PYUSD Overview

In olden times, the exchange of value was the exchange of goods

There is evidence of humans using barter systems as early as 9,000 BC

Value exchange in barter systems was relatively straightforward

- Farmers could exchange goods they had for goods they needed
- Price (and fair value) was determined bilaterally
- Since transactions took place in person, the incidence of fraud was likely quite low
  - Goods could be inspected prior to trade
  - Double-spend wasn't an issue

Farmers could trade a cow for bushels of grain

As societies grew, more advanced systems of exchange were needed

Barter is difficult to scale

- Generally requires in-person interactions
- Bringing physical goods to market is unwieldy
- Relies on a coincidence of needs
  - If no one needs your grain, you can't get a cow
  - If you harvest your crop in the fall, how do you obtain goods for the rest of the year?
- Trading services requires some amount of faith that you will get paid or that services will be rendered
- Even for physical goods, you might not be getting what you thought
  - Animals could harbor disease or be less productive than claimed
  - Goods might be of lower quality than thought

Fortunately, we don't need to carry bushels of wheat in our wallets

Enter tokenization

(a.k.a. Money)

Tokenization refers to the ability of one thing (a token) to stand in for another (e.g., a bushel of wheat)

- Physical goods were now abstracted from the medium of exchange
- This permitted the exchange of non-physical goods (i.e. labor)
- Archeological records suggest Middle Eastern societies used clay balls to represent cattle, grain, and labor as early as 7,500 BC

But tokenization creates additional avenues for fraud

- If you weren't getting the commodity immediately, how could you be sure you'd receive it, or that it was as you were promised? ("Goods not received or not as described")
- How do you prevent double-spend (i.e., I have two tokens that represent the same cow)?

Plain tokens, Mesopotamia, present day Iraq, ca. 4000 BC.. Courtesy of Denise Schmandt-Besserat, UT Austin

Token based systems rely on shared trust to function

Photo credit: https://sites.utexas.edu/dsb/ain-ghazal/tokens-and-writing-the-cognitive-development/

Money has evolved, but it still serves the same purpose

We're still using tokens to represent value

A token is any thing that can be used to represent something else

- In this context, the target is usually some representation of value
- They are issued by some entity and accepted (redeemed) by the same or different entities
- Examples include coupons, bus tokens or casino chips
- More interestingly, this also includes cash

In modern times, monetary tokens can stand in for real assets or represent arbitrary, agreed upon value

This gold certificate is a representation of real value. Every dollar issued corresponded to a dollar of gold stored in a vault somewhere.

This modern-day bank note has no reference value. It is not backed by any specific hard assets but by the faith and credit of the US Federal Reserve.

And it continues to evolve

Digital tokens are tokens in the digital domain

- A digital token is a token that exists in digital form
- Lacking physical form, digital tokens can be easily transferred and exchanged
- They require some mechanism of issuance (minting) and redemption (burning)
- Examples include gift cards, in-game currencies, or crypto-currencies

Digital tokens can stand in for an asset of real value or represent an arbitrary, agreed upon value

PAX GOLD

PAX Gold is a digital token issued by Paxos. Each token represents and is backed by one troy ounce of gold, physically held in a vault

Bitcoin is a digital token whose value is determined solely by its demand relative to its mathematically enforced scarcity.

Digital tokens that have a value pegged to a reference currency are often called “stablecoins”

But the need for trust still exists, too

Additional layers of abstraction require additional layers of trust

In traditional financial systems, that trust is provided by centralized institutions (banks, the Fed, PayPal) and other actors

- A central bank provides trust that a nation's currency retains value and constitutes legal tender for exchange
- Treasury creates notes and coins that incorporate mechanisms to prevent misrepresentation and counterfeiting
- Banks and other financial institutions safeguard assets and assure that assets on deposit can be redeemed and used
- Appraisers validate the worth of an item that is being exchange or can act as collateral in a transaction
- Escrow services act as a trusted intermediary to ensure parties in a transaction fulfill their obligations
- Auditors verify the operations and records of participants in the value chain to ensure they match stated operations
- etc.

Each of these provides value-add and higher degrees of assurance but each requires additional time, cost, and complexity

- Also: how do you decide who to trust? All parties in a transaction have to agree to trust the intermediary(-ies)

Cryptocurrencies are digital or virtual forms of currency (tokens) that use cryptography for security and trust.

Why does that matter?

Traditional payments are inefficient… and insufficient.

Payments take **days to settle.**

Excessive **intermediary fees.**

Require **bank accounts.**

Constrained **by banking hours.**

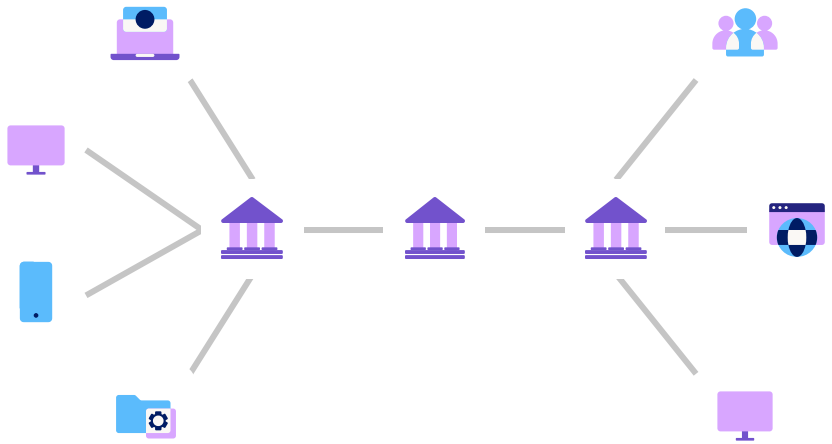
1872	First wire transfer is completed		Western Union
1950	First credit card is introduced		Diners Club INTERNATIONAL
1972	First ACH network goes live		Federal Reserve Bank of San Francisco
1977	XB correspondent banking		Swift

