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RESEARCH HenryFund.Org

Data and Payment Processing

April 17, 2019

Financial Services

Industry Rating **Overweight**

Investment Thesis

Growth in non-cash payment transactions and e-commerce is building excitement for the data and payment processing industry. There are strong future growth prospects internationally as companies initiate entry into global markets. For these reasons, we recommend an overweight position.

Drivers of Thesis

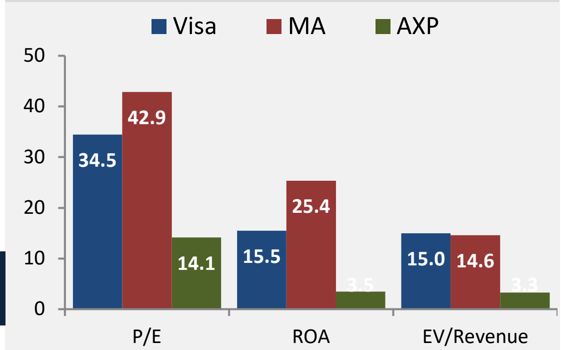
- **Growth in non-cash payment transactions**: Capgemini estimates to see a rise in global transaction volume of 10.9% CAGR from 2015-2020 [1]; 80% of consumer spending in the US was cashless [2]
- **Entry into international markets**: Countries in Asia are expected to see growth of 30.9% CAGR from 2017 to 2020 [1]
- **Catalysts such as Apple Pay, Venmo, and the Cash app** will drive more consumer traffic to the card networks. These new platforms add to the number of non-cash payment options.

Risks to Thesis

- **Heavily exposed to drops in consumer spending**. A collapse in talks with China as well as slowing global economic growth could negatively impact industry revenues
- **Merchant activism could force possible anti-trust regulation** bringing in more competitors such as Paypal and Apple Pay looking to vertically integrate

Key Industry Statistics

Market Cap in Billions	
Visa (V)	$352.03
MasterCard (MA)	$246.31
American Express (AXP)	$93.84
Discover (DFS)	$25.10
Beta	
Visa	0.88
MasterCard	1.01
American Express	1.06
Discover	1.58
PE Ratio	
Visa	34.47
MasterCard	42.87
American Express	14.14
Discover	9.88
Industry	28.36
Industry Profitability	
Profit Margin	32.55%
Return on Equity (TTM)	23.90%
Return on Assets (TTM)	11.79%
Cash as a % of Assets	31.30%

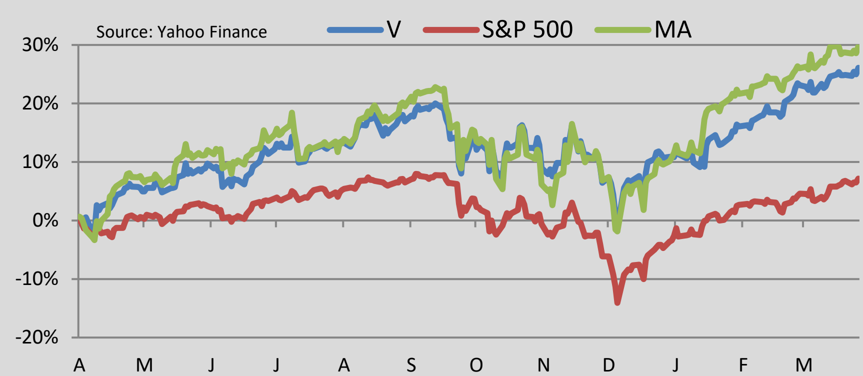


Source: Yahoo Finance

E-commerce Sales Estimates [3] (in millions)

Year	2016	2017	2018	2019E	2020E	2021E
Sales	$393.9	$452.1	$509.9	$567.3	$620.4	$666.6
growth	*15.7%*	*14.8%*	*12.8%*	*11.3%*	*9.3%*	*7.4%*

12 Month Performance



Industry Description

In an ever-cashless world, credit and debit cards have become king. E-commerce and convenience has driven consumer demand in this industry. The data and payment processing industry offers financial payment transaction processing through their patented card networks. Companies in this industry offer their product to merchants, issuing banks, and consumers. This network connects consumers, merchants, financial institutions, strategic partners and government entities on an electronic payment platform.

