



CRYPTOCURRENCY AND THE UNBANKED/UNDERBANKED OF THE WORLD

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I. Executive Summary

In this paper, we seek to address how crypto-asset technology applications might benefit unbanked and underbanked populations around the world. To evaluate these opportunities, we adopted the lens of a non-government, private-market actor. We find it highly probable that any financial inclusion effort in the crypto-asset space will involve one or multiple private entities and, as such, wished to consider the motivations and constraints of such an entity.

Our paper evaluates financial inclusion tactics and strategies in three markets: Mexico, India and Indonesia. While each of these markets has a sizeable population of unbanked individuals, the countries differ in the character of their financial inclusion landscape as well as their broader regulatory treatment of crypto-assets. We believe the lessons drawn from each of these case studies are ultimately applicable to a great many countries around the world – and similar market-entry strategies may be adopted depending on the goals and constraints of a given actor.

Crypto-assets and Crypto-asset Companies as Change Agents

Broadly speaking, the unbanked population in each of these countries dwells primarily in rural areas. While each country has growing telecommunications infrastructure, such development often lags in these very same rural areas. Similar challenges exist with financial infrastructure – it is often logistically and operationally challenging to provide these populations with financial services. For starters, setting up a physical bank branch in a remote area is difficult. Achieving profitability in such an endeavor is even more difficult, as these populations often lack sufficient formalized (*i.e.*, documented) assets to justify a bank's operation. Finally, even if geography and profitability were not a concern, compliance standards are nearly impossible to uphold among populations with minimal identification and varying degrees of participation in informal economies. That said, we believe there are solutions.

The nature of cryptocurrency itself is, of course, a prime factor in crafting these solutions, but so is the character of private entities in the crypto-asset space. Crypto-assets and blockchain bring technological efficiencies to financial products and more naturally operate in decentralized environments. The companies working to define the space, however, possess the spirit of innovation which might drive new applications for these solutions among populations around the world. Lastly, new approaches bring with them the opportunity for new regulatory constructs. We envision a virtuous cycle whereby pro-social crypto-asset solutions beget tailored regulatory treatment which enable further improvements in the delivery of such solutions. How to pursue these solutions, of course, requires an approach catered to each individual market.

Mexico

Mexico has already experienced some degree of crypto-asset involvement with financial inclusion efforts – targeting its high-volume remittance market with the United States. Moneygram, the U.S.-based money transfer company, partnered with Bitso, a Mexican cryptocurrency exchange, and Ripple Labs, a U.S.-based cryptocurrency exchange and remittance network to offer cryptocurrency remittances between the two countries. While consumer adoption was strong, Ripple’s ongoing lawsuit with the SEC (unrelated to this remittances arrangement) may be just the disruption another actor needs to step in and fill the market gap. On the Mexican side, Bitso’s role highlights a unique regulatory factor in Mexico – namely, who gets to benefit from favorable treatment under the new fintech regulations. Bitso was the first recipient of a fintech license, in January 2020, and makes clear the value of a local market presence to any foreign crypto-asset company looking to enter the space.

An innovative approach to the both the regulatory environment and the more general challenges of serving an unbanked/ underbanked population would be to partner with and piggy-back off of

an existing company's geographic footprint. Two convenience store chains, Mexico-based Oxxo and 7-Eleven both serve vast portions of the country. Were a crypto-asset provider to partner with one of these organizations to provide novel financial services, they might solve both the "local market champion" and "physical infrastructure" challenges of such an initiative at once.

India

India offers a different set of complexities. Whereas Mexico has an existing but exclusive regulatory structure for fintech and crypto-asset companies, India has been caught up in a highly polarized debate about whether crypto-assets should even be permitted in the country. While the regulatory back-and-forth is covered in significant detail later, it is important to note that the most severe of these debates result in a binary – and for the purposes of our solutions, we presume a positive outcome for the legality of crypto-assets.

India has taken material steps to address the challenges of launching financial inclusion efforts among the unbanked and underbanked. Specifically, it managed nation-wide identification efforts for all populations. Through biometrics and other digital techniques, India has attempted to bring all individuals in the country "online" from a government records standpoint.

Documentation gaps are a key compliance risk and – as all compliance officers are surely aware – a unique challenge when attempting to deliver financial solutions to the unbanked and impoverished. Leveraging this biometric data system along with the increasingly well-developed mobile data infrastructure throughout much of the country would allow "digital ambassadors" to serve as traveling financial representatives – onboarding new clients throughout the countryside.

Indonesia

Indonesia occupies a regulatory middle ground between India and Mexico. The status of crypto-asset fintech companies is not as seemingly secure as in Mexico, but there are relatively fewer crypto-detractors in government than India. There are already multiple crypto-asset actors within the country, removing the potential for a first-mover advantage, but opportunities remain for differentiation within the marketplace.

Indonesia has a large unbanked population but has not taken the same steps as India in laying the groundwork for financial inclusion efforts. Partnering with the government to build out identification and documentation systems for the population – in tandem with a financial service offering – could prove valuable in securing positive regulatory treatment not only for these initial financial services but also new and more complex financial structures within the country.

