Latam Payments Deep Dive



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Topics Covered: Instant Payments, Digital Payments, Payment Rails, Payment Processing, Central Bank Digital Currency, Banking as a Service, Cryptocurrency, Digital Wallets, Latin American Payment Offerings, Latin American Real Time Payments

Relevant Companies: Mercado Libre (MELI), dLocal (DLO), Pageseguro (PAGS), StoneCo (STNE), Evertec (EVTC), Cielo (CIOXY), Visa (V), Mastercard (MA), Paypal (PYPL), Square (SQ), Adyen (ADYEY), Stripe (Private), Global Payments (GPN), Fidelity National Information Services (FIS), Fiserv (FISV), Amazon (AMZN), Google (GOOG), Apple (AAPL), Lightspeed POS (LSPD), Affirm (AFRM)

Nuggets

"The hardest thing to do in payments is getting local connections and merchants to sign up for your payments system, it's a key barrier to entry for global payments"

"Outside of Cryptocurrency there are limited ways around the credit card networks, but some new offerings like Buy Now Pay Later [BPNL], digital wallets, or national direct bank to bank transfers get around the card networks"

"Currently about 70% of consumers in Latin America shop online. The adoption of online banking and card payments are fuelling this ecommerce growth. Neobanks and traditional banks are now offering services to many who were previously excluded from the financial system"

"When you are talking Latam payments you are really talking Brazil and Mexico, as combined the countries have 71% of the GDP of Latam and 68% of the Ecommerce market of Latam"

Levelsetting

Point of Sale System: A physical software or a terminal where a customer executes the payment for goods or services and where sales taxes may become payable (Example: Mercado Pago POS).

Acquiring Bank (or Merchant Acquirer): Bank that manages merchant accounts and issues EDC (Example: Banco Santander Brasil).

Issuing Bank: Bank that issues credit or debit card (Example: Bradesco - Consumer)

Payment Gateway: Technology that captures and transfers payment data from the customer to the acquirer and then transfers the payment acceptance or decline back to the customer (Example: Paypal's Payflow / Mercado Pago Gateway).

Payment Processor/3rd Party Processor: Organization that manages the credit card transaction process by acting as the mediator between the merchant and the financial institutions involved (Traditional Example: Fisery, Fintech Example: Adyen).

Real Time Payments: An instant payments system that is available 24/7/365 and includes instant settlement of any financial institution's account. There are government run RTPs or instant payment networks in Brazil, Mexico, Argentina, and Chile.

FedNow: The real time payments network was launched in the US on July 20, 2023 by the US Federal Reserve. Adoption is currently low, as the cost is viewed as prohibitively high.

Central Bank Digital Currency (CBDC): A digital form of fiat money (a currency established as money by government regulation, monetary authority or law). Currently being conceptualized and developed globally by Central Banks.

Banking as a Service (BaaS): Banking-as-a-service (BaaS) is an end-to-end process where third parties – FinTech, non-FinTech, developers, etc. – can access and execute financial services capabilities without having to develop them organically or obtain a bank license. This usually streamlines the process for those trying to enter banking.

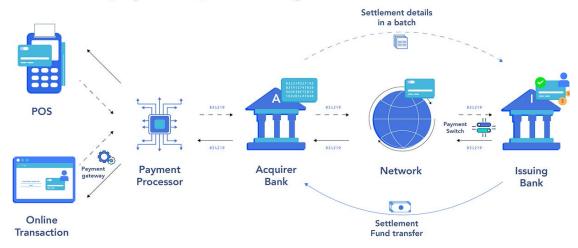
Account to Account Bank Transfers: Payment systems that transfer directly from a bank account to another merchant/personal bank account. These are very common in specific countries in Europe. (Example: Giropay in Germany)

Buy Now Pay Later (BNPL): Allows you to make purchases online and pay them off over time in weekly, bi-weekly, or monthly installments usually via linking your bank account or credit card for automatic withdrawals.