50+ years old technologies still underpin nearly all payments today

PayPal

It’s time for The Next Generation of payments

TRADITIONAL PAYMENTS



Rely on **inter-bank messaging** and **ledger reconciliation** to settle payments

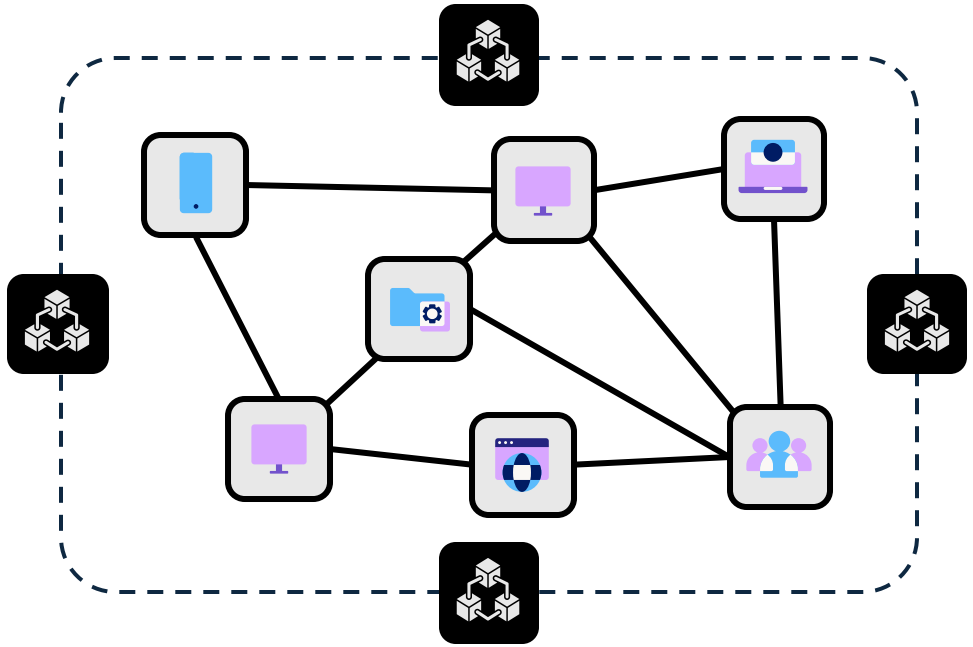
PayPal

It’s time for The Next Generation of payments

TRADITIONAL PAYMENTS

Rely on inter-bank messaging and ledger reconciliation to settle payments

NEXT GENERATION PAYMENTS



Peer-to-peer networks settle payments **without a central intermediary**

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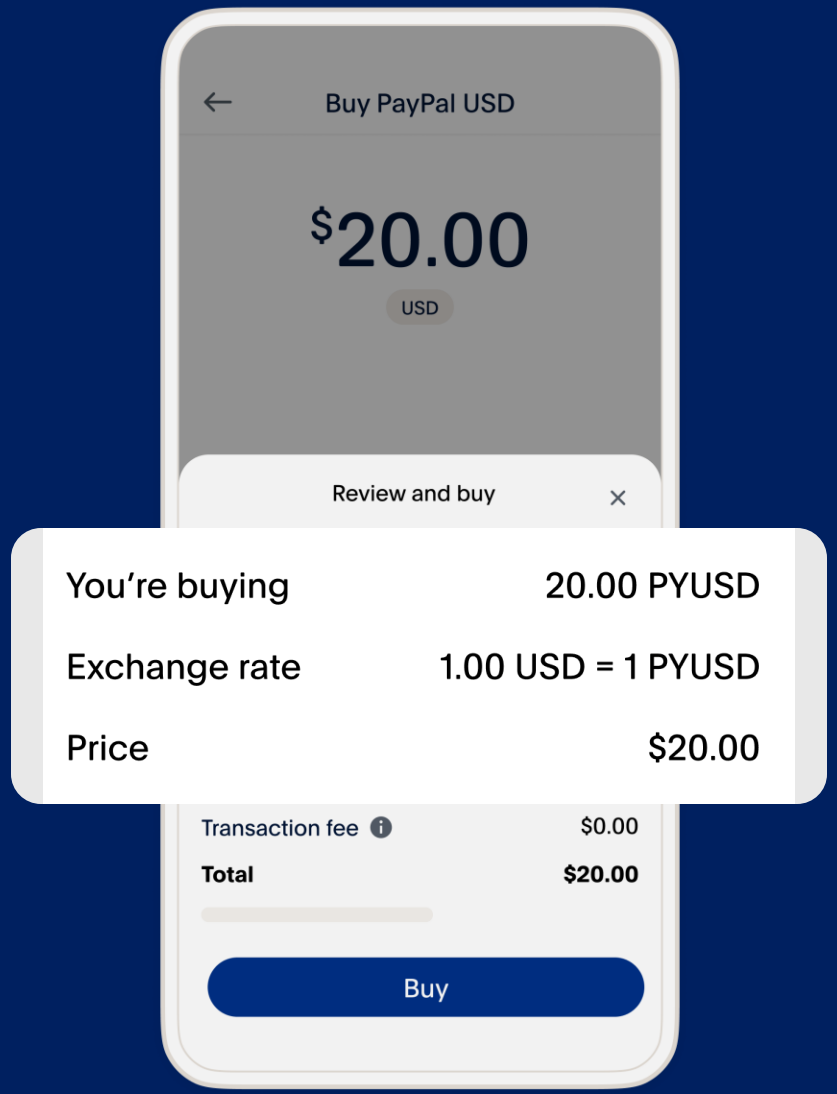
The struggle is real



