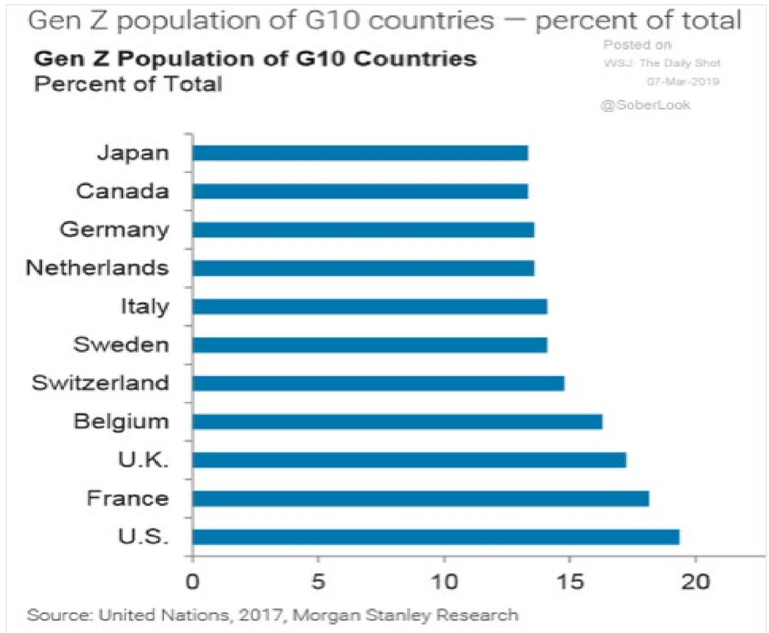
Introduction:

Over the last few months, the 2019 interns of Manole Capital conducted a financial services survey, specifically targeting the thoughts of America's younger generations. Specifically, we sought out Gen Z (those born after 1996) and Millennials (born 1981 to 1996).

We feel it is important to understand the perspective of these younger individuals, especially since Gen Z now represents nearly 20% of the US population. This year, Gen Z will reach 61 million individuals and become the US's largest generation.



This younger generation was born after the internet went mainstream and the oldest amongst them was only 10 years old when the iPhone was introduced by Steve Jobs. Most of Gen Z is still in school, but they have direct spending power of over $140 billion annually. Early analysis shows that Gen Z consumers are less concerned about brands, labels or even corporate names. They are quite entrepreneurial, ethnically diverse, socially tolerant and environmentally aware.

Manole Capital exclusively focuses on the emerging Fintech industry. The goal of these research notes is to provide valuable insights, specifically in the financial services segment, into this growing category of younger individuals. In total, we were able to survey 195 individuals. Respondents were asked a series of questions on four financial subjects, which will be released in four distinct notes:

1) Banking
2) **Payments**
3) Brokerage
4) Cryptocurrencies

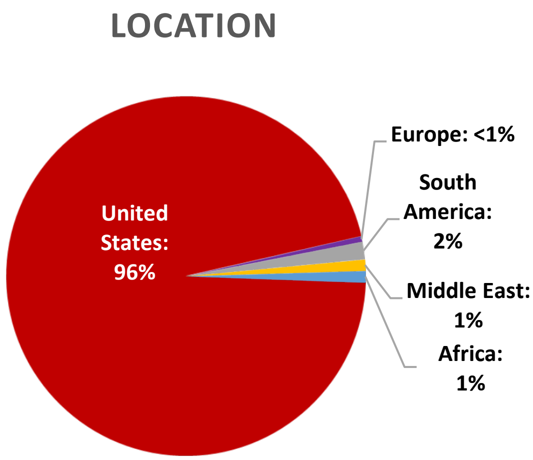
The questions we asked, as well as the information we received, is summarized below. Where possible, we have attempted to provide our conclusions and opinions. While some may be viewed as controversial, it is simply intended to serve as possible Gen Z and Millennial perceptions. This is the 2nd annual financial services survey performed by the interns of Manole Capital. Where we feel it is interesting to note, we will comment on large discrepancies and changes from last year's survey.

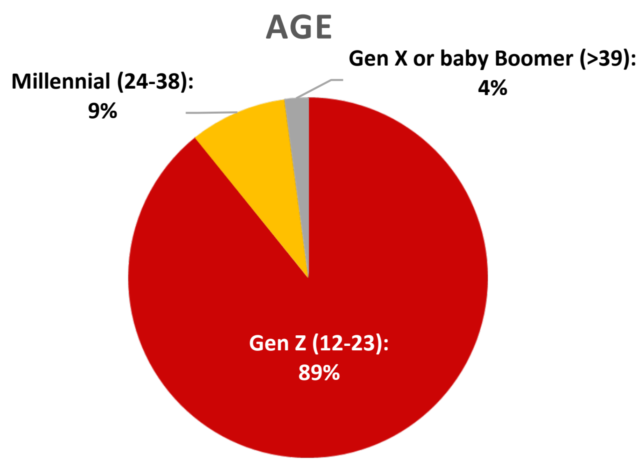
Who We Surveyed:

Out of the 195 individuals that participated in our online survey, 89% were between the ages of 12 and 23 (Gen Z), while 9% were aged 24-28 (Millennials) and 4% of respondents were older than 39 (Gen X or Baby Boomer).

While we would have preferred the sample size exceeding 500, we are pleased to have 98% of those questioned under 38 years old. For the few Gen X's and Baby Boomers that participated, we appreciated your participation, but you ruined our age demographic. Way to go Mom & Dad!

Geographically, 96% of the sample lives in the United States, while the other 4% are from South America, the Middle East, Africa, and Europe. Since we attend the University of Tampa, a high percentage of our survey is based in Florida.





Conclusion for Note 1 of 4 on Banking:

If you did not have an opportunity to read our last survey note (on the banking sector), please click here. As our last note proved, banks used to believe that their position was an insurmountable barrier to entry. Banks had the benefit of distribution, brand recognition, trust, regulatory backing and funding advantages. Now, those companies that are embracing technology, are gaining market share. An enormous shift is occurring, and it will impact all financial service companies.

