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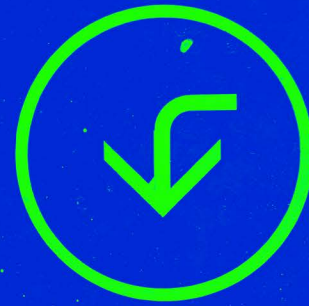
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AND REMITTANCES

EXECUTIVE SUMMARY

¹World Bank Press Release, <https://www.worldbank.org/en/news/press-release/2021/11/17/remittance-flows-register-robust-7-3-percent-growth-in-2021>.

²International Remittances and Poverty Reduction: Evidence from Asian Developing Countries. <https://www.adb.org/publications/international-remittances-and-poverty-reduction>

As long as people have migrated in search of a better life, they have sent money home. And today, in cities and towns across the developed world, immigrants queue up to send money back to waiting families. From farmworkers in California's central valley to construction workers in Dubai, millions of people are part of a system of remittances that deliver hundreds of billions of dollars to some of the world's poorest communities. Today, remittance payments exceed half a trillion dollars annually, and make up a vital part of the global economy.¹ For many countries, remittances represent a large fraction of their economy, accounting for up to 20-30% of GDP, and lifting millions of families from poverty.²

Given the magnitude and the target of international remittances, it is of the utmost importance to ensure that the remittance process is as efficient, fast, and accessible as possible. Unfortunately, the legacy process of sending money abroad is complex and costly.

1. Traditional payment networks are fast and cheap at connecting domestic financial institutions, but slow and costly for international transfers.
2. Differences in the legal requirements across countries make know-your-customer (KYC) and anti-money-laundering (AML) obligations complex and more costly, and contractual recourse uncertain when payment settlement fails.
3. Many remittance recipients are unbanked and live far from brick-and-mortar cashout points.
4. Large fixed costs, such as brick-and-mortar offices make international transfers of small amounts of money very expensive with fees of up to 10 percent.
5. The market for remittances has been dominated by large banks or by money transfer operators (MTOs) like Western Union and Moneygram, and historically has been uncompetitive.

Over the last twenty years, with the wide adoption of the internet and smartphones, people have started using digital remittance methods. Instead of going to the local Money Transfer Operator (MTO) office or bank to send or receive money, people use their smartphones. But while digital remittance methods make it easier to send and receive money for those without bank access, they still rely on traditional payment rails that are relatively slow and inefficient. Furthermore, traditional remittances, whether digital or not, do little to help recipients who lack access to basic financial services like banking, savings, and investment accounts.

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Recently, cryptocurrencies have ushered in a new, alternative system for moving money abroad. Cryptocurrencies are digital assets that users hold in a digital wallet and access online with a smartphone or computer. Because they are digitally native (meaning that they are developed based on the internet, as opposed to being an internet substitute for a non-internet based process), cryptocurrencies can be transferred around the world seamlessly peer to peer, without corresponding banking networks or other centralized intermediaries. Cryptocurrency transfers settle almost instantly, without the need for inter-bank accounts, overnight payment processing, or bank branches. In addition, the money is transferred simply by entering in the recipient’s public crypto wallet address, without the need for a bank account or costly in-person verification process. Crypto wallets enable recipients to store transferred money in yield-producing crypto accounts that preserve or even increase in value — a critical feature in recipient countries that often experience high inflation and for individual recipients with no bank accounts.

³ Cross-Border Remittances Report, <https://www.pymnts.com/wp-content/uploads/2021/09/PYMNTS-Cross-Border-Remittances-Report-September-2021.pdf>.

Crypto remittance use is growing. In the past year, almost a quarter of U.S. consumers who sent digital payments to friends and family in other countries reported using crypto.³ In fact, many of them cited crypto as their most commonly-used method of payment. We estimate that people can save between 2-8% in fees when they send funds using crypto rather than traditional payment methods. This, in turn, would benefit some of the most vulnerable populations and countries in the world, who today bear unfair and inefficient deadweight costs for transferring small amounts of money across borders.