Separately, a purely private market strategy could target Indonesian street vendors – a highly informal segment of the economy wherein many of the participants rely heavily on cash for all transactions. A financial education campaign targeted at these individuals – highlighting the efficiency of digital asset solutions along with the decreased risk of minimizing cash holdings on the job/ at home could help drive widespread adoption of crypto-asset technology amongst these individuals. With ever-increasing smartphone penetration rates among all individuals, this reality may be closer than one might first imagine.

Building a Global Playbook

The strategies outlined above – JV Partnership, mobile ambassadors, public education campaigns – are not novel approaches to market entry, but do highlight the flexibility needed for a crypto-asset company seeking to address various unbanked and underbanked populations around the

world. In each of these cases, the most “useful” partner is ultimately the partner which grants the most secure foothold into the country and maximizes chances of successfully delivering financial services to the target population. For Mexico, it comes in the form of a domestic convenience store chain with an unparalleled geographic footprint. In India, the strategy capitalizes on previous government-led financial inclusion efforts. In Indonesia, government coordination and public education help to target an as-of-yet overlooked population.

Other geographies will offer similar footholds. In many developing nations, agricultural cooperatives and other farming initiatives are the first attempts to alleviate poverty. Supporting these efforts and offering blockchain solutions to fair-trade cooperatives, agricultural insurance, and forward contract agreements for crop output could all function across a variety of markets.

There are many voices in the crypto-asset community and many competing visions for the future of decentralized finance, but more than enough see the positive impact this technology can have on society and – hopefully – the drive to fulfill these ambitions.

II. Industry Overview

It would be difficult to identify a moment in the history of cryptocurrency as dynamic as the present. Cryptocurrency inflows reached an all-time high watermark of \$4.5bn in 1Q 2021¹ and Coinbase, a prominent US-based crypto-asset exchange, saw all-time highs with 6.1mm active users and \$1.8bn of revenue in the same period.² Consumers can look forward to leveraging new payments applications through platforms such as Bakkt, a digital wallet which can be used to

¹ Chavez-Dreyfuss, Gertrude. “Cryptocurrency inflows hit all-time high of \$4.5 billion in first quarter: Coinshares”. Reuters. April 6, 2021. <https://www.reuters.com/article/us-crypto-currency-inflows/cryptocurrency-inflows-hit-all-time-high-of-4-5-billion-in-first-quarter-coinshares-idUSKBN2BT2U8>

² Onaleye, Tomiwa. “Bitcoin Rally Sees Coinbase Rake in \$1.8bn Revenue in Q1 as Active Users Hit 6.1 million”. April 7, 2021. <https://technext.ng/2021/04/07/bitcoin-rally-sees-coinbase-rake-in-1-8bn-revenue-in-q1-as-active-users-hit-6-1-million/>

make payments at Starbucks³, as well as the likely myriad applications to emerge following the news that Visa, the global transactions network, would begin to process payments settled in cryptocurrency.⁴

Not all news has been good news, however – the increased adoption of cryptocurrency has also ushered in a host of new risks. Consumers face dangers of uninsured accounts drained by malicious actors – such as the Brooklyn lawyer whose nearly \$100,000 of digital assets was drained from his Coinbase account last year⁵ or the individuals who lost at least \$1.6mm of crypto-assets through “imposter” applications which were able to access crypto-asset wallets.⁶ In fact, the UK government reported a 57% increase in cryptocurrency-related scams in 2020.⁷ These are in addition to the previously known risks of money-laundering or terrorism-financing, such as the documented use of cryptocurrencies to facilitate payments to ISIS and Al-Qaeda⁸ as well as alleged cryptocurrency payments to those who participated in the failed coup attempt on January 6th.⁹

³ Businesswire. “Bakkt Launches Digital Wallet, Bakkt App, to Manage All Forms of Digital Assets, Debuting with Starbucks, GolfNow, and Best Buy Among Other Marquee Brands. March 30, 2021.

<https://www.businesswire.com/news/home/20210330005401/en/Bakkt-Launches-Its-Digital-Wallet-Bakkt-App-to-Manage-All-Forms-of-Digital-Assets-Debuting-with-Starbucks-GolfNow-and-Best-Buy-Among-Other-Marquee-Brands>

⁴ Hussain, Noor Zainab. “Exclusive: Visa moves to allow payment settlements using cryptocurrency.” Reuters. March 29, 2021. <https://www.reuters.com/article/us-crypto-currency-visa-exclusive/exclusive-visa-moves-to-allow-payment-settlements-using-cryptocurrency-idUSKBN2BL0X9>

⁵ Browning, Kellen. “Coinbase Users Say Crypto Start-Up Ignored Their Pleas for Help”. New York Times. March 24, 2021. <https://www.nytimes.com/2021/03/24/technology/coinbase-bitcoin-complaints.html>

⁶ Albergotti, Reed. “He believed Apple’s App Store was safe. Then a fake app stole his life savings in bitcoin. The Washington Post. March 30, 2021. https://www.washingtonpost.com/technology/2021/03/30/trezor-scam-bitcoin-1-million/?utm_medium=social&utm_source=twitter&utm_campaign=wp_main