EXECUTIVE SUMMARY

The data and payment processing service industry has historically outperformed the S&P benchmark the last 5 years, but its volatility mirrors it closely. Driven by growth in non-cash payment transactions, this industry has enjoyed the explosion of e-commerce. Companies in this segment can expect this honeymoon to continue as US online sales of physical goods are expected to surpass 735 billion dollars in 2023, a growth rate of 21.5% YoY [2].

A concerted, strategic effort has been made by this industry to enter into international markets, with an emphasis on Asia. Capgemini forecasts global non-cash transactions will grow at 10.9% annually from 2015 to 2020 [1]. Countries in Asia are expected to realize the fastest growth at 30.9% over the same period.

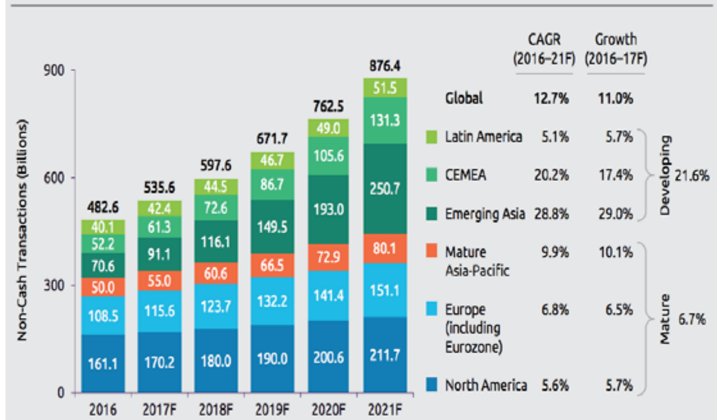
Deregulation and tax cuts from the Trump administration has been a positive for the economy. Specifically, continued deregulation of Dodd-Frank which will bring more price flexibility to financial institutions because they are not paying to meet government restrictions. This will create stickier partnerships between bank and card networks in the US allowing for expansion and introduction to new consumer bases.

The industry is currently trading at 27.94x (ttm) earnings, which is a tad under the Shiller PE ratio of 31.28x. The stock in the payment processing industry trade at a premium because of their historical success and their expected growth abroad. On April 12th, a Morgan Stanley analyst said there is a new competitor to the FAANG stocks (Facebook, Apple, Amazon, Netflix, Google). Their acronym is MVP (Mastercard, Visa, and Paypal). MVP has outperformed the FAANG stocks by 31% since March 2017.

INDUSTRY DESCRIPTION

With 72.6% of all transactions now conducted with a credit card or debit card in the US [4], this industry has grown immensely. Cash usage in the US is still higher than in Western European countries. In 2015, cash usage in the US represented 13.1% of GDP, where as countries in the EU cash represented about 7% of GDP.

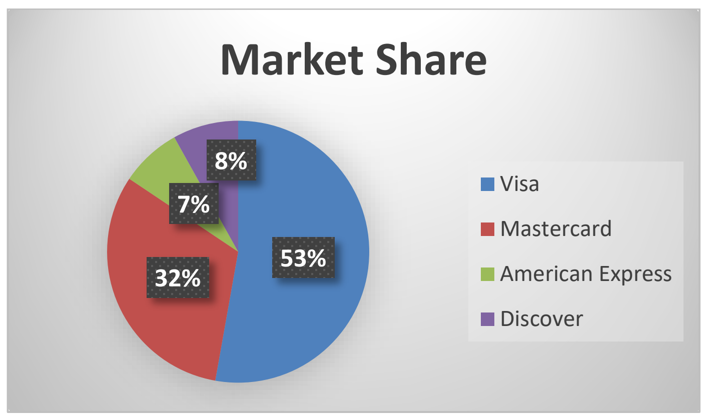
Figure 1.5 Number of Worldwide Non-Cash Transactions (Billions), by Region, 2016–2021F



Source: Capgemini Global Payment Report

The number of non-cash transactions has grown and is estimated to grow substantially in about every region of the globe. There is still much room to expand their network. The percent of cashless consumer spending in China and India was less than 60% in both countries. [2]

The data and payment processing industry is led by Visa, followed by MasterCard, American Express and Discover.