On a global scale, the United Nations estimates that using digital payments for remittances could increase by 3% and 5% the money received by users, potentially lifting 30 million people out of poverty. ⁴

⁴ Igniting SDG Progress Through Digital Financial Inclusion, https://sdgs.un.org/sites/default/files/publications/2655SDG_Compendium_Digital_Financial_Inclusion_September_2018.pdf

PART 1

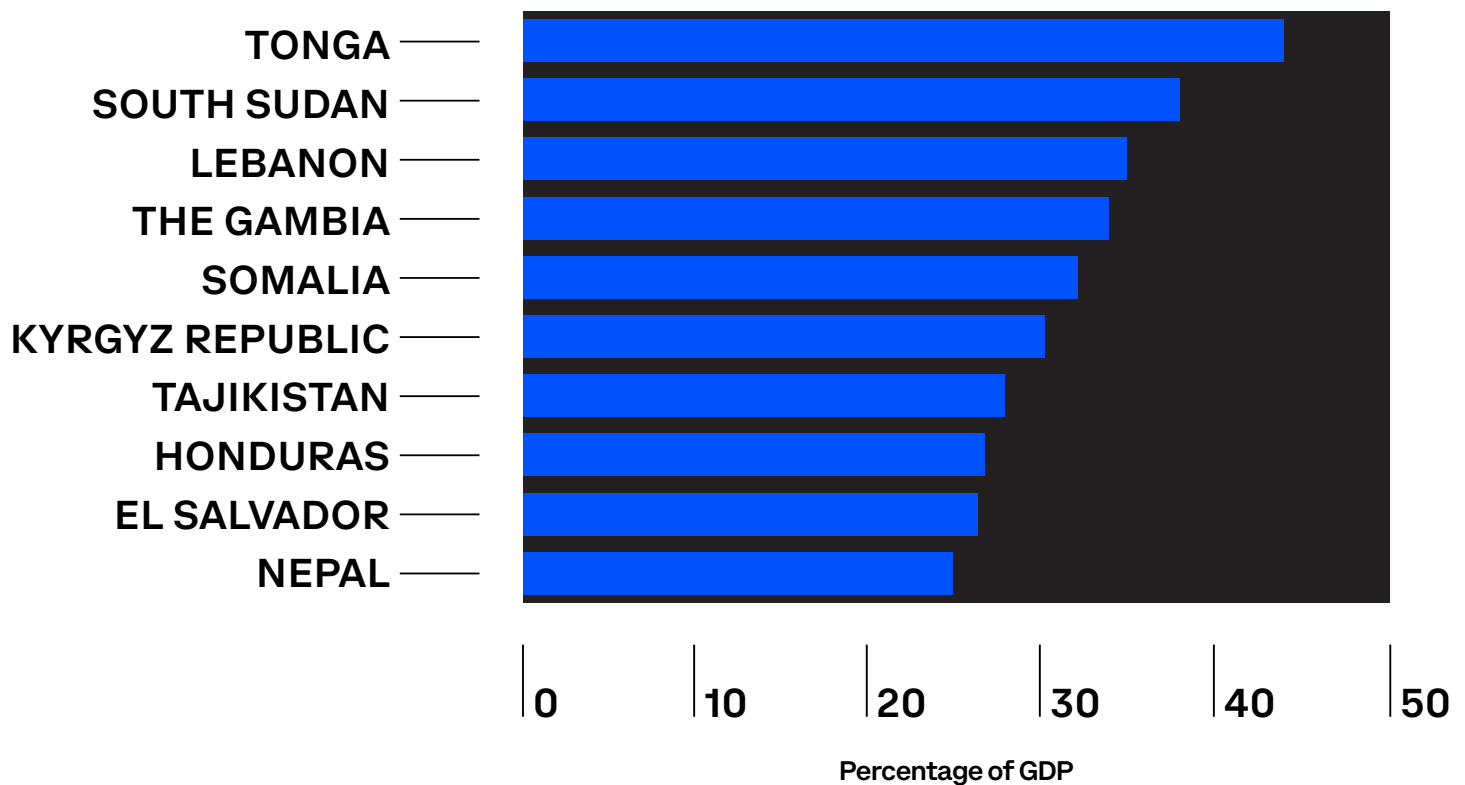
How Big is the Remittance Economy?