PayPal USD

A PayPal stablecoin pegged 1:1 to the US Dollar

1 PYUSD = $1 USD

PayPal

PayPal USD is the open-loop evolution of PayPal balance

PayPal USD: Tokenized, programmable PayPal balance with interoperability inside and outside PayPal ecosystem

PayPal Balance → PayPal USD

- Interoperability
- Programmability
- Low-cost rails
- Instant, 24/7 settlement

PayPal USD is secure and built for payments:

- 100% backed by USD reserves for a 1:1 peg
- Distribution through PayPal & Venmo
- Anti-fraud transaction monitoring
- Built for scale

Stablecoins can reduce complexity

From:

Consumer account	Consumer wallet	Issuer bank	Payment processor	Card network	Settlement bank	Acquirer bank	Merchant account
JPMorgan Chase & Co. / Wells Fargo / Bank of America	PayPal	JPMorgan Chase & Co. / Wells Fargo / Bank of America	PayPal	VISA / mastercard	JPMorgan Chase & Co. / Wells Fargo / Bank of America	JPMorgan Chase & Co. / Wells Fargo / Bank of America	JPMorgan Chase & Co. / Wells Fargo / Bank of America

mastercard VISA

To:

Consumer wallet	Virtual asset service provider	Merchant wallet
PayPal PAXOS METAMASK	PayPal stripe checkout.com	PayPal PAXOS METAMASK

PayPal USD

With Stablecoins, merchants can receive more money, quicker

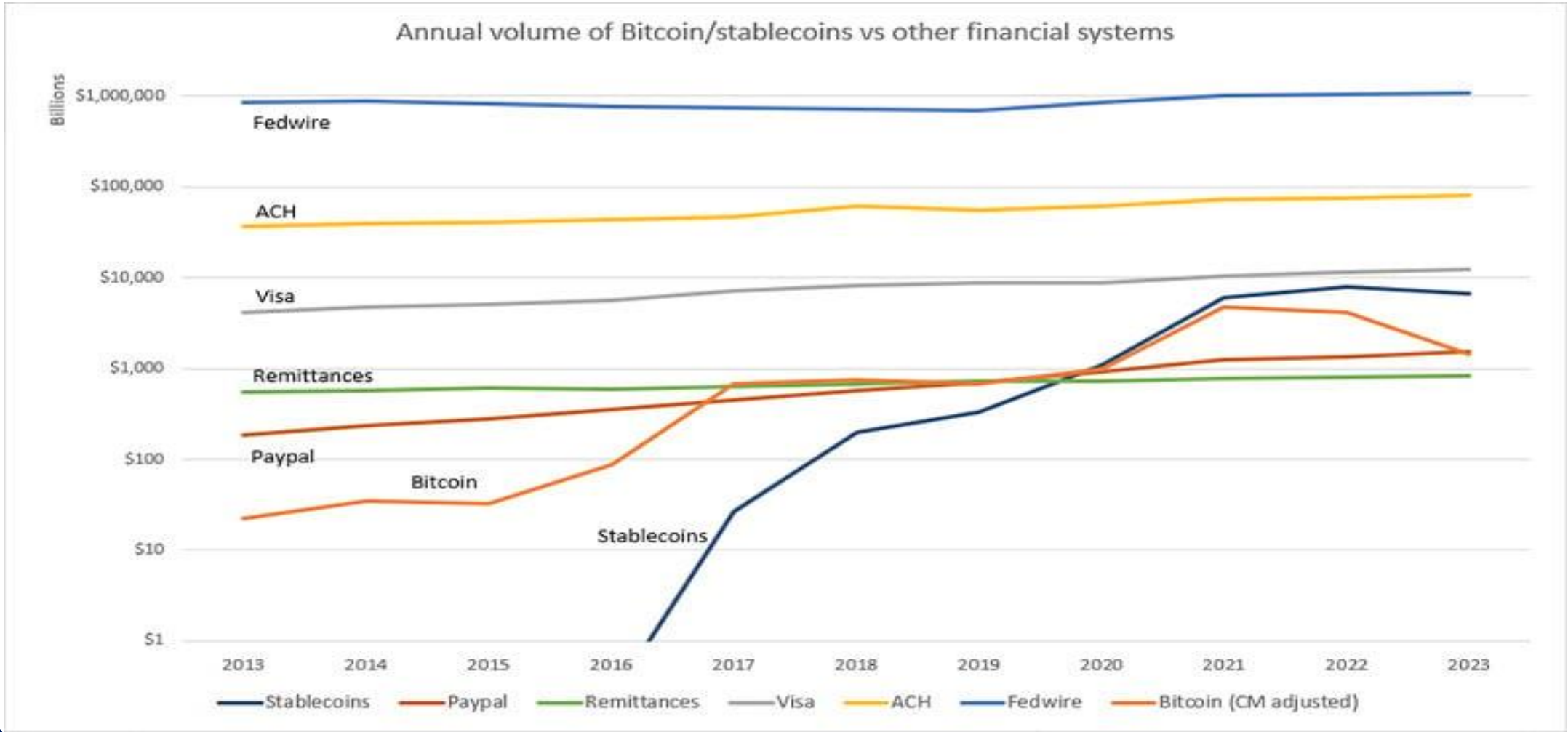
Illustrative	**Card** transaction	**PYUSD** transaction
Consumer pays:	$100	$100
Processor charges:	**2.4%**	**1.0%**
→ **Processor** keeps[1,2]:	**$0.20**	**$0.90**
→ **Network** keeps[1,3]:	**$0.50** (e.g., Visa, MC)	**$0.10** (e.g., Ethereum, Solana)
→ **Issuer** bank keeps[1,4]:	**$1.35**	-
→ **Acquirer** bank keeps[1,4]:	**$0.35**	-
Merchant receives	**$97.60**	**$99.00**
Settlement time	**1-2 business days**	**Instant, 24/7**