⁷ Mellor, Sophie. “Reflecting crypto craze, crypto-related scams spiral higher in the U.K.” Fortune. April 6, 2021. <https://fortune.com/2021/04/06/crypto-scams-uk-cryptocurrency/>

⁸ De, Nikhilesh. “Crypto Use in Terrorism ‘a Growing Problem,’ Yellen Says”. Coindesk. February 10, 2021. <https://www.coindesk.com/crypto-use-in-terrorism-a-growing-problem-yellen-says>

⁹ Porter, Tim. “The FBI is probing whether foreign governments, groups or individuals funded Capitol rioters using Bitcoin, says report.” Business Insider. January 17, 2021. <https://www.businessinsider.com/fbi-investigates-foreign-bitcoin-funding-for-capitol-rioters-nbc-news-2021-1>

In response to these risks, world governments have adopted a variety of positions. While India has proposed an outright ban on all crypto-assets¹⁰, China has taken the bold step of issuing the first Central Bank Digital Currency, the Cyber Yuan.¹¹ While there have been no definitive regulatory rulings from the United States, there is a growing sense that crypto-assets are here to stay and that aspects of blockchain and digital currencies might form the basis of a new payments system and financial architecture.¹² The industry has taken notice, with major financial firms such as Fidelity, Square, and Coinbase launching the Crypto Council for Innovation.¹³ It can be expected that such private market activity may increase the sense of urgency for regulators to act – all while shaping the future of cryptocurrency.

This dynamism, while intellectually invigorating, poses a unique set of challenges for an academic paper bound by a fixed end-date for the semester. At times, the process has felt like chasing a moving target – and as such we offer the general caveat that industry and regulatory perspectives can change at a moment's notice. Short-term regulatory volatility aside, we view the strategies identified herein as consistent with long-term trends in the crypto-asset space. We take a broad understanding of the definition of cryptocurrency and crypto-asset, allowing for the inclusion of “household” names such as Bitcoin and Ethereum, lesser-known coins, stable-coins of all varieties, and Central Bank Digital Currencies (CBDCs). Regulatory decisions will likely

¹⁰ Buckland, Kevin, Ponthus, Julien, and Chavez-Dreyfuss, Gertrude. “Bitcoin falls after weekend record high as India considers a ban”. Reuters. March 16, 2021. <https://www.reuters.com/article/us-crypto-currency-bitcoin/bitcoin-falls-after-weekend-record-high-as-india-considers-a-ban-idUSKBN2B70F0>

¹¹ Areddy, James T. “China Creates Its Own Digital Currency, a First for Major Economy.” The Wall Street Journal. April 5, 2021. <https://www.wsj.com/articles/china-creates-its-own-digital-currency-a-first-for-major-economy-11617634118>

¹² PYMTS. “Boston Fed’s Cunha On Building A Payments Network For The ‘Next 100 Years’”. April 5, 2021. <https://www.pymnts.com/cryptocurrency/2021/exclusive-boston-feds-cunha-looks-toward-practical-side-of-crypto/>

¹³ Baer, Justin. “Fidelity, Square, Coinbase Launch Bitcoin Trade Group.” The Wall Street Journal. April 6, 2021. <https://www.wsj.com/amp/articles/fidelity-square-coinbase-launch-bitcoin-trade-group-11617710402>

shape which of these varieties of crypto-assets will be most applicable in the market, but we feel secure in the understanding that some (or many) of these varieties will persist in the long run.

III. Regulatory Landscape

Understanding the regulatory landscape of the cryptocurrency industry both within the United States and in economies around the world is critical for its use as an innovation for financial inclusion. What is vital for cryptocurrency innovators shaping the future to comprehend is that while some areas of cryptocurrency operation have established regulatory frameworks within the US, the exponential growth of the sector and the sheer diversity of the business endeavors undertaken by blockchain-related companies makes the regulatory landscape quite fluid as a variety of state and federal regulators attempt to litigate its multifunctional nature.

The Regulatory Definitions of Cryptocurrencies and Blockchain Products:

Money Remitters: Cryptocurrency exchanges, recognized by regulators as money remitters or *Money Services Businesses (MSBs)*, are overseen by both state departments of financial services¹⁴ and the Internal Revenue Service (IRS), as well as being bound by MSB and Virtual Currency guidance from FinCEN such as the well-established *Travel Rule*¹⁵ and new “Unhosted Wallet” reporting guidance released for public comment in January 2021.¹⁶

¹⁴ Virtual Currency Businesses: Virtual Currencies. (n.d.). Department of Financial Services. https://www.dfs.ny.gov/apps_and_licensing/virtual_currency_businesses/virtual_currencies

¹⁵ MoneyLaundering.com: Changes in Bank Regulations, Financial Compliance Regulations, Regulation Banks, Money Laundering Cases, Anti Money Laundering, Money Laundering Training. (n.d.). ACAMS. <https://www.moneylaundering.com/news/fincen-travel-rule-tests-cryptocurrency-industry/>

¹⁶ Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers. (2019). Financial Action Task Force. <https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets.html>

Securities Brokers/Dealers: The Securities & Exchanges Commission (SEC) and Financial Institution Regulatory Authority (FINRA)¹⁷ have issued guidance related to digital asset securities as well as initial coin offerings, establishing its authority in the sector.¹⁸ Senior SEC officials have publicly expressed the view that Bitcoin and Ether—the world’s two largest cryptocurrencies in circulation—are not securities for the purposes of regulation, largely because they are not centrally controlled.¹⁹ However, many other cryptocurrencies were not completely decentralized in their initial incarnation or are somewhat centralized in their current operational nature and SEC digital currency guidance has suggested that these cryptocurrencies could meet the prongs of the Howey Test and therefore be defined as securities.

