average	Current Trend
Net Sales Revenue	\$7,225.0	\$8,116.0	\$9,181.0	\$9,566.0	\$10,537.0	\$11,941.0	\$13,626.2	\$9,868.2	\$10,681.3	\$12,783.6
Sales Growth	12.35%	12.33%	13.12%	4.19%	10.15%	13.32%	14.11%	10.62%	9.22%	13.72%
Sales Growth Trend	15.00%	12.34%	12.81%	7.76%	7.77%	12.05%	13.80%	10.55%	9.20%	12.93%
Operating Cash Flow (EBITDAR)	\$4,318.2	\$5,011.0	\$5,855.4	\$5,819.0	\$6,606.5	\$7,486.1	\$8,458.2	\$6,155.6	\$6,637.2	\$7,972.2
EBITDAR Margin	59.77%	61.74%	63.78%	60.83%	62.70%	62.69%	62.07%	62.35%	62.07%	62.38%
EBITDAR Growth	14.86%	16.04%	16.85%	-0.62%	13.53%	13.31%	12.99%	11.82%	8.74%	13.15%
Net Operating Profit Before Tax (NOPBT)	\$4,068.2	\$4,726.0	\$5,509.4	\$5,397.0	\$6,142.9	\$6,992.1	\$7,870.1	\$5,753.5	\$6,177.3	\$7,431.1
NOPBT Margin	56.31%	58.23%	60.01%	56.42%	58.30%	58.56%	57.76%	58.30%	57.76%	58.16%
NOPBT Growth	14.65%	16.17%	16.58%	-2.04%	13.82%	13.82%	12.56%	11.67%	8.53%	13.19%
Cash Operating Income Tax	\$1,149.5	\$1,459.1	\$1,707.1	\$1,333.9	\$1,540.3	\$1,903.0	\$2,020.2	\$1,588.7	\$1,592.4	\$1,961.6
Economic Tax Effective Rate	28.26%	30.87%	30.99%	24.72%	25.07%	27.22%	25.67%	27.77%	25.67%	26.44%
Net Operating Profit After Tax (NOPAT)	\$2,918.8	\$3,266.9	\$3,802.3	\$4,063.0	\$4,602.6	\$5,089.1	\$5,849.9	\$4,164.8	\$4,584.9	\$5,469.5
NOPAT Margin	40.40%	40.25%	41.41%	42.47%	43.68%	42.62%	42.93%	42.09%	42.92%	42.77%
NOPAT Growth	19.39%	11.93%	16.39%	6.86%	13.28%	10.57%	14.95%	11.80%	10.24%	12.76%
Cash & Equivalents	\$5,716.0	\$6,750.0	\$6,859.0	\$6,521.0	\$7,522.0	\$7,968.0	\$9,067.4	\$7,124.0	\$7,337.0	\$8,517.7
Total Assets	\$12,120.0	\$13,730.0	\$14,659.0	\$14,634.0	\$17,323.0	\$20,914.0	\$23,799.6	\$16,252.0	\$17,623.7	\$22,356.8
Non - Interest Bearing Liabilities (NIBLs)	\$4,902.0	\$5,706.0	\$6,252.0	\$6,464.0	\$7,359.0	\$8,497.0	\$9,669.4	\$6,855.6	\$7,440.0	\$9,083.2
Net Assets	\$7,206.0	\$8,013.0	\$8,360.0	\$8,139.0	\$9,934.0	\$12,321.0	\$14,021.0	\$9,353.4	\$10,131.3	\$13,171.0
Economic Asset Adjustments	(\$236.5)	\$11.3	(\$125.4)	(\$50.9)	(\$57.7)	\$49.4	\$56.2	(\$34.7)	(\$19.8)	\$52.8
Net Operating Assets	\$6,969.5	\$8,024.3	\$8,234.6	\$8,088.1	\$9,876.3	\$12,370.4	\$14,077.2	\$9,318.7	\$10,111.6	\$13,223.8
Debt & Debt Equivalents	\$86.5	\$92.3	\$1,607.6	\$1,647.1	\$3,528.3	\$5,618.4	\$6,393.6	\$2,498.7	\$3,597.9	\$6,006.0
Equity & Equivalents	\$6,912.0	\$7,657.0	\$6,501.0	\$6,267.0	\$6,219.0	\$6,442.0	\$7,330.8	\$6,617.2	\$6,309.3	\$6,886.4
Total Capital - Financing Sources	\$6,998.5	\$7,749.3	\$8,108.6	\$7,914.1	\$9,747.3	\$12,060.4	\$13,724.4	\$9,115.9	\$9,907.2	\$12,892.4
Capital Adjustments	(\$323.0)	(\$81.0)	(\$239.0)	(\$203.0)	(\$260.0)	(\$176.0)	(\$200.3)	(\$191.8)	(\$213.0)	(\$188.1)
Net Capital Financing Sources	\$6,675.5	\$7,668.3	\$7,869.6	\$7,711.1	\$9,487.3	\$11,884.4	\$13,524.1	\$8,924.1	\$9,694.2	\$12,704.3
Net Working Capital	(\$495.8)	(\$833.2)	(\$928.0)	(\$1,983.7)	(\$1,951.2)	(\$1,638.0)	(\$1,863.9)	(\$1,466.8)	(\$1,857.6)	(\$1,750.9)
Cost of Net Working Capital	(\$19.8)	(\$48.7)	(\$59.6)	(\$98.1)	(\$122.2)	(\$118.9)	(\$135.4)	(\$89.5)	(\$113.1)	(\$127.1)