⁵ World Bank Blog, <https://blogs.worldbank.org/peoplemove/global-remittance-flows-2021-year-recovery-and-surprises>.

⁶ Migration Development Brief 35, at 6, https://www.knomad.org/sites/default/files/2021-11/Migration_Brief%2035_1.pdf.

Remittance payments are essential not only for individuals and families, but for developing countries as a whole. These payments can constitute up to 30% of a country's GDP. The World Bank estimated that remittance flows to low- and middle-income countries reached \$589 billion dollars in 2021, an increase of 7.3% since 2020.⁵ Since the mid-1990s, remittances have totaled almost three times the amount of foreign aid, or official development assistance from governments.⁶ This means that the economies of many capital-poor countries depend more heavily on remittances than on any other source of international aid. But with average fees of just over 6%, over \$35 billion of the money flowing to these countries last year was spent in fees.

Top 10 Remittance-Receiving Countries and % of GDP, 2021



Source: KNOMAD, Remittance Data, <https://www.knomad.org/data/remittances?page=21>.

⁷Border Report, <https://www.borderreport.com/regions/mexico/mexicans-in-u-s-sending-remittances-in-record-numbers-to-relatives-across-the-border/>

⁸KNOMAD, Remittance Data, <https://www.knomad.org/data/remittances?page=21>.

⁹World Bank Data, <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS>.

For many emerging economies, a lack of capital that can fund economic development is a critical roadblock. Their development prospects, then, are tied directly to the remittance economy. Measured in current U.S. dollars, the top recipients of remittances in 2021 were India, China, Mexico, the Philippines, and Egypt.⁷ Measured as a share of GDP, the top recipients of remittances are, as expected, much smaller economies, Tonga (44%) and South Sudan (38%).⁸ For Haiti, remittances represent over 22% of GDP; El Salvador and Honduras are at about 24%.⁹ For both humanitarian and strategic reasons, continued development in these countries is very much in the interest of wealthier countries from which remittances are typically sent.

PART 2

The Burden of Costly Remittances

¹⁰World Bank Press Release, <https://www.worldbank.org/en/news/press-release/2021/11/17/remittance-flows-register-robust-7-3-percent-growth-in-2021>.

¹¹U.N. Resolution, Goal 10.c, https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

¹²Remittances Prices Quarterly, World Bank, https://remittanceprices.worldbank.org/sites/default/files/rpw_main_report_and_annex_q121_final.pdf

¹³These include companies like Western Union, Moneygram, Xoom, and Wise, among others.

¹⁴IMF Guide, <https://www.imf.org/external/np/sta/bop/2008/rcg/pdf/guide.pdf>.

¹⁵World Bank Press Release, <https://www.worldbank.org/en/news/press-release/2021/11/17/remittance-flows-register>

Traditional remittance payments are costly and time-consuming. According to the World Bank, the cost of sending just \$200 cross-border “continued to be too high” in 2021, averaging 6.4%.¹⁰ While these costs are slowly decreasing over time, it is more than twice the 3% target set by the U.N. Sustainable Development Goal.¹¹ Further, costs vary considerably among different regions, service providers, and means of payment. For example, average costs in sub-Saharan Africa are over 8%, and the average cost of sending money using banks — the most expensive way to remit money — is over 10.5%.¹²

People sending remittances have historically relied on MTOs to send remittances, and they remain the most widely used option today.¹³ MTOs are non-bank financial institutions such as Western Union or MoneyGram that send funds cross-border, either within their own system or in partnership with a network of banks.¹⁴ Sending a cash-to-cash remittance payment through an MTO requires a complex network of intermediaries.

