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Mastercard Incorporated Class A (MA-US)

IT Services

- **We reiterate our Strong Buy rating on MA as increases in consumer spending and improving consumer confidence continue to drive strong Business Performance.**
- **Business performance remain strong driven by increases in consumer spending, improving consumer confidence and market share gains.**
- **MA will continue to add gains by targeting businesses, governments and consumers outside of its traditional card network.**
- **ACH payments continue to be a key market focus and growth driver for MA.**
- **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 07/27/2017: \$128.93

52 Week High / Low: \$132.20 / \$92.11

Key Data: (TTM as of Jun-17)
Excess Cash per Share: \$6.48

Annual Dividend: \$0.88

Dividend Yield: 0.68%

Ave. Volume (30 Day): 3.1M

Shares Outstanding: 1,065.2M

Float: 951.9M

Equity MV: \$137,333.7M

Sales TTM: \$11,423.0M

Beta: 1.00

EBITDAR: \$7,136.0M

NOPAT: \$4,821.2M

Total Invested Capital: \$11,236.5M

Return on Capital: 47.34%

Cost of Capital: 6.67%

Economic Profit: \$3,861.3M

Market Value Added: \$131,648.7M

Current Operations Value: \$69,120.3M

Future Growth Value: \$73,764.9M

- **We reiterate our Strong Buy rating on MA as increases in consumer spending and improving consumer confidence continue to drive strong Business Performance.** MA continues to benefit from an improving global economy and the increasing use of credit cards and other forms of electronic payment. MA's strong brand equity and innovative thinking will continue to drive revenue growth. MA should continue to gain market share in Europe as Visa (V-US, Non-rated) raises its below market processing rates from the recently acquired Visa Europe. MA's ongoing expansion in its ACH processing capabilities will continue to increase Return on Capital and growing Economic Profit which will continue to drive greater shareholder value creation.
- **Business performance remain strong driven by increases in consumer spending, improving consumer confidence and market share gains.** For the LTM ending June 2017, revenue increased 12.13% Y/Y from \$10.2 billion to \$11.4 billion. We are forecasting a similar increase of 12% to \$12.8 billion over the NTM. Economic Operating Cash Flow (EBITDAR) increased 14% Y/Y from \$6.26 billion to \$7.14 billion. We are forecasting an increase of 11.3% to \$7.94 billion over the NTM. Net Operating Profit After Tax (NOPAT) increased 11% Y/Y from \$4.35 billion to \$4.82 billion. We forecast an increase of 13.64% to \$5.48 billion over the NTM. Return on Capital declined slightly from a very strong 51.2% to 47.34% due to an increase in capital from the closing of recent acquisitions. We forecast an increase to 53.0% as the acquisition of VocaLink starts to contribute to positive returns. Economic Profit increased 7.7% Y/Y from \$3.85 billion to \$4.24 billion. We forecast an increase of over 12% to \$4.64 billion over the NTM.

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Mastercard Incorporated Class A (MA-US)**IT Services**

- **MA will continue to add gains by targeting businesses, governments and consumers outside of its traditional card network.** MA's acquisition of VocaLink adds automated clearinghouse capabilities (ACH) and an expanded customer base. The ability to process ACH payments from a customer's bank account, directly to a vendor, adds a tremendous new market opportunity for MA. As more consumers and businesses bank online, their primary method of payment is through ACH. It's estimated that over 50% of all global payments in the top 50 countries around the world are processed this way. With VocaLink's Fast ACH, MA has the ability to process payments to and from any bank account, in real time, and reach more users including businesses, consumers and governments that may only have a bank account and not a debit or credit card. MA continues to invest to expand its position as an enabler of digital payments which should continue to drive increases in Return on Capital and greater Economic Profit.
- **ACH payments continue to be a key market focus and growth driver for MA.** VocaLink's Fast ACH helps consumers and businesses better manage their financial transactions. VocaLink's Fast ACH enhanced data and messaging capabilities enable it to connect directly to ERP (Enterprise Resource Planning) systems to facilitate B2B payments and improve receivables management. It also support bill pay through its Request to Pay messaging capabilities. Currently over 25 countries are actively using Fast ACH networks. VocaLink currently provides the services in the UK, Sweden, Singapore, Thailand and the US. VocaLink and Fast ACH complements MA's Mastercard Send push payment service to facilitate the delivery of funds in near real time to virtually all debit card accounts in the US. MA also continues to leverage its exclusive capabilities with its HomeSend JV to enable cross-border payments to over 85 markets by connecting into cash in and cash out locations and by two mobile wallets and bank accounts.
- **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.