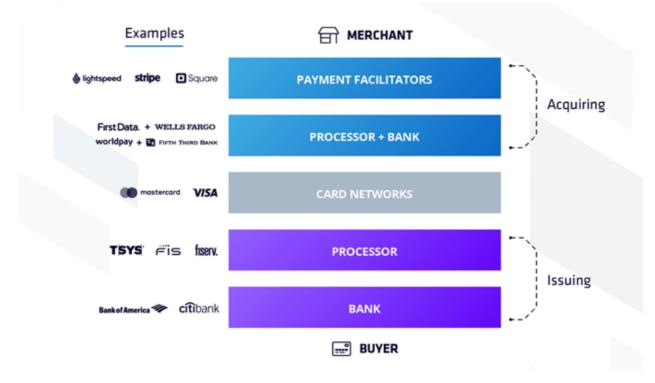
PIX: Banco Central do Brasil (BCB) created Pix, the Brazilian IP scheme that enables its users to send or receive payment transfers in a few seconds at any time, including non-business days. The system is low cost, fast, and uses instant remittance.

Credit Card Payments Process: Card Card payments is a multi step process that first gets authorization for a payment and then later settlement for that payment.

Credit card payment processing flow

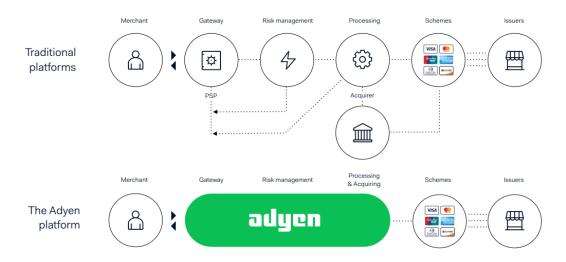


Payment Landscape: The major players in each part of the value chain of payments all bow to the duopoly that Visa and Mastercard control, the card networks.



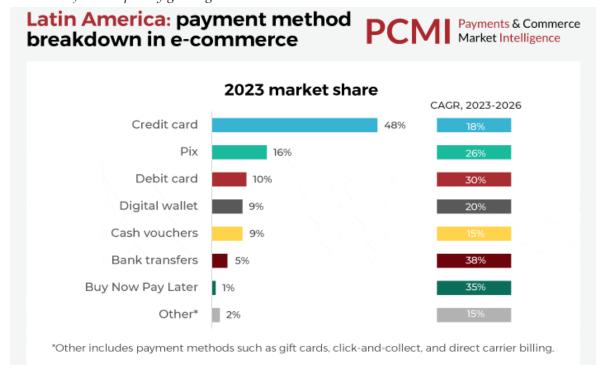
Fintech Payment Process (Adyen Example): Fintech is attempting to streamline the payments process by offering an end to end global solution for merchants, but getting around card networks is very difficult but becoming easier with new digital and instant payment schemes.

The power of one platform



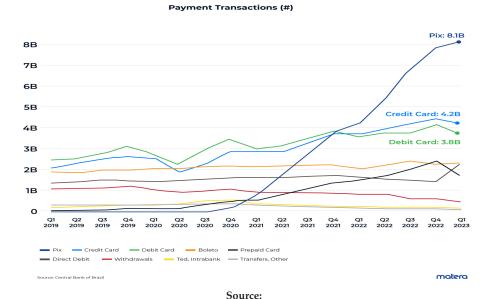
Source: Adyen Sept 2020 Capital Markets Day

Current Latam Payments Landscape: Credit cards still dominate the payment sources, but Pix and Bank Transfers are quickly gaining market share.



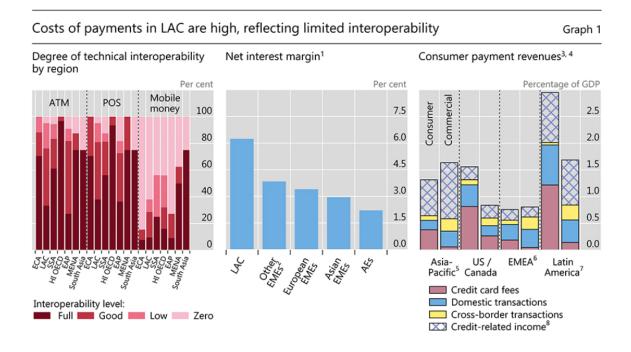
Source: https://americasmi.com/insights/digital-payments-and-e-commerce-in-latin-america-data-projections/

The rise of PIX in Brazil: Pix has quickly risen to become the most used payment method in Brazil. Pix has begun to cause declines in credit and debit card transactions in Brazil.



https://www.businesswire.com/news/home/20230725094936/en/Credit-Card-Transactions-in-Brazil-May-Have-Peaked-as-Pix-Continues-to-Surge

Payment Costs in Latam have traditionally been high: *Due to bad internet interoperability, local interest rates, and limited digital options, historically Latam payments costs have been high. This is changed with the introduction of Pix in Brazil, SPEI in Mexico, and Transfers 3.0 in Argentina.*



Real Time Payments: Latam has been quick to adopt RTP systems, and even more pressure has been put on Central Banks to launch RTP systems in Latam since the quick success of PIX.