1. The sender delivers cash and identifying information of the recipient to an agent of the MTO in the host country. The agent can be a retail outlet of the MTO, post office, bank, or even a gas station or drug store. The sender pays a transaction fee and fee to cover the exchange spread, which the MTO hedges to protect itself against unanticipated exchange rate fluctuations in the interim.¹⁵
2. The agent delivers the funds and the sender’s and recipient’s information to the MTO.
3. The MTO asks its bank to transfer funds from its domestic account to the overseas account of a partner MTO agent in the receiving country.
4. The partner MTO agent agent verifies the recipient’s information and delivers the cash, or credits the funds to its subagent in the receiving country where the recipient can collect his or her money after verifying their identity.

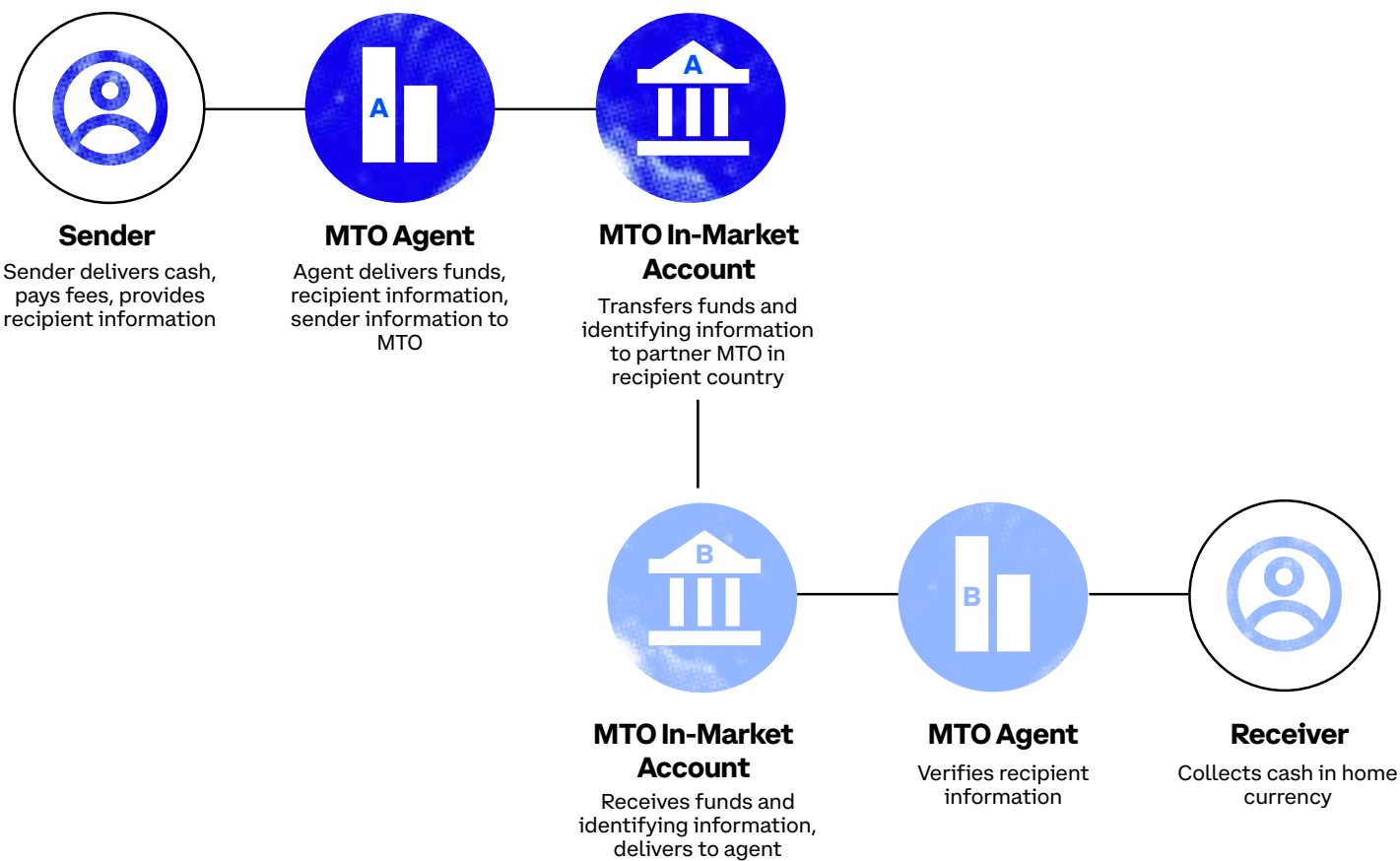
¹⁶ The Use of Remittances and Financial Inclusion, <https://www.ifad.org/documents/38714170/40187309/>

