

CIB buys Square Inc (NYSE:SQ)

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Summary:

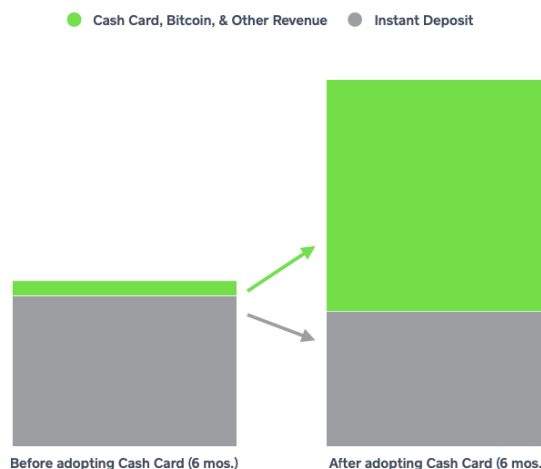
Square has the potential to create an entire banking network for businesses and their employees by linking their Cash App and Seller App. Square has also seen sustained growth in both its payment processing and cash app businesses. Both of these fields represent significant market opportunity within the United States, \$100B and \$ 60B respectively. With less than 3% of the market captured in each area, Square has the potential for significant growth making it an attractive investment opportunity.

Cash App Growth and Drivers:

1. Monetizing Customer Base

Square has increased Average Revenue per User (ARPU) over 100% since 2017. This is largely driven by their ability to graduate customers from one product to the next. Once customers begin to adopt Cash App's Direct Deposit feature, they are more likely to adopt the Cash Card, where the majority of Cash App's revenues come from. Customers that graduate from one product to the next are likely to spend 2x-3x more and Cash App users are transaction on average 15x a month, thus increasing revenues for the Cash App.

Cohort Revenue Mix Before and After Cash Card
January 2019 Cohort



2. Low Customer Acquisition Cost

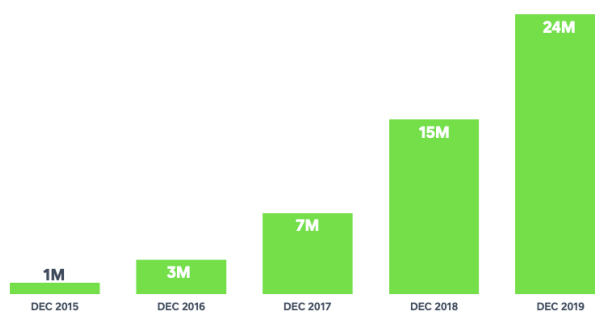
Square has the benefit of the Peer-to-Peer (P2P) to acquire customers at very low cost. Customers use the Cash App to send money to peers and to redeem their money, the recipients must create an account. Cash App uses their "graduation" strategy to move these new customers onto more monetizable products. In addition, Cash App has used celebrity giveaways and podcast sponsorships to target their customer base. This spend is paid off in less than 12 months through their customer graduation strategy and they experience 5x ROI after 2.5 years.



3. Growing User Base

There are currently 20M unbanked in the United States, and the cost of banking is very expensive between all the various fees associated with banking. The Cash App provides the opportunity for customers to have an account and routing number, deposit paychecks, transfer money, invest, and most recently, receive partial paychecks through the Cash App. The wide array of growing products for the Cash App has attracted customers to the app. Monthly transacting customers has increased 60% y/y and as of 2Q20, Cash App has 30M active customers. As Cash App taps into the unbanked consumer market and increases its array of products, their customer base will continue to grow.

Monthly Transacting Actives

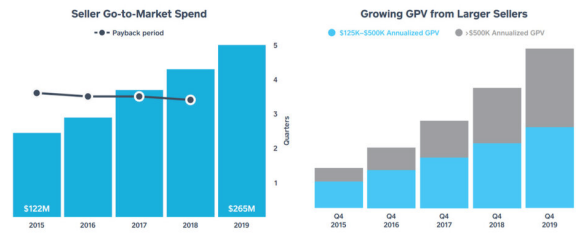


Square Seller Ecosystem Main Drivers of Growth

1. Consistent increases in size of cohorts

One great sign for Square was its ability to bring on a large new cohort in 2020 despite some of the challenges presented by Covid-19. Specifically, Q2 of 2020 brought in more new cohorts than Q2 of 2019. This is significant for Square since we can see that even during an economic downturn Square is able to continue to acquire customers. In addition, through each cohort, Square is acquiring a greater number of large sellers allowing the seller ecosystem to capture a larger portion of market share. We expect Square to continue this trend and drive growth of the Seller Ecosystem as a whole. (Image at bottom showing growth in cohorts and gross profit per seller)

