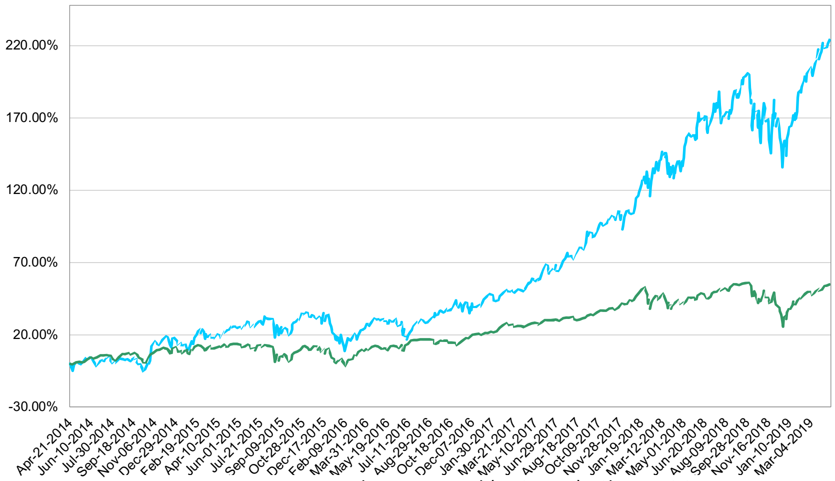
Mastercard INC

Student Management Fund 2019 Report

Analysts: Kevin Hebreo & Tianjiao (Talia) Chai

Market performance and statistics

Cumulative price change MA vs ^SPX



Source: NetAdvantage Figure 2

Market Date April 20, 2019	
Closing Price	$240.89
52 Wk H	$242.65
52 Wk L	$170.75
Mkt cap (MM)	247,131.69
P/E	36.72
Enterprise Value (MM)	192,548.20

Source: Bloomberg. Figure 1

Relative Valuation		
	MA	Industry Median
Sales Growth Yoy (%)	19.63	8.18
EBITDA Margin (%)	51.78%	34.8
P/E	31.86	22.76
ESG Score	90.63	51.25

Source: Bloomberg. Figure 3

Investment Highlights

Analyst Opinion: Buy – 40, Hold -5, Sell - 0

The current price is $240.89 on April 20th, 2019, which is higher than the team's estimated fair price $201.51. We don't recommend buy at the current price. But will recommend investors to keep track on the stock price and buy if it is below $201.51.

Efficient strategy to grow core business and enhance protection for cyber risk. Mastercard has been an industry leader by rising more than 43% since the beginning of 2018 and shown a $40 increase in 2019. They continue to form partnerships and make acquisitions which is a big part of their business strategy. They are becoming even more well-known becoming the First Global Partner of the world's largest E-Sport event, partnering with Microsoft as a way to differentiate from competition and aiding companies to improve their global trade and supply chains.

Solid foundation and competitive position in payment industry. Mastercard has performed better than the closest competitor, Visa, in price performance, return on equity, higher earnings expectation and growth projections. The companies' price performance in 2018 has been 60.1% compared to Visa's 45.7%, ROE has been 103.82% compared to 36.09%, earnings of 9.57% compared to 9.27% and projections of 19% to 17.5%. The quarterly earnings calls have shown the earnings beating projections in every quarter for the past year and earnings per share continues to grow. At the end of 2018, EPS was at $1.50 compared to $1.10 in 2017. The stock remains with a safety rating of 1 on Value Line, a timeliness rating of 3, and A++ on Financial Strength, which shows that there is still much room for growth of the market share which in turn will generate profits for Mastercard.

Company Description

Overview

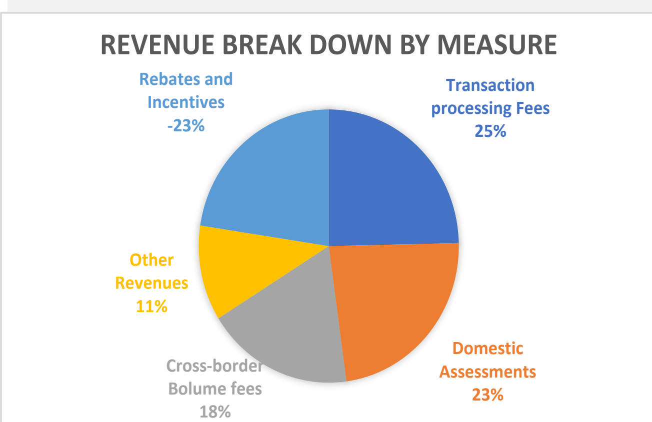
Surpassing Visa in market share – now that would be priceless. Serving financial institutions around the word, Mastercard is the second largest payment system in the US. The company does not issue credit or its namesake cards; rather, it markets the Mastercard, Maestro, and Cirrus brands, provides a transaction authorization network, and collects fees from members. The company provides its services in more than 210 countries and territories more than 150 currencies, and its branded cards are accepted at millions of locations globally.