¹⁷ Federal Reserve Guide, <https://www.federalreserve.gov/publications/files/money-and-payments-20220120.pdf>.

This process can take anywhere from 1- 5 days to complete. It is expensive, involving both a transaction fee to transfer money and a foreign exchange spread for the currency conversion. The funds that reach the recipient are noticeably less than the original amount, which has significant implications when 80% of recipients use these funds for basic necessities such as food, medical care, and housing.¹⁶ And it requires people to relinquish control of their money to a network of intermediaries. A recent report from the Federal Reserve cited time zone differences (which cause difficulties in real time settlement), limited competition, and “coordination problems among intermediaries” as multiple frictions that cause the cost of remittances to remain high.¹⁷

Cash-to-Cash Remittance Payments Using an MTO

Sending Country



Receiving Country

PART 3

The Rise of Digital Payment Services

In recent years, digital payment options have begun to simplify the remittance process and reduce costs. Using a digital account funded by a bank account, debit card, or credit card, users can send money through a mobile wallet on their phone or computer. Money is then directly transferred to the recipient, to either a mobile wallet, bank account, or debit card. By eliminating the need for an in-person visit to send or collect payment, services involve fewer handoffs, resulting in lower fees. These payments also happen much more quickly, instead of 1-5 days of traditional remittances, these payments can happen within a day, sometimes a few minutes

These payments also save people the time they would have spent traveling to and from MTOs. One study estimated that mobile financial services could save remittance recipients in Mexico fifteen days over the course of their lives, nearly 100 million hours in aggregate for the economy, and nearly \$450 million in economic value.¹⁸

¹⁸ World Economic Forum Blog, <https://www.weforum.org/agenda/2019/04/how-digitalizing-remittances-can-help-families-around-the-world>.

¹⁹ Forbes Article, <https://www.forbes.com/sites/danielwebber/2020/05/28/how-money-transfer-companies-squeezed-four-years-of-digital-growth-into-just-two-months/?sh=3f027399a7b6>.

²⁰ <https://usa.visa.com/content/dam/VCOM/global/ms/documents/veei-the-rise-of-digital-remittances.pdf>.

The use of digital payment technologies has only been accelerated by the COVID-19 pandemic.¹⁹ Over one billion mobile money wallets are now in use, and about \$12.7 billion in remittances were processed via mobile digital payments in 2020.²⁰ Still, this represents only about 2% of global remittances in value. And despite the time and cost savings they make possible, these digital payment options still require users to fund their accounts using a bank account or card. Fees are still high — over 5% in many cases. And recipients have limited savings and investment options with the money they receive.

PART 4

Using Cryptocurrencies for Cross-Border Transfers

²¹ <https://www.pymnts.com/wp-content/uploads/2021/09/PYMNTS-Cross-Border-Remittances-Report-September-2021.pdf>

²² https://www.washingtonpost.com/national/locked-out-of-traditional-financial-industry-more-people-of-color-are-turning-to-cryptocurrency/2021/12/01/a21df3fa-37fe-11ec-9bc4-86107e7b0ab1_story.html

²³ <https://tracxn.com/d/trending-themes/Startups-in-Cryptocurrency-Remittance; Visa Report at 23, https://usa.visa.com/content/dam/VCOM/global/ms/documents/veei-the-rise-of-digital-remittances.pdf>

²⁴ <https://coinmarketcap.com/>.

