

The Toll Booth Businesses of Visa and MasterCard

SB scuttlebuttinvestor.com/blog/2014/9/6/the-toll-booth-businesses-of-visa-and-mastercard

September 13, 2014

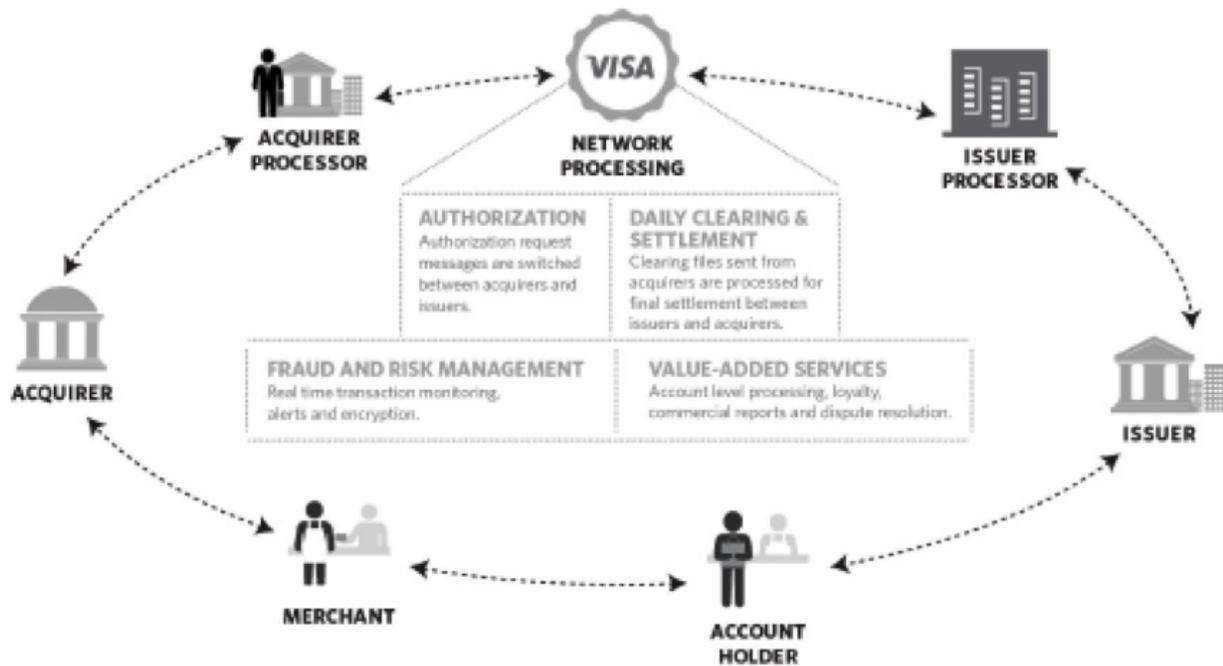
Summary

- Visa (V) and MasterCard (MA) both play a vital role in the payments ecosystem and get paid handsomely to do so while bearing little risk.
- They are both wonderful businesses that benefit from a durable competitive advantage in the form of embedded ecosystem integration and universal acceptance coupled with strong consumer brand recognition. They both also benefit from a secular shift to card-based/digital/mobile payments, strong economics, high operating leverage and a natural index to inflation.
- There are risks/considerations to both businesses that include pricing power degradation, customer concentration, competition from China UnionPay, new digital payment technologies, potential disintermediation and also lawsuits.
- V and MA, despite some risks, are both wonderful businesses with really good management teams. MA trades at a ~15% discount to fair value and thus provides a bit more upside at current prices of ~\$75 so I am a buyer of MA. V appears to be fairly valued at \$215 so I would wait to buy into V until short term dips to provide a more attractive entry point.

