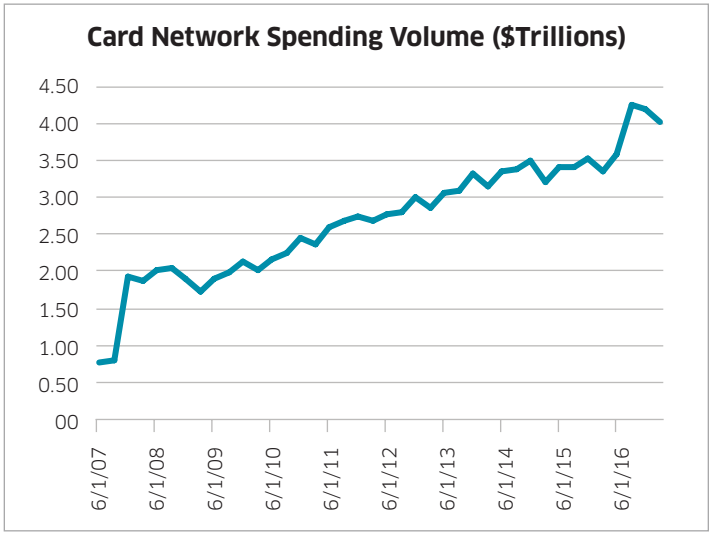
Mobile Payments

Industry Report & Investment Case

What are Mobile Payments?

In recent years, digital and mobile payments have risen tremendously, as more people continue to go "cashless" and adopt these modes of payments into their everyday transactions. While electronic payments have existed for decades, with an estimated of over 2 billion people using smartphones, however, mobile transactions have surged[1]. To give an idea of the importance of the mobile payments market, the chart below shows the massive increase in aggregate global value of debit, credit, and charge card transactions for Visa, MasterCard, American Express, Discover, and PayPal; from about $0.76 trillion in the second quarter of 2007 to $4.03 trillion in the first quarter of 2017. While during the same time frame that global payment volume has increased, global smartphone shipments have been growing as well. As more people have smartphones, then, the ability to pay for products and services has been progressively integrated into smartphones.



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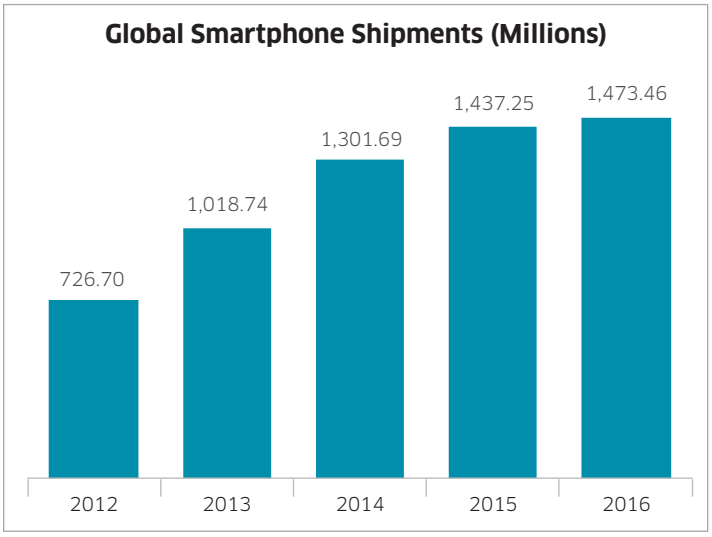

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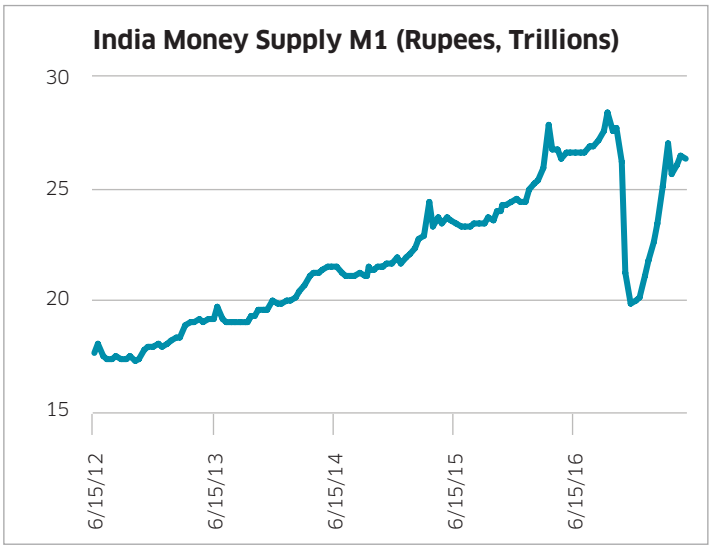
In general, there are four types of mobile transactions[2]:

1. Mobile Browser-Based Payments: This option allows people to make purchases without having to rely on physical credit cards (i.e. similar to desktop based e-commerce but on mobile devices).
2. In-App Mobile Payments: This option enables people to make payments within an enclosed ecosystem (e.g. on iTunes or Google Play). In other words, people register their card information once and then they can download any number of apps or make purchases within that ecosystem very easily. This type of technology helped make mobile payments mainstream, as users became more accustomed to relying on their smartphones to securely purchase products and services.

BY: GAURAV PENDSE, SENIOR PRODUCT DEVELOPMENT ANALYST, NASDAQ GLOBAL INFORMATION SERVICES

3. Mobile Credit Card Readers: Rather than relying on stationary credit card readers/terminals, retailers can now invest in hardware that fits into pre-existing headphone jacks. Then, with these mobile readers, merchants can swipe credit cards and accept payments on the spot. The biggest benefit is that retailers can process transactions virtually anywhere while a major drawback is that consumers still have to carry around their credit cards.
4. Contactless Mobile Payments: This option represents the next leap in mobile payment technology. Recent technologies have enabled people to make payments without having to swipe any card at all; instead people can wave their mobile devices across a contactless reader that wirelessly and securely captures the relevant payment information. The underlying technology for this is Near Field Communications (NFC), which is similar to Bluetooth technology but transfers data in closer proximity and with greater security.

A strong example of an application and benefit of mobile payments can be seen during the cash ban in India during November 2016. The prime minister of India had banned the two largest denominations in the country, both of which were very liquid prior to the ban. The effect of this ban can be seen in the chart on the right, as the M1 money supply (a good measure of liquidity and the amount of money that is in circulation in a country) in the Indian economy plummeted by about 29% from the peak of about 28 trillion Rupees to about 20 trillion Rupees after the ban was issued. As such, the ban created a massive cash clout, as consumers had little cash on hand to pay for products and services. This, then, led to the rise of mobile payments as merchants in India began to accept payments from mobile payment companies, such as MobiKwik which saw a 75x surge in transactions during the ban[3]. This enabled consumers to make payments with the use of their phones, eliminating the need for cash-based transactions. This example clearly highlights the importance and benefits of mobile payments and the demand for it in an increasingly digitized marketplace.



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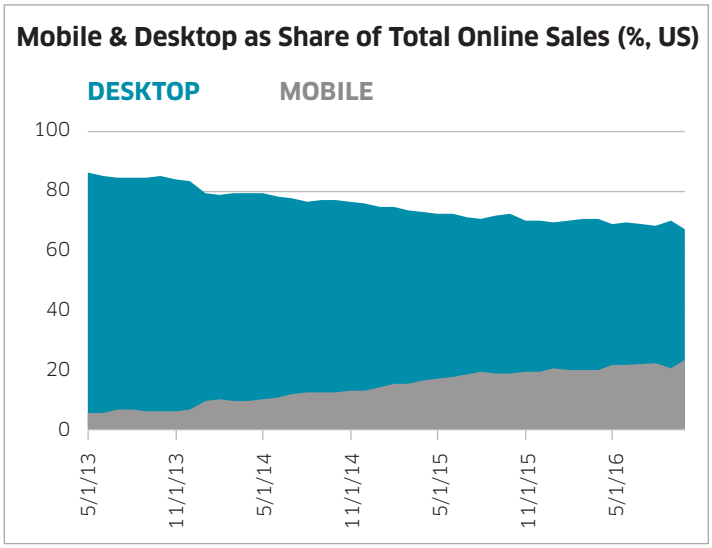
One way in which investors can get exposure to the mobile payments industry is through the PureFunds ISE Mobile Payments ETF (IPAY). The underlying index for this product is the ISE Mobile Payments Index (IPY). In order to adequately understand the reasons as to why mobile payments is important from an investment perspective, it is first vital to understand the growth drivers for mobile payments as well as the industry outlook. The following research will discuss the growth drivers and industry outlook for mobile payments and then show the ways in which the mobile payments index is poised to capture these positive trends in the mobile payments industry.