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Investment Thesis

MA is the number two global card network providing 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 worldwide transaction and electronic payment processing payment solutions include facilitating the authorization, clearing and settlement process of electronic transactions, as well as processing cross-border and currency conversion transactions. MA's payment card brands including MasterCard, Maestro and Cirrus.

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 offers. MA's significant brand equity and innovative ability continues to create opportunity to gain greater market share in the global electronic payments market. We believe MA continues to exhibit very strong ability to generate increasing Returns on Capital and greater Economic Profit significantly increasing shareholder value creation. MA's strong cash flow will continue to drive its history of returning significant cash to shareholders through ongoing dividend increases and share repurchases.

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

Report Basis Reported Period Ending	LTM 06/30/2012	LTM 06/30/2013	LTM 06/30/2014	LTM 06/30/2015	LTM 06/30/2016	LTM 06/30/2017	LTM 06/30/2018	NTM	5 Yr Average	3 Yr Average	Current Trend
Net Sales Revenue	\$7,126.0	\$7,819.0	\$8,893.0	\$9,539.0	\$10,187.0	\$11,423.0	\$12,794.1	\$9,572.2	\$10,383.0	\$12,108.5	
Sales Growth	17.98%	9.72%	13.74%	7.26%	6.79%	12.13%	12.00%	9.93%	8.73%	12.07%	
Sales Growth Trend	15.98%	13.03%	12.13%	9.85%	6.98%	10.00%	12.05%	10.40%	8.94%	11.03%	
Operating Cash Flow (EBITDAR)	\$4,259.2	\$4,821.0	\$5,562.5	\$5,950.8	\$6,259.0	\$7,136.0	\$7,944.9	\$5,945.9	\$6,448.6	\$7,540.5	
EBITDAR Margin	59.77%	61.66%	62.55%	62.38%	61.44%	62.47%	62.10%	62.10%	62.10%	62.28%	
EBITDAR Growth	21.31%	13.19%	15.38%	6.98%	5.18%	14.01%	11.34%	10.95%	8.72%	12.67%	
Net Operating Profit Before Tax (NOPBT)	\$4,016.2	\$4,542.0	\$5,235.5	\$5,539.8	\$5,794.4	\$6,667.0	\$7,391.6	\$5,555.7	\$6,000.4	\$7,029.3	
NOPBT Margin	56.36%	58.09%	58.87%	58.08%	56.88%	58.37%	57.77%	58.06%	57.77%	58.07%	
NOPBT Growth	21.15%	13.09%	15.27%	5.81%	4.59%	15.06%	10.87%	10.77%	8.49%	12.96%	
Cash Operating Income Tax	\$1,175.3	\$1,378.0	\$1,647.0	\$1,382.2	\$1,448.9	\$1,845.8	\$1,913.0	\$1,540.4	\$1,559.0	\$1,879.4	
Economic Tax Effective Rate	29.26%	30.34%	31.46%	24.95%	25.00%	27.69%	25.88%	27.89%	25.88%	26.78%	
Net Operating Profit After Tax (NOPAT)	\$2,840.9	\$3,163.9	\$3,588.5	\$4,157.6	\$4,345.5	\$4,821.2	\$5,478.6	\$4,015.4	\$4,441.5	\$5,149.9	
NOPAT Margin	39.87%	40.46%	40.35%	43.59%	42.66%	42.21%	42.82%	41.85%	42.82%	42.51%	
NOPAT Growth	25.33%	11.37%	13.42%	15.86%	4.52%	10.95%	13.64%	11.22%	10.44%	12.29%	
Cash & Equivalents	\$5,033.0	\$5,837.0	\$6,254.0	\$6,618.0	\$6,989.0	\$7,503.0	\$8,407.5	\$6,640.2	\$7,036.7	\$7,955.2	
Total Assets	\$11,240.0	\$12,021.0	\$14,375.0	\$15,272.0	\$16,282.0	\$19,839.0	\$22,230.6	\$15,557.8	\$17,131.0	\$21,034.8	
Non - Interest Bearing Liabilities (NIBLs)	\$4,741.0	\$4,752.0	\$6,302.0	\$7,021.0	\$6,814.0	\$8,223.0	\$9,214.3	\$6,622.4	\$7,352.7	\$8,718.6	
Net Assets	\$6,488.0	\$7,258.0	\$8,025.0	\$8,219.0	\$9,436.0	\$11,520.0	\$12,908.7	\$8,891.6	\$9,725.0	\$12,214.4	
Economic Asset Adjustments	(\$251.3)	\$15.6	(\$107.8)	(\$54.4)	(\$12.9)	\$58.5	\$65.6	(\$20.2)	(\$2.9)	\$62.1	
Net Operating Assets	\$6,236.7	\$7,273.6	\$7,917.2	\$8,164.6	\$9,423.1	\$11,578.5	\$12,974.3	\$8,871.4	\$9,722.1	\$12,276.4	
Debt & Debt Equivalents	\$86.7	\$92.6	\$1,607.2	\$1,647.6	\$3,510.1	\$5,551.5	\$6,220.8	\$2,481.8	\$3,569.7	\$5,886.1	