Source: https://www.aciworldwide.com/insights/expert-view/2017/december/faster-payments-coming-to-us-are-you-ready

Questions & Answers

Q: How has the launch of PIX real time payments in Brazil affected the broader payment landscape?

PIX adoption in Brazil has been a surprise to many payment watchers. RTP, or instant account-to-account payment systems, have been launched elsewhere in the world but have not seen similar rates of adoption. A few key dynamics contributed to PIX success, including the costly and limited payment infrastructure in traditional banking in Brazil, the wide adoption of digital wallets, and the high penetration of the MercadoPago digital payment offering (\$MELI).

The use of credit card networks has begun to see negative impacts from the adoption of PIX in Brazil. This should be a scary proposition for the credit card payment networks (MasterCard, Visa, and American Express). The networks have had a locked-in monopoly on electronic payment options outside of cash for the last 30 years, but that seems to be changing. At a certain point, I expect to see a leveling off of the growth of PIX. In general, the assumption that as cash moves to digital payments, it will universally benefit credit card networks has been dealt its first major blow. The future will be more cost- and functionally focused on Latam payments.

Q: How does Mercado Pago compare to peers like Stone, PagSeguro, DLocal, and Cielo?

People often get confused between Mercado Pago, StoneCo, PagSeguro, and Cielo. Here is a quick breakdown:

Mercado Pago is a digital wallet, a payment network, a payment processor, a POS operator (merchant acquirer), merchant banker, a p2p payment system (like Venmo) and a consumer card issuer in all Latin American Countries.

StoneCo is a POS operator (merchant acquirer) and merchant banker in Brazil.

PasSeguro is a POS operator (merchant acquirer) and merchant banker, expanding into consumer centric products like card issuing and has a Neobank PagBank.

DLocal is a POS operator (merchant acquirer) for emerging markets including Mexico, Brazil, Argentina, and Chile.

Evertec is a POS operator (merchant acquirer), payment processor, and runs an ATH network in Puerto Rico, and several smaller Latin America countries.

Cielo is a legacy merchant acquirer and merchant banker.

Mercado Pago is the only true payment solution in Brazil that is not just a merchant acquirer. It was modeled after Alipay in China and effectively has had similar success in Brazil.

Q: How do the credit card networks (MasterCard/Visa/American Express) fair in Latam?

Visa and Mastercard have built the most durable and cheap network in the history of mankind. The cost structure of the payment networks is incredibly cheap from an operations standpoint, with upwards of 99.5% margins (net margins: network and processing costs for Visa from Q4 2022 earnings). But to be fair, to actually successfully run the network, you need to account for more than just the network and processing costs; you also need to include some of the personal costs and depreciation. Even in the worst case, the cost of running the network is likely extremely cheap and yields about 95% margins. On a per-transaction basis, you can calculate that each transaction costs Visa or MasterCard about \$0.001–\$0.005.

Over time, as Visa and MasterCard move more into the digital payments space and get pressure from other payment gateways or networks, the cost per transaction will rise, and margins might degrade as they compete in new verticals with different cost structures. Visa and MasterCard have so much margin to work with that it won't matter much to the bottom line. To counter that cost pressure, as the world continues to move away from cash to cards to digital payments, volumes should continue to increase, while network costs are relatively fixed for traditional card transactions. It's not clear to me which effect will impact Visa and MasterCard's costs and margins more, but those seem to be the two levers to watch out for.

Q: Why have Neobanks like Nubank and Neon had so much success in Latin America?