Business Overview

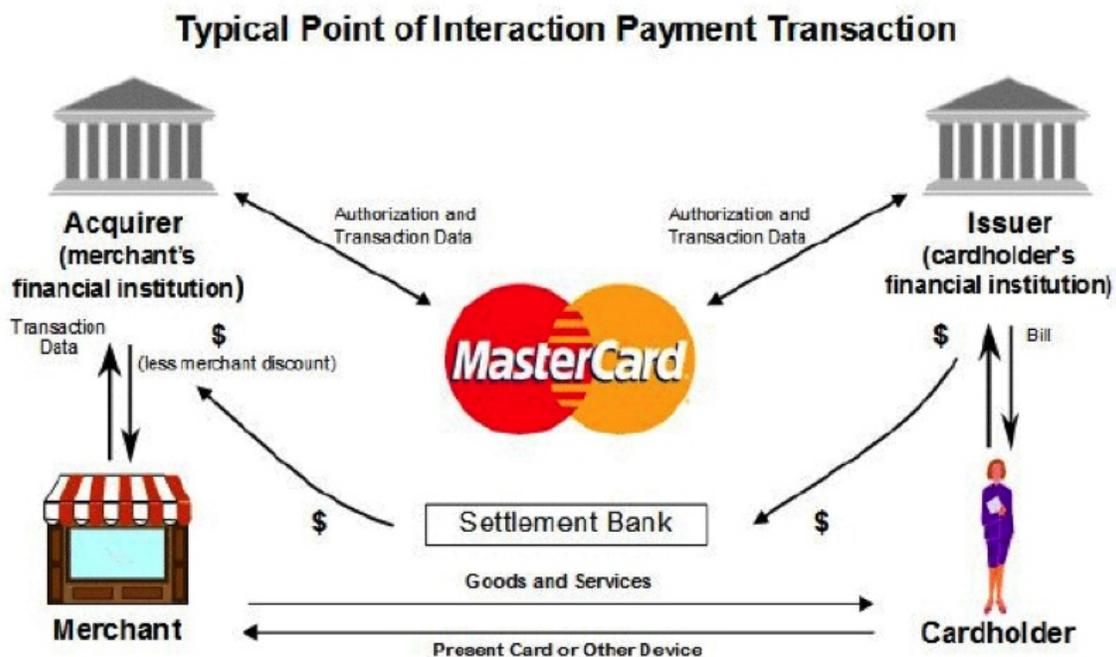
Visa (V) and MasterCard (MA) both operate open loop payments networks. This is in comparison to companies like American Express and Discover that operate closed loop payments networks. To better understand this, it is necessary to understand the complex ecosystem in which both companies operate. The two graphics below (from the Visa 10-K and the MasterCard 10-K) illustrate how they operate amidst the payment ecosystem. Essentially, V and MA act as an intermediary that links card issuers and merchant acquirers to facilitate the processing of credit card and debit card transactions. They act as a middleman that enables all of these institutions to speak to each other so that you can pay for your goods at the store quickly, conveniently and securely and they get paid a tiny fee every time a transaction is made on a V or MA issued card. This is sometimes confusing for consumers, but V and MA don't actually extend credit so they don't bear any credit risk.

Visa Payment Ecosystem



Source: Visa 10-K

MasterCard Payment Ecosystem



Source: MasterCard 10-K

Other than V and MA, there are typically many parties involved in what appears to be a simple credit card transaction. First, the card issuer -think companies like Chase, Capital One and Bank of America, who actually issue the cards and bear the credit risk of

lending money. They earn the interest and late fees that are paid if the card owner carries a balance or makes a late payment. The card issuers also earn the largest portion of the merchant discount. This is the fee that merchants pay when they accept credit card payments and all the players in the ecosystem eat a portion of this fee. While the size of this fee depends on the merchant type and many other factors, it typically ranges from 1.5% to 2.5%.

To exemplify, let's say that a consumer shops at a grocery store and spends \$100 on her Chase credit card. Of this \$100, the grocery store receives \$98 (assuming a 2% merchant discount) and Chase (the credit card issuer) and several other parties split \$2 as a fee for facilitating the transaction. The card issuer usually receives the largest portion of this fee because it is the card issuer that bears the risk of the \$100 loan to the consumer.

One of the other parties involved in the transactions is the merchant acquirer (shown as Merchant's Financial Institution in the MasterCard graphic above). Many of these companies aren't as familiar to the average consumer, but they are an essential part of the ecosystem. They enable merchants (grocery store in the example above) to accept credit cards and include players like First Data and Global Payments as well as some of the issuers themselves like Chase Paymentech and Wells Fargo Merchant Services).

These companies typically provide the credit card terminal equipment to the retailers to accept credit card payments and serve as the merchant's financial institution. Essentially, they hold the funds when the card issuer makes the \$98 payment to the retailer. They also receive a small portion of the merchant discount.

Visa and MasterCard provide the payment networks that connect the card issuers to the merchant acquirers and enable them to speak to each other. They provide the software "highway" that transactions are routed on between the two parties and ensure that the transactions are authorized and settled securely. And they collect a small toll for doing so. They do this for credit cards, debit cards and also prepaid cards and the tolls are somewhat different for each.

American Express and Discover operate somewhat differently than V and MA. As mentioned, they operate closed loop payments networks meaning they are both the card issuer and payments network. The card issuer typically assumes all of the credit risk of the borrower or cardholder. Thus American Express and Discover both assume credit risk, but also make more money on a given transaction as a result. These are both also great businesses but they do carry more risk in an economic downturn as some consumers default on their credit card payments.