What is Driving the Growth Behind Mobile Payments?

In order to explain the growth drivers for mobile payments, it is vital to understand recent demographic trends, particularly in the Millennial and Generation Z group (age 13-32 and 12 and under, respectively). According to Payfirma, 87% of millennials use 2 or 3 technology devices at least once a day, 80% sleep with their cell phones next to their bed, and 82% check their mobile devices within an hour of waking up[4]. In addition, the average millennial with internet access spends 3.2 hours a day on their mobile devices[4]. As such, given the affinity that millennials have towards their mobile devices, they are more inclined and comfortable connecting their payment information to an app from a retailer or purchase products on their phones themselves. This can be seen in a study by JWT,

where 44% of millennials said that they would rather use their mobile phone than cash to pay for small items and 45% said they want to use mobile payments when splitting bills or expenses with friends[5]. This study confirms the trend that millennials and those younger are driving the usage of mobile payments.

This trend of increasingly using mobile devices to pay for products and services or peer-to-peer (P2P) transactions is evidenced in the chart below, as mobile devices have taken a larger share of online sales in the US[6]. This solidifies the fact that more people are comfortable with paying through their smartphones for everyday transactions.



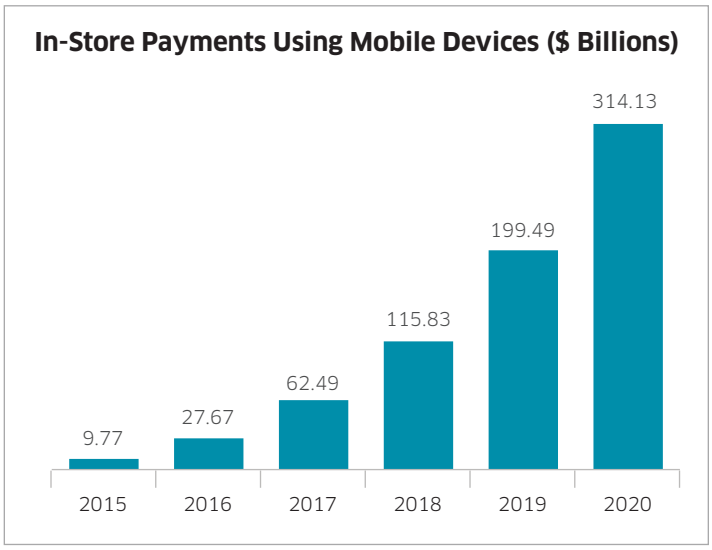
Bloomberg Intelligence, David Ritter, PayPal is Clear Leader in Mobile Payments as Rivals Jump In, March 2017

Another driver of mobile payments is the recent adoption of Near Field Communication (NFC) technology to the payments industry. While this technology has been around a long time, its application to the payments and smartphone industry has been fairly recent. NFC technology works by bringing together two electronic devices, in this case typically a mobile device such as a smartphone and a reader. Since merchants began adapting to the EMV security standard (chip-based cards), the card readers that they have been ordering have NFC technology built into them. These new card readers, then, will help to make NFC technology universal and will thus allow for increasing amounts of mobile payments[7].

This reveals that the increasing usage of smartphones by millennials and younger, their comfort with paying for products and services via their mobile devices, and the application of NFC technology to payments are some of the key growth drivers for the surge in mobile payments.