Introduction for Note 2 of 4 on Payments:

There quite possibly is no larger market than payments, especially when one considers currency movements between and inside of countries. The scope of reinvention requires analysis and we hope this research provides some valuable insights.

How Millennials and Gen Z make purchasing decisions and what they look for in a brand is shifting. However, we believe that personalization has become increasingly important in today's society. This requires a different set of tools. New regulations and technologies are creating both opportunities and challenges to the financial services industry. Traditional companies are banking on brand recognition, trust, experience and their existing physical distribution channels. There is an opportunity for existing financial services companies to think differently and combine their experience with the agile nature of financial technology. Being the first to implement an idea is an advantage, but there is clearly a benefit to incumbents and current market leaders.

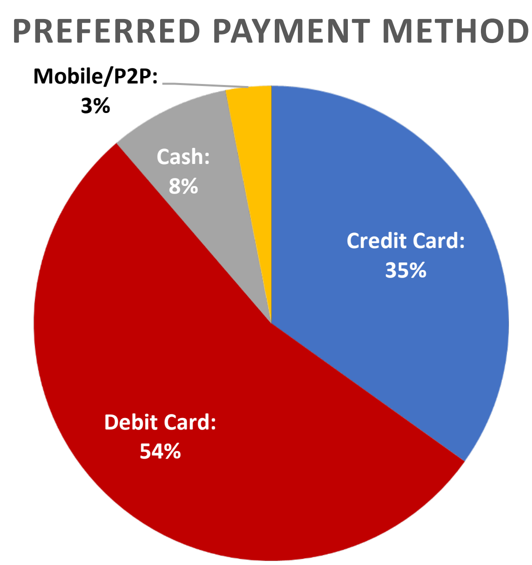
The FINTECH market is dynamic, and the certain players are extremely aggressive. Newer FINTECH companies are leveraging data and information, exercising an entrepreneurial mindset and utilizing technological benefits. Newer, nimbler companies, that rely on algorithms, specialized software and technology can succeed. Ultimately, there is no escaping the advancement of FINTECH benefits.

In this note, we will be commenting on the results from our "Cash/Payments" section of the survey. Specifically, we address cash versus card usage, mobile payments, P2P (person-to-person) payments, and ATM usage. Our survey began by asking respondents a series of questions regarding their thoughts, usage habits, and preferences for the payments industry.

Payment Methods:

Q&A:

To start off this segment, we asked the survey respondents to list their preferred method of payment. The most popular method, for the 2nd year in a row, was debit at 54%. Credit cards were second at 35%. Cash came in 3rd at 8%. Surprisingly, mobile payments and/or P2P came in at only 3%.



Compared to last year, debit had a slight decrease from 58%. Credit card usage made the biggest leap from last year, increasing from only 20% to 35%. Cash continues to fall as a method of payment and should continue to donate market share. Last year, cash was still preferred in roughly 1/5th of transactions. Now it is in the high single digits.

Our Conclusions:

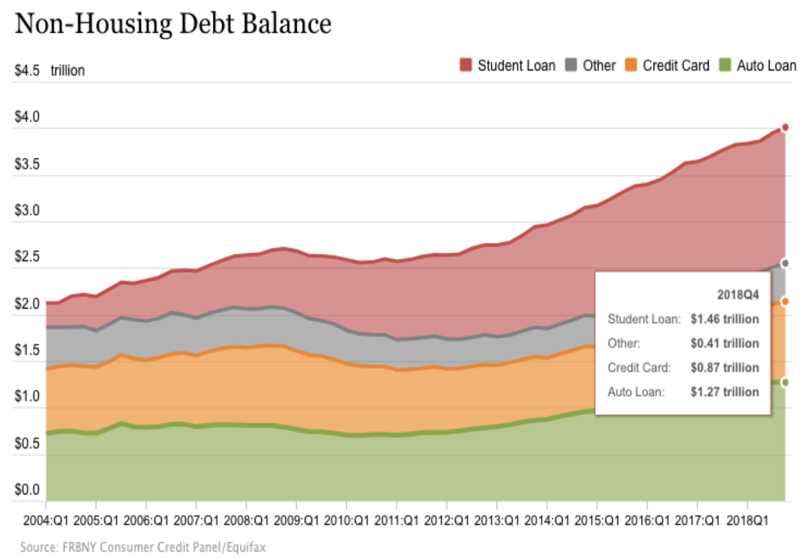
Combining both debit and credit, card usage is nearly 90% of Gen Z's favorite way to pay. Last year, card usage combined to equal 78%. The quick conclusion is that cards remain dominant and the preferred payment method, but let's dive a little further into the details.

In the UK, debit card transactions overtook cash payments in 2017. Fast forward a year and the UK market is shutting down over 500 ATMs every month. While cash still represents roughly 30% of all UK transactions, estimates believe cash payment share will fall below 10% over the next decade. Cash continues to be the market share donor. We will address the major differences between international markets and the US in a bit…

Are there any new marketing tactics the credit card companies are using to entice Gen Z? TransUnion has reported that 178.6 million consumers, an all-time high, now have access to a credit card. Anecdotally, we have noticed an uptick in Discover Card (DFS) usage. A college student can easily apply for a Discover "Student IT Card" and get a response back in just a few minutes. Without a credit history, Discover Card kicks 5% cash back on purchases, doubles rewards points and provides a $20 statement credit for those with 3.5 GPA. We are pleased to have GPAs over this threshold, but we do not believe that Discover Card verified our GPAs to get our $2,000 line of credit.

According to recent Federal Reserve data, consumer debt (which includes auto, student, personal and credit card loans) hit an all-time high of $4 trillion. There are nearly 430 million credit cards in circulation today, with an average debt level per borrower of $5,736.