Commodities: The Commodities Futures Trading Commission (CFTC) has successfully claimed that cryptocurrencies can be legally defined as commodities under the Commodity Exchange Act and are therefore subject to the CFTC’s enforcement power—a power that the agency has exercised on numerous occasions since 2015 in swaps, futures, options, and derivatives markets.²⁰

Currency: The Office of the Comptroller of the Currency (OCC) has issued guidance for banking institutions regarding best practices for collaboration with cryptocurrency companies, including

¹⁷ Cryptocurrencies | FINRA.org. (2021). FINRA. <https://www.finra.org/investors/learn-to-invest/types-investments/initial-coin-offerings-and-cryptocurrencies/cryptocurrencies>

¹⁸ SEC.gov | Statement on Cryptocurrencies and Initial Coin Offerings. (2017, December 11). SEC. <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>

¹⁹ Giancarlo, C., Bahlke, C., & Gallagher, F. W. (2021, April 9). Cryptocurrencies and US securities laws: beyond bitcoin and ether. *International Financial Law Review*. <https://www.iflr.com/article/b1m2pm9g4n65mk/cryptocurrencies-and-us-securities-laws-beyond-bitcoin-and-ether>

²⁰ The CFTC’s Approach to Virtual Currencies. (2020). *The National Law Review*. <https://www.natlawreview.com/article/cftc-s-approach-to-virtual-currencies>

guidance on custodial responsibilities and outlining their ability to use Independent Node Verification Networks and transact with customers using stable-coins.²¹

The constantly expanding universe of definitions for cryptocurrency have made for a somewhat unpredictable regulatory environment, as overlapping regimes each seek to define the sector on their own terms. Some industry leaders believe that a dedicated agency for cryptocurrency and blockchain technology is necessary to effectively regulate the sector, however, this presents its own challenges as such an agency would be tasked with tackling a variety of different types of regulatory examination all at one time. There is some hope on the horizon for cooperation among regulators, one example being in 2019 when FinCEN, the SEC, and the CFTC issued a joint statement expressing their shared commitment to making sure cryptocurrency-related financial institutions abided by the rules of the Bank Secrecy Act (BSA)²², but the regulatory terrain still makes risk-taking somewhat perilous as innovators have one or more explicit regulators with which they must contend but also have concerns about additional scrutiny as they expand their product lines.

When examining the barriers to international expansion, the regulatory framework does present difficulties, most notably a potential regulatory mismatch and definitional differences as cryptocurrency companies expand to new markets. The most recent draft guidance on Virtual Assets (VAs) and Virtual Asset Service Providers (VASPs) issued by the Financial Action Task Force in March 2021 clarifies their definitions of VAs and VASPs and reiterates the need for countries to both have a process for registering VASPs and a competent authority for supervising

²¹ Lennon, H. (2021, January 5). OCC Regulator Implements Groundbreaking Cryptocurrency Guidance For Banks And The Future Of Payments. Forbes. <https://www.forbes.com/sites/haileylennon/2021/01/04/occ-regulator-implements-groundbreaking-cryptocurrency-guidance-for-banks-and-the-future-of-payments/?sh=7690ce5f27e9>

²² SEC.gov | Leaders of CFTC, FinCEN, and SEC Issue Joint Statement on Activities Involving Digital Assets. (2019, October 11). SEC. <https://www.sec.gov/news/public-statement/cftc-fincen-secjointstatementdigitalassets>

their activities. Furthermore, the guidance provides greater clarity on VASP compliance with the Travel Rule and counterparty due-diligence between VASPs. An encouraging aspect of the guidance are new proposed mechanisms for cross-border information sharing among VASP authorities around the world and with the private sector, which may assist in creating greater education related to the sector and help to identify threats.²³ One of the largest vulnerabilities identified in the new FATF draft guidance is the danger posed by decentralized exchanges, “Unhosted Wallets”, and Peer-to-Peer transactions, much like the United States’ own proposed rule.

While FATF has assisted in creating better uniformity among countries in oversight and registration for Virtual Asset Service Providers, there is still a risk that cryptocurrency companies seeking to expand could enter a complex regulatory environment like that of the US. However, now is a unique time to seek out regulatory partnerships with governments as they work to abide by FATF’s new guidelines such that virtual currency rules on the country level can be conducive to innovation. Although not all countries will present the multifunctional regulatory challenges of the United States, it is important to note that if cryptocurrency companies want to act as a primary resource for customer exchange in cross-border funds flows they should understand the potential regulatory exposure posed by expanding their product-lines into areas such as digital asset investments, ICOs, or stable-coins.