% of Revenue	-0.27%	-0.60%	-0.65%	-1.03%	-1.16%	-1.00%	-0.99%	-0.89%	-1.06%	-0.99%
Operational Capital	\$55.7	(\$266.9)	(\$261.4)	(\$1,190.6)	(\$1,050.9)	(\$511.5)	(\$582.1)	(\$656.3)	(\$917.7)	(\$546.8)
Cost of Operational Capital	\$13.8	(\$7.7)	(\$17.9)	(\$48.9)	(\$69.6)	(\$51.8)	(\$58.9)	(\$39.2)	(\$56.8)	(\$55.4)
% of Revenue	0.19%	-0.10%	-0.19%	-0.51%	-0.66%	-0.43%	-0.43%	-0.38%	-0.54%	-0.43%
Productive Capital	\$1,818.7	\$1,489.1	\$1,899.6	\$1,536.4	\$1,510.1	\$3,650.5	\$4,154.1	\$2,017.1	\$2,232.3	\$3,902.3
Cost of Productive Capital	\$120.8	\$121.1	\$114.7	\$115.8	\$94.6	\$171.0	\$194.6	\$123.5	\$127.2	\$182.8
% of Revenue	1.67%	1.49%	1.25%	1.21%	0.90%	1.43%	1.43%	1.26%	1.18%	1.43%
Total Operating Capital	\$1,614.7	\$1,680.1	\$1,834.6	\$2,045.4	\$2,881.1	\$4,999.5	\$5,689.2	\$2,688.1	\$3,308.6	\$5,344.3
Cost of Total Operating Capital	\$116.7	\$120.6	\$118.9	\$130.8	\$153.0	\$261.2	\$297.2	\$156.9	\$181.7	\$279.2
% of Revenue	1.61%	1.49%	1.30%	1.37%	1.45%	2.19%	2.18%	1.56%	1.67%	2.18%
Non - Operating Capital	\$5,354.8	\$6,344.2	\$6,400.0	\$6,042.7	\$6,995.2	\$7,371.0	\$8,387.9	\$6,630.6	\$6,802.9	\$7,879.4
Cost of Non - Operating Capital	\$294.0	\$428.3	\$431.3	\$419.4	\$405.0	\$476.1	\$541.8	\$432.0	\$433.5	\$508.9
% of Revenue	4.07%	5.28%	4.70%	4.38%	3.84%	3.99%	3.98%	4.44%	4.07%	3.98%
Total Capital	\$6,969.5	\$8,024.3	\$8,234.6	\$8,088.1	\$9,876.3	\$12,370.4	\$14,077.2	\$9,318.7	\$10,111.6	\$13,223.8
Cost of Total Capital	\$410.7	\$549.0	\$550.2	\$550.2	\$558.1	\$737.3	\$839.0	\$588.9	\$615.2	\$788.1
% of Revenue	5.68%	6.76%	5.99%	5.75%	5.30%	6.17%	6.16%	6.00%	5.74%	6.17%
Cost of Capital (WACC)	6.16%	7.32%	6.77%	6.74%	6.21%	6.63%	6.63%	6.73%	6.53%	6.63%
Capital Structure										
Debt & Debt Equivalents	\$86.5	\$92.3	\$1,607.6	\$1,647.1	\$3,528.3	\$5,618.4	\$6,393.6	\$2,498.7	\$3,597.9	\$6,006.0
Debt & Debt Equivalents % of Market Value	0.16%	0.12%	1.91%	1.62%	3.12%	3.65%	3.65%	2.35%	2.93%	3.65%
Preferred Equity	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Preferred Equity % of Market Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Market Value of Common Equity	\$54,034.9	\$78,038.4	\$82,373.2	\$99,932.6	\$109,652.2	\$148,144.1	\$168,584.0	\$103,628.1	\$119,243.0	\$158,364.0
Common Equity % of Market Value	99.84%	99.88%	98.09%	98.38%	96.88%	96.35%	96.35%	97.65%	97.07%	96.35%
Total Economic Market Value (MV)	\$54,121.4	\$78,130.7	\$83,980.8	\$101,579.7	\$113,180.4	\$153,762.5	\$174,977.6	\$106,126.8	\$122,840.9	\$164,370.0
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Excess Cash	\$5,354.8	\$6,344.2	\$6,400.0	\$6,042.7	\$6,995.2	\$7,371.0	\$8,387.9	\$6,630.6	\$6,802.9	\$7,879.4
Economic Enterprise Value	\$48,766.7	\$71,786.5	\$77,580.8	\$95,537.0	\$106,185.3	\$146,391.5	\$166,589.6	\$99,496.2	\$116,037.9	\$156,490.6
Average Capital	\$6,377.9	\$7,171.9	\$7,768.9	\$7,790.3	\$8,599.2	\$10,685.8	\$12,704.3	\$8,403.2	\$9,025.1	\$11,695.0
Capital Δ	\$595.2	\$992.8	\$201.3	(\$158.5)	\$1,776.2	\$2,397.1	\$1,639.7	\$1,041.8	\$1,338.3	\$2,018.4