Latin America has historically had a more costly payment and banking landscape. This is in part due to the mixed economic realities of the countries in the region. Hyperinflation, political unrest, nationalistic financial regulations, and large portions of the population that are

underbanked have been the norm across the region for the last 40 years. This reality has meant a costly financial system extracting high fees from the citizens of Latam. These issues, as well as complex regulations, have left Latam with a large portion of the population underbanked. This higher payment cost, high barrier to entry into the banking system, and large underbanked population have opened up a huge opportunity for NeoBanks (banks that offer lower-cost and often completely online services) to succeed. Nubank, Neon, and Mercado Libres Neobank "Mercado Pago" have had a historical rise due to this huge opportunity to service a broader population at a much cheaper cost than traditional banking.

Q: What are the major trends in Payment Networks in Latam for the next few years?

The biggest trend in payments is the shift from cash to credit to digital payments which has been the tailwind driving the industry since the 1980s. That trend is set to continue for many more years. Several other large trends are on the horizon for payments which you can sum up with the word "digital". These trends include digital wallets, app based payments, touchless payments, and BNPL/microloans. Ironically, a lot of the trends in payments are playing out in Latin America quickly, specifically RTPs.

Digital use cases are all somewhat linked to each other in terms of adoption and value to the consumer. The more people use touchless payments the more they will want to use their digital wallets. The more people use Mercado Pago to pay friends, the more they want to use it to pay merchants. There is a certain cascading effect on digital payments technology in which as one becomes more comfortable with one aspect of it, they are more likely to use another digital payment service.

Digital Wallets and Neobanks are much more widely accepted in Latin America than the US or Europe. Neobanks like NuBank and Mercado Pago fintech offering in Brazil have risen to compete with the traditional Brazil consumer banks for savings, checking, and investment accounts as they have become the main payment method in the country.

Digital payment adoption leds to digital banking, digital investing, and digital insurance. Its all a cascading trend. Latam is still relatively early on the adoption curve on digital banking, but have moved faster than the US and Europe.

Q: Why was PiX so successful as compared to what seems like a lukewarm launch of FedNow?

PIX is mandated by the Brazilian Central Bank for all financial institutions, whereas the new FedNow service in the US is not mandatory. Brazil has a much less developed financial banking system than the US or other OECD countries. Pix is a much more flexible instant payment system than FedNow, allowing individuals to send payments to one another, not just banks like FedNow. These major differences will mean that FedNow will not see similar adoption in the US as PIX has seen in Brazil.

Q: What are the long tail effects of RTPs and CBDCs?

Real-time payments (RTP) networks are an eventuality globally, but how they impact the rest of the payments landscape is still up in the air.

The real threat to credit card networks is the combination of both a central bank-run RTP system and a central bank-run digital currency. In this scenario, a central bank would offer a clear alternative to credit card networks (and even banks for deposits) by allowing citizens to have accounts with the central bank and the ability to make direct payments from those accounts for goods and services. If that scenario plays out, there will still be material forces keeping people using credit cards, including convenience, privacy, credit, and rewards, but cost, ease, and functionality advantages will be materially impacted.

Conclusions

- 1. The launch of PIX in Brazil and its quick adoption was a large surprise and proved that central banks can actually make an impact on payments. This outcome should be a concern for anyone who is an investor in credit card networks (\$MA, \$V, and \$AXP). PIX was so successful in Brazil for two reasons. First, the environment in Brazil was ripe for a low-cost payment system, and Pix offered individuals an easy way to make payments both online and offline, something that the FedNow system does not offer.
- 2. Fintech companies are becoming more dominant in payments across the globe, as eCommerce and global commerce have created a need for a simplified and uniform global payment infrastructure. Global brands looking to sell into all markets want payment support globally. Adyen, Stripe, and Paypal are leading the way on the digital payments processing side, while Paypal, Square, Alipay, WeChat, Stone, Lightspeed, and MercadoLibre are leading the way on the merchant and payment gateway sides. Expect this trend to continue, eventually pushing on the credit card networks to adopt more diverse payment options and change their rails to help service more digital needs. This shift may put pressure on Mastercard and Visa in the year to come from a margin standpoint, but the established duopoly still has significant leverage to fend off new Fintech companies or the capital to buy them.
- 3. Payments is a big enough industry with complex needs, requirements, and international standards that not one company can dominate the entire space. I don't expect one payment system to "win" a lion's share of the payment volumes. There will be many winners in global payments for many years, especially with the huge tailwind of cash to credit to digital pushing the industry higher. The hardest thing to accomplish in payments is establishing and maintaining the merchant relationship, which is still a localized effort. This localized presence prevents many payment businesses from easily expanding into new markets, which can create a barrier of entry for payment companies that already dominate those markets.