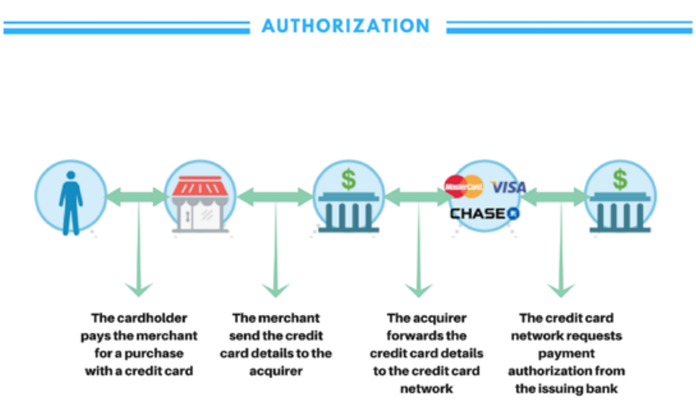
Source: WalletHub

Visa and MasterCard are solely credit card networks, while American Express and Discover act as both card networks and credit card issuers. Credit card networks can control where cards are accepted and set the rate at which merchants pay for using their network. The digital payments industry is hard to understand and what they are doing can be often confused. The confusion lies at the amount of actors present during the exchange and who is taking on the credit risk. On a given transaction, at least four actors can be a part of the processing and authorization.

Four Party Model

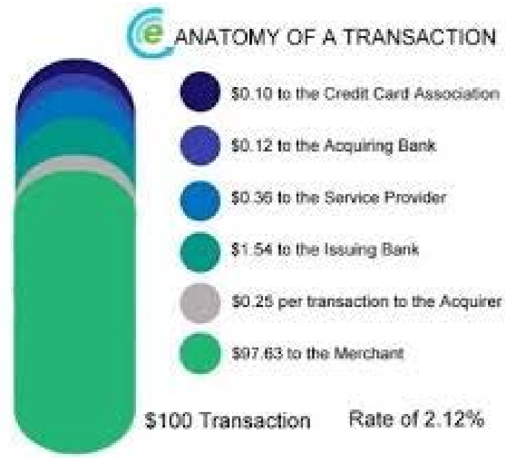
The common four party model includes merchant, acquirer, credit card network, and financial institution. Contrary to popular opinion, credit card companies like Visa and MasterCard do not take on any credit risk. Their product is granting access to their credit card network. Visa and MasterCard issue its network licenses to banks, who then issue cards to their customers. Therefore, although they do not encounter any credit risk, they also do not receive any late fees or interest charged on the balances. American Express and Discover Financial Services do carry credit risk, however. To get a better grasp of this industry's source of revenue we will discuss an example:

The consumer buys groceries on credit from the merchant (grocery store). When the consumer swipes the card, the "network" comes into play. The card details go to the acquirer, which are then sent to the credit card network, and finally the money is authorized by the issuing bank. This whole process happens in a matter of seconds, but the time it takes for the merchant to actually receive the funds in their bank account is about 24 hours.



Source: Wallet Hub

Credit card networks and banks are differentiated on the fees that they charge merchants. On a given transaction, between 1.5%-4% can be charged to the merchant. The Durbin Amendment (mentioned later) has kept these fees lower in recent years, but the credit card companies control the fees for the most part.



Source: Wallet Hub

Blockchain Technology

Known as being the "digital ledger of value", blockchain technology seems poised to disrupt any industry with its incorruptible framework. Especially with credit card networks where security has become a concern, blockchain could become the trusted intermediary. However, this technology is in its infancy and does not have the speed to compete with the credit card networks.

Blockchain is not necessarily a competitor of the credit card industry. Since there is no patent on the technology, Visa and MasterCard have consulted with tech firms on creating their own Blockchain technology in hopes of creating a more secure network for consumer information.

RECENT DEVELOPMENTS

Visa and MasterCard came out with 4th quarter numbers at the end of January. Let us dive into those:

Visa 4Q 2019 Earnings (January 30, 2019)

Visa beat the Street's estimates in both revenue as well as earnings per share. Revenue came in at $5.51 billion, a rise of 12% YoY, beating the estimate by more than $100 million. Its EPS of $1.30, growth of 34% YoY, surpassed the forecast of $1.25 [6]. Visa cited increased consumer activity during the holidays as the reason for the success in their top and bottom lines. Despite this great news for investors, Visa's stock dropped by 5% after the bell. CFO, Vasant Prabhu, cautioned investors in his forward guidance. Prabhu signaled that another government shutdown, a lack of a deal with China, and declining consumer sentiment could be detrimental for the industry. Given what we know now, there will not be another government shutdown and there is increasingly positive news about the China trade talks.