Operations

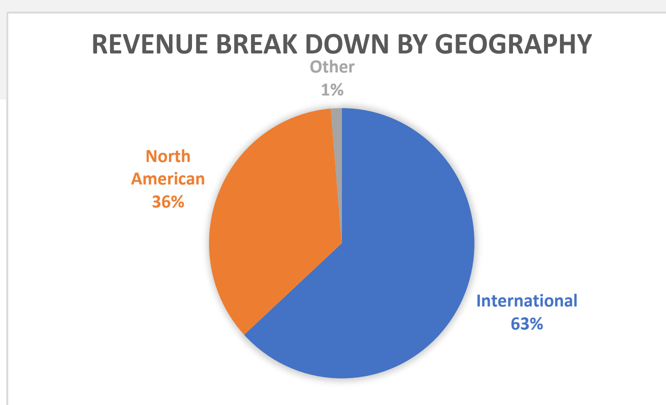
Mastercard operates and reports financial information for a single segment, Payment Solutions. Its main revenue-generating activity is collecting fees for processing credit card transactions. The company also provides a range of payment-related products and services to both consumers and merchants. In 2018, the gross dollar volume of transactions performed in Mastercard-branded programs was more than $2.5trillion for consumer credit, around $2.7 trillion for consumer debit and prepaid, and around $650 million in commercial credit and debit.

In addition to being one of the most recognizable brands in the world, they also add value to the surrounding world by being a responsible firm. Mastercard adds advanced corporate sustainability by conducting business in an open and transparent way and promoting environmental oversight. They believe that cultivating and including their workforce culture creates inspired authentic selves who will change the world for the better. The employees, company partnerships, and products developed all work together to become a force for good and leadership builds the core values of trust, integrity and respect. This is emphasized by their focus ethical business model and legal compliance efforts.

"Their main competing strategy is to grow, diversify and build through acquisition and organic methods"



Source: Bloomberg Figure 4



Source: Bloomberg Figure 5

Industry Outlook -- Positive

The outlook now is largely constructive for the next several years, assuming a degree of resilience on the business and stock market fronts. The payment industry is broken up into two types of payment processors. There are open-loop and closed-loop companies each having their own advantages and disadvantages. Closed-loop companies make money on the fees incurred from processing as well as interested gained from providing credit services. Open-loop companies are middlemen that gain profits based on the fees from processing based solely on the amount of transactions. Mastercard is an open-loop company and so they do not take on the credit risk that a closed-loop company would. Credit risk comes with a higher cost meaning revenue will be higher, but profits can potentially be lower than open-loop.

According to various analysts, the industry has had revenue growth of 8%, 13% and 11% in the past three years with an expected continued growth of 7%. This is due to electronic payment methods becoming more popular than paper methods. The value of electronic methods is expected to rise by 11.5% into 2020. Mastercard has shown growth in revenue of 12.15% in 2017 from foreign markets and a 5.91% growth in the United States.

Investment Risks

Regulations and Legal Impact

Global regulatory and legislative activities related to payment markets and Cyber-Security have material impacts on overall business. MasterCard Inc is subject to Anti Money Laundry and Counter Terrorist Financing laws and regulations globally as well as the US Bank Secrecy Act and the USA Patriot Act. For example, the aspects of its Vocalink business are subject to the U.K. payment oversight regime. A statement of objections issued by the European Commission in July 2015 related to their interregional interchange fees and central acquiring rules within the European Economic Area.

Any new regulations related to payment market will have impact on their products and services, including interchange rates, network fees and pricing, network standards and routine agreements. The regulations of privacy, data protection and digital economy could increase the costs potentially as well as negatively impact on revenue growth. Weakening of existing rules is always probable, but these industries haven't been a focus for U.S regulators. Fintech firms likely will stay in a regulatory vacuum due to regulators' conflicting views.

Money Market Risks

MasterCard Inc's exposures to market risk from changes in interest rates, foreign exchange rates and equity price risk is limited. The company enter foreign currency contracts and foreign currency derivative contracts to offset possible changes in value due to foreign exchange fluctuations of earnings, asset and liabilities. Their exposures to interest rates is because of the available for sale investments in fixed income securities, the hold-to- maturity securities such as deposit and the dollar-denominated and euro-denominated debt.