- 4. FedNow is essentially a last-ditch effort by the Federal Reserve to create a fee structure for themselves that makes them relevant in payments. The development of FedNow completely conflicts with the Fed's stated mission to provide services only when the private market is not able or willing. I believe FedNow will not be as successful as Pix for one key reason:
 Pix is solving a problem for individuals in Brazil, whereas FedNow is not consumer-facing but rather bank-facing. Banks have little incentive to help make FedNow successful, whereas Pix is mandated by the Brazilian Central Bank for all banks and fintech companies. US individuals have no direct access to set up accounts within FedNow or use the FedNow payment system.
- 5. Fintech payments companies will use their platforms to offer more value added services that banks usually provide like savings, checking, investment, insurance, and loans. Banking as a Service (BaaS) is a big trend in which banks will offer services through third parties, mostly fintech companies that will receive a fee based compensation. BaaS is primarily for fintech firms that want to offer banking services but don't want to take on the regulatory burden or balance sheet risk that banks have. This trend has accelerated with the recent introduction of Stripes BaaS functionality which makes adding Banking Services to any application or website much easier.

Investment Takeaways

- Digital Fintech companies still have huge runways with big tailwinds. The transition from cash to cards to digital is still very early, with many years of runway left to propel the global payments volumes much higher. Focus your investment on the unique areas of digital payments, which have the least competition and best chance to gain a large market share. Adyen, Stripe, and Paypal I consider the top names in digital payments due to their positioning as both a Payment Processor and Payment Gateway in one integrated digital platform which has major synergies and can allow them to be cheaper than other payment gateways. Long Ideas: Adyen
- Legacy payment processors are under siege by Adyen, Paypal, and Stripe. It is not clear yet how legacy payment processors can compete effectively versus these digital payment innovators. As Payment Processing and Payment Gateways get merged into one in a digital landscape, the need for traditional stand alone payment processors will dwindle. Most of these large legacy payment processors do more than just Payment Processing which will buffer their declining processing business, but the payments processing part of the businesses will definitely struggle in the years to come. Avoid/Sell: Fiserv, FIS, Global Payments

- Visa and Mastercard are still both juggernauts with a spectacular duopoly in their credit card rails networks that are extremely hard to replace or substitute. With the confusing real time payments situation in the US with RTP and FedNow competing, as well as the entrenched credit card issuers relationship I don't see credit card volumes dropping in the US and most OECD countries. Pix success in Brazil should raise caution for MasterCard and Visa as it has actually impacted credit & debit card growth in Latin America and other non-OECD markets. While PIX is an interesting new development to the payments landscape, it likely won't materialize globally. Visa and Mastercard are increasingly reliant on cross border volumes which will continue to rise and OECD consumers are not changing from their credit card addiction anytime soon. Long: Mastercard and Visa.
- Mercado Libre is by far in the best position of any company in Latam payments. They offer the most robust offering including digital wallet, a payment network, a payment processor, a POS operator (merchant acquirer), merchant banker, a p2p payment system (like Venmo) and a consumer card issuer. There really is no material competition that spans the breadth and depth of Mercado Libre. Long: Mercado Libre.

Top 5 Read, Listen, Watch

- 1. <u>Central Bank Digital Currency Paradigm Shift</u> (Listen)
- 2. The Payments Podium: Pix and The Future of Instant Payments in Brazil (Listen)
- 3. The Past, Present, and Future of a Real-time Payments System w/ George Selgin (Listen)
- 4. Inspired by Pix, instant payments are moving forward in Latin America (Read)
- 5. Deep Dives: Mercado Libre, Adyen, Nubank

Final Thought

The global payments system is in a critical transition period where the legacy credit card model is being challenged by a digital model. Latin America is taking a different path in payments than many other areas around the world. Latin American countries are increasingly focused on a digital central bank instant payments infrastructure after the success of the Brazilian PIX system, which has led the region into a new framework. The future of payments in Latin America is clearly going to be digital instant payments first and credit cards second, driven by the success of PIX and the large underbanked population that now has access to banking

services for the first time through digital Neobanks. The region will continue to be led by Mexico and Brazil in terms of e-commerce, payments, and banking, which will dictate the status quo in payments and banking for the region.