Equity & Equivalents	\$6,265.0	\$7,018.0	\$6,266.0	\$6,404.0	\$5,837.0	\$5,852.0	\$6,557.4	\$6,275.4	\$6,031.0	\$6,204.7	
Total Capital - Financing Sources	\$6,351.7	\$7,110.6	\$7,873.2	\$8,051.6	\$9,347.1	\$11,403.5	\$12,778.2	\$8,757.2	\$9,600.7	\$12,090.9	
Capital Adjustments	(\$338.0)	(\$77.0)	(\$221.0)	(\$207.0)	(\$217.0)	(\$167.0)	(\$187.1)	(\$177.8)	(\$197.0)	(\$177.1)	
Net Capital Financing Sources	\$6,013.7	\$7,033.6	\$7,652.2	\$7,844.6	\$9,130.1	\$11,236.5	\$12,591.1	\$8,579.4	\$9,403.7	\$11,913.8	
Net Working Capital	(\$436.7)	(\$548.1)	(\$757.4)	(\$2,080.1)	(\$1,650.7)	(\$1,630.9)	(\$1,827.4)	(\$1,333.4)	(\$1,787.2)	(\$1,729.1)	
Cost of Net Working Capital	(\$14.1)	(\$33.7)	(\$44.1)	(\$92.6)	(\$109.7)	(\$109.3)	(\$122.5)	(\$77.9)	(\$103.9)	(\$115.9)	
% of Revenue	-0.20%	-0.43%	-0.50%	-0.97%	-1.08%	-0.96%	-0.96%	-0.79%	-1.00%	-0.96%	
Operational Capital	\$108.0	\$15.6	(\$105.1)	(\$1,295.5)	(\$766.5)	(\$560.3)	(\$627.9)	(\$542.4)	(\$874.1)	(\$594.1)	
Cost of Operational Capital	\$17.7	\$4.2	(\$3.0)	(\$45.7)	(\$60.6)	(\$44.2)	(\$49.5)	(\$29.9)	(\$50.2)	(\$46.9)	
% of Revenue	0.25%	0.05%	-0.03%	-0.48%	-0.60%	-0.39%	-0.39%	-0.29%	-0.49%	-0.39%	
Productive Capital	\$1,773.0	\$1,702.6	\$2,180.9	\$1,506.5	\$1,829.5	\$3,324.7	\$3,725.5	\$2,108.8	\$2,220.2	\$3,525.1	
Cost of Productive Capital	\$118.1	\$119.0	\$131.3	\$120.4	\$98.1	\$171.7	\$192.3	\$128.1	\$130.1	\$182.0	
% of Revenue	1.66%	1.52%	1.48%	1.26%	0.96%	1.50%	1.50%	1.35%	1.24%	1.50%	
Total Operating Capital	\$1,560.0	\$1,827.6	\$2,107.9	\$2,023.5	\$2,943.5	\$4,646.7	\$5,206.8	\$2,709.8	\$3,204.6	\$4,926.8	
Cost of Total Operating Capital	\$113.9	\$116.0	\$133.1	\$134.9	\$146.1	\$252.8	\$283.3	\$156.6	\$177.9	\$268.0	
% of Revenue	1.60%	1.48%	1.50%	1.41%	1.43%	2.21%	2.21%	1.61%	1.69%	2.21%	
Non - Operating Capital	\$4,676.7	\$5,446.1	\$5,809.4	\$6,141.1	\$6,479.7	\$6,931.9	\$7,767.5	\$6,161.6	\$6,517.5	\$7,349.7	
Cost of Non - Operating Capital	\$236.9	\$346.7	\$380.6	\$390.2	\$371.2	\$446.6	\$500.5	\$387.1	\$402.7	\$473.6	
% of Revenue	3.32%	4.43%	4.28%	4.09%	3.64%	3.91%	3.91%	4.07%	3.88%	3.91%	
Total Capital	\$6,236.7	\$7,273.6	\$7,917.2	\$8,164.6	\$9,423.1	\$11,578.5	\$12,974.3	\$8,871.4	\$9,722.1	\$12,276.4	
Cost of Total Capital	\$350.8	\$462.7	\$513.6	\$525.1	\$517.2	\$699.4	\$783.7	\$543.6	\$580.6	\$741.6	
% of Revenue	4.92%	5.92%	5.78%	5.50%	5.08%	6.12%	6.13%	5.68%	5.57%	6.12%	
Cost of Capital (WACC)	5.85%	6.85%	6.76%	6.53%	5.88%	6.66%	6.66%	6.54%	6.36%	6.66%	
Capital Structure											
Debt & Debt Equivalents	\$86.7	\$92.6	\$1,607.2	\$1,647.6	\$3,510.1	\$5,551.5	\$6,220.8	\$2,481.8	\$3,569.7	\$5,886.1	
Debt & Debt Equivalents % of Market Value	0.17%	0.14%	1.91%	1.55%	3.56%	4.16%	4.16%	2.54%	3.17%	4.16%	
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	\$52,149.1	\$67,134.9	\$82,558.2	\$104,334.3	\$94,956.4	\$127,998.8	\$143,428.9	\$95,396.5	\$109,096.5	\$135,713.9	
Common Equity % of Market Value	99.83%	99.86%	98.09%	98.45%	96.44%	95.84%	95.84%	97.46%	96.83%	95.84%	
Total Economic Market Value (MV)	\$52,235.8	\$67,227.5	\$84,165.4	\$105,981.8	\$98,466.5	\$133,550.4	\$149,649.6	\$97,878.3	\$112,666.2	\$141,600.0	
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
Excess Cash	\$4,676.7	\$5,446.1	\$5,809.4	\$6,141.1	\$6,479.7	\$6,931.9	\$7,767.5	\$6,161.6	\$6,517.5	\$7,349.7	
Economic Enterprise Value	\$47,559.1	\$61,781.5	\$78,356.1	\$99,840.8	\$91,986.9	\$126,618.5	\$141,882.2	\$91,716.7	\$106,148.7	\$134,250.3	
Average Capital	\$5,778.2	\$6,523.6	\$7,342.9	\$7,748.4	\$8,487.3	\$10,183.3	\$11,913.8	\$8,057.1	\$8,806.4	\$11,048.6	
Capital Δ	\$470.8	\$1,020.0	\$618.6	\$192.3	\$1,285.6	\$2,106.4	\$1,354.5	\$1,044.6	\$1,194.8	\$1,730.5	