According to TransUnion research, not only are the number of cards up 13% from 2015, but debt levels are up 7.5% too. Is Discover doing an appropriate job of due diligence on their new cardholders? Only time will tell…



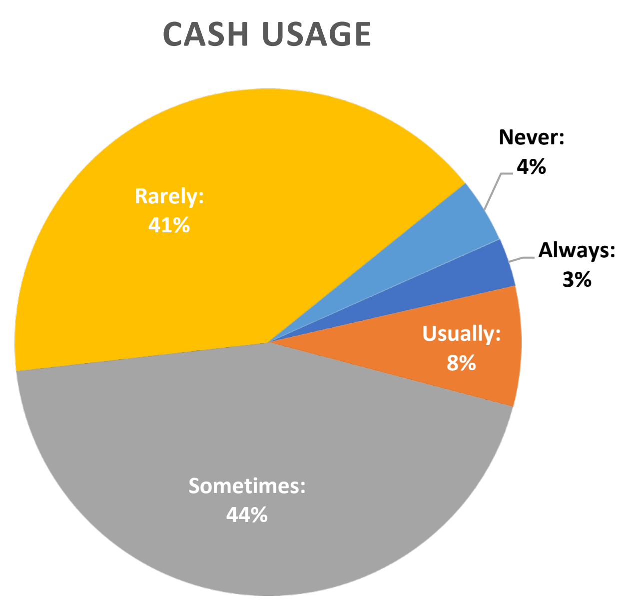
Cash Usage:

Q&A:

From the last question, it is obvious that cash is becoming less popular among the younger generations. To better understand how Gen Z's use cash, we asked our survey respondents how often they pay using paper currency.

41% report "rarely" using cash, while 4% "never" use paper currency. 44% use it "sometimes", 8% "usually" pay using cash and only 3% use it "always".

This is a huge change from last year, where 1/5th of our surveyed respondents reported "always" using cash to pay. Gen Z's cash usage is dramatically changing. Cash is clearly donating usage market share and more of Gen Z is choosing to use cash less and less.



Our Conclusions:

It is obviously much easier and more secure to carry a 3 x 2 piece of plastic than to risk holding a cumbersome wad of cash. However, it is important to recognize that cash usage is likely here for the foreseeable future.

In 2017, the average American carried $50 in their wallet. Just one year later, that dropped 16% to $42. From our survey results and broader trends, it is safe to say cash will remain an option over the next decade. However, we believe Gen Z is likely to continue to favor P2P, mobile payments and card usage.

Shift to Mobile Payments:

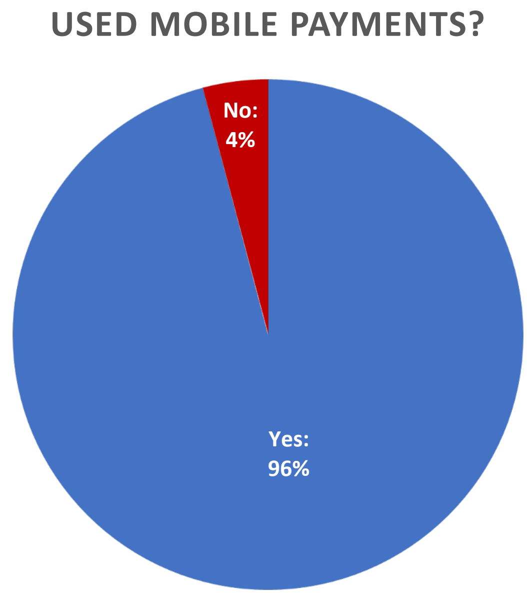
Q&A:

It is true that Gen Z's like to pay using card, but how soon can we see the shift towards more transactions via mobile payment platforms?

To begin our mobile and P2P analysis, we wanted to learn how many of our respondents use mobile payments, and especially how often they use them.

Our Conclusion:

Not to our surprise, 96% of our respondents have used mobile payments, which is a 19% increase from last year's results. Once again, the 4% not using mobile payments are most likely the Baby Boomers that answered our survey. Thanks Dad!



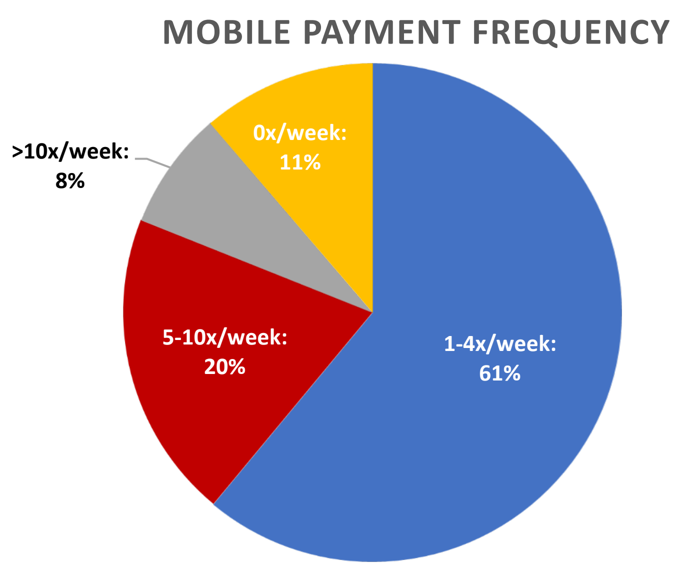
Q&A:

We then wanted to understand frequency of use. 61% of our respondents use mobile payments 1x to 4x per week. 20% stated 5x to 10x per week and 8% said they are using mobile payments more than 10x a week.

Our Conclusion:

In our opinion, an individual using a service more than once a week is an active user. 89% of our group of Gen Z users is making mobile payments each week.