Cryptocurrency adoption has grown exponentially over the last several years, and this includes remittances. A recent survey of over 2,000 people in the U.S. who had sent digital remittances online found that 23% had sent crypto to a recipient outside of the country in 2020-21.²¹ Moreover, 13% of respondents cited crypto as their most commonly used method of sending value internationally. Other data show that marginalized communities and those excluded from traditional banking systems are more likely to hold and trade crypto.²² And innovation has flourished — about 100 companies now facilitate remittance-like payments using crypto.²³

a. Cryptocurrency Overview

A cryptocurrency is a digital asset. Bitcoin, introduced 13 years ago, is the most well known, but there are approximately 19,000 cryptocurrencies circulating today.²⁴ Some, like Bitcoin, act as a form of money, while others, like Ethereum, enable new means of carrying out traditional financial functions like borrowing and lending, trading, and providing insurance. While the value of many cryptocurrencies can fluctuate daily, others are designed to be more stable and to track the value of the U.S. dollar.

All records related to crypto transactions in crypto are maintained on a type of database called a blockchain. At its most basic level, blockchain technology works by creating a chain of linked “blocks” that encodes and verifies information. Blockchain protocols provide a unique level of security for transactions by relying on a decentralized peer-to-peer network that anyone can join.



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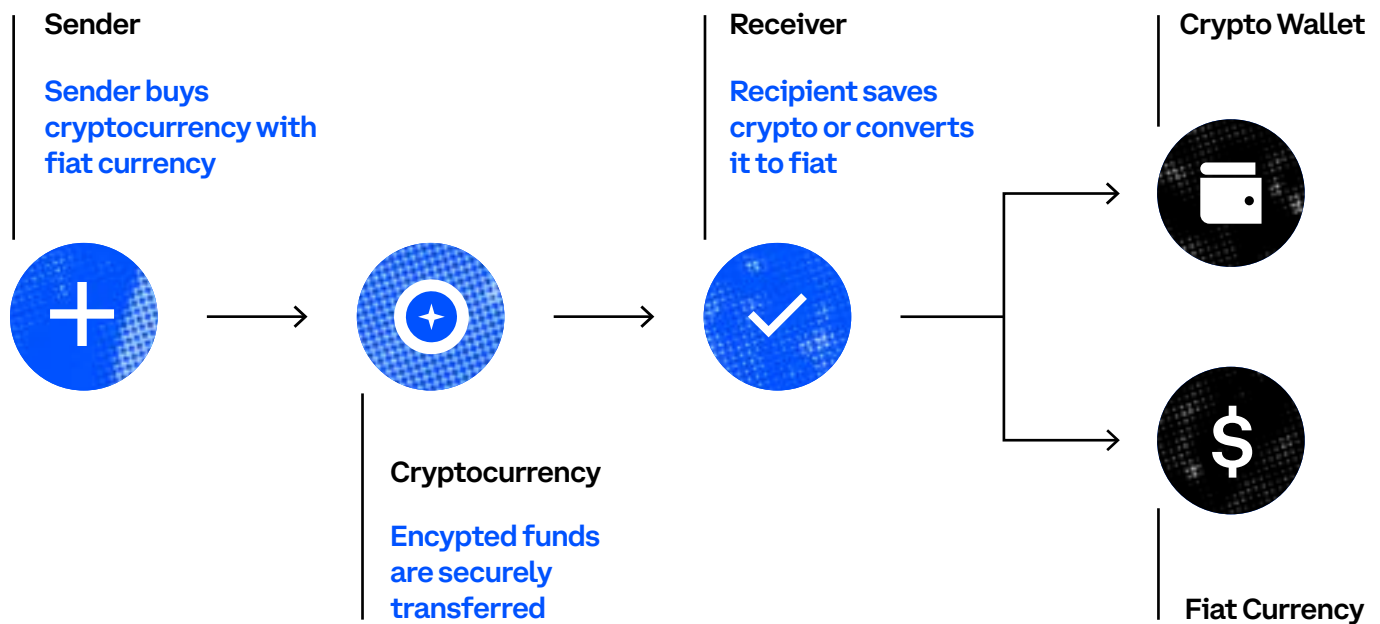
b. Using Crypto for Remittances