Revenue Model

Let's talk more about the toll that V and MA collect from the merchants that drive on their highway.

Visa and MA generate revenue primarily from three sources:

1. **Service Revenues (V speak) or Domestic assessments (MA speak):** This is revenue generated based on dollar payment volume on Visa or MasterCard branded credit, debit or prepaid cards. In return for an issuer issuing a V or MA branded card, V or MA is entitled to a tiny percentage of all the dollar volume spent on these cards. This amount varies based on the type of transaction, transaction size and other factors but over the last few years the service fee has averaged \$1.25 to \$1.35 per \$1,000 of payment volume or 0.125% to 0.135% (this is a percentage so it is $.00125 \times$ the dollar volume) based on my calculations. So V and MA get about 1/16th of the 2% merchant discount previously mentioned. While this seems like a really low percentage, you can imagine how this adds up over the \$4 trillion of payments made on Visa cards in 2013 or the \$2.7 trillion of payments on MasterCard cards in 2013. The name of the game is issuing more Visa or MasterCard cards because the more cards in circulation, the more money people spend on cards and Visa and MA collect a tiny piece of each dollar spent.
2. **Data Processing (V speak) or Transaction Processing (MA speak):** This is revenue generated based on services that V and MA provide to route transactions from the merchant to the issuer for approval/authorization, clearing and settlement of the funds between these parties. The transactions travel on proprietary networks called VisaNet and the MasterCard Network respectively for credit card transactions. They also have similar networks for debit processing. The processing revenue stream is a bit misleading because one would assume that all transactions made on a Visa card would be processed by Visa, but this isn't necessarily the case. There are other companies that process these transactions and collect this revenue stream as a result. Processing revenue is typically charged as a flat rate per transaction and has averaged between 7 cents (V) and 9 cents (MA) per transaction over the last several years. It likely also varies depending on the size of the transaction and I would expect that the fee is much lower for lower dollar transactions to encourage merchants to accept cards even on smaller transactions.
3. **International Transaction (V speak) or Cross Border Volume Fees (MA speak):** These are extra fees that V and MA charge when the merchant country and the issuer country are different and are assessed as a % of dollar volume. These fees are typically higher than the service revenues charged for domestic transactions because they include currency conversion fees and an upcharge for making an international transaction. If you have ever used a credit card when traveling internationally (and don't have a Capital One card – which assumes these fees) you have seen these additional fees on your credit card statement for transactions made in an international currency.

Both companies also generate other revenues from some additional services and solutions they provide but these revenue streams are relatively small versus the other revenue streams.

V and MA also have a contra-revenue account that consists of rebates and incentives that

they provide to their card issuer customers. These are often incentives provided to these partners to drive higher payment volume and greater card issuance. These incentives have historically averaged ~25% of revenue for MA and 17% for V. However, these numbers can be a bit misleading because of the slightly different way that the companies account for this contra revenue. I am led to believe that the incentives are likely comparable on a percent of revenue basis when accounted for on a like for like basis.

Investment Merits

There are a lot of things to like about the businesses of V and MA that attracted me to a potential investment in these companies.

- **Secular shift to card-based (digital) payments**

- There is a large secular shift going on in the payments landscape from paper based (cash and check) payments to card-based payments that strongly favors the credit card companies. What is astounding is that ~85% of the world's payments transactions are still paper based so there is a huge addressable market that is still not using credit cards, especially in developing markets. This secular shift helps counteract or mitigate short-term cyclicalities in the economy that could negatively impact payments volumes. In other words, the revenue from the number of people transitioning to card payments is likely to more than offset any impact from an economic downturn that may lead consumers to spend less. And we actually saw this happen from 2007 to 2010 for V and MA. In contrast to the massive revenue declines of nearly every other business during the great recession, both V and MA experienced strong revenue growth (double digit in most cases) in every year from 2007 through 2010 (currency fluctuations impacted MA in 2009). This was the secular shift (more people using card based payments) more than offsetting the recession related per-capita spending declines (less spend per person). And there is still a lot more secular shift to come. See tables below for historical revenue growth.
- Furthermore, this is not a winner take all scenario. There is enough growth coming from this secular shift for all of the card companies (V, MA, American Express, Discover, etc.) to benefit over at least the next 10 years or so.
- There are several factors driving this secular shift: 1) spending shifts to digital spending (i.e. online shopping), 2) convenience (cards are easier to use than cash) and 3) growing middle class around the world that is adopting cards

- **Wide Moat / Durable Competitive Advantage**

- V and MA both benefit from a wide moat or a durable competitive advantage in the form of: 1) embedded ecosystem integration, 2) nearly universal acceptance, 3) strong issuer relationships, 4) High consumer brand recognition and awareness. This has been demonstrated by the strong operating margins that both businesses generate. More on the margins

later.