Maintained payback period even as we have grown larger sellers

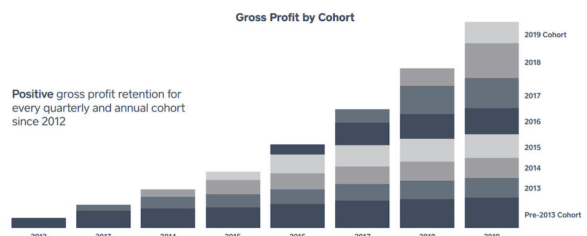


2. Low Cost for Customer Acquisition

Square has been able to acquire customers at a low enough cost that it has been able to break-even from its customer acquisition expenses within 1 year. This has allowed Square to generate an ROI of 3x on average in 3 years for each customer it acquires. This low cost of customer acquisition will enable Square to continue acquiring customers at a fast rate as they seem to be able to keep customer acquisition costs low even with larger cohorts and larger sellers.

3. Customer and Gross Profit retention

Coupled with the point above, a low cost for customer acquisition along with strong customer loyalty makes Square a company poised for rapid growth. Square has seen growth from each of its yearly cohorts in gross profit since 2013. This allows Square with its low customer acquisition cost to be aggressive in acquiring new customers which they can retain and continue to grow. Along with clear increases in total number of sellers and revenue per seller (Figure below), Square is poised to continue growth through acquisition and retention.



Size of Peer to Peer Platform

Square's Peer to Peer (P2P) platform, Cash App, has a total addressable market of \$4 Trillion, representing a \$20B revenue opportunity for the Cash App. The growth of their platform is largely determined by Cash App's ability to acquire and retain customers. For comparison, in China Alipay and WeChat Pay control about 95% of the third-party mobile payments market, according to ARK Research. From 2014-2019, China's mobile payment market has increased nearly 30-fold, valued from approximately \$1T to now \$34T, nearly 3x China's entire GDP. While the mobile payments market in the United State is not at this size, Cash App has the positioning and size to have a large share of a market prime for growth.

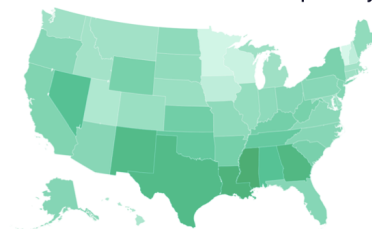
Sources: *Ark Research, Investor Presentation*

Customer Segmentation

While Square does not report their customer segmentation, using Google Search Trends, we can see that Cash App's customers are largely concentrated in the South. Cash App's Google Trends also aligns very closely with the unbanked population in the US. From early adoption, Square targeted the unbanked, emphasizing that banks were expensive and charged consumers a variety of unnecessary fees, and that the Cash App was a cheaper way to send and receive money. Cash App's low customer acquisition costs, as a result of the stickiness P2P transactions, allowed Square to keep fees low and appeal to the unbanked and underbanked community. Cash App has begun to transition their marketing campaign to acquire a younger demographic by sponsoring popular podcasts like The Joe Rogan Experience and Pardon My Take (and podcast studios). In addition, they have used Twitter to reach this audience. For example, Cash App teamed with Burger King to give away money to college students with student loans (that had a Cashtag)

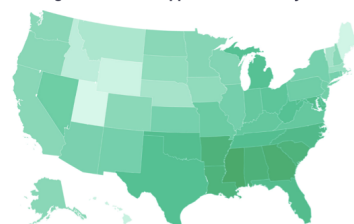
Sources: *Ark Research, Company Filings*

Figure 11: FDIC: Rate of Unbanked or Underbanked Population by State (2017)



Source: ARK Investment Management LLC, Google Trends, FDIC (2017)

Figure 10: Google Trends: Cash App Search Interest by State (August 2019)



Source: ARK Investment Management LLC, Google Trends, FDIC (2017)