International Entry

The fight between MasterCard and Visa over UnionPay's monopoly in China has been much publicized. The World Trade Organization has been fighting to disrupt UnionPay's stranglehold on the Chinese market and emerging Asian markets. In 2017, American Express, MasterCard, and Visa applied for licenses to conduct business in China. With trade tensions between the US and China heightened, these credit card networks have yet to be accepted in China. In China, UnionPay controls more than 90% of the market [5]. Alipay and Tencent, both Chinese companies, make up the majority of the other 10% with scan-to-pay technologies. A shift away from a governmental planning economy as well as a trade deal could be the breakthrough these domestic credit card companies need to gain access to the world's second largest economy. We give the opening up of the Chinese economy to payment networks about a 40% chance with the trade talks gaining traction.

MasterCard 4Q Earnings (January 31, 2019)

MasterCard stock soared on news that they beat analyst estimates on EPS of $1.53 with a strong $1.55, an increase of 36% YoY. This is an increase from the $1.17 figure from this time last year. They matched the street estimates on revenues at $3.81 billion, a 15% rise YoY. [7] CFO, Ajay Banga, much like Visa's CFO has his eyes on increased trade tensions, rising interest rates, and the Brexit plan in Europe. In addition, Banga was worried about recent declines in consumer confidence in international markets. Despite these possible headwinds, MasterCard and the digital payment industry continues to see a strong shift to electronic forms of payment.

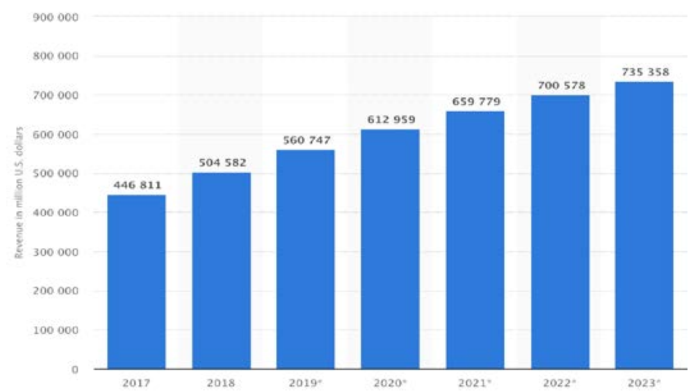
MasterCard announced a partnership with Westpac Bank, one of the largest banks in Australia. Bank alliances fuel revenues and introduce card networks to customer bases.

INDUSTRY TRENDS

Non-cash Payments Transaction Growth

Driven by growth in non-cash payment transactions, the card networks have enjoyed the explosion of e-commerce. These companies can expect this honeymoon to continue as US online sales of physical goods are expected to surpass 735 billion dollars in 2023, a growth rate of 21.5% YoY [10]. Consumer spending is expected to continue to trend upwards through 2023. About 80% of transactions in the US are non-cash and countries like Sweden will be 100% cashless by 2023.

Retail e-commerce sales in US 2017-2023



Source: Statista

Rising Fees

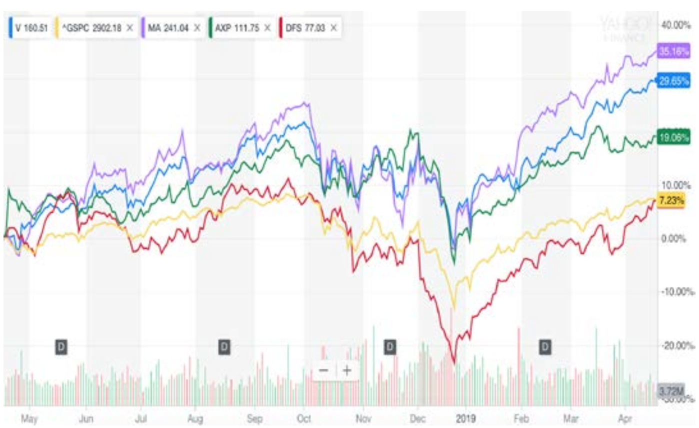
Credit card companies enjoy high margins thanks to the control they have over merchant fees. In 2011, those fees were mitigated due to the Durbin Amendment of the Dodd-Frank Act. This regulation lowered the interchange fees that card issuers could charge merchants. This leaves a greater share of the profits of a given transaction to the merchant. Increased merchant activism could bite into these margins as competition increases. However, the Trump administration is expected to continue with their pro-business agenda of deregulation and the Durbin amendment is expected to be on the docket.