- Universal acceptance – You can pretty much go anywhere in the world and use your Visa or MasterCard to make a purchase, which makes the barriers to entry high for a new player. A new player must ensure broad acceptance of their brand by forging relationships with many fragmented players worldwide.
- Strong issuer relationships – V and MA have strong relationships with issuers that have been issuing cards from both companies for several decades. In fact, the issuer banks once owned V and MA. While they don't have an exclusive relationship, the relationship benefits both parties as issuers generate significant profits on their credit card operations and issuing broadly popular V and MA cards makes them more attractive to consumers.
- Ecosystem integration – As previously discussed, V and MA play a crucial role in the credit card payment ecosystem that is not easily replicable without significant investments in security and technology by another party.
- Strong consumer brand recognition – V and MA spend a significant sum (several hundred million dollars) on marketing whether it is Olympic or World Cup sponsorships or the Priceless campaign to ensure that brand awareness is high among not only consumers but also issuers.

- **Business model is naturally indexed to inflation**

Most businesses have a really tough time passing on price increases to their customers as input costs rise. Often times, there is a lag in raising prices to pass on higher input costs and volumes are likely to decline when prices are increased. However, a significant portion of the V and MA revenue streams (Service Revenues or Domestic Assessments) are naturally indexed to inflation. As prices of goods rise, V and MA naturally get a fixed percentage of these higher prices and the impact to the bottom line is immediate. This is a huge advantage of the business model that is often overlooked.

- **Strong revenue growth**

As shown below, V and MA have both managed impressive revenue growth across all of their business segments over the last several years. Visa has grown its top line at a CAGR of 14.6% and MasterCard has grown at CAGR of 12.7%. These appear to be growth rates of young tech company, but V and MA are mature, steady companies that generate strong operating margins (to be discussed), positive earnings and strong free cash flow.

Visa Metrics

	Fiscal Year Ended							07-'13 CAGR	Projected	
	9/30/07 PF	9/30/08	9/30/09	9/30/10	9/30/11	9/30/12	9/30/13		9/30/14	9/30/15
Revenue										
Services Revenue	\$2,582	\$3,061	\$3,174	\$3,497	\$4,261	\$4,872	\$5,352		\$5,916	\$6,330
Data Processing Revenue	\$1,659	\$2,073	\$2,430	\$3,125	\$3,478	\$3,975	\$4,642		\$5,096	\$5,606
Int'l Transaction Revenue	\$1,193	\$1,721	\$1,916	\$2,290	\$2,674	\$3,025	\$3,389		\$3,728	\$4,101
Other Revenue	\$473	\$569	\$625	\$713	\$655	\$704	\$716		\$723	\$730
Client Incentives	(\$714)	(\$1,161)	(\$1,234)	(\$1,560)	(\$1,880)	(\$2,155)	(\$2,321)		(\$2,629)	(\$2,850)
Total Operating Revenue	\$5,193	\$6,263	\$6,911	\$8,065	\$9,188	\$10,421	\$11,778		\$12,834	\$13,917
Growth (%)										
Services Revenue		18.6%	3.7%	10.2%	21.8%	14.3%	9.9%	12.9%	10.5%	7.0%
Data Processing Revenue		25.0%	17.2%	28.6%	11.3%	14.3%	16.8%	18.7%	9.8%	10.0%
Int'l Transaction Revenue		44.3%	11.3%	19.5%	16.8%	13.1%	12.0%	19.0%	10.0%	10.0%
Other Revenue		20.3%	9.8%	14.1%	-8.1%	7.5%	1.7%	7.2%	1.0%	1.0%
Client Incentives		62.6%	6.3%	26.4%	20.5%	14.6%	7.7%	21.7%	13.3%	8.4%
Total Operating Revenue		20.6%	10.3%	16.7%	13.9%	13.4%	13.0%	14.6%	9.0%	8.4%

Source: Visa 10-Ks and my financial analysis for projected numbers. Pro Forma 2007 represents a combined statement as if Visa were operating as an combined independent company.