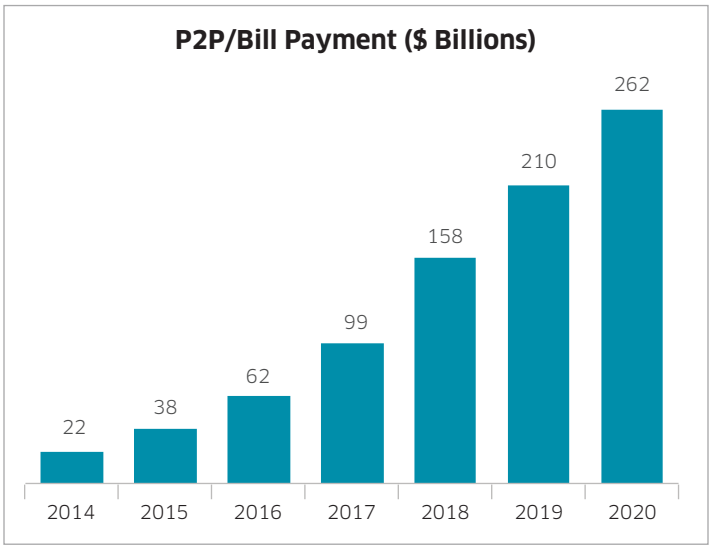
What is the Industry Outlook for Mobile Payments?

The aforementioned drivers to the growth of mobile payments will continue to bode well for the industry going forward. The chart below shows that payments made in-store using mobile devices have experienced significant growth and this growth is expected to continue[8]. This highlights the ease with which people can make purchases on mobile devices, and the easier that retailers make it for shoppers to go online and on mobile devices, the more that purchases on mobile devices will augment.



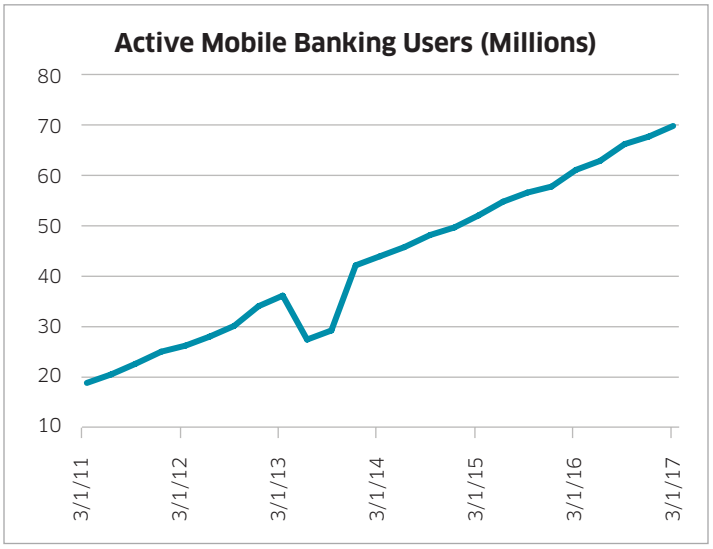
Bloomberg Intelligence, David Ritter, Card Networks Take Center Stage in Enabling Digital Payments, March 2017

In addition, the chart below shows that Peer-to-Peer (P2P) payments, where payers use their mobile devices to transfer funds to a different account, and mobile bill payments, which are fund transfers initiated through mobile devices, will continue to thrive going forward; they're projected to grow from $38 billion in 2015 to $262 billion in 2020[9]. Being able to efficiently and securely pay friends, family, or others is a key advantage of mobile payments, and the chart below shows that this industry is poised to take advantage of this.



Bloomberg Intelligence, David Ritter & Alison Williams, Apple May Tap Banks to Run Payments Service, Equalizing Fees, November 2015

Along with the increased expected spending for P2P and mobile bill payment, active mobile users for banking have been increasing as well. The chart below illustrates that the aggregated mobile banking users for JP Morgan, Bank of America, and Wells Fargo have been increasing for the last 6 years or so. This reveals that consumers have been increasingly relying more on their mobile devices for everyday banking services such as depositing checks, etc.



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The above has shown that the industry outlook for mobile payments is very positive as in-store payments using mobile devices, P2P and mobile bill payments, as well as mobile banking have all been increasing over time which is a positive sign for the mobile payments industry going forward.