On February 17th, Visa and Mastercard announced fee hikes starting in April. Although there was no specific hike percentage given, these hikes would be targeted at merchant banks, but would more than likely be passed on to merchants and consumers. In response, Kroger, who had banned Visa cards at a select few stores back in August, announced they will no longer be accepting Visa cards at their Smith Food & Drug stores expanding to 142 supermarkets and 108 fuel stations across seven US states. Visa responded, saying that these fee increases are necessary with their increased investments in VisaNet to make the network more secure and reliable. Visa also cites that their network helps businesses top lines, by attracting more customers with additional payment options.

Although Kroger has been the only corporation to act out on their unhappiness with Visa's fees, merchant activism is certainly a concerning development but we do not see any anti-trust regulators coming in to break up the duopoly of the industry in the near future. This administration and split legislature are focused more on big banks and tech.

MARKETS AND COMPETITION

Top Competitors



Source: Yahoo Finance

Visa (V)

Visa is at the top of this industry by every statistical category. They garner a market share of 52%, with Mastercard slightly behind with 32% making this industry a virtual duopoly. Visa operates the largest retail electronic payments network in the world. Their revenue is based on volume and dollar value transactions, currency exchange transactions, as well as corporate partnerships. Visa attracts EBITDA of $14.27 billion and has an operating margin of 65.8%, both highs of the industry. Visa has a 1yr target price of 169.22, while currently trading at a price of 160.44 which is a price/book of 12.33.

MasterCard (MA)

Mastercard is the 2nd largest electronic payment processor by market share and market cap. They report revenue similarly to Visa and both companies do not take on any credit risk. Illustrating the importance of partnerships which expand the payment network footprint, MA announced a partnership with Westpac Bank which is one of the largest banks in Australia. These partnerships introduce the company to new customer bases which will lead to increasing the top line. Mastercard reported EBITDA of $8.8 billion with an operating margin of 55.9%. Mastercard currently trades at $240.34 with a consensus target price of $249.32. Their current price results in premiums of 26.93x(forward) and a price/book of 45.93. Mastercard has an incredible return on equity of 105.98%, compared to Visa which has an ROE of 32%.

American Express (AXP)

American Express, which grabs the 4rd largest market based on cards in circulation, owns the 3rd largest market cap of the group. Like Discover, AXP acts as a direct lender to its customers. While Visa and Mastercard's primary clients are financial institutions and banks, American Express targets upper income individuals with their closed-loop system as well as small-business owners with their Small Business Saturday initiative. American Express records EBITDA of $15.1 billion and has operating margins of 31.9%. They currently trade at a price/book of 4.2x and have a forward looking P/E of 13.3x. Their consensus target price is $119.09.

Discover (DFS)

Discover Financial Services has the smallest market cap out of these comps at $25.11 as well as the largest beta of 1.66. They issue their own cards through Discover Bank and covet an 8% market share based on cards in circulation. Discover reports their financial statements more like a bank so it is more difficult to compare. Most of their revenue comes from net interest income. Discover has a ROE of 21.2% and trades at 2.4x price/book as well as a forward looking P/E of 8.7x. They have a consensus target price of $81.16.

Porter's Five Forces

Threat of Entry

Successful new entrants to this industry would have a model that cuts costs, provides faster and more secure credit networks, and offers cardholders enhanced benefits. However, the sheer size of these credit card companies creates a wide economic moat and entering this industry would more than likely not be a profitable exercise. Visa and Mastercard together garner more than 85% of the market share. They have sticky relationships with merchants and banks across the globe. It would take a herculean effort from a capital standpoint as far as building a secure network as well as marketing your product.

Threat of Substitutes

With government intervention or increased merchant activism, it is possible that companies like Apple and Paypal would want to vertically integrate by creating their own payment networks. This would allow them to keep more of the fees, but like we said in the prior segment this would take an immense amount of capital. In addition, we do not see government regulation coming to this industry during the Trump administration.