MasterCard Metrics

	Fiscal Year Ended							07-'13 CAGR	Projected	
	12/31/07	12/31/08	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13		12/31/14	12/31/15
Revenue										
Domestic Assessments	\$2,099	\$2,386	\$2,382	\$2,642	\$3,246	\$3,511	\$3,777		\$4,113	\$4,483
Transaction Processing	\$1,180	\$1,547	\$1,509	\$1,927	\$2,467	\$3,017	\$3,405		\$3,743	\$4,094
Cross-Border Volume Fees	\$1,490	\$1,777	\$2,042	\$2,198	\$2,222	\$2,343	\$2,775		\$3,191	\$3,606
Other Revenues	\$622	\$751	\$784	\$791	\$1,000	\$1,154	\$1,331		\$1,358	\$1,385
Client Incentives	(\$1,324)	(\$1,469)	(\$1,618)	(\$2,019)	(\$2,221)	(\$2,634)	(\$2,942)		(\$3,250)	(\$3,555)
Total Operating Revenue	\$4,067	\$4,992	\$5,099	\$5,539	\$6,714	\$7,391	\$8,346		\$9,155	\$10,013
Growth (%)										
Domestic Assessments		13.7%	-0.2%	10.9%	22.9%	8.2%	7.6%	10.3%	8.9%	9.0%
Transaction Processing		31.1%	-2.5%	27.7%	28.0%	22.3%	12.9%	19.3%	9.9%	9.4%
Cross-Border Volume Fees		19.3%	14.9%	7.6%	1.1%	5.4%	18.4%	10.9%	15.0%	13.0%
Other Revenues		20.7%	4.4%	0.9%	26.4%	15.4%	15.3%	13.5%	2.0%	2.0%
Client Incentives		11.0%	10.1%	24.8%	10.0%	18.6%	11.7%	14.2%	10.5%	9.4%
Total Operating Revenue		22.7%	2.1%	8.6%	21.2%	10.1%	12.9%	12.7%	9.7%	9.4%

Source: MasterCard 10-Ks and my financial analysis for projected numbers

Strong economics and high operating leverage

Both V and MA both demonstrate amazing economics. By virtue of their business models (collect a toll with no credit risk), they generate strong operating margins hovering near ~60%. Furthermore, they have both steadily improved their operating margins over the years due to high operating leverage. In other words, their expenses are primarily fixed so as revenues grow, these largely fixed costs can be leveraged over a larger base – leading to higher operating margins. As shown below, V has increased its operating margin from ~30% in 2007 to ~61% in 2013. MA has increased its operating margin from 27% in 2009 to 55% in 2013. The strong and consistent operating margins are firsthand evidence of both companies' durable competitive advantage.

Visa Metrics

	Fiscal Year Ended							07-'13 CAGR	Projected	
	9/30/07 PF	9/30/08	9/30/09	9/30/10	9/30/11	9/30/12	9/30/13		9/30/14	9/30/15
Visa Adjusted Operating Income	\$1,537	\$2,702	\$3,540	\$4,544	\$5,463	\$6,239	\$7,242	29.5%	\$7,936	\$8,654
Adjusted Operating Margin % (1)	29.6%	43.1%	51.2%	56.3%	59.5%	59.9%	61.5%		61.8%	62.2%

MasterCard Metrics

	Fiscal Year Ended							07-'13 CAGR	Projected	
	12/31/07	12/31/08	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13		12/31/14	12/31/15
Adjusted Operating Income	\$1,112	\$1,948	\$2,267	\$2,752	\$3,483	\$3,957	\$4,598	26.7%	\$5,076	\$5,586
Adjusted Operating Margin % (1)	27.3%	39.0%	44.5%	49.7%	51.9%	53.5%	55.1%		55.4%	55.8%

(1) Adjusted Operating Margin excludes litigation expenses; While it could be argued that these may be ongoing for the company, they are considered one-time for these purposes
Source: Visa and MasterCard 10Ks and my analysis for projections

Investment Risks and Considerations

While both V and MA are wonderful businesses, they are not without their risks

- **Pricing Power**

The pricing power of both V and MA is not as strong as I would want it to be mainly because there are several large customers (e.g. Chase, Wells Fargo, Capital One) that are highly concentrated. This gives the banks and credit card issuers leverage and negotiating power when it comes to fee negotiation. I do see some minor evidence of Domestic Assessment fee degradation over the last several years for MasterCard but it doesn't concern me greatly at this point. It's something that I will continue to watch closely and try to better understand.