Processors can **decrease prices** while **increasing margins**

Merchants receive **more money, quicker**

SOURCE: National Retail Federation (2023), Visa 10-K (2022), Mastercard 10-K (2022), Modern Treasury (2023)
1-5. See slide notes

Stablecoins use is growing



Annual stablecoin volumes

SOURCE: Visa (2024)

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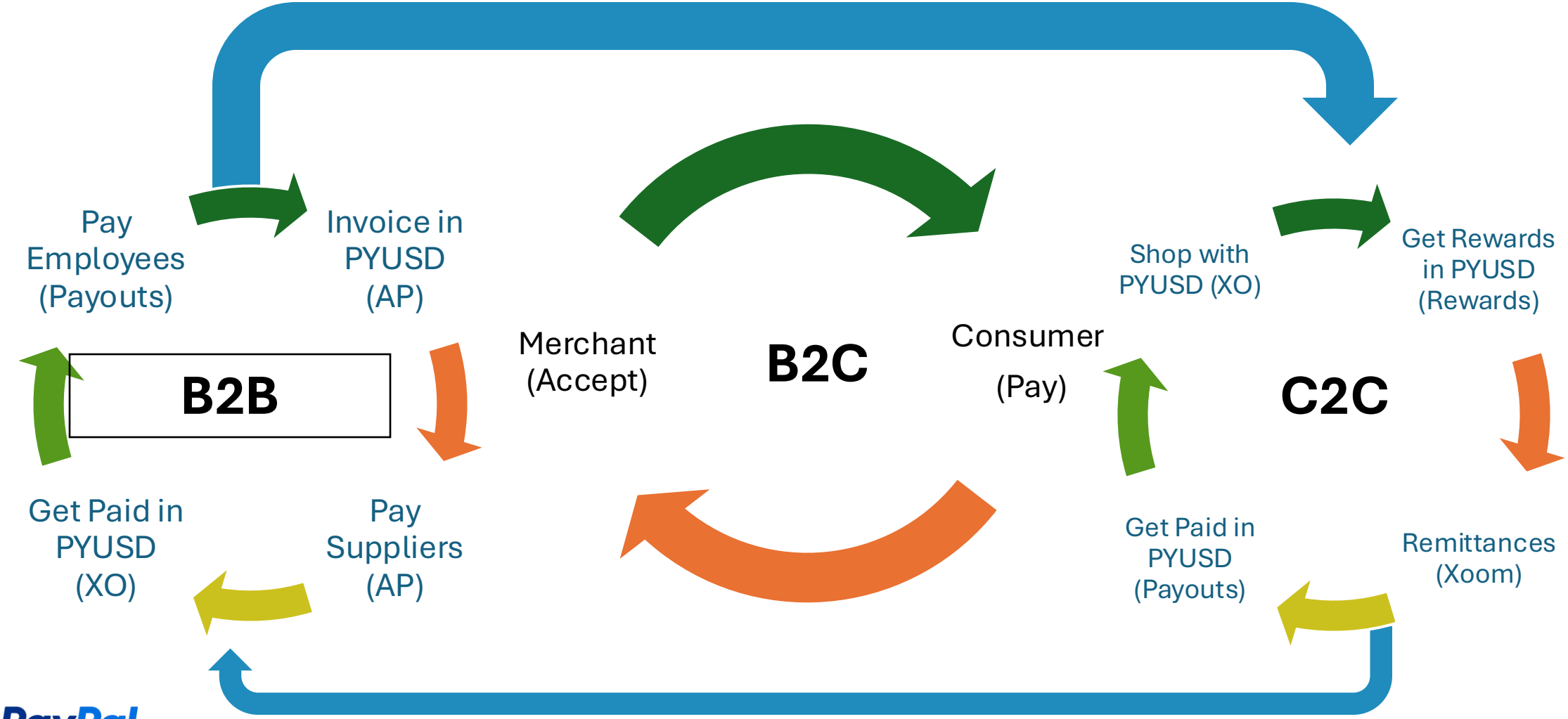
Strong network effects