Competition and Technology Challenge

MasterCard faces worldwide and intense competition in global payment industries. Its competitors include American Express, Discover and private label card networks. If MasterCard could not continue to provide unique products and offer higher quality services, its market shares might be taken by competitors.

Valuation

Multistage Discounted Dividend Model

We argue that financial service firms are best valued using equity valuation models, rather than enterprise valuation models, and with potential dividends, rather than free cash flow to equity. The reasons are that the cash flows to a financial service firm cannot be easily estimated and that changes in the regulatory environment can create large shifts in value.

MasterCard Inc is worth about $201.51 per share using a multistage discounted dividend model, which is slightly higher than the price we purchased. Given the robust economic environment and increasing interest rate in 2018, we believe holding this stock will contribute positive returns to our portfolio. This model assumes an earnings growth rate 17.68% for the growing years, which is the geometric average earning growth rates of last 7 years, and a terminal growth rate 5.6% at maturity based on the fact that MA has been performed better than the US market for the last 5 years. Another important assumption to support this data is that MA is expected to maintain its profits margins well in the future by expanding their core business and maintain the current operating expenses level. (Figure 6, Figure 12)

Sensitivity Analysis

To assess the impacts on the valuation assumption like discounted rate and cost of equity change, we did sensitivity analysis to calculate a price range of $164.67 - $261. (Figure 7)

10 Year Note Rate	2.57%
US Market Risk	9.48%
Risk Premium	6.91%
Beta	1.12
Cost of Equity	10.31%

Source: Bloomberg Figure 6

Sensitivity Analysis					
201.51	9.85%	10.10%	10.31%	10.55%	10.75%
5.06%	195.62	185.91	178.48	170.67	164.67
5.36%	208.69	197.68	189.29	180.54	173.84
5.66%	223.63	211.04	201.51	191.62	184.09
5.96%	240.87	226.33	215.40	204.14	195.62
6.26%	261.00	244.01	231.36	218.41	208.69

Source: Team Assessment Figure 7

Multiples

We applied the most widely used equity multiple price earnings ratios to do the relative valuation for MasterCard Inc. MA has higher P/E ratio 31.48 compared to industry median 22.76. This could be explained by higher expected growth rate in earnings and lower cost of equity. Regression PE ratios against the expected growth rate and the standard deviation yields the following:

PE Ratio = -5.02 + 23.085 * Expected Growth Rate + 23.233 * Beta R Square=55%

Then we use the regression equation to project PE ratio which revealed MasterCard is undervalued by 4.86%. The following tables are details for our valuation. (Figure 8, Figure 9)

Name	P/E	5Y EPS Growth	Ajt Beta
FIDELITY NATIONAL INFO SERV	15.81	0.09	0.92
TOTAL SYSTEM SERVICES INC	20.34	0.19	0.98
EURONET WORLDWIDE INC	21.10	0.20	1.04
FLEETCOR TECHNOLOGIES INC	21.61	0.21	1.01
WEX INC	22.41	0.04	1.12
GLOBAL PAYMENTS INC	23.11	0.16	1.14
FISERV INC	25.01	0.19	0.87
VISA INC-CLASS A SHARES	30.04	0.18	1.03
MASTERCARD INC - A	31.48	0.17	1.12
PAYPAL HOLDINGS INC	37.47	0.17	1.20

Source: Bloomberg Figure 8

Name	P/E	Projected P/E	% Under or Over Value
MASTERCARD INC - A	31.48	38.18	-4.86%
VISA INC-CLASS A SHARES	30.04	33.01	5.59%
PAYPAL HOLDINGS INC	37.47	42.65	23.02%
FIDELITY NATIONAL INFO SERV	15.81	28.94	14.75%
GLOBAL PAYMENTS INC	23.11	40.00	12.82%
FLEETCOR TECHNOLOGIES INC	21.61	31.17	0.32%
TOTAL SYSTEM SERVICES INC	20.34	30.03	1.58%
WEX INC	22.41	41.53	8.01%
FISERV INC	25.01	23.68	23.89%
EURONET WORLDWIDE INC	21.10	32.99	1.98%