Source: Company Data, Financial statements and Tigress Research

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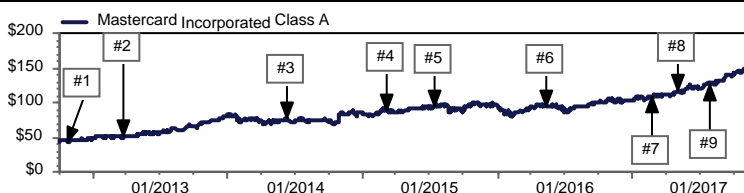
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Mastercard Incorporated Class A (MA-US)
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Ratings History

Mastercard Incorporated Class A (MA-US)				
Item #	Date	Research Action	Rating	Price
#9	07/02/2017	Reiterate Rating	Strong Buy	\$127.91
#8	05/04/2017	Reiterate Rating	Strong Buy	\$117.92
#7	02/21/2017	Reiterate Rating	Strong Buy	\$110.16
#6	05/13/2016	Reiterate Rating	Strong Buy	\$95.36
#5	07/15/2015	Reiterate Rating	Strong Buy	\$98.41
#4	03/10/2015	Reiterate Rating	Strong Buy	\$88.84
#3	06/10/2014	Reiterate Rating	Strong Buy	\$77.36
#2	03/25/2013	Reiterate Rating	Strong Buy	\$52.00
#1	10/25/2012	Initiation of Coverage	Strong Buy	\$44.94


Tigress Research Methodology Overview

We employ proprietary quantitative valuation models combined with dynamic fundamental analysis based on the principles of Economic Profit to formulate timely and insightful investment ratings, analysis, strategies, and recommendations.

We make key adjustments to reported financial data eliminating GAAP-based accounting distortions and measuring all companies on a cash operating basis.

Our proprietary research framework is a multi-factor model that scores and ranks companies based on their risk-adjusted ability to create Economic Profit relative to their current market value focusing on three key components:

Business Performance: Measuring economic profitability, growth and operating efficiency.

Risk: Measuring business sustainability, volatility, strength, and consistency.

Valuation: Linking business performance to market value. Measuring value created relative to capital employed and enterprise multiples of economic profit and cash flow.

We score and rank 24 key measurements of performance, risk, and value into relative market and industry investment recommendations.

For more information on our research methodology, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

Glossary of Key Terms and Measures

Excess Cash per Share: Excess Cash per Share is the amount of excess cash divided by basic shares outstanding. Excess Cash consists of all cash and short-term securities less operating cash needed to run the business. Operating Cash is 5% of TTM net sales revenue.

EBITDAR: Earnings Before Interest, Taxes, Depreciation, Amortization, and Restructuring and Rent Costs. This is especially important when comparing companies that use a significant amount of leased assets like restaurants and retailers.

NOPAT: Net Operating Profit after Tax represents a company's after-tax cash operating profit excluding financing costs.

Total Invested Capital: Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of the company.

Return on Capital: Return on Capital equals NOPAT divided by Total Invested Capital. It is a key measure of operating efficiency. ROC quantifies how well a company generates cash flow relative to the capital invested in its business.

Cost of Capital: Is the proportionately weighted cost of each category of capital – common equity, preferred equity and debt.

Economic Profit: Economic Profit is the net operating income after tax less the opportunity cost of the total capital invested. It is the most important driver of shareholder value.

Current Operations Value: Current Operations Value is the portion of market value based on the discounted present value of the current earnings stream assuming it remains constant forever.

Future Growth Value: Future Growth Value is the portion of market value based on un-earned Economic Profit

For more information on the key terms and measures, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

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		Companies Under Coverage		Relationship Companies Under Coverage*		
		#	%	#	%	
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Neutral:	Expect little or no outperformance opportunity over the next 12 months.	44	38%	1	17%	
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Not Rated	No Current Research Rating	NA	NA	65	NA	
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Company:	Disclosure:
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