CONSUMER USE CASES

Cross-border P2P

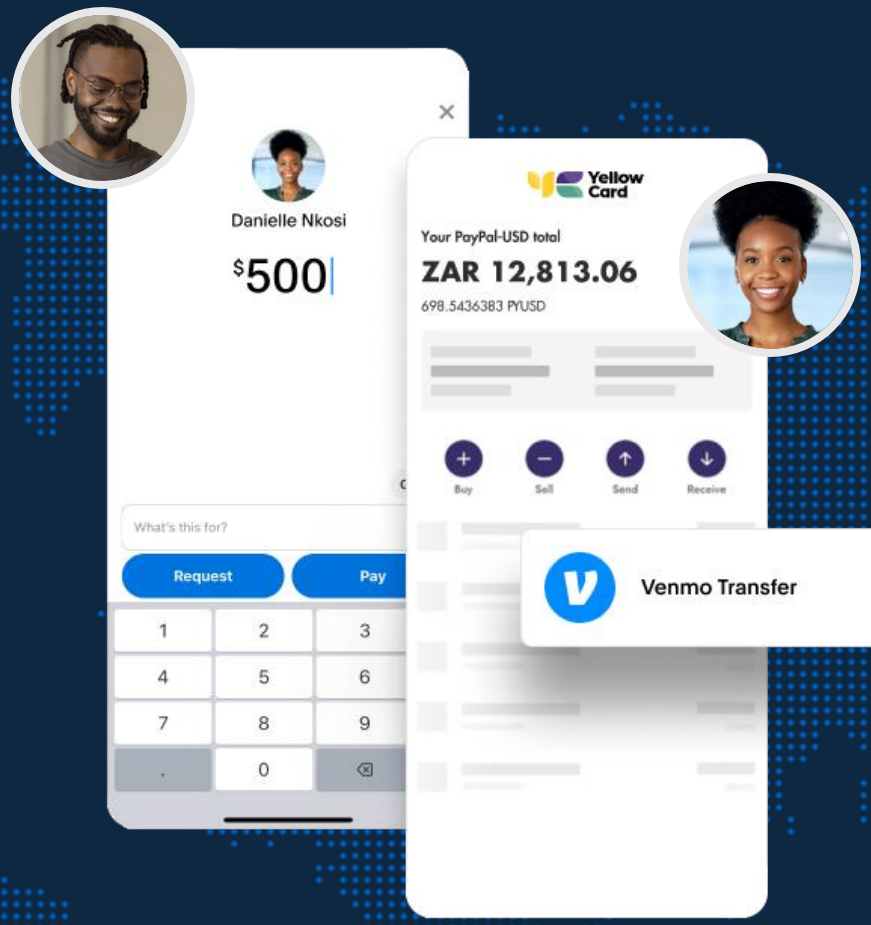
Live now

PayPal

CONSUMER USE CASES

Cross-border P2P

Live now



Quick, low-cost USD transfers from the US to Africa.

Settles in minutes

Less than $0.10 fee

For a transfer of any amount[1]

USA resident using venmo ▶ PayPal USD ▶ African resident using Yellow Card

1. For Solana transactions as of Oct. 2024

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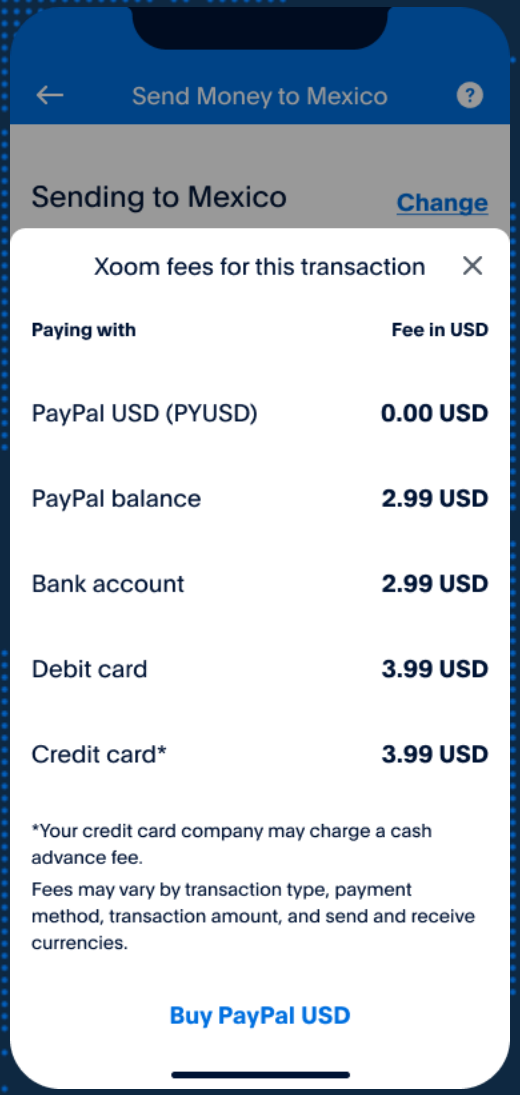
CONSUMER USE CASES