Another critical note is that while many jurisdictions such as China seek to ban cryptocurrency exchanges, heat-map analysis indicates that mining processes²⁴, peer-to-peer transactions, and

²³ J. (2021, March 19). Analysis: Proposed FATF Guidance for Virtual Assets and VASPs. CipherTrace. <https://ciphertrace.com/analysis-proposed-fatf-guidance-for-virtual-assets-and-vasps/>

²⁴ Cambridge Bitcoin Electricity Consumption Index (CBECI). (2021). Cambridge Bitcoin Electricity Consumption Index (CBECI). https://cbeci.org/mining_map

decentralized exchanges continue to exist within the country, making the ban effectively useless. A strong argument for allowing cryptocurrency businesses into a new market and creating a healthy regulatory infrastructure is that if this is not available customers will still transact, but the officials will have no way to monitor them, leaving their citizens at the mercy of fraud and giving illicit actors cover to continue operating. Cryptocurrency companies can and should act as emissaries and educators showing government leaders that crypto is here to stay and the best path towards prosperity is to protect against its risks, harness its potential, and use it to create financial services to help people from all walks of life.

IV. Country-Specific Use Cases

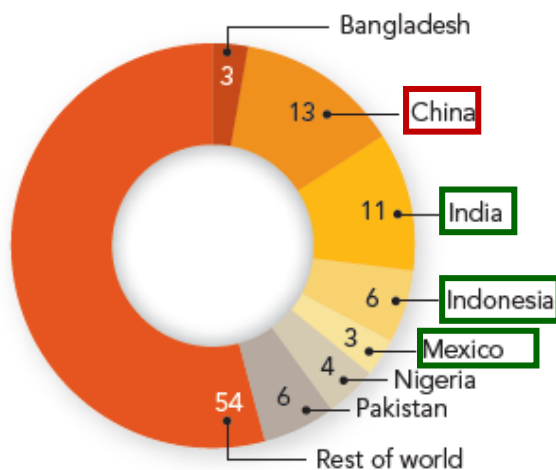
Country Selection Process

Only seven economies account for ~50% of unbanked adults globally:

FIGURE 2.1

Nearly half of all unbanked adults live in just seven economies

Adults without an account by economy (%), 2017



Source: Global Findex database.

Our selection process considered each nation's overall unbanked population, its degree of financial development (factoring in both domestic and international ties), as well as the overall diversity between all case studies.

China seemed an obvious candidate, but upon further evaluation it was determined that the degree of regulatory restrictions would prohibit any actor other than the Chinese government itself from operating in the space. China offers an interesting model to consider, but actionability of recommendations would be strained by the Chinese Communist Party's blanket ban on cryptocurrency exchanges, initial coin offerings, and transactions between cryptocurrency and fiat currency.²⁵

India, despite a vocal opposition in government, seemed an interesting case study given its size and a perceived unlikelihood of the country establishing a China-like dominance in the space. Indonesia and Pakistan were next, with Indonesia winning out due to diversity of landscape and juxtaposition with India. Lastly, Mexico was chosen given its strong remittance relationship with and proximity to the US – along with key opportunities to partner with adjacent industries along the way.

Lastly, we recognize that advanced financial architectures are not built overnight and – as such – the first stage of crypto-asset adoption may look fairly similar across geographies. In short: remittances and peer to peer transfers are the likely candidates for any entry into a global market. The operating strategy and potential second and third-order developments in each market, however, are likely to exhibit far stronger divergence.

²⁵ Regulation of Cryptocurrency: China. The Library of Congress.
<https://www.loc.gov/law/help/cryptocurrency/china.php>

By no means are these three country case studies collectively exhaustive – but each could serve as a crucial stepping-stone in establishing a global cryptocurrency presence, which can then have a domino effect – spilling over into countless neighboring geographies.

Mexico

Mexico: Introduction

Mexico has one of the largest populations of unbanked individuals in the world, with only 37% of adults possessing an account.²⁶ However, Mexico's technological infrastructure along with its proximity to and relationship with the United States offer exciting opportunities for cryptocurrency and blockchain technology to expand access.

Unbanked populations in Mexico face geographical, technological, and cultural obstacles. To begin with, it is often unprofitable for financial institutions to operate in the rural areas where a substantial portion of the unbanked live.²⁷ Moreover, while Mexico does have a sophisticated telecommunications infrastructure and high rates of mobile phone usage, the unbanked remain unable to access requisite smartphone technology or digital-only financial solutions.²⁸ Finally, a legacy of instability and corruption in the financial system has reinforced a cash-based culture wherein individuals exclude themselves from financial institutions²⁹ – even when it leaves them more vulnerable to theft and makes it more difficult to transfer, save, or borrow money.

As unyielding as these obstacles may seem, cryptocurrency solutions may offer a novel approach for improving financial access for this population. Leveraging cryptocurrency to make remittance transactions faster and cheaper can provide an entry point to the financial system, whereby previously unbanked populations might then be able to access digital savings and loans products. A stable-coin based alternative to traditional banking services, powered by novel risk

²⁶World Bank Group, "The Global Findex Database", World Bank Group, 18th of March 2021, https://globalfindex.worldbank.org/sites/globalfindex/files/2018-04/2017%20Findex%20full%20report_0.pdf

²⁷ Eschenbacher, Stefanie and Irrera, Anna. "Mexico pushes mobile payments to help unbanked consumers ditch cash." Reuters. February 19, 2019. <https://www.reuters.com/article/us-mexico-fintech-unbanked/mexico-pushes-mobile-payments-to-help-unbanked-consumers-ditch-cash-idUSKCN1Q80FN>

²⁸ Ibid

²⁹ Ibid

assessment methodologies through innovations in digital identification, can build upon pre-existing, informal networks of savings to collateralize community trust and solve the issue of financial inclusion for this population.