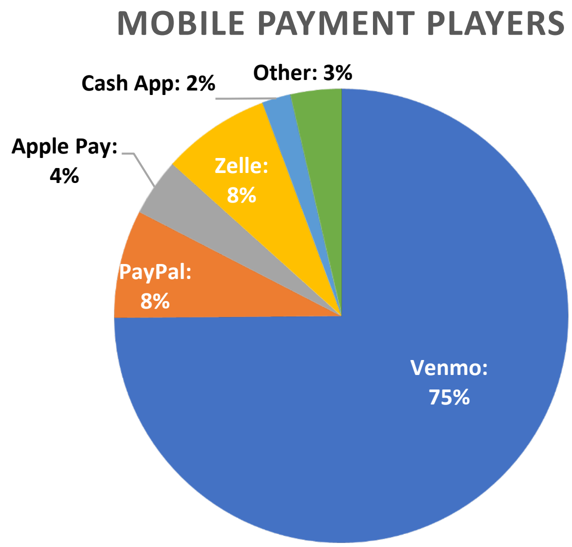
Comparing this year to last, the 1x to 4x group increased 12% year-over-year and those over 5x per week rose 19% year-over-year. We expect the frequency of use to continue to climb in the mid-teens for the foreseeable future.



Mobile Payment Brands:

Q&A:

Clearly, mobile payments and P2P (person-to-person or peer-to-peer) payments are gaining momentum. We then wanted to understand which brands and players are the most popular.



Venmo clearly is the lead mobile payment and P2P brand, with 75% market share (in our survey). PayPal came in 2nd place with 8%, followed closely by Zelle.

Considering that PayPal owns Venmo, we should probably say that PayPal + Venmo at 83% is the clear leader. Apple Pay continues to struggle, with only 4% market share.

Our Conclusion:

It is estimated that there are 1 billion active users of P2P payments worldwide with projections of volume increases of 180% over the next 5 years. Venmo dominates the market and is widely viewed as a verb. Instead of stating how people can pay one another, it is now commonplace to say, "I'll just Venmo you the money". This kind of recognition and brand awareness is hard to value, but clearly it is a significant asset for PayPal.

Manole Capital wrote a detailed note on PayPal back in September of 2016, which can be read by clicking here. In that note, Manole Capital reviewed the opportunity in PayPal and especially how it can begin to monetize their valuable Venmo brand. PayPal's growth, especially among Gen Z and Millennials, has been impressive. This rapid growth, among this demographic, should bode well for future monetization of the Venmo asset. The stock price appreciation in PayPal, from that note's publishing, has been significant.

Recent Results:

With PayPal reporting results recently, we thought it would be interesting to provide some additional details. Venmo has 40 million active users that are generating volume of over $21 billion, up 75% versus last year.

During the 1st quarter of 2019, Zelle reported payment volume of $39 billion, which was a 54% increase year-over-year. Transaction volume grew an impressive 72% to 147 million transactions. With an average transaction size of $265, Zelle seems to be for much bigger consumers, than typical Gen Z users.

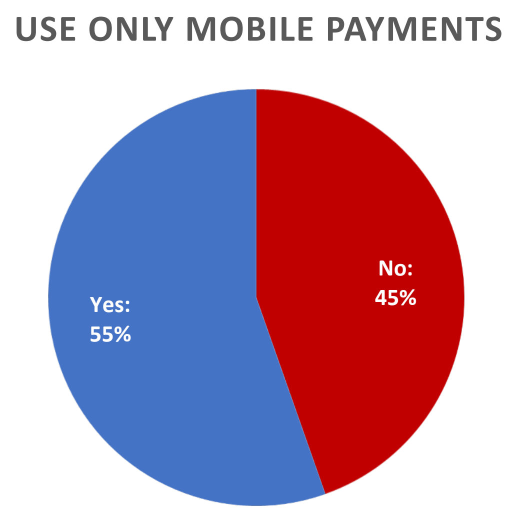
Despite only getting 8% of our survey results, we believe that Zelle is the biggest threat to PayPal's Venmo product. We forecast that Apple Pay is more likely to gain market share among our Gen Z demographic, but there is no denying Zelle's impressive statistics.

Zelle P2P payment service owned by the traditional banks. While smaller financial institutions can utilize Zelle (current banks and credit unions total 5,391), it's overwhelmingly being driven by Bank of America and JP Morgan Chase. For example, Bank of America represents roughly 40% of Zelle's total transactions and payment volumes.

Wallets:

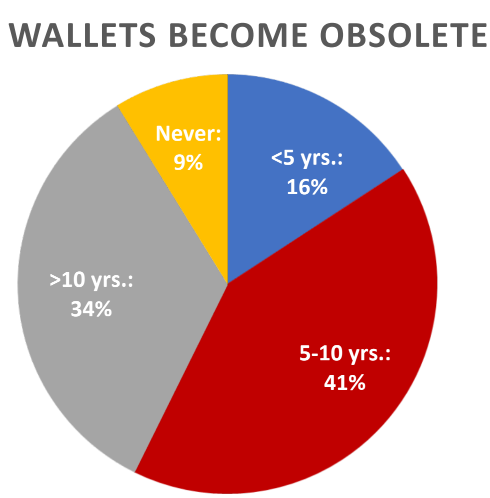
Q&A:
We wanted to understand if our respondents would be willing to only use mobile payments and if they would be comfortable ditching their traditional wallets. Over half would be willing to use only mobile payments, if they could.

Our Conclusion:
There are other factors involved in no longer using a wallet (i.e. driver's licenses, school ID, insurance cards, etc), but this result is interesting.



Q&A:
We then asked when our group believes traditional wallets will become obsolete.

We were surprised by these results, with 41% believing traditional wallets will be around for another 5 to 10 years. 34% stating that they expect to be carrying around a wallet in a decade and another 9% stated that wallets will "never" become obsolete. Only 16% believe that wallets will disappear over the next 5 years.