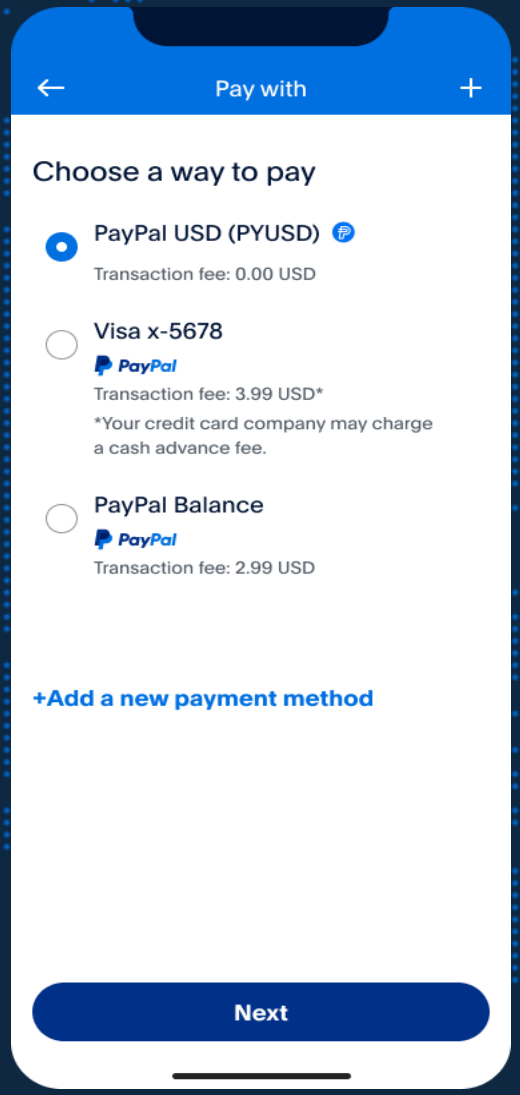
Remittances funding

Live now

PayPal USD

Lowest-cost option for sending Xoom and PayPal remittances.