The US-Mexico Remittances Market

The US-Mexico remittances market is the third largest in the world – with over \$40bn transferred in 2020.³⁰ This market will continue to expand due to political and economic conditions³¹ but the mode of transfer is ripe for disruption. Traditional services such as Western Union maintain high transfer fees – nearly 10% for a pure cash transfer³². As mobile money transfer services increasingly offer faster, cheaper, and more efficient ways to send money, the opportunity to displace traditional service providers will grow.

Remittances can be expected to remain strong, especially given an uneven recovery post COVID-19. The US Dollar to Mexican Peso exchange rate remains ~10% higher than pre-COVID levels³³ and with strong stimulus packages in the US, the economy can be expected to rebound at a faster pace than other geographies (including Mexico) over the course of 2021. All these factors create optimal conditions for steady to increased remittances flows.

The remittances market has already seen cryptocurrency solutions emerge – and with strong consumer adoption. Ten percent of 2020 remittances were sent via an agreement between Ripple, a US-based cryptocurrency exchange, Moneygram, a US-based financial transfer service

³⁰ Harrup, Anthony. “Mexicans in U.S. Sent Record Remittances Despite COVID-19 Pandemic”, Wall Street Journal, 18th of March 2021, <https://www.wsj.com/articles/mexicans-in-u-s-sent-record-remittances-despite-covid-19-pandemic-11610110800>

³¹ Grimble, Tristan. “Growth of the U.S. - Mexico remittance corridor”, BBVA, 19th of March 2021, <https://www.bbva.com/en/growth-u-s-mexico-remittance-corridor/>

³² www.westernunion.com

³³ Bloomberg Finance, “USD:MXN” Bloomberg, 25th of March 2021, <https://www.bloomberg.com/quote/USDMXN:CUR>

provider, and Bitso, a Mexican cryptocurrency exchange.³⁴ This agreement was suspended, however, due to the SEC lawsuit against Ripple (for reasons unrelated to this remittances activity). As the lawsuit addresses internal business/ corporate finance practices and not market applications, it is not expected that this would preclude other players from working within the US-Mexico remittance market. Although the outcome of the lawsuit is still unclear, the remittance market remains incredibly attractive posing opportunities on both sides of the border with differentiated value propositions for each side. In fact, this temporary dislocation of Ripple from the market may prove an optimal entry point to the market for another cryptocurrency exchange.

Mexico: Partnership/ Joint Venture Opportunities

Targeting remittance payments offers a compelling opportunity for entering the US-Mexico space and a joint venture with key American or Mexican retailers may offer further benefits – both short and long term. Specifically, these partnerships may enable (1) reduced investment cost and time-to-market, (2) opportunities for long-term service expansion, (3) increased consumer trust, and (4) more favorable regulatory treatment.

Potential partners include popular convenience store chains such as Mexico-based Oxxo or the international 7-Eleven. US-based Walmart also boasts a compelling geographical footprint in Mexico with the added bonus of their recent foray into the financial technology space through their US-based unit, Hazel.³⁵

³⁴ Grimble, Tristan. “Growth of the U.S. - Mexico remittance corridor”, BBVA, 19th of March 2021, <https://www.bbva.com/en/growth-u-s-mexico-remittance-corridor/>

³⁵ Boyle, Matthew and Patton, Leslie. “Walmart Files for Trademark for Fintech Unit: ‘Hazel by Walmart’”. Bloomberg. April 7, 2021. <https://www.bloomberg.com/news/articles/2021-04-07/walmart-files-for-trademark-for-fintech-unit-hazel-by-walmart>

The efficiency of cryptocurrency versus traditional money transfer services as well as the convenience of integration with a chain such as Oxxo would prove fruitful for all parties.

Consumer trust in the established brand and local-market history would potentially engender favorable market treatment and regulation. Additionally, the convenience of co-location in these stores could enable back-end services such as bill-pay (*e.g.*, electricity, mobile phones) as well as the purchase of other goods and services.

Consumer trust is especially important in a space as polarizing as cryptocurrency. Although there is established interest in cryptocurrency in Mexico (As of 2020, there were ~2.5mm cryptocurrency accounts in Mexico, compared to ~400k active stock brokerage accounts³⁶), public perception may still reflect the volatility of Bitcoin as opposed to the possibility of stable financial services through other offerings.

Even if a JV with a trusted name such as Oxxo or 7-Eleven were to be established, barriers such as low financial literacy and a rigid Fintech law would remain. Mitigants could once again take advantage of the partner firms' history and geographic footprint. Financial education campaigns could be launched from the stores and, by leveraging pre-existing regulatory relationships, favorable readings of the country's financial architecture might be obtained.