Making remittance payments in crypto enhances the benefits of digital payment technologies by offering even more options, and saving people additional time and fees. Transfers happen instantly, and cost much less than traditional methods. Crypto provides new savings opportunities for recipients and, unlike other types of digital payments, crypto transfers are easily accessible by the unbanked. The biggest challenge of replacing traditional remittances with crypto-based solutions right now is the relative scarcity of safe and reliable off-ramps to convert crypto to local currency. This problem will likely dissipate over time, as more businesses accept crypto payments and as technology makes conversion more seamless.

The process of sending crypto is fairly simple.

1. The sender uses a digital wallet to buy cryptocurrency for a small fee.
2. The sender instantly transfers the crypto to the recipient's digital wallet address or email address.
3. The recipient can convert it to fiat currency, or keep it in their digital wallet to spend or save.

Remittance Payments Using Crypto



Because many businesses are just beginning to accept crypto payments, most users will seek to cash out. In this situation, crypto is used as a bridge asset — an intermediary asset that provides for currency conversion — effectively eliminating the need for banks. This feature distinguishes crypto from other digital remittances, but it depends on the ability of receiving country partners, such as convenience store chains and ATMs, to convert crypto into local fiat. This is referred to as crypto's "last mile problem." Furthermore, the value of the amount transferred can be uncertain, given the volatility of many cryptocurrencies. However, the growth of stablecoins, which are pegged in value to stable assets, provides a potential solution to this issue.

²⁵The Use of Remittances and Financial Inclusion, <https://www.ifad.org/documents/38714170/40187309/gpfi.pdf/58ce7a06-7ec0-42e8-82dc-c069227edb79>. (showing that on average 57 percent of receiving households in several developing countries save a portion of their remittances, compared to only 41 percent of all adults).

In addition to ease of transfer, crypto offers greater flexibility than cash — senders can choose from among hundreds of cryptocurrencies, and recipients can choose to spend, hold, or trade their crypto. For example, a remittance recipient may choose to hold stablecoins as a hedge against inflation in her home currency. This point is particularly salient given high rates of inflation among countries that receive significant volumes of remittances. And it appears to be a popular practice, as USDC Coin, a stablecoin pegged to the U.S. dollar, is the second most popular cryptocurrency for remittances, behind Bitcoin. It is also especially relevant because remittance-receiving households have higher savings rates than households that do not receive remittances.²⁵ These households can securely save money in U.S. dollars, even if they are unbanked. This option is unavailable in traditional remittance methods.



In this way, crypto recipients have more flexibility with their money than those who simply receive cash transfers that are converted to their home currency.

Case Study: Coinbase Cashouts Through Remitly

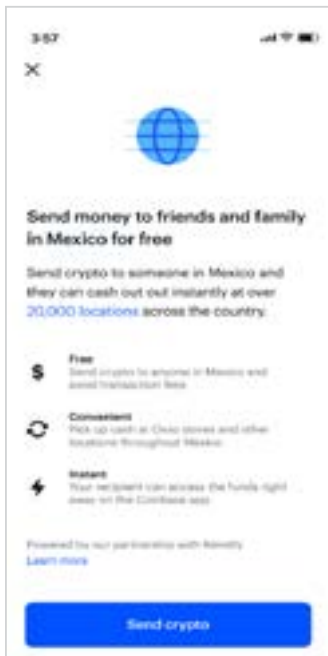
Coinbase’s recent announcement that it is partnering with Remitly in Mexico provides a good example of crypto’s potential to transform and disrupt traditional cross-border money transfers. The offering lets Coinbase customers in Mexico receive crypto from Coinbase users in the U.S. and easily cash out Mexican pesos at a variety of in-person locations throughout the country.²⁶ Sending and receiving payments between Coinbase customers’ accounts is free and fast, taking place within a second. Recipients in Mexico can cash out to pesos at popular retail outlets, and the money is available for pickup less than five minutes after cashing out in the Coinbase app.