Source: Team Assessment Figure 9

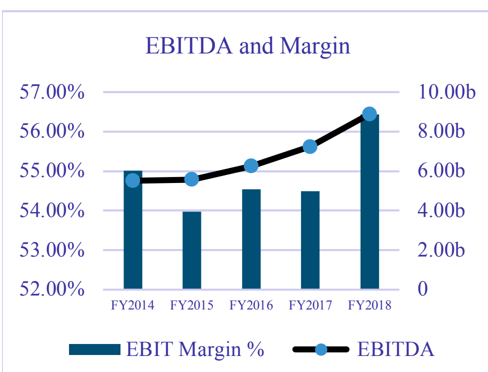
Financial Analysis

Growing Revenue and EBITDA margin

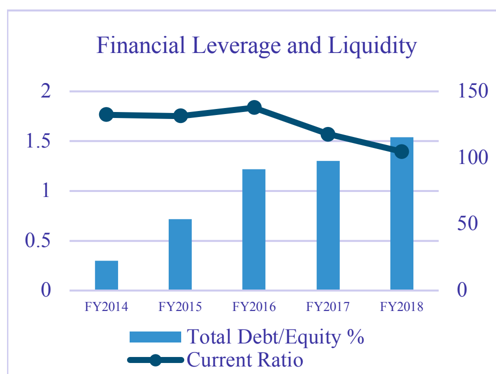
MasterCard Inc. has demonstrated a positive strong growth in revenue for the last 6 years with a geometric average growth rate 10.14%, which is attributed to continually grow core business globally in a strong economic environment and to create and acquire differentiated products to provide higher quality solutions to clients. At the same time, the company is able to maintain the high EBITDA margin. (Figure 10)

Leverage and Liquidity

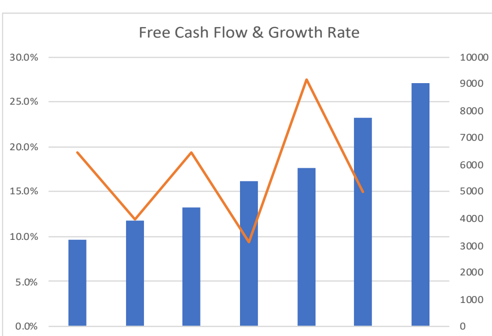
Regarding leverage, the company saw a great increase in its debt to equity ratio between 2014 and 2018 due to repurchase shares as well as acquisitions. During the fourth quarter of 2017, the company repurchased approximately 6.9 million shares for $1.0 billion at an average price of $148.44 per share, and it announced to repurchase 6.5 billion worth of shares in the fourth quarter of 2018. MasterCard has announced 5 acquisitions between 2018 and 2019. For example, this company announced to acquire Earthport PLC for $233.84 millions in cash with estimated complete time of March 2019. The acquisitions of Transfast AB and Ethoca Ltd were announced in March 2019 and are expected to be completed within the same year. The recently acquisitions of tech companies have add values on the quality in their products by reducing cyber-security threats. Since then, the company's market capitalization has risen and return on equity is increasing without cutting down too much liquidity. (Figure 11)



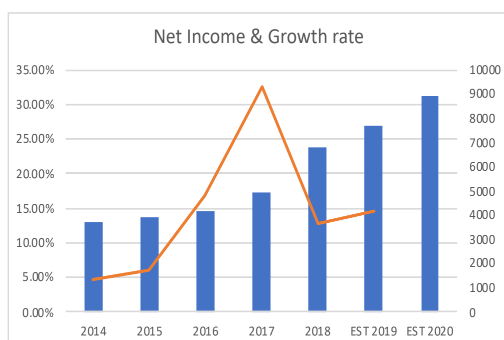
Source: Bloomberg Figure 10



Source: Bloomberg Figure 11



Source: Team Assessment Figure 13



Source: Bloomberg Figure 14

Multistage Dividend Discounted Model data

Column1	Est Earnings	Earning growth rate	Pay out ratio	Dividend	PV of Dividend
0	7.556			1.165	1.165
1	8.937	16.786%	15.418%	1.378	1.249
2	10.582	16.895%	15.420%	1.632	1.341
3	12.453	17.683%	15.418%	1.920	1.430
4	14.655	17.683%	15.418%	2.260	1.526
5	17.247	17.683%	15.418%	2.659	1.628
6	20.297	17.683%	15.418%	3.129	1.737
7	23.886	17.683%	15.418%	3.683	1.853
8	28.109	17.683%	15.418%	4.334	1.977
9	33.080	17.683%	15.418%	5.100	2.109
10	38.532	16.481%	18.376%	7.081	2.654
11	44.419	15.278%	21.334%	9.476	3.220
12	50.671	14.076%	24.293%	12.309	3.792
13	57.194	12.874%	27.251%	15.586	4.353
14	63.870	11.672%	30.209%	19.294	4.885
15	70.557	10.469%	33.167%	23.402	5.371
16	77.095	9.267%	36.125%	27.851	5.795
17	83.312	8.065%	39.084%	32.561	6.142
18	89.029	6.862%	42.042%	37.430	6.400
19	94.069	5.660%	45.000%	42.331	141.142
				SUM	201.510

Source: Team Assessment Figure 12