Mexico: Savings & Loan Applications

Beyond the remittances space, cryptocurrency might also play a valuable role in savings and loans. The Central Bank of Mexico, Banxico, has already attempted to develop a digital currency through its Cobro Digital (CoDi) mobile money platform. Adoption of the technology, which

³⁶ Sandali Handagama, "Why it's time to pay attention to Mexico's Booming Crypto Market", Coindesk, 20th of March 2021, <https://www.coindesk.com/mexicos-quiet-crypto-boom>

utilizes QR codes for fiat transfers between bank accounts, has not met expectations.³⁷ Given that it relies on commercial bank accounts for users to transact, it inherently fails to boost inclusion among the most financially vulnerable – those who do not have a bank account to begin with.

Cryptocurrency solutions could rely more heavily on mobile phone technology – foregoing the traditional fiat currency transfer architecture in Mexico, SPEI.³⁸ Stable-coins, including those linked to fiat currency, might help replicate the benefits of a traditional transfer system while eliminating risk associated with the volatility of many cryptocurrencies. Exchanges such as Coinbase, Binance, and Gemini have all made these stable-coins a reality.³⁹

With more flexible architecture, these transfer systems might even be able to more easily link into additional financial services – such as savings and loans products. By creating a more efficient system for banking services, incentives might be in place for partial or full adoption by the currently unbanked.

Mexico: An Integrated Use Case – Informal Savings Practices

These new technologies can build upon centuries-old practices of informal savings and loans. Known as *Tandas* or *Cundinas*, rotational savings groups have long existed in Latin America and around the world as a means to save money.⁴⁰ These trust-based systems operate by collecting

³⁷ López, Mariana. “Government’s payment platform CoDi has yet to take off in Mexico.” Contxto. July 1, 2020. <https://contxto.com/en/mexico/payment-codi-mexico/>

³⁸ <https://www.banxico.org.mx/services/interbanking-electronic-payme.html#:~:text=This%20system%20allows%20money%20to,bank%20deposit%20accounts%20almost%20instantly>

³⁹ Sun, Mengqi. “OCC Says Banks Can Use Stablecoins in Payments”. The Wall Street Journal. January 7, 2021. <https://www.wsj.com/articles/occ-says-banks-can-use-stablecoins-in-payments-11610068515#:~:text=The%20OCC%20in%20its%20guidance,financial%20transactions%2C%20including%20stablecoin%20transactions>

⁴⁰ Meraji, Shereen Marisol. “Lending Circles Help Latinas Pay Bills and Invest”. NPR. April 1, 2014. <https://www.npr.org/sections/codeswitch/2014/04/01/292580644/lending-circles-help-latinas-pay-bills-and-invest>

sums of money from community members on a regular basis and paying out larger sums to group members on a rotational basis – in order to give loans or facilitate large purchases. Financial inclusion experts have noted the manner in which these community-based institutions assist in the creation of wealth for poor communities and allow them to thrive in locations deemed unprofitable by traditional banking standards.⁴¹ Cryptocurrency technology companies have the opportunity to build upon and digitize these practices – helping communities maximize their return and safeguard their cash-based savings from theft. In the future, the systems of collective security created by *Tandas* or *Cundinas* could be used to collateralize community lending, a revolutionary concept that echoes the collective trust in the blockchain itself.

Mexico: Regulatory Barriers & Opportunities

Although there is tremendous potential for cryptocurrency interventions for financial inclusion in Mexico, there are still a variety of challenges that might hamper innovation in the space. The most difficult is navigating Mexico’s recently enacted Financial Technology Institutions Law (Fintech Law) implemented in 2018. The law was designed to offer a sandbox environment for both traditional fintechs and blockchain-based solutions to experiment with new approaches to inclusive finance, but the guidelines new commercial ventures must follow are quite onerous for a start-up environment and have taken nearly two years to materialize. The first fintech licensed by the government of Mexico to operate, NVIO Pagos México, a subsidiary of Bitso, was granted their license in January 2020 and started operations in early 2021⁴², but 85 other fintechs

⁴¹ Ortiz Reynaga, Eduardo and Carraro, Maelis. “Fintech’s unfulfilled promise: why many Mexicans remain excluded.” Catalyst Fund. April 27, 2020. <https://bfaglobal.com/catalyst-fund/insights/fintech-unfulfilled-promise-many-mexicans-remain-excluded/>

⁴² Ng, Chee Meng. “Microcapital Brief: Nvio Pagos México Awarded 1st Fintech License from Comisión Nacional Bancaria y de Valores”. MicroCapital. March 3, 2020. <https://www.microcapital.org/microcapital-brief-nvio-pagos-mexico-awarded-1st-fintech-license-from-comision-nacional-bancaria-y-de-valores/>

linger in the pipeline, many currently operating without the official approval of the government because their operation predated the passing of the Fintech Law.⁴³