- **Encroachment from issuers and disintermediation**

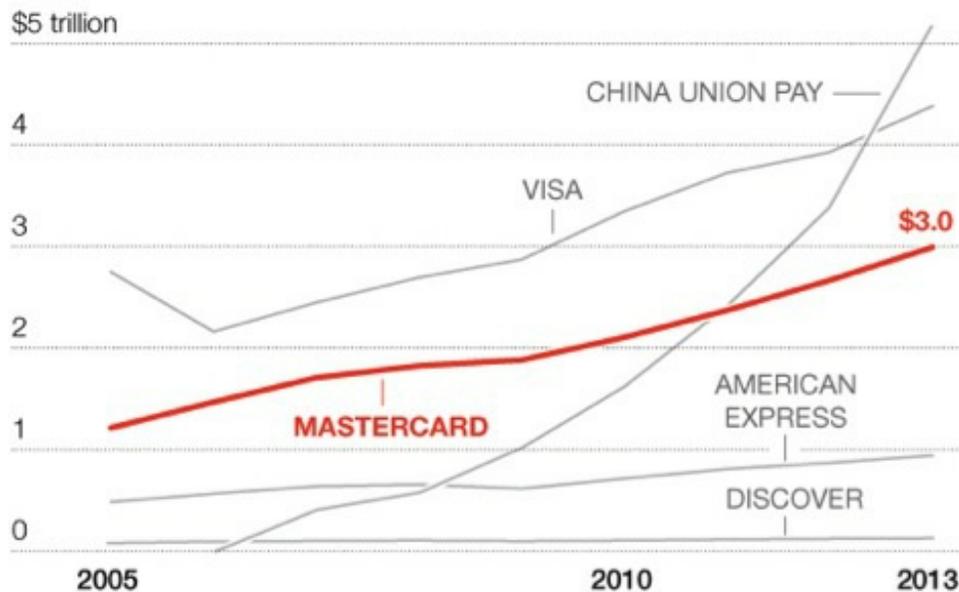
Many of the large issuer customers of V and MA are involved in various aspects of the card payment ecosystem. For example, Chase is one of the largest card issuers and is also a large merchant acquirer. Given Chase's size, it seems possible that Chase could completely cut Visa or MasterCard out of the payment eco-system and create a Chase branded payment brand and thus eliminate any payments that are made to V and MA with larger profits for the issuers. In this hypothetical scenario, Chase would have to ensure acceptance by other merchant acquirers but this doesn't seem like a difficult proposition. This was much less likely when V and MA were associations owned by the banks, but now as independent companies, the banks and card issuers don't have a vested interest in ensuring that V and MA remain an integral part of the payment ecosystem. I believe that V and MA have two key protections/defense strategies here: 1) they benefit from more fragmentation in the payments ecosystem. Thus, they want more issuers and acquirers to

ensure that one large party doesn't assume too much power. More fragmentation allows V and MA to bring more value to the ecosystem by connecting fragmented players. Unfortunately we have only seen more consolidation in the space over the last 20 years as banks and financial institutions have merged. 2) they need to sign long term contracts with the financial institutions that issue cards. These contracts need to ensure that the financial institutions continue to issue V or MA cards and also provide pricing benefits for higher volume to ensure that card issuers are incentivized to issue more V and MA cards. I don't know if these two strategies provide full protection against the risk of disintermediation but we haven't seen this risk come to fruition yet, so there may also be other protections in place that I am not aware of. I have not seen other analysts discuss this long-term risk and plan to evaluate it further.

- **Competition – Other Players and China UnionPay**

There is competition in the space outside of the potential encroachment from issuers discussed previously.

- First off, V and MA are direct competitors with each other but have largely managed to peacefully co-exist for a long time. They have even partnered on several industry initiatives like card security.
- Second, American Express, Discover Card, Diner's Club and various other smaller players compete in the space. While these players have a slightly different business model, they compete directly for the same revenue dollars as V and MA.
- Finally, there is a large competitor that flies under the radar if you live in the US. This is China UnionPay. The magnitude of China UnionPay's business is astounding. While China UnionPay has fewer cardholders than Visa, it recently surpassed Visa in terms of global spending volume (the metric that really matters) with over \$5 trillion of global spending volume. As recently as 2006, China UnionPay had no volume and has managed to grow the business to become the largest player in the industry in 7 short years. The growth has been driven largely by the economic growth of China, but does pose a threat as UnionPay maintains a government-sanctioned monopoly in China preventing Visa, MasterCard or any other players from entering the market. However, there is very little preventing China from entering new international markets (including the US) as domestic growth in China slows. While I don't see this as an imminent threat, I think it is worth highlighting the potential risk that China UnionPay poses in the long term. I am partly comforted by the fact that many Chinese companies have had difficulty expanding outside of their home market, especially in an industry like payments where the ecosystem is complicated with many relationships and players.