TAM

Square's seller ecosystem (including Square terminal) has a **total addressable market of \$85B** presenting significant opportunity for Square if they are able to capture 10% of the TAM. We calculate the TAM based on the fact that we have 20M businesses in the US, with over \$6T in gross receipts. With those two numbers, we can calculate Square's TAM to be a sum of Transaction Revenue + Square Capital Revenue + Financial Services Revenue + Software Revenue. We calculate transaction revenue by multiplying "Gross Receipts" opportunity by The Nilson Report's estimate of card payments at 65% of 2018 U.S. consumer payment volume (as of December 2019), and multiplying by Square's average transaction margin as a percentage of GPV of approximately 1% and get a value of \$39B. For software revenue, we calculate by multiplying select employer and non-employer firms producing less than \$100 million in annual gross receipts in select relevant industry verticals based on 2012 U.S. Census data by Square's annualized software revenue per existing seller by product based on three months ending January 2020 giving us a value of \$30B. For Square Capital revenue, we calculate by multiplying the sum of FDIC's \$232B of U.S. small business loans under \$250,000 outstanding as of December 31, 2019 by the average of Goldman Sachs' estimated revenue rate on small business loans of 4% to 6% as of 2015 giving us a value of \$12B. For Financial Services Revenue, we calculate by adding instant transfer and Square card opportunities for this we get a value of \$5B. This TAM is calculated without including possibilities of an international expansion and without including possibilities of revenue from new products which could cause this number to grow much more. Overall Square is in a space with huge prospects of growth due to its large TAM.

Sources: *Investor Presentation, Company Filings*

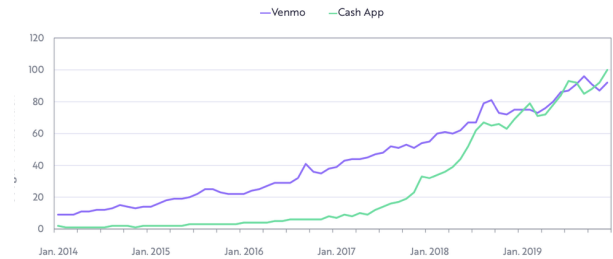
Competitors

Cash App vs Venmo

Cash App's main competition comes from PayPal's Venmo, an almost identical peer to peer payment system. While Cash App has less monthly active users than Venmo, as of 2Q20, Cash App's 60% MAU growth is outpacing Venmo's 50% MAU growth. This growth is due to two main reasons; Cash App's diverse variety of products offered and Cash App's marketing strategy described above. Cash App has introduced a wide variety of products since 2017 when they introduced the Cash Card, a debit card linked to your Cash App balance. From there, the Cash App has incentivized the use of the Cash Card, by adding direct deposits to a user's Cash Balance; Boosts, which give Cash Card users instant discounts at coffee shops and convenience stores; and most recently US Equity and Bitcoin investing. As described previously, Cash App's main user demographic is lower income and un[der]banked, but through various marketing campaigns, the Cash App has been targeting a younger demographic. These marketing campaigns and product additions have paid off as seen in the chart to the right.

This is a competitive advantage over Venmo because Venmo has been late to adopt these products. Square has the advantage of a start-up work environment, and therefore can recruit talent better than PayPal. This allows Square to innovate and create new products to acquire, retain, and monetize consumers at a faster, more efficient rate than Venmo.

Figure 12: Cash App vs. Venmo Google Trends (1/1/14 - 12/31/19)

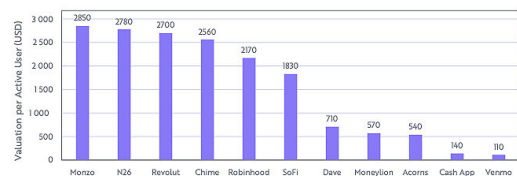


Cash App vs Challenger Banks

A rising concern regarding competition for Square's Cash App is the entrance of challenger banks. Challenger banks, like Monzo, Chime, N26 already have millions of consumers with bank accounts and any peer to peer platform they introduce may take share from Cash App. The graph below shows that for an average bank, the customer acquisition cost for each product is significantly higher than it is for Square to acquire customers.

As for Challenger banks, they are grossly overvalued in our opinion with their value/MAU is much higher than both CashApp

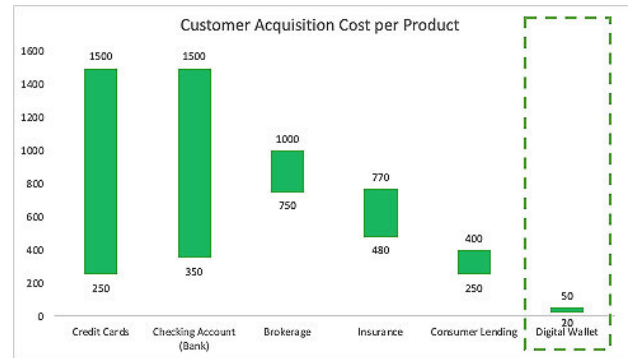
Figure 17: Private Fintech Startups and Digital Wallets: Valuation per Active User (USD)



and Venmo. We do not think they provide much more value that would allow them to be valued much higher.