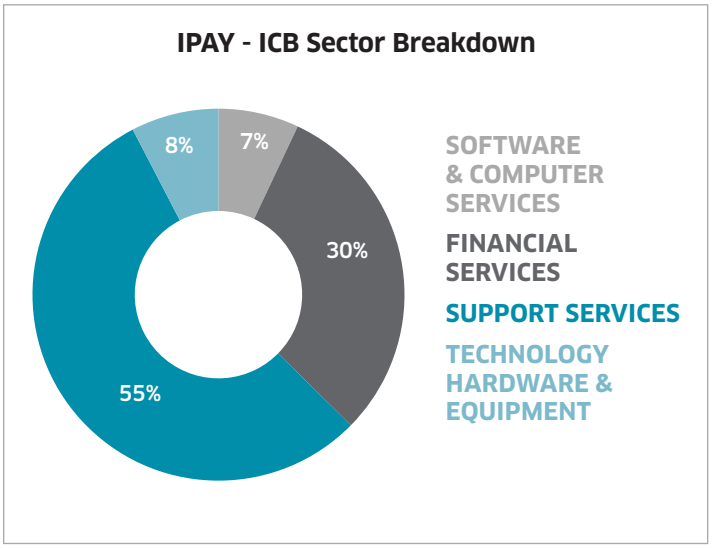
How can People Invest in Mobile Payments?

As mentioned above, one of the ways in which people can invest in the mobile payments industry is through the PureFunds ISE Mobile Payments ETF (IPAY) and the underlying index for this ETF is the ISE Mobile Payments Index (IPY). In order for a company to be included in IPY, the methodology states that it must[10]:

1. Provide services as a credit card network
2. Provide payment industry infrastructure and software services
3. Provide payment processing services, or
4. Be a payments solutions provider

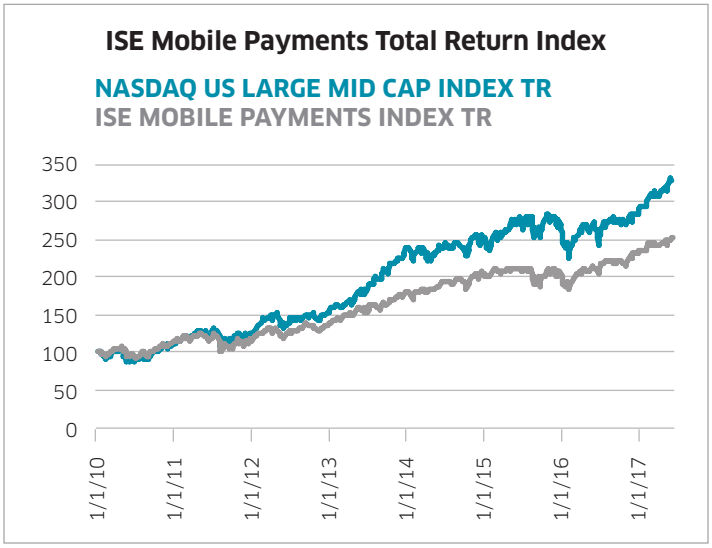
In addition, a security must have a minimum market capitalization of $100 million.

The chart below shows the ICB sector breakdown of the ISE Mobile Payments Index and it is clear that the index holds companies that are involved in all the different payments channels from companies that provide the underlying support and infrastructure, to payment processers, and to card networks, as the sectors below are the ones that are the most involved in the payments ecosystem. So, investors will get exposure to various channels in the mobile payments industry when they invest in the product tied to this index.



Components as of 6/15/2017

In addition, the performance of this index reveals the high growth that this industry has seen historically. In fact, the chart below shows the total return version of the ISE Mobile Payments Index versus the total return version of the Nasdaq US Large Mid Cap Index, and immediately the outperformance is evident. This shows that investing in mobile payments, a niche area in the market, would have yielded a significantly higher return over the benchmark.