Source: Fortune Magazine and The Nilson Report

- **New digital payments technology**

The death of the credit card has been greatly exaggerated. There have been numerous digital payments technologies (like digital wallets, PayPal, Google Wallet, etc.) that have been introduced over the last several years. However, most of these new solutions have not been runaway successes as predicted, mainly because they are trying to solve a problem that doesn't exist. Credit cards are here to stay for three compelling reasons:

1. Credit cards are incredibly easy to use, fairly easy to carry and very secure for the most part. They have only become easier to use over the last 5-10 years, as signatures are no longer required for most purchases and nearly every card provides fraud protection. So consumers will continue to use credit cards for a long time to come
2. Many digital payments solutions still use credit cards on the backend. In other words, many digital payments link back to credit cards or debit cards to actually facilitate the payments and merely provide a user-friendly front-end experience. In this case, V and MA still make their cut. As I expected, we have seen this most recently with Apple's new payment solution - Apple Pay. Both V and MA (and American Express) make still make their cut from this platform. There are some solutions like PayPal that have a bifurcated approach - they link to credit/debit cards but also directly to bank accounts. In the latter case, V and MA don't make a cut. However, I am not convinced that PayPal or similar solutions will be taking significant share away from card-based payments in the near term.
3. Issuers have done a great job at creating strong incentives to continue to use credit cards - i.e. airline mileage cards and rewards cards. So while consumers may make some purchases through PayPal here and there, the majority of their purchases (and especially the larger ones) will be relegated

to a card.

- **Lawsuits**

As with many companies, there is litigation risk with V and MA. However, V and MA have been the target of more litigation than most other companies.

In the past, they have been sued for anticompetitive behavior by the likes of American Express and Discover with both of the latter receiving large settlements. More recently, they also settled a lawsuit with retailers nationwide over interchange (swipe fees). They were several large retailers (30 in total like Amazon, Walmart, Target) that bowed out of that settlement so there is more litigation and/or settlements that are coming. Given that there are several large retailers that are litigating, V and MA could be on the hook for several billion dollars. While these payments do impact cash flow and valuation as a result, I believe that the quick settlement/resolution will also lift a cloud of uncertainty from hanging over both companies.

- **Focus on share repurchases rather than dividend payments**

Both V and MA have generated a tremendous amount of cash flow over the last several years. However, they both sport very low dividend yields. In my opinion, the dividend yields are far too low for companies that have high operating cash flow and very low capex requirements. Both companies have used their cash primarily to fund share repurchases. While I like all shareholder friendly activities, I have a strong preference for dividends and consistent dividend policy. Management is generally not good at evaluating when their shares are cheap and often buy the stock when it is overpriced. Furthermore, share repurchases are often used to mask overly generous equity awards to management. As I have made clear in my investment philosophy, dividends keep management disciplined (not wasting money on foolish low return ventures) and I like to see continuously increasing dividends. V and MA have consistently increased dividend payments in the last few years, but not to the levels that I would expect and not to the levels that their FCF will comfortably allow. I would like to see management increase dividend payments significantly to at least a 35% FCF payout ratio.

- MA is currently paying out about 22% of FCF. An increase to a 35% FCF payout ratio would increase their payout to 18 cents per share per quarter from 11 cents per share per quarter currently. This would amount to a dividend yield of about 1% versus 0.6% today. This payout is still conservative and would still provide MA with ample operating flexibility to make acquisitions, fund share repurchases and potential litigation.
- Visa currently pays out about 15% of FCF. An increase to a 35% FCF payout would increase their payout from 41 cents per share currently to 96 cents per share. (a 135% increase). It would result in a dividend yield of 1.8% versus 0.8% today.
- There is no guarantee that V and MA will drastically increase their

dividend payments in the near term but I am generally optimistic that the management teams will realize that dividends need to be increased consistently and significantly.

Management

Both V and MA generally have good, capable management teams that have for the most part acted in the best interest of shareholders. Each company needs to be evaluated separately in this regard.

Visa Management

A former JPM exec, Charles Scharf, has been at the helm at Visa since late 2012. Scharf is no stranger to the banking world having been one of Jamie Dimon's right hand men at JPMorgan previously. Scharf has had meaningful impact in a short time at Visa. I would guess that Scharf was one of the chief architects behind the recent transition from nearly all of JPMorgan Chase Bank's credit cards from MasterCard branded cards to Visa branded cards. Previously Chase issued both MasterCard and Visa cards to its customers. I would imagine that Scharf (given his relationships at JPM) was able to strike some type of sweetheart deal that assures exclusive Visa issuance or at least very high volumes of Visa cards for lower interchange fees. Anecdotally, my Chase MasterCard was recently automatically switched over to a Visa card. Given that Chase is the largest card issuer in the country, this is a big deal for Visa, even though it's difficult to determine exactly what the financial impact will be. Scharf was quick to bring over his colleague from JPM, Ryan McInerney, to serve as president. McInerney was previously CEO of consumer banking for JPMorgan Chase so he has the experience and relationships to serve him well in this new role. Scharf is supported by a solid supporting cast, but I wouldn't be surprised to see some C-suite turnover in the near term as many of the folks (CFO, CMO) are of the old-guard pre Scharf.