Cash App can afford their user demographic to consist of lower income, un[der]banked consumers that spend less because their customer acquisition cost is so low. For a bank like JPM, the cost of acquiring an underbanked, low revenue customer through a peer to peer platform is too high and not worth their time. Therefore, in targeting the underbanked community, Cash App has ensured that its user base will stick around.

Sources: Ark Research (1, 2), Company Filings



Square Terminal vs JPM & Other Banks

JPM recently introduced their own payment processing service to compete with Square and PayPal in this space. JPM priced their card reader competitively and are selling at a cost of \$49.95. In addition JPM is offering free instant transfers in their account. So how does Square stack up? While on first glance it looks as though the pricing for the hardware is competitive, JPM also charges a monthly maintenance fee of \$15 for each card reader. These costs can add up for a small business looking to make a switch. It will also be some time before JPM can gain traction and eat into Square's market share simply since Square has been extremely reliable for vendors. JPM's QuickAccept feature of no cost instant transfer is only available to businesses with existing Chase accounts, and come with some restrictions (minimum of \$2k in account, etc). Chase currently has around 3 million small business customers, and if they are unable to convert most of these clients into users of Chase's new card reader, Square still has plenty of market opportunity left to capture and will be able to continue their growth. With the increase in costs compared to Square, along with the uncertainty of switching into a new product, Square will be able to maintain - and grow - its market share

Sources: Company Filings, AP news

Square's Competitive Advantages

Stickiness of the Square Terminal

In terms of being able to retain revenue from the new cohorts that Square acquires every year, they have been very successful. Square has been able to maintain positive earnings retention for every quarterly and annual cohort since 2012. In addition they have maintained a payback period of 3 Quarters and 3x ROI on their customer acquisition cost in 3 years. Square has also demonstrated greater than 5x ROI on a period after 5 years. All of these statistics show the stickiness of the seller ecosystem's products, as they have been able to maintain the positive earnings, and also shown that they have loyal customers who have been with them since 2012.

Source: Investor Presentation

Pricing

The biggest competitive advantage that Square has is the competitive pricing that they offer. Square's competitive pricing model of 2.5% for swiped credit transactions is lower than its current competitors in the market space such as PayPal(2.6%) and Fiserv(2.7%) (JPM will be talked about separately). In addition, the Square card reader is also cheaper than the Paypal reader by a significant margin(\$49.99 to \$59.99). Square also accepts international cards without an added fee however Paypal charges a fee of 1.5% per transaction. Square also doesn't have a fee for merchant refunds, however Paypal charges the original transaction fee for every refund which could get expensive quickly for small businesses. Also a smaller note but Square does not charge fees to merchants for chargebacks while Paypal actually charges a flat fee of \$20 for each chargeback item.

Better add-ons and features on their app

Square has many features on its POS service that PayPal and its other competitors do not include. Square is more feature rich and more reliable than Paypal. Square allows merchants unlimited amount of keyed in transactions(though it costs the merchants more) while Square only allows merchants to have \$500 worth of keyed in transactions per week.

Reliability

The Square terminal has been proven to be more reliable than Paypal's or other competitors competing services. Square's reliability is an invaluable advantage for small businesses looking to maximize revenue and avoid bugs in their payment processing system.

Sources: Company Websites, Mobiletransactions.org

Square Capital

Square Capital's ability to provide loans have been on full display during the coronavirus pandemic. They facilitated over \$820 million in PPP loans to over 76,000 small businesses in their ecosystem. These loans are extremely low risk because they have access to the revenue streams of customers, and have an understanding of the cost structures and business models of these customers. These PPP loans are only a fraction of the loans that Square Capital has made. These loans allow Square Capital to consistently generate revenue (\$2.3B in loans in 2019) with low risk of propensity pay. They have grown loaned capital volume each year while maintaining loan loss rate of below 4%. This coronavirus pandemic actually aided in the growth of Square Capital as out of their 140,000 applications for PPP loans, over 60% of the businesses had never taken a loan from them before. This allows Square to continue growing their seller network by providing loans to many small businesses in order to compete with banks such as JPM