As of 6/15/2017

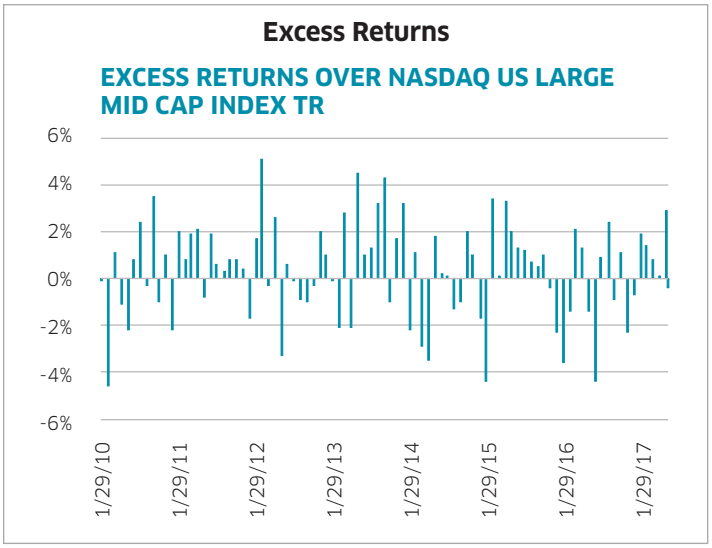
In the tables above, the outperformance is clearer as the sharpe ratio of the ISE Mobile Payments Index is almost 11% higher and the annualized return is almost four percentage points higher overall. Additionally, the chart below shows the excess returns that the ISE Mobile Payments Index has had over the Nasdaq US Large Mid Cap Index, and in most months, IPY had a positive return over the benchmark. In fact, IPY has outperformed the benchmark in approximately 60% of the months since January 2010.

Performance Statistics	ISE Mobile Payments Index TR	Nasdaq US Large Mid Cap Index TR
Return	229.30%	152.26%
Annualized Return	16.71%	12.74%
Average Daily Return	0.07%	0.05%
Volatility	17.80%	15.00%
Sharpe Ratio	0.939	0.849
Max Drawdown	-20.88%	-19.24%
Information Ratio	0.527	-
Alpha	3.52%	-
Up Capture Ratio	1.097	-
Down Capture Ratio	1.073	-

As of 6/15/2017 (Nasdaq US Large Mid Cap Total Return Index is the benchmark)

Annualized Returns	ISE Mobile Payments Index TR	Nasdaq US Large Mid Cap Index TR
1Y	25.47%	19.41%
3Y	10.68%	9.50%
5Y	18.43%	14.46%
Since Inception	16.71%	12.74%

As of 6/15/2017



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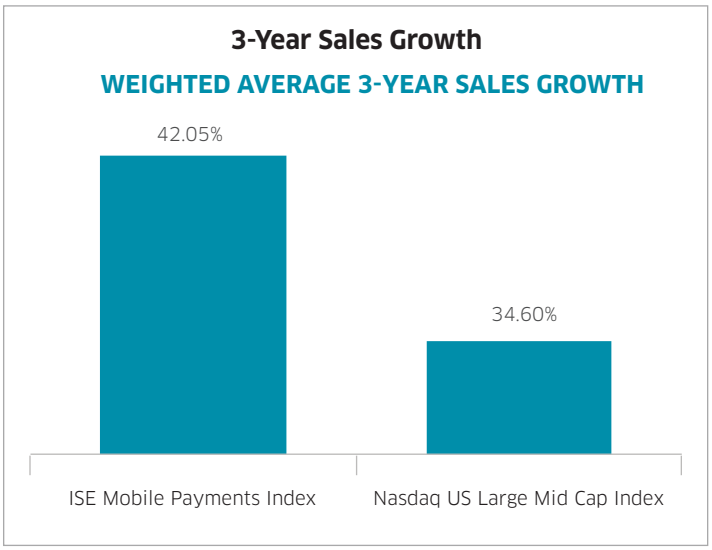
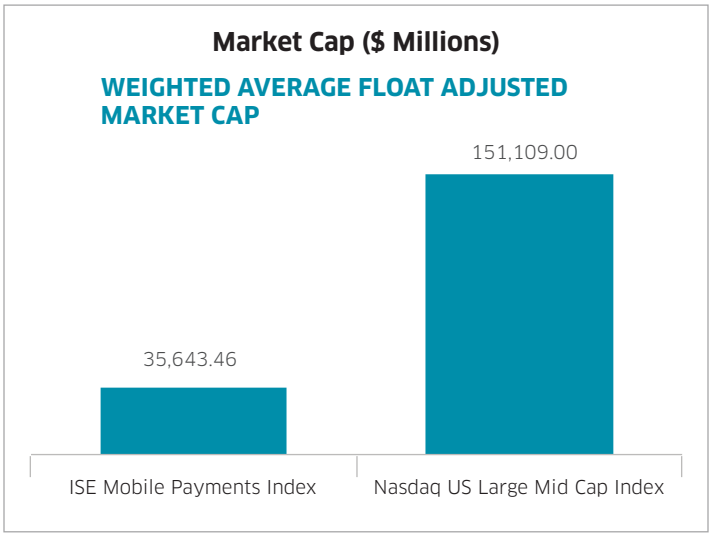