Visa has treated shareholders pretty well during Scharf's term. They increased the dividend 21% (from 33c/share to 40c/share) and also repurchased 33 million shares for \$5.4bn. The company also put in place a new repurchase program of \$5.0bn in October 2013 through which 16mm shares (for \$3.4bn) have been repurchased through June 30th, 2014. Some of these repurchases have offset dilution caused by stock options and other stock based rewards, but the total diluted share count has decreased considerably from 2011 through June 2014, which is good for shareholders. Generally, I would say that management has acted in the best interest of shareholders, but I would like to see more of the cash dedicated to dividends going forward as it signals confidence in the business from the management team as I have articulated previously.

From a corporate governance perspective I also appreciate that Visa maintains an independent chair of the board (Robert Matschullat) that is separate from the CEO position. While it is important that the CEO and Chair of the Board work together collaboratively, it is also important to maintain a separation of powers.

MasterCard Management

Ajay Banga, a former Citigroup and Nestle executive, has served at the helm of MasterCard since 2010 (joined MA in 2009 as COO). He has a diversity of experience working in financial services and also consumer packaged goods, which I think is very well suited to a company like MasterCard that depends heavily on both brand marketing and its financial institution partnerships. Banga has been credited with driving a new focus on innovation at MA and repositioning the company to think of itself as a technology company rather than just a payments processor. He has also launched an internal innovation lab called MasterCard Labs in 2010.

Like Visa, MasterCard demonstrates good corporate governance practices by separating the role of CEO and Chairman.

Banga has generally acted in the best interest of shareholders. During his tenure as CEO, dividends have increased at a CAGR of 65% (2010-2014). This is a tremendous feat. More importantly, Banga has drastically improved the dividend policy versus his predecessor. Before his arrival, dividends were held flat since early 2007, likely due to the recession, but I would argue unnecessarily so. Banga also initiated MA's first ever share repurchase program in September 2010. Since then, the company has repurchased nearly \$8.3bn of shares through July 24, 2014, which is significant given a current market cap of \$88bn. \$728mm is remaining under the current repurchase program, but I expect management to authorize a new program fairly soon. My primary gripe with MA is the same as V. I would like to see a meaningful increase in its dividend. I expect management to partly deliver on this next year.

Valuation

V and MA are both great companies. They both generate robust operating margins due to high operating leverage and a natural index to inflation. They will both also continue to experience strong growth as they benefit from the continuing secular shift to card-based payments. Generally they both also benefit from a durable competitive advantage and defensible moat in the form of embedded ecosystem integration, coupled with universal acceptance, strong issuer relationships and strong consumer brand recognition.

As with all great companies, the question comes down to valuation and if the current prices provide a reasonable return to prospective shareholders.

Based on a simple DCF, using reasonable assumptions for discount rate and growth, I arrived at a value of ~\$87 per share for MA, which provides about 15% upside from today's price of \$75. For Visa, similar discount rate and growth assumptions were utilized to arrive at a value of \$223, which would make it more or less fairly valued (~4% upside) versus today's share price of ~\$215.

What does all this mean? Valuation is an imperfect science with many inputs so these

derived values are not exact. Generally, I believe there is a low margin of safety (lower than the 25% I would generally require) built into MA at current prices. Visa is fairly valued and has no margin of safety. However, as Warren Buffett has said on many occasions, "It's far better to buy a wonderful company at a fair price than a fair company at a wonderful price" and both V and MA are wonderful companies where the expected margin of safety will typically be less than can be found on other less wonderful businesses. However, even buying at fair value would provide a return of 7-8% annually (with low risk) for an investor. And I believe that management can and will drive more value over time by increasing dividend payments, thereby instilling more discipline and signaling more confidence in the future business (which lowers risk and in tandem, the discount rate).

Based on the valuation analysis, I am a buyer of MA at current levels and would look to buy on short-term dips to provide further upside. For V, I will withhold buying until short-term dips present a more attractive entry point.

DISCLOSURE: I am currently long MA stock. I am not an investment advisor and this article presents my personal views. While I have conducted a fair bit of research to write this, you should also do your own research and come to your own conclusions.