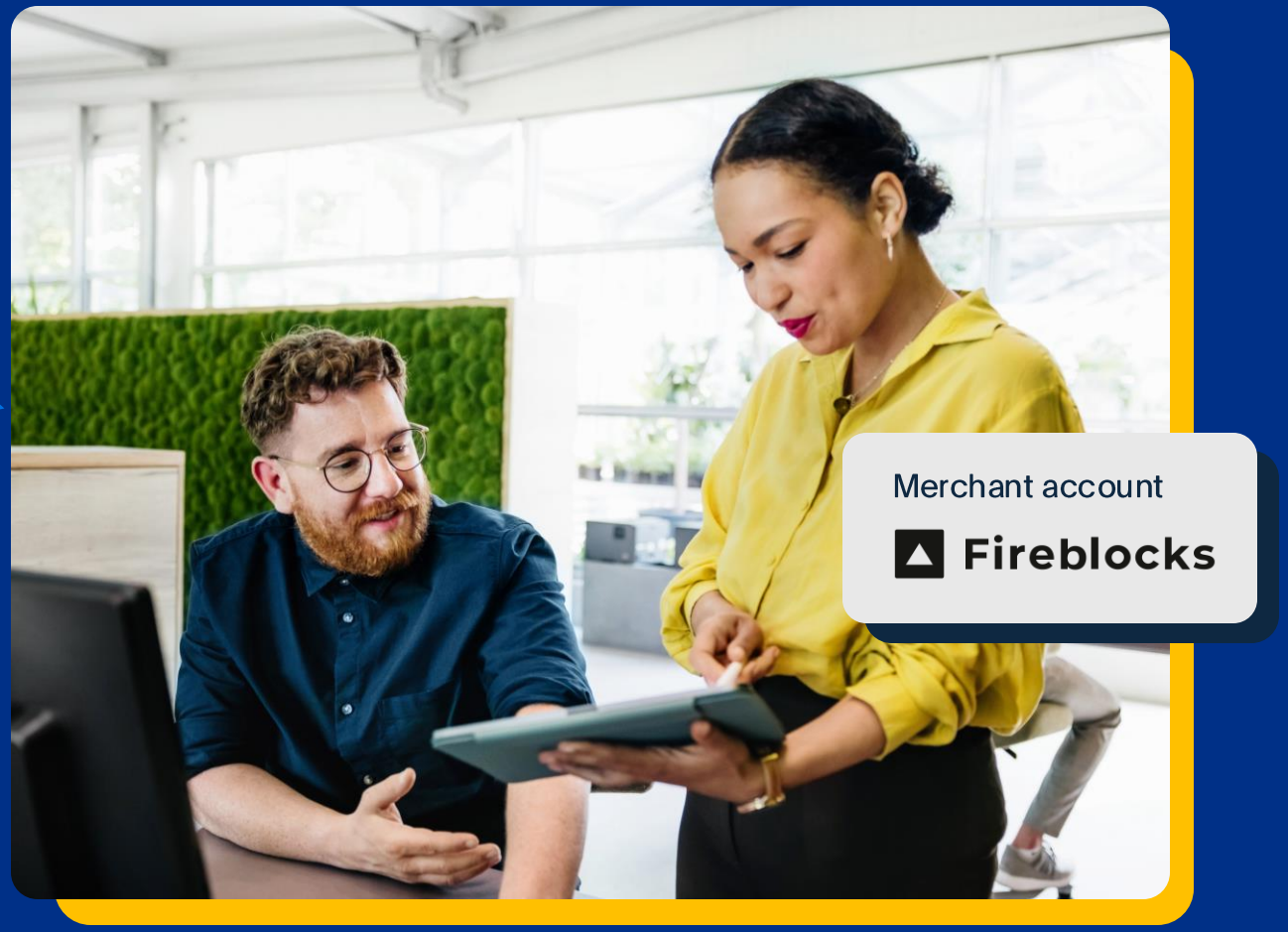




MERCHANT USE CASES

Settlement

Live now

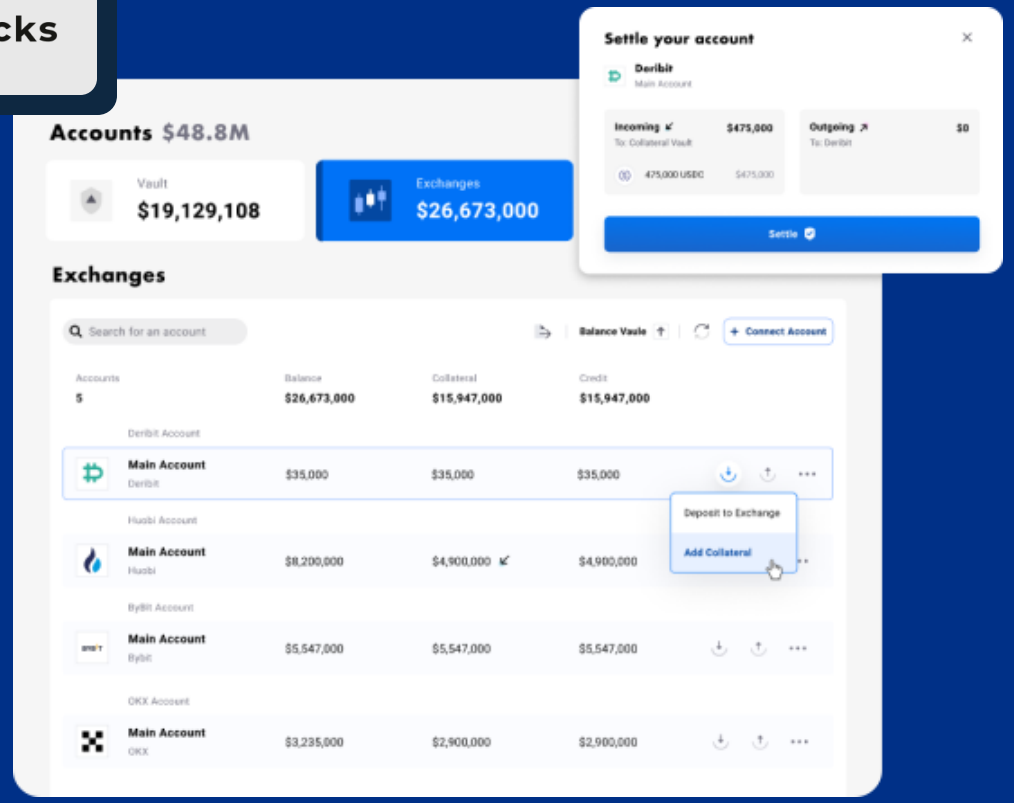


MERCHANT USE CASES

Settlement

Live now

Fireblocks



Instant, 24/7 USD merchant settlement with PYUSD

Real-time settlement

24/7 availability

Merchant store using PayPal

PayPal USD

Merchant account

PayPal

ENTERPRISE USE CASES

B2B Payments

Live now

Efficient, instant value transfer with partners and suppliers

- Vendor payments
- Venture funding
- Treasury and intercompany money movement

Global bank accounts → PayPal USD → Global partners


PayPal USD

Appendix

Macro Trends

Rise of Digital Payments

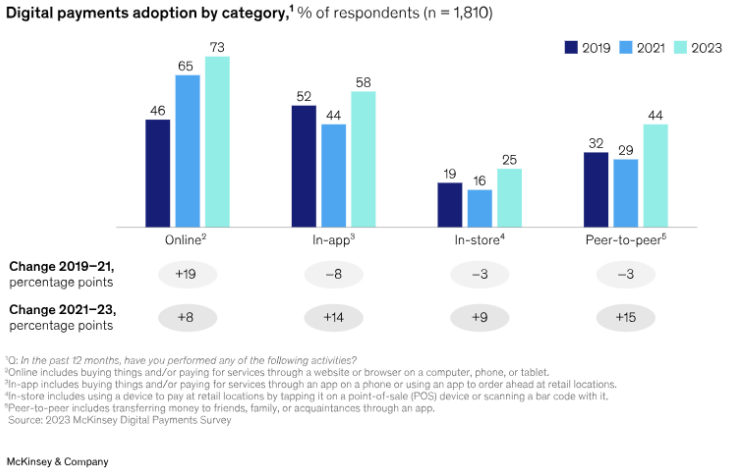
The COVID-19 pandemic accelerated the adoption of digital payments globally. According to a report by McKinsey, in 2020 alone, there was a 25% increase in online transactions.

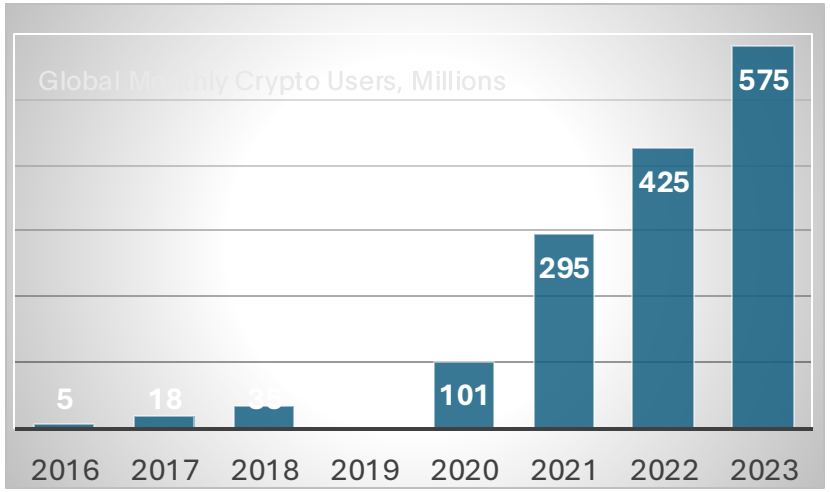
Rise of Digital Currencies

As cryptocurrencies like Bitcoin have become more mainstream, people are looking for ways to use them for everyday transactions. However, the volatility of these assets has limited their adoption.

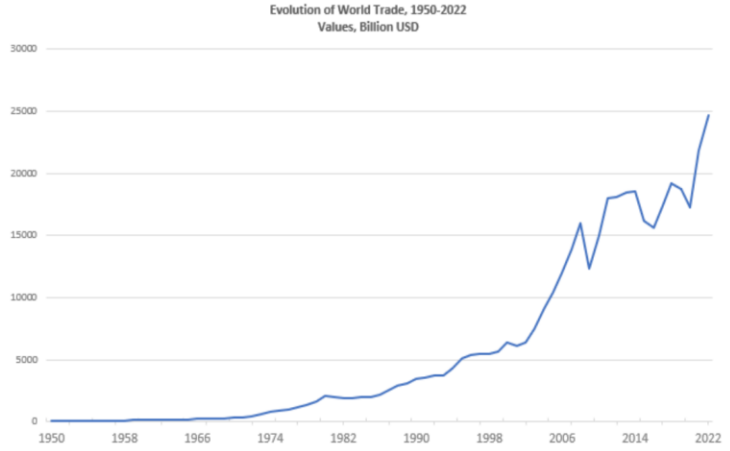
Growing Cross-Border Trade

The world is becoming increasingly interconnected, with global trade increasing by 4% in 2020 (World Trade Organization).





Source: Statista



Source: World Economic Forum