As of 6/15/2017

As the chart below shows, the companies in this index are much smaller than the companies in the Nasdaq US Large Mid Cap Index on a weighted average float-adjusted market cap basis. The companies in the ISE Mobile Payments Index, however, have experienced higher sales growth on average than those companies in the Nasdaq US Large Mid Cap Index. This shows that the companies in this index are relatively smaller than those in the benchmark while, at the same time, they've experienced higher revenue growth, highlighting the fact that these companies are poised to thrive in the small but continuously growing part of the market: mobile payments.

This clearly shows that IPY offers a unique exposure to the mobile payments industry when compared to the benchmark. Investors will get exposure to all the companies from sectors that are critical to the payments ecosystem. In addition to this, the outperformance of the index over the benchmark as well as the strong sales growth of the companies in this index is evidence that the components in IPY are well-positioned to capture the growth in the mobile payments industry.



As of 6/15/2017

Conclusion

In conclusion, the above explained that mobile payments is a crucial part to the economy, as the number of smartphones and payments volume as grown, so has the demand for making payments and transactions on those mobile devices. An example of the cash ban in India in November 2016 explicitly highlighted the key role that mobile payments play in digitizing economies at a mass scale. Further, there are significant growth drivers to this industry such as the increasing number of people in the Millennials and Generation Z age groups using smartphones for making payments as well as advancements in one of the key underlying technologies for mobile payments: Near Field Communication (NFC). This has led to increased expectations and projections for peer-to-peer payments and in-store payments using mobile devices, amongst other modes of mobile payments, which is a very positive sign for the overall industry. The analysis of the index shows that it has significantly outperformed the benchmark historically and the companies within the index have experienced higher sales growth than those in the benchmark while being smaller than those in the benchmark as well, showing that they are poised to thrive in an industry that is expected to grow tremendously over the next few years. Investors looking to invest in the product tied to IPY can invest in the PureFunds ISE Mobile Payments ETF (IPAY).

FOOTNOTES

1. https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/
2. http://blog.bluepay.com/different-types-of-mobile-payment-systems
3. https://www.bloomberg.com/news/articles/2016-11-23/cash-ban-the-best-thing-to-happen-to-indian-digital-payments
4. https://www.payfirma.com/payments-industry/mobile-era-part-1-millennials-mobile-dependency/
5. http://www.adweek.com/brand-marketing/why-mobile-payments-are-millennial-must-161163/
6. Bloomberg Intelligence, David Ritter, PayPal is Clear Leader in Mobile Payments as Rivals Jump In, March 2017
7. http://www.businessinsider.com/mobile-payment-technology-contactless-payments-explained-2016-11
8. Bloomberg Intelligence, David Ritter, Card Networks Take Center Stage in Enabling Digital Payments, March 2017
9. Bloomberg Intelligence, David Ritter & Alison Williams, Apple May Tap Banks to Run Payments Service, Equalizing Fees, November 2015
10. https://indexes.nasdaqomx.com/docs/Methodology_IPY.pdf
11. Data mentioned in the piece is from Nasdaq Index Research, Bloomberg, and/or Factset, unless otherwise stated

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