Our Conclusion:
Looking forward, mobile phones replacing traditional wallets is the holy grail for payment providers. Our results show that card usage will dominate, but it might shift from plastic to digital. There has always been the risk that card usage would decline,

as mobile payments and P2P grows in popularity. If users can simply use their phones as payment devices, there is huge upside for the transaction & payment processors.

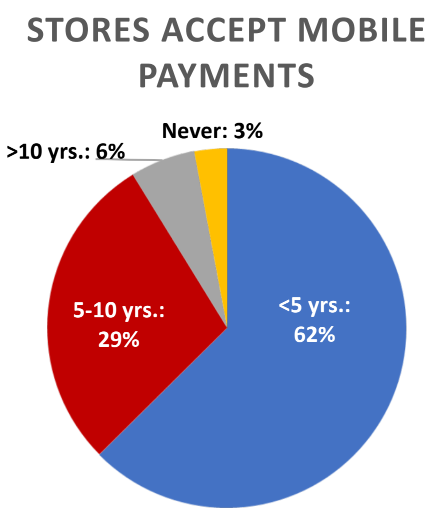
In our opinion, funding remains the most important aspect of the payment ecosystem. If credit and debit accounts are the primary mechanism to fund payments, the issuers (i.e. issuers and banks) will be protected. As long as the payment is card funded, whether it is plastic or digital, the payment networks should be the ultimate beneficiaries.

Merchant Acceptance:

Q&A:

We wanted to better understand how fast retailers and merchants will begin to adopt mobile payments at the point of sale (POS). We asked our group a series of acceptance questions. Specifically, we inquired when they expect traditional retail stores (i.e. bricks and mortar) will begin to accept Venmo, PayPal, and other digital or mobile payments.

62% believe retailers will begin to accept mobile payments in under 5 years. 29% of our group expect it will occur between 5 and 10 years from now and 6% believe it will take over a decade.



Our Conclusion:

Is widespread adoption being held back because many retail locations still fail to offer a viable and quick mobile payment solution? US contactless transactions still only represent 1% to 2% of POS purchases. Why are mobile payments so popular with consumers and still not seeing POS usage? Some blame can go towards a lack of contactless payments acceptance at the POS. Millions of merchants still have not bothered to turn on the NFC (near field communication) functionality in their POS terminals. According to a Mastercard study, only 1/5th of US merchant locations accept contactless payments.

In our opinion, the problem goes deeper than simple acceptance. Want an example of merchants negatively impacting mobile phone payment adoption? We believe some of it revolves around speed and convenience. We recently used our mobile phone to make a purchase at Panera. The transaction occurred quite quickly, and our credit card funding source was automatically charged. Simple right? Not so fast.

After facial recognition authenticated our identity, why did they ask us to sign? Was that helpful in improving security? What purpose is this signature providing, as the Panera employee certainly is not going to compare our signature to that on our plastic card.

Merchants are dying to reach their consumers and build a deeper relationship with their valued customers. Starbucks, which launched its payment process back in 2011, has successfully created a proprietary system that rewards its loyal customers. Now, mobile payments represent over 30% of Starbucks US transactions. Dunkin' Donuts, CVS, Wal-Mart and other retailers have launched their own payment platforms to build that strong relationship with its customers.

These daily or regular usage retailers will have success by offering the consumer discounts or rewards but must always remember to never limit customer choice. Consumers should always be allowed to pay in whatever form they wish. Limiting choice or forcing lower acceptance cost methods will not lead to success.

Smaller merchants do not have the presence, technology budget or desire to support mobile payments. Many small businesses have just gone through the chip-in-card technology process and do not want to institute anything that slows down their lines or takes away from the customer experience.

The emerging trend is obvious. Technology exists to leverage smart devices and streamline a more efficient and frictionless consumer experience. Whether it is software firms, device manufactures or another entity…the payments industry is poised to deliver on this consumer demand. So, what's the holdup? We believe it is due to physical retailers and merchants.

Merchant Pushback:

Wal-Mart was a founding member of MCX (Merchant Customer Exchange), which was formed by 40 retailers in 2012. MCX changed its named from ISIS, for obvious reasons, but was created to benefit merchants at the expense of the general-purpose card industry and networks. These merchants wanted lower acceptance costs, but also wanted to create a loyalty program benefitting all merchants in their network. The mobile phone was supposed to make the data collection and sharing of information, across the network, more insightful. This way, merchants could build customer awareness and customized loyalty programs. This was a good concept, but the reality was very different.

We believe that their CurrencyC platform failed because Wal-Mart cannot structurally cooperate with Target, just like CVS cannot cooperate with Walgreens. Ultimately, CurrencyC was sold to JP Morgan for a bag of slightly used baseballs. We joke, but the retailers have not been terribly helpful in advocating mobile payment growth and adoption.

Merchants will push their own wallets / apps and seek to develop a deep relationship with their customers. We do not believe consumers will load dozens and dozens of various apps on their phones, as that wallet space or real estate is too valuable. Some may get a special spot, like Starbucks or Dunkin'. We doubt consumers are excited to load apps onto their phone if they only plan on using it 1x or 2x per year.

Digital First Approach:

What exactly do we mean by "Digital First"? Gen Z consumers listen to music digitally and consume their entertainment digitally. Social media and engagement are digital, so too is commerce. The concept of payments needs to change, not from the consumers perspective or the merchant's perspective. The technology needs to change, and we believe the payment networks are the key. It is our opinion that all of these changes will occur because of tokenization. This is the way to safely digitize what exists in the physical world. Consumers will shortly be able to store their cards (and all of those funding details) in a digital wallet. Once again, the goal is for consumers to transact in a convenient and secure way. Gen Z never likes to be without their phones. We believe the phone is the answer for payments and commerce.

Our Conclusion:

Credit cards have not materially changed in decades. The main reason is not that there aren't technological changes, but rather it is because cards are simple, useful and are very easy to use. Why mess with a good thing? Cards have always been controlled by that physical piece of plastic. People love to simply use their cards at the register. Turning this from a physical experience to a digital experience has been a challenge. Whether it is a phone, wearables or other types of interfaces, digital payments are coming. However, its speed to market has been slow. Why?