Source: Company Data, Financial statements and Tigress Research

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Company Report – Research Update

Mastercard Incorporated Class A (MA-US)

IT Services

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	06/30/2012	06/30/2013	06/30/2014	06/30/2015	06/30/2016	06/30/2017	06/30/2018	Average	Average	Trend
Return on Market Value (NOPAT / MV)	5.44%	4.71%	4.26%	3.92%	4.41%	3.61%	4.05%	4.18%	3.98%	3.83%
Return on Enterprise Value (NOPAT / EV)	5.97%	5.12%	4.58%	4.16%	4.72%	3.81%	4.27%	4.48%	4.23%	4.04%
Return on Capital (NOPAT / Average Capital)	49.17%	48.50%	48.87%	53.66%	51.20%	47.34%	53.05%	49.91%	50.73%	50.20%
Cost of Capital (WACC)	5.85%	6.85%	6.76%	6.53%	5.88%	6.66%	6.66%	6.54%	6.36%	6.66%
Economic Return Spread	43.31%	41.65%	42.11%	47.13%	45.32%	40.68%	45.59%	43.38%	44.38%	43.14%
Capital Charge	\$338.1	\$446.9	\$496.6	\$506.0	\$499.2	\$678.3	\$760.0	\$525.4	\$561.2	\$719.2
Economic Profit (EP)	\$2,502.8	\$2,717.1	\$3,091.9	\$3,651.7	\$3,846.3	\$4,142.9	\$4,642.4	\$3,490.0	\$3,880.3	\$4,392.6
Economic Profit Improvement (EPI)	\$579.5	\$214.3	\$374.8	\$559.8	\$194.6	\$296.6	\$499.4	\$328.0	\$350.3	\$398.0
EP Growth	30.13%	8.56%	13.80%	18.11%	5.33%	7.71%	12.05%	10.70%	10.38%	9.88%
Economic Profit Margin on Sales	35.12%	34.75%	34.77%	38.28%	37.76%	36.27%	36.29%	36.36%	37.44%	36.28%
Economic Profit Per Share	\$1.96	\$2.17	\$2.55	\$3.13	\$3.39	\$3.77	\$4.23	\$3.01	\$3.43	\$4.00
GAAP Earnings Per Share	\$1.67	\$2.43	\$2.78	\$3.28	\$3.41	\$4.04	\$4.66	\$3.19	\$3.58	\$4.35
Excess Cash Per Share	\$3.71	\$4.50	\$4.99	\$5.40	\$5.90	\$6.48	\$7.26	\$5.45	\$5.93	\$6.87
Performance Drivers										
Sales Growth	17.98%	9.72%	13.74%	7.26%	6.79%	12.13%	12.00%	9.93%	8.73%	12.07%
Sales Growth Trend (ROC Sales Growth)	15.98%	13.03%	12.13%	9.85%	6.98%	10.00%	12.05%	10.40%	8.94%	11.03%
EBITDA Margin	59.77%	61.66%	62.55%	62.38%	61.44%	62.47%	62.10%	62.10%	62.10%	62.28%
EBITDAR Growth	21.31%	13.19%	15.38%	6.98%	5.18%	14.01%	11.34%	10.95%	8.72%	12.67%
NOPBT Margin	56.36%	58.09%	58.87%	58.08%	56.88%	58.37%	57.77%	58.06%	57.77%	58.07%
NOPBT Growth	21.15%	13.09%	15.27%	5.81%	4.59%	15.06%	10.87%	10.77%	8.49%	12.96%
NOPAT Margin	39.87%	40.46%	40.35%	43.59%	42.66%	42.21%	42.82%	41.85%	42.82%	42.51%
NOPAT Growth	25.33%	11.37%	13.42%	15.86%	4.52%	10.95%	13.64%	11.22%	10.44%	12.29%
Economic Profit Margin on Sales (EP / Sales)	35.12%	34.75%	34.77%	38.28%	37.76%	36.27%	36.29%	36.36%	37.44%	36.28%