Source: Company Filings, Company Website

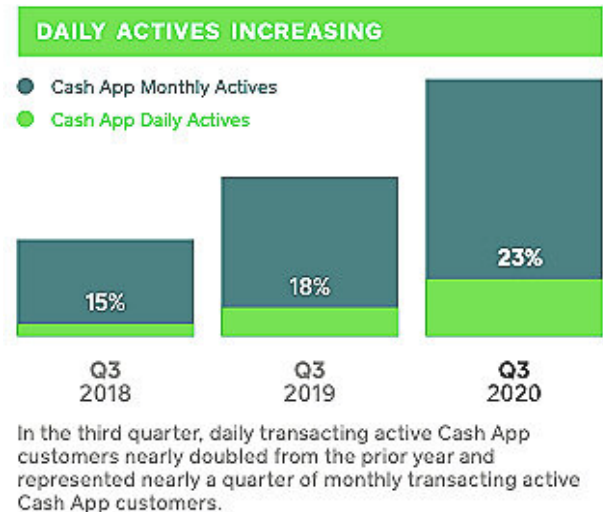
Q3 Earnings Reaction

Cash App

Overall, Cash App reported very strong earnings in line with and therefore upholding our investment thesis. Cash App's revenue ex bitcoin increased 174% to \$435M y/y. Gross profit for the Cash App was \$385M, including \$32M from its bitcoin product line, increases of 212% and 1500% y/y, respectively. This strong growth from the Cash App stemmed from reported success in graduating customers to more monetizable products and an increase in Cash for Business transactions.

Graduation Strategy Success

Cash App reported success in both graduating its user base to more monetizable products, as well as higher user engagement. Cash App's number of daily active users nearly doubled in count and now represent 23% of monthly active users, an increase of 5% y/y. While specific numbers are unreported, we believe that this is a result of both a growing user base and the ability to engage customers with more monetizable products. Customers who used multiple products, like the Cash Card, direct deposit, bitcoin or stock investing, on average transaction 3-4x more than consumers that only use the P2P platform. This set of consumers also generated 3-4x more gross profit in Q3. To take a more granular look, customers that used bitcoin or stock investing generated 28% more transactions and 15% more gross profit than before their first investment. Therefore, the monetizable products that Square is graduating its customer base to, is sticky, drives engagement, and increases revenues for the Cash App. Thus, our investment



Seller Ecosystem

Adoption of the Square card (Business Debit card) has increased every quarter since its launch, continuing that trend in Q3 of 2020. Sellers spent over \$250 million on their cards which is the highest amount per quarter showing no signs of slowing down bodes well for Square and the ecosystem in the future. In addition, 50% of the transactions are within the first month of onboarding which allows Square an incredible opportunity to tap into if they are able to keep up their high rate of customer acquisition. Overall, gross profit was \$409 million, up 12% year-over-year. Excluding 4th of July and Labor Day, Seller GPV growth was relatively consistent on a year-over-year basis from July to August, followed by a modest improvement in September. This is significant since when comparing year-over-year numbers, we have to understand that the seller ecosystem's main driver over revenue - transaction fees - was expected to take a big hit due to the coronavirus pandemic which hit small businesses the hardest. Therefore being able to show a 12% growth in gross profit year-over-year with these conditions means that we can expect the seller ecosystem to grow even more rapidly in a future without the pandemic.

Diving a bit deeper into the GPV numbers in the ecosystem, we see seller GPV in markets outside the US grew 46% year-over-year in the third quarter and represented 11% of total Seller GPV, up from 6% two years ago. Growth in the quarter was primarily driven by easing of restrictions in various regions as well as strong acquisition of new sellers. If Square is able to maintain positive gross profits for their quarterly cohorts moving forward as they have done since 2012, this could potentially increase the upside with a larger TAM due to increased opportunities internationally. One worry that could affect numbers in the near future is potentially a second wave of coronavirus increasing shutdowns for a bit longer particularly in their international markets in Canada and UK. An interesting point to note is that Seller gross profit has grown faster than GPV this year, in part due to higher transaction margins, which benefited from a greater mix of debit, card-not-present transactions and higher average transaction sizes. However, we could expect this to normalize due to the stable usage rate of card not present transactions in the future.