Consumers and merchants, across the world, are familiar with the payment process and it is a convenient experience. What some merchants do not understand (i.e. Wal-Mart) is that the card strategy has been so successful because of the strategy around honoring consumer choice. Merchants should never force consumers to act or behave or pay in a certain manner. Successful retailers allow consumers to pick their favorite funding and payment choice. Consumers demand convenience, privacy and transparency and do not want to be forced into certain behaviors.

For the 2nd year in a row, we were surprised that younger generations are ***not*** showing a preference for mobile payments. It was the preferred method of payment in only 3% our our Gen Z surveyed participants. The hype over mobile wallets in not new. Google Checkout was created in 2006 and Apple Pay was launched, with much fanfare, back in September of 2014. So, a decade after their creation, where do we stand? Early adopters and certain enthusiasts might have embraced mobile wallets, but it really has fallen flat. Who is to blame? Multiple parties deserve some credit or blame for this lackluster acceptance. Several major factors are holding back US mobile payment trends from widespread adoption.

The major selling point of the Big 3 "Pay" (Apple, Google and Samsung) firms was centered on speed. However, authentication via a fingerprint or facial recognition, is not terribly faster than swiping a piece of plastic at the POS. Apple Pay is now accepted at 65% of all US locations and 74 of the top 100 US merchants, but it continues to struggle with driving transactions and usage. Will Apple's new credit card, with Goldman Sachs as card issuer, generate volumes for Apple Pay?

An Interesting Partnership (Apple, Goldman Sachs and Mastercard):

On Monday, March 25th, a much-publicized partnership between Apple and Goldman Sachs was announced. These two wonderful companies launched the first digital credit product. In our opinion, the biggest technology advancement came from Mastercard.

Before discussing the technology, one needs to understand the power of these brands, when it comes to acceptance. One of the most important aspects that Mastercard and Visa bring to the table is global merchant acceptance. Consumers need payment products to be ubiquitous, whether they want to transact online, in a store or through an app. Mastercard brings Apple 50 million merchants and an acceptance network recognized around the world. Both Visa and Mastercard are mandating all new cards and payment terminals issued must be contactless enabled in the next few years. Once a retailer makes the initial contactless upgrades to their terminal infrastructure, no additional investment will be necessary to accept contactless cards. While the technology and tokenization is critically important, do not underestimate the importance of global acceptance.

Without getting too technical, Mastercard is bringing significant technology to Apple's / Goldman's product. When a consumer decides to pay with this digital card, a series of transactions occurs. That payment message goes to Goldman Sachs, which provides the "go ahead". Mastercard receives that message and it instantly creates a token. This is essentially the representation of the prior 16-digit card number. Mastercard sends this to the phone and that token is combined with a cryptographic equation stored in a chip in the secure element of the phone. All of this occurs in a few seconds and the transaction can be verified. This insures that each transaction has been authenticated by the right person, from the right phone (i.e. reducing fraud). The entire security protocol is handled by technology that is fast and safe, through Mastercard's Token Service.

In addition, this process also allows for physical card optionality. Let's say you are at a restaurant or a bar. Do you want to leave your phone with the waiter or bartender? Absolutely not! The Apple Card is designed to also have a physical card, just without any of those easy to steal numbers on it. The card has a name on it, as well as a chip, but it does not have a 16-digit number, an expiration date or an annoying security code. All of these items are safely stored on the phone, for maximum utility for the consumer and safety for the issuer.

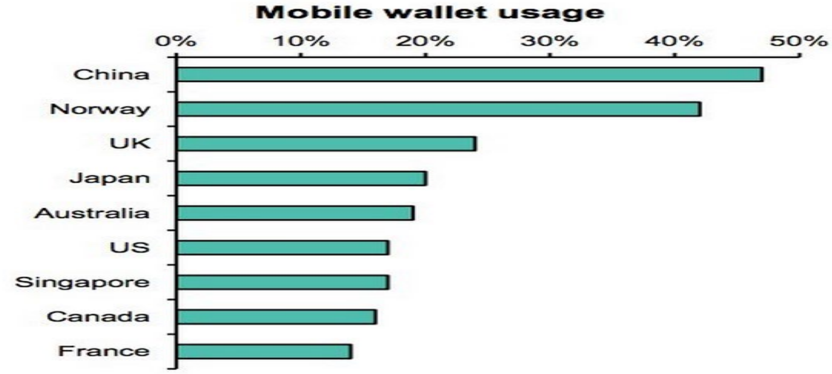
Once again, the key is ubiquity and choice. Gen Z consumers want all of their connected devices to be commerce enabled devices. The phone is the most logical device, but smart watches, wearables, cars, and even fridges can become a secure payment device. Cards will be around for years, but their shape and formfactor are undergoing a massive change. Gen Z hates the mindset of "one-size-fits-all" and we want a multiplicity of solutions that honor consumer choice. Will this partnership lead other technology companies, like Facebook, Google and Amazon, to move towards a digital first approach? Time will tell…

International > US:

A cultural shift towards cashless payments in underway. Some estimates believe that mobile payments have the opportunity to become a $100 trillion market. Instead of using cash or checks, certain governments are advocating card usage and mobile payments.