Economic Profit Growth	30.13%	8.56%	13.80%	18.11%	5.33%	7.71%	12.05%	10.70%	10.38%	9.88%
Economic Return Spread (ROC-WACC)	43.31%	41.65%	42.11%	47.13%	45.32%	40.68%	45.59%	43.38%	44.38%	43.54%
Economic Return Ratio (ROC / WACC)	840.19%	707.99%	722.65%	821.74%	870.46%	710.80%	796.48%	766.73%	801.00%	753.64%
Economic Profit Momentum (ΔEP/Capital)	9.64%	3.05%	4.90%	7.14%	2.13%	2.64%	3.97%	3.97%	3.97%	3.30%
Economic Profit Momentum Margin (ΔEP/Sales)	8.13%	2.74%	4.21%	5.87%	1.91%	2.60%	3.90%	3.47%	3.46%	3.25%
Capital Growth	8.49%	16.96%	8.80%	2.51%	16.39%	23.07%	12.05%	13.55%	13.99%	17.56%
Capital Turns	1.18X	1.11X	1.16X	1.22X	1.12X	1.02X	1.02X	1.12X	1.12X	1.02X
EVC Acceleration Margin	9.59%	3.01%	4.79%	6.29%	2.04%	2.91%	4.37%	2.66%	3.66%	3.83%
EVC Acceleration Spread	12.26%	3.71%	5.75%	7.62%	2.51%	3.50%	4.90%	2.75%	4.35%	4.52%
Risk Factors										
Free Cash Flow (NOPAT - Δ Capital)	\$2,370.0	\$2,144.0	\$2,969.8	\$3,965.3	\$3,060.0	\$2,714.8	\$4,124.1	\$2,970.8	\$3,246.7	\$3,419.4
Free Cash Flow Rate (FCF / Capital)	39.41%	30.48%	38.81%	50.55%	33.51%	24.16%	32.75%	35.50%	36.07%	28.46%
Free Cash Flow Yield (FCF / MV)	4.54%	3.19%	3.53%	3.74%	3.11%	2.03%	3.12%	2.96%	2.96%	2.39%
Total Debt / Total Capital	1.44%	1.32%	21.00%	21.00%	38.45%	49.41%	49.41%	26.23%	36.28%	49.41%
Total Debt / EBITDAR	2.03%	1.92%	28.89%	27.69%	56.08%	77.80%	78.30%	38.48%	53.85%	78.05%
Excess Cash	\$4,676.7	\$5,446.1	\$5,809.4	\$6,141.1	\$6,479.7	\$6,931.9	\$0.0	\$6,161.6	\$6,517.5	\$3,465.9
Financial Leverage ((Total Debt - Excess Cash) / Pension Leverage (Net Pension Liability / MV))	-8.79%	-7.96%	-4.99%	-4.24%	-3.02%	-1.03%	-4.16%	-4.25%	-2.76%	1.56%
Equity Risk Index (S&P 500 = 1.00)	0.95	0.95	0.97	0.97	1.00	1.00	1.00	0.98	0.99	1.00
Stock Price Volatility	4.24	3.59	2.64	2.87	2.80	2.38	2.38	2.86	2.68	2.38
Sales Index (NL Sales)	8.87	8.96	9.09	9.16	9.23	9.34	9.46	9.16	9.25	9.40
Market Value Index (NL Market Value)	10.86	11.12	11.34	11.57	11.50	11.80	11.92	11.47	11.62	11.86
Size Index (NL Sales: MV)	9.87	10.04	10.22	10.37	10.36	10.57	10.69	10.31	10.43	10.63
Beta	0.93	0.93	0.95	0.95	0.99	1.00	1.00	0.96	0.98	1.00
TFP Adjusted Beta	0.95	0.95	0.97	0.97	1.00	1.00	1.00	0.98	0.99	1.00
Stock Price Volatility	4.24	3.59	2.64	2.87	2.80	2.38	2.38	2.86	2.68	2.38
Valuation Measures										
Total Economic Market Value (MV)	\$52,235.8	\$67,227.5	\$84,165.4	\$105,981.8	\$98,466.5	\$133,550.4	\$149,649.6	\$97,878.3	\$112,666.2	\$141,600.0