This service not only facilitates an off-ramp from crypto to cash; it gives recipients in Mexico the option of keeping crypto in their digital wallets to hedge against the depreciation of Mexican currency. Users can hold crypto in their Coinbase accounts indefinitely, cashing out when needed for purchases and other expenses. Coinbase is exploring plans to extend this service to other countries in the near future.

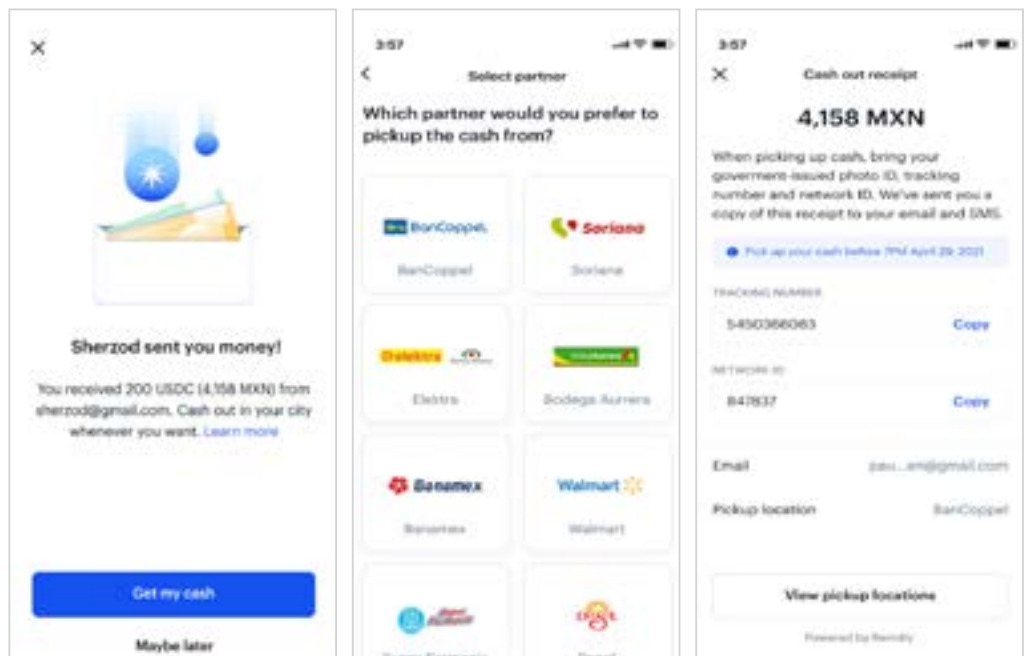
²⁶ Coinbase Help, <https://help.coinbase.com/en/coinbase/trading-and-funding/sending-or-receiving-cryptocurrency/send-funds-abroad>.

Remitly Flow

Sender Flow



Receiver Flow



PART 5

Where To From Here

The remittance economy could look very different in just a few years, and there is an exciting opportunity for rapid economic development. For example, crypto has the potential to become the go-to medium for micro-loans, direct cash payments, and other development strategies. The crypto wallet has the possibility of becoming an official identification tool for those who lack access to a government-issued ID. Reducing transaction costs for small international payments could empower small businesses and entrepreneurs. Crypto-based solutions can also boost competition in the overall global payments market.

At their core, remittance payments are fundamentally personal transactions. But they also have global implications — they can stimulate developing economies and help lift millions out of poverty. Crypto has the potential to drastically transform the remittance space by solving many pain points, the most appealing being a brighter economic future for recipients who will be able to keep more of their money so they may decide for themselves whether to spend, save, or invest it.



Crypto has the potential to drastically transform the remittance space by letting recipients keep more of their money and decide for themselves whether to spend, save, or invest it.

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