Goto Market Approach

Short Term **Unlocking payment use cases**	Mid Term **Expanding integrated experiences**	Long Term **Powering seamless global payments**
Connecting PYUSD into payment use cases paving the way for faster, cheaper payments **USP:** 20+ years of payments expertise, powered by a branded stablecoin, PYUSD	Integrating PYUSD further into payment experiences for consumer and business **USP:** Global 2-sided network with e2e payments expertise	PYUSD integrated as a foundational payments, commerce, and financial experience globally **USP:** Proven, trusted, and well-integrated platform

PayPal USD

Superior to other payment rails

	Cost per transaction	Settlement time
PayPal USD	**<$0.01[1] to $0.50[1]** (On an optimized protocol)	**0.5 seconds to 3 minutes[1]** (On an optimized protocol)
ACH	$0.26-$0.50[2]	1-3 business days[3]
Checks	$2.01-$4.00[2]	At least 1 business day[4]
Debit Cards (Domestic)	$0.34 or 0.74%[5]	24-48 hours[6]

1. SOURCE: Circle report on USDC (2023) for different protocols.
2. SOURCE: 2022 study from the Association of Finance Professionals (AFP) cited by the National Automated Clearing House Association (NACHA).
3. SOURCE: NACHA Public Documentation.
4. SOURCE: Federal Reserve Public Documentation.
5. SOURCE: Federal Reserve Study on Debit Card Costs.
6. SOURCE: Chase Bank Public Documentation.

PayPal