Economic Enterprise Value	\$47,559.1	\$61,781.5	\$78,356.1	\$99,840.8	\$91,986.9	\$126,618.5	\$141,882.2	\$91,716.7	\$106,148.7	\$134,250.3
Equity Market Value	\$52,149.1	\$67,134.9	\$82,558.2	\$104,334.3	\$94,956.4	\$127,998.8	\$143,428.9	\$95,396.5	\$109,096.5	\$135,713.9
Total Capital	\$6,236.7	\$7,273.6	\$7,917.2	\$8,164.6	\$9,423.1	\$11,578.5	\$12,974.3	\$8,871.4	\$9,722.1	\$12,276.4
Market Value Created MVC (MV - Capital)	\$45,999.1	\$59,953.9	\$76,248.2	\$97,817.3	\$89,043.4	\$121,971.8	\$136,675.3	\$89,006.9	\$102,944.2	\$129,323.6
MVC Margin (MVC / Sales)	645.51%	766.77%	857.40%	1025.45%	874.09%	1067.77%	1068.27%	929.85%	991.47%	1068.04%
MVC Spread (MVC / Capital)	737.56%	824.27%	963.06%	1198.07%	944.95%	1053.43%	1053.43%	1003.30%	1058.87%	1053.43%
Current EVC Value (EP / WACC)	\$42,769.6	\$39,663.3	\$45,720.7	\$55,923.5	\$65,391.4	\$62,199.7	\$69,697.7	\$53,387.5	\$61,035.2	\$65,948.7
Current Operations Value COV	\$48,547.8	\$46,186.9	\$53,063.6	\$63,671.9	\$73,878.7	\$72,383.0	\$81,611.5	\$61,444.6	\$69,841.6	\$78,997.3
Current Operations Value Per Share	\$37.93	\$36.95	\$43.82	\$54.65	\$65.15	\$65.92	\$69.66	\$52.45	\$61.68	\$67.85
Future Growth Value (MVC - EVA Value)	\$3,688.0	\$21,040.6	\$31,101.8	\$42,310.0	\$24,587.8	\$61,167.4	\$68,038.1	\$36,433.7	\$42,824.7	\$64,602.7
Future Growth Value Reliance (FGV / MV)	7.06%	31.30%	36.95%	39.92%	24.97%	45.80%	45.46%	37.22%	38.01%	45.62%
Share Price	\$43.01	\$57.45	\$73.47	\$93.48	\$88.06	\$121.45	\$121.45	\$86.78	\$101.00	\$121.45
Dividend Yield	0.21%	0.31%	0.53%	0.63%	0.83%	0.70%				
Total Shareholder Return (TTM)	42.94%	33.88%	28.42%	27.87%	-4.97%	38.62%	0.00%	-28.55%	16.38%	20.25%
MV to IC Ratio	8.38X	9.24X	10.63X	12.98X	10.45X	11.53X	11.53X	11.03X	11.59X	11.53X
EV / EBITDAR Multiple	11.17X	12.82X	14.09X	16.78X	14.70X	17.74X	17.86X	15.43X	16.46X	17.80X
EV / NOPBT Multiple	11.84X	13.60X	14.97X	18.02X	15.88X	18.99X	19.20X	16.51X	17.69X	19.10X
EV / NOPAT Multiple	16.74X	19.53X	21.84X	24.01X	21.17X	26.26X	25.90X	22.84X	23.90X	26.07X
EV / EP Multiple	19.00X	22.74X	25.34X	27.34X	23.92X	30.56X	30.56X	28.28X	27.36X	30.56X
Future Growth Value (% of MV)	7.06%	31.30%	36.95%	39.92%	24.97%	45.80%	45.46%	37.22%	38.01%	45.62%
Current Operations Value (% of MV)	92.94%	68.70%	63.05%	60.08%	75.03%	54.20%	54.54%	62.78%	61.99%	54.38%
Market Value (COV + FGV %)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Basic Shares Outstanding	1,280.0	1,250.0	1,211.0	1,165.0	1,134.0	1,098.0	1,171.6	1,171.6	1,132.3	1,134.8