Rivalry

Rivalry is powerful between Mastercard and Visa. They have been fighting for international position, especially when it comes to the emerging markets in Asia. They have both applied for licenses in China and are awaiting a possible trade deal between the US and China. Currently Union Pay and the joint venture rule in China is hurting initiation in the market.

Power of Suppliers

Bargaining power of suppliers is relatively low since this industry spends more on personnel than raw materials and technology.

Power of Buyers

Limited options for customer, a large customer base, and a lack of control over credit network fees makes buyers immobile in this industry. With the shift to digital payments, demand for the credit card industry is strong. In addition, the ruling in the summer of 2018 in favor of American Express in AMEX vs Ohio was a huge boon for the industry. The US supreme court ruled that American Express did not violate antitrust laws in its contracts. The upholding of anti-steering laws is a positive development for the industry because no merchant can "steer" a customer away from using a certain card network just because the card network has higher fees.

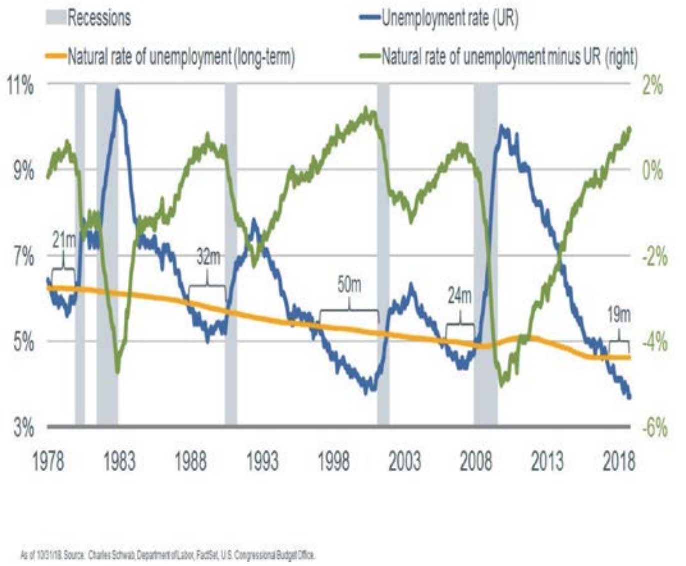
Five Forces Conclusion

The data and payment processing industry is set up well for financial success and is mature in its life cycle. High barriers to entry and low bargaining power for buyers allows for firms in the industry to enjoy high profit margins. With a strong economic backdrop including increased consumer spending, historically low unemployment numbers, and a shift to digital payments with the growth of e-commerce; this industry is situated well to realize strong performance. However, being so reliant on global economic factors, this industry teeters on imminent events such as a government shutdown, jobs numbers, trade tensions with china, and slowdowns in global economies. Visa is the best positioned company in this group of peers. They have the highest operating margin and dominates the market share. They also trade at a much lower price/book multiple than Mastercard making them more fairly valued.

ECONOMIC OUTLOOK

Due to its reliance on the consumer, this industry is sensitive to the macro-economic picture. As seen by its mirroring of the market, it has a beta near one. Reading into the CFO statements on their earnings calls, they are very much focused and cautious about the economy. The timeline of a deal with China is in the very near term. Poor outcomes in this event would lead to diminished consumer sentiment, halting consumer spending.

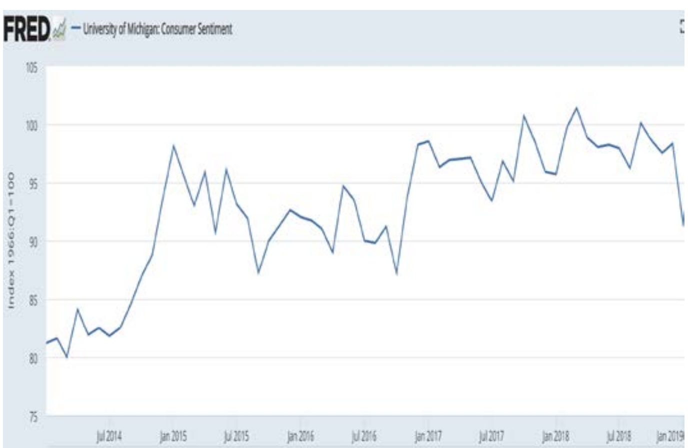
There is a concerning trend in macro-economic data with the actual and natural employment rates converging upon each other [8]. This trend signals that inflation is right around the corner and has put in motion devastating recessions in the past. Inflation deters consumer spending and would hurt Visa's top line growth.