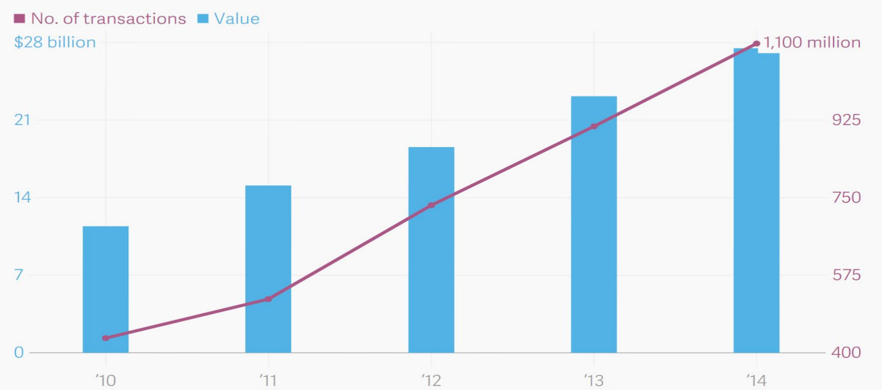
The US leads the world in certain technological developments and advancements. However, the international market is well ahead of the US in terms of mobile payments.

EXHIBIT 19: User adoption of online payments in China (2015)



Source: eMarketer and Bernstein analysis.

Kenya's M-Pesa mobile money has grown rapidly



Few think of Sub-Saharan Africa as a FINTECH leader or mobile payment pioneers. However, Kenya has revolutionized mobile payments with M-Pesa.

Over the last decade, the M-Pesa payment platform has nearly 25 million subscribers doing 1.7 billion transactions each year. In Kenya, M-Pesa accounts for more than 50% of the country's GDP.

No country has nurtured and developed mobile payments like China. At the forefront of China's mobile payment adoption are Alipay (owned by Ant Financial) and WeChat Pay (owned by Tencent). These two entities handled roughly 95% of all cashless mobile transactions in China and in 2018 and China's mobile payment users reached an astounding 583 million. eMarketer projects that by 2021, 79% of China's smartphones will be tapping, scanning and swiping at the POS to pay.

Users have embraced their smartphones for everyday transactions like food at street food stalls, highway tolls, bus fares, taxis, subways, etc. Once the process of paying became easy and quick, Chinese consumers (and merchants) embraced mobile payments.

In comparison, eMarketer projects that the US will only have 30% penetration by 2021. While the trend towards mobile payments has been widely embraced oversees, the US has been somewhat slow to adapt. Why is the US falling behind?

The US Government:

Payments need to be safe, secure and convenient. Today, consumers are using their phones and smart watches to pay for various goods and services. At the Mercedes-Benz Stadium, home of the NFL's Atlanta Falcons and this year's Super Bowl, just switched to only accepting mobile payments, as well as traditional credit and debit cards. No cash at all! The goals for this change were simple. They wanted to improve the payment experience, eliminate the costs of handling cash, minimizing security exposures, and effectively speed up transaction times for customers.

Instead of embracing a cashless society, the US has seen certain cities pushback. For example, lawmakers in Pennsylvania, New York, California and New Jersey have introduced or passed legislation that prohibits businesses from refusing to accept cash payments. The argument is that a cashless society discriminates against low-income people. Unfortunately, these measures only slow down the inevitable.

Our Conclusion:
Gen Z is accustomed to making purchases on their mobile phones and are not inclined to carry and use cash for purchase transactions. By the time Gen Z reaches their prime earning years, we would not be surprised if they are purchasing goods and services in a completely cashless way.

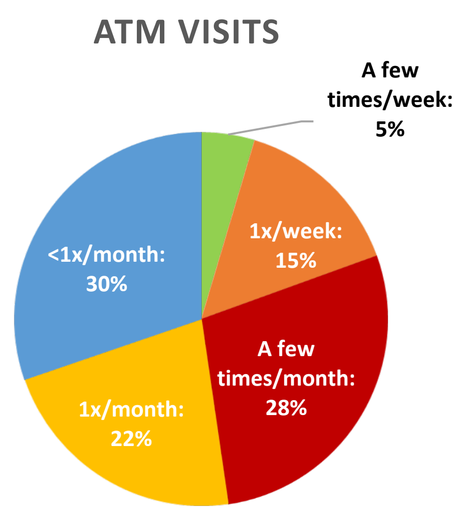
Manole Capital has written extensively on on trends in cash usage and payments. To read our prior note on Amazon Pay, please click here. To read other Manole Capital notes, simply search in the Seeking Alpha website.

ATM Usage:

Q&A:
There are more than 400,000 ATMs in the US, of which 48% are bank-owned (see below). With that being said, we wanted to better understand the shift we are seeing in cash usage and their impact on ATMs.

From what we gathered, only 1/5th of our surveyed group visit an ATM every week (5% of use an ATM a few times a week, while 15% use one 1x a week). The vast majority of Gen Z are using ATMs roughly 1x per month.

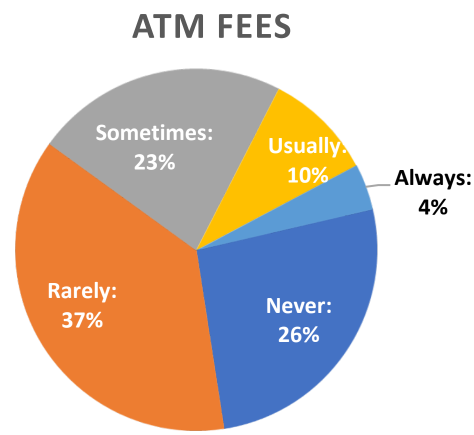
Almost half of the ATMs in the US are owned by the big four banks: JP Morgan, Wells Fargo, Citibank, and Bank of America. Major credit unions also have vast ATM networks. Over half of the ATMs in the U.S. are owned by independent operators.