Source: Company Data, Financial statements and Tigress Research

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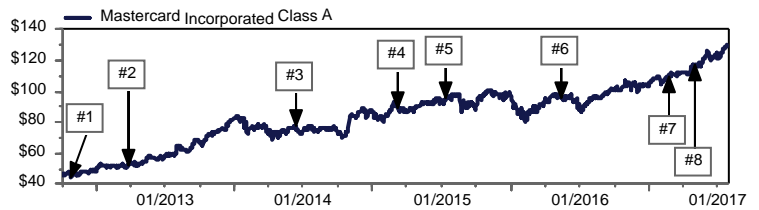
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Mastercard Incorporated Class A (MA-US)
IT Services
Ratings History

Mastercard Incorporated Class A (MA-US)				
Item #	Date	Research Action	Rating	Price
#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


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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 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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Rating:	Meaning:	Rating Distribution (07/27/2017)				
		Companies Under Coverage		Relationship Companies Under Coverage*		
		#	%	#	%	
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Buy:	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	55	45%	4	66%	
Neutral:	Expect little or no outperformance opportunity over the next 12 months.	46	37%	1	17%	
Underperform:	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.	6	5%	0	0%	
Sell:	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%	
Not Rated	No Current Research Rating	NA	NA	65	NA	
		Total	123	100%	70	100%

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Company:	Disclosure:
Mastercard Incorporated Class A (MA-US)	8, 13, 14

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