Source: Congressional Budget Office

Conditions like these represent the risk that could be on the horizon for the market. In addition the recent inversion of the yield curve has been a precursor to recession. The average lead time is about 14 months.[11]

Consumer Sentiment



Source: FRED

Consumer sentiment is the macro variable that dictates how the consumer is feeling about the future of the economy. Consumer spending makes up 75% of GDP so naturally the attitude of the consumer is a good indicator of the health of the economy. The government shutdown deteriorated that sentiment in January, but with that resolved and a possible deal with the world's second largest economy we expect to see that sentiment restored in the coming months.

Real Gross Domestic Product

The US GDP has seemed to peak as economists predict GDP to fall below 2% in 2020. [8] It is commonly said that 2 consecutive quarters of negative GDP constitutes a recession. The Henry Fund teams has a cautiously optimistic view of the economy the next twelve months. We see GDP continuing to settle around 2.7% and unemployment to remain around 4%. These peripherals would be positive for the payment processing industry with them continuing to experience breakthroughs in the market and consumer spending. Visa, Mastercard, Discover and American Express are all trading near or at the top of their 52 week range.

CATALYSTS FOR GROWTH

E-commerce has boomed in recent years, transforming malls across America from being overcrowded to being ghost towns. Its convenience has created a demand for credit card networks and has been a boon for their revenues. US online sales of physical goods are expected to surpass 735 billion dollars in 2023, a growth rate of 21.5% YoY.

Entrance into the Asian market would prove to be a large tailwind for revenues. Currently, diplomatic tensions with China stand in the way. However, as China shifts from less government planning to a more capitalistic society, there would be more of an opportunity for domestic credit card networks. A well-structured deal by the Trump administration with China would go a long way as well.

With concerns of a global slowdown, Theresa May and British parliament would behoove themselves to complete an exit plan for Britain's leave from the European Union. This would certainly boost consumer confidence in Europe.

A change in government in Venezuela would be a win for capitalism and western values. This would be a tremendous stabilizer in South America; and fending off communist and strong arming countries like China and Russia would relax consumer fears.

Paypal and Apple Pay, which act as processors or gateways, connect Visa to facilitate payments. We view these two companies as catalysts for the card network, providing a platform for the card networks to be accessed by more consumers. However, if these companies are able to cultivate new technology and decide to vertically integrate that would cut the networks out of the payment process. This would certainly increase competition and hurt the current players in the industry.

INVESTMENT POSITIVES

- Growth in non-cash payment transactions; Capgemini estimates to see a rise in global transaction volume of 10.9% CAGR from 2015-2020 [1]; 80% of consumer spending in the US was cashless [2]

- Entry into international markets; Countries in Asia are expected to see growth of 30.9% CAGR from 2017 to 2020 [1]

- Catalysts such as Apple Pay, Venmo, and the Cash app will drive more consumer traffic to the card networks. These new platforms add to the number of non-cash payment options.

INVESTMENT NEGATIVES

- Heavily exposed to economic conditions; unemployment and a collapse in consumer sentiment surrounding trade and another government shutdown could negatively impact revenues

- Merchant activism could force possible anti-trust regulation bringing in more competitors such as Paypal and Apple Pay looking to vertically integrate

KEYS TO MONITOR

With this industry being heavily exposed to economic conditions, there are a few macro indicators to monitor over the coming months. Employment rose a tad to 4% in the newest household survey data [9], still a historically low number, but a continuation in this trend could signal a recession. A recession in this industry would deteriorate earnings due to drops in consumer spending and a pause in growth internationally.

In the February 5th State of the Union Address President Trump emphasized optimism towards a deal with China. He noted his "great respect" for President Xi, but that "the deal must include real, structural change" [10]. On April 17th, the WSJ announced that the US and China have tentatively scheduled a fresh round of trade talks and are hoping to seal a deal in late May. A trade deal between the two countries would more than likely target the join venture program in China and ease tensions on US companies attempting to enter the 2nd largest economy in the world.

The positive outlook for growth in this industry, mixed with the cautious optimism toward the future economic environment brings us to our conclusion of an overweight position for this industry.

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