Q&A:

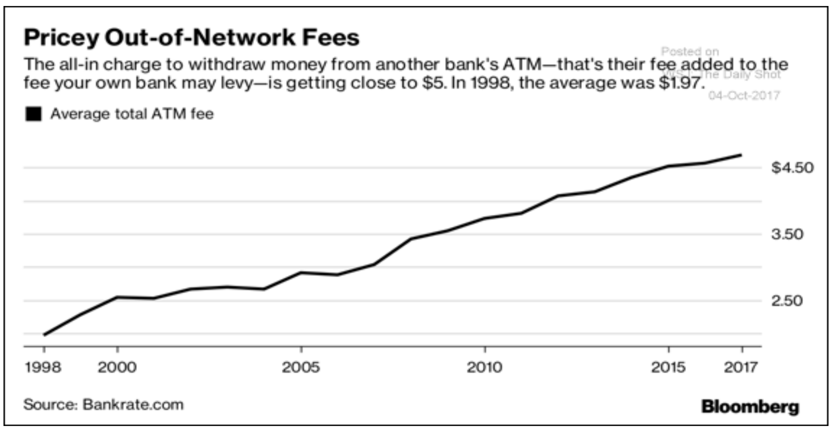
Knowing this, we wanted to know how often they incurred out-of-network fees. As one might expect, Gen Z attempts to avoid ATM fees by using their own bank ATMs.

37% rarely use out of network ATMs, whereas 26% refuse to pay a fee when using an ATM.



Our Conclusion:

As this Bankrate.com chart shows, the average ATM fee has risen from roughly $2 in 1998 to almost $5 per transaction.



While convenience is always a factor, Gen Z is cost conscious and will attempt to avoid pricey ATM fees. Don't call us cheap! Just fiscally sound.

From our survey, we believe that ATM usage will continue to decline. In addition, we think that out-of-network ATM providers will struggle in the future.

The Winner = The Shared Buy Button:

Mastercard's Masterpass was launched in 2013 and Visa launched Visa Checkout in 2014. This was not the first attempt for the networks to push mobile payments and garner more online market share. Research from similartech.com shows that PayPal has 7% market share of the Top 10,000 online sites versus Visa's Checkout and Mastercard's Masterpass at a paltry 0.25% and 0.41% respectively. As we discussed earlier, merchants have been hesitant to accept these network brands, for a fear of being further removed from their customers and that valuable transaction data.

Last year, the networks (Visa, Mastercard, American Express and Discover) began to explore a common user-interface for Secure Remote Commerce (SRC). The technical specifications and branding of this new "shared buy button", for online purchases, will take months, if not years. Consumers will ultimately pre-select their favorite funding source (i.e. a credit or debit card) and pay with their mobile phone.

If it can be streamlined, with little friction, it can gain market share. The concept is quite intriguing, but we have seen difficulty when enemies attempt to behave friendly towards each other, for the common good. The payment networks are the current winning incumbents and they are pushing the same security protocols dictated in their own EMV standards. These standards were created and are controlled by Visa, Mastercard, American Express, Discover, Japan's JCB and China UnionPay. Do you think anything, in terms of a technical framework, will happen quickly with this group? We don't!

It might take a few years to develop a common buy button, but we believe it will occur. Some merchants want an easy one-click experience, to improve their digital checkout process and help lower their cart abandonment rates. Wal-Mart and other big merchants are worried that this will negatively impact their own application, raise their cost of card acceptance and continue to place them on the "outside looking in". Wal-Mart has an embedded advantage versus smaller merchants, in terms of acceptance costs. Wal-Mart may cry about its card acceptance costs, but it has a material advantage versus smaller merchants, in terms of routing and scale pricing.

Conclusion:

In our opinion, mobile payments need a few, critical items to succeed. We believe that a "common buy button" will ultimately win in the online environment. However, there will be a few important steps that need to happen. For widespread success, it will need to have the proper protocols and security standards that the networks advocate. Offering tokenized digital payments, very similar to how Apple Pay currently works, is a start. To make a simple statement, on a very complex payment process, security measures are needed to provide users with a digital ID instead of easily compromised cardholder information. We envision these standards forming and emerging over the next year or so and should focus in on advanced biometric options (i.e. fingerprints, voice, iris or face recognition). Using PayPal's online track-record as an example, we believe it succeeded in ease-of-use and simplicity. We believe a one-click experience is a step in the right direction.

For mobile payments to flourish at the POS and at physical retailers, merchants will need to realize that the payment networks are not the enemy. Card acceptance, via plastic or a phone, is a much better solution than cash and checks. There should be a cost of card acceptance, for its convenience, safety and elevated purchasing power. If the payment networks can help create a loyalty or reward program for these worried retailers, that would be the ultimate solution. We do not envision this last marketing component will occur, but we still can hope.

FINTECH is beginning to touch consumers and businesses in new and exciting ways. The US has been slow to adapt, but we are encouraged by recent advances. Why was the US the last developed country in the world to embrace EMV standards (i.e. chip-in-card technology)? Simply stated, the magnetic stripe, which is a +50 year technology, works pretty well. It is quick and convenient, so there was consumer hesitancy to make a large behavioral change.

As our survey proves, Gen Z is pushing the US payment environment towards P2P and mobile payments. The changes will not happen overnight but will occur over the next 5 to 10 years. New iPhone and Android smartphone users are linking and loading a card in their device onboarding process. We believe this is the rationale for Apple's new credit card, to drive Apple Pay adoption. Just remember that the US payments industry is more similar to an aircraft carrier, than a speed boat. It will take a while to turnaround, but change is coming. You can either "thank or blame" Gen Z for the impending adoption of mobile payments. Gen Z is embracing technology and it believes in the mantra of "faster and cheaper". If mobile payments can become more efficient and improve the experience, Gen Z will dictate and help shift the US towards this advanced payment future.

Manole Capital is heavily invested in the payments landscape, with its FINTECH focus. One of the firm's long-term thesis's is that payments are an "evolution, not a revolution". Will the "Big 3" use their position on smartphones to garner payment market share? Will the payment networks succeed with their "common buy button"? Maybe the merchants can get consumers to pick and choose their specific mobile phone app? Like any revolution, there is a significant amount of unpredictability and uncertainty.

"Thank you" for your interest in our 2nd survey note, focused on the emerging payments sector. Please be on the lookout for our next note which will focusing on the brokerage and trading space.

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