What appears most concerning about the new regulations are the capital requirements necessary for operation and its rejection of the Fintech-as-a-Service (FaaS) business model, which many young fintech companies have utilized to begin operations without becoming a full-fledged regulated entity. Under the FaaS structure, instead of becoming banking institutions, fintech companies partner with banks to provide services using Application Programming Interfaces (APIs) or software applications for managing funds that exist on top of an already regulated banking entity. The Mexican Fintech Law stipulates that only regulated banks or fintechs can represent themselves as financial services providers to the public, which effectively eliminates the FaaS model as a pathway to becoming a legitimate fintech. Although the law does provide for a somewhat Open API model, it still seeks to regulate fintechs themselves separate from banking institutions they may partner with, which could hinder growth.⁴⁴

What is exciting about the regulatory landscape in Mexico today is that the first fintech licensed under the new Fintech Law is a blockchain company, indicating the country's understanding of the potential of this unique market and hope for other cryptocurrency platforms that are attempting to branch out from the American market into Mexico. Furthermore, the Fintech Law, while still requiring Know Your Customer (KYC) standards for new fintechs, approaches the sector with a tiered due diligence perspective, with one set of procedures for customers holding

⁴³ Staschen, Stefan and Kerse, Mehmet. "Is Mexico's 'Fintech Law' Leading a New Trend in Fintech Regulation". CGAP. January 20, 2021. <https://www.cgap.org/blog/mexicos-fintech-law-leading-new-trend-fintech-regulation>

⁴⁴ GreenbergTraurig. "FAQs Concerning Mexico's New FinTech Law". April 3, 2018. <https://www.gtlaw.com/en/insights/2018/4/mexicos-new-fintech-act-faqs#main-content>

under \$250USD per month and another for those holding under \$985USD per month.⁴⁵ These procedures are an exciting nod to inclusion as low-income customers are less likely to hold the documents requested in more strenuous KYC reviews.

However, one development that cryptocurrency platforms should be developing more robustly are digital identification solutions for low-income consumers that remove the limitations of the current KYC landscape. As of now, conversations about digital ID innovations are only taking place in abstract, but a report by McKinsey estimates that the use of digital ID could boost GDP around the world by as much as 13% by 2030.⁴⁶ Most conceptions of digital ID focus on its provision by governments or financial services providers as a means to identify people through a digital signature such as a password, a PIN, security tokens, smart devices, or biometric data. However, there is yet to be a successful practical implementation for the concept and many assess that it has substantial risks for individual privacy and potential corruption. However, leaders in the crypto space should be looking in this direction, as the decentralized nature of blockchain technology could offer a remedy to many of the concerns raised by a digital ID system and unlock opportunity for millions of people around the world.

Conclusion

With understood market demand, proof-of-concept through the Ripple/Moneygram/Bitso agreement, and emerging favorable regulatory trends, and an opportunity to displace outdated rivals, the Mexican market is ripe for further penetration by cryptocurrency and blockchain

⁴⁵ Arce Lozano, René and Dávalos, Luis. "Mexico: The Mexican Fintech Law: What International Entities Need To Know". Mondaq. April 12, 2019. <https://www.mondaq.com/mexico/fin-tech/798318/the-mexican-fintech-law-what-international-entities-need-to-know>

⁴⁶ McKinsey Global Institute. "Digital Identification: A key to inclusive growth". April 17, 2019. <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digital-identification-a-key-to-inclusive-growth#>

technology. With an introduction through the US-Mexico remittances space and/or the domestic digital transfers space, a body of financial services can be established to serve a wider population set than those currently reached by present-day financial architecture.

India

Unbanked Population & Current Government Schemes

A Sketch of the unbanked/underbanked Population

India has the world's second-largest unbanked/ underbanked population. According to the World Bank, about 20% of India's adults (~190mm people) have no access to financial services, including banks.⁴⁷ For those with bank accounts, over half are classified as inactive – meaning the owner did not make a deposit or withdrawal within the past year.⁴⁸ Moreover, there is a high degree of overlap between the unbanked and underbanked an India's rural populations – accounting for ~65% of the country.⁴⁹

While cash plays an outsized role in financial transactions (including payments for wages, utility bills, and taxes⁵⁰), indirect arrangements rely on family, friends, or third-parties to facilitate payments.⁵¹

Current Government Plans to Help the Unbanked

The Indian government has taken steps to boost financial inclusion. In 2014, it launched the Pradhan Mantri Jan Dhan Yojana (PMJDY) program to extend banking networks and encourage new account creation.⁵² The government also created a national, biometric-linked identification program for all citizens – called “Aadhar” – to facilitate KYC processes for financial services

⁴⁷ Asli Demircuc-Kunt et al., *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution* (Washington, DC: World Bank, 2018), <https://doi.org/10.1596/978-1-4648-1259-0>.

⁴⁸ Ibid

⁴⁹ Rural population (% of total population) - India | Data, World Bank, (2021), <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=IN>

⁵⁰ Abhijit Matkar, Devbrat Kumar, and Ayan Roy Choudhary, “Payments Banks Could Be Unbanked India's Banking Solution” (Nielsen, 2018), <https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/nielsen-featured-insights-payments-banks-unbanked-indias-banking-solution.pdf>.

⁵¹ Ibid

⁵² RBI, “National Strategy for Financial Inclusion 2019-2024” (Reserve Bank of India, January 10, 2020), <https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1154>.

providers.⁵³ Finally, the Reserve Bank of India (RBI) took several steps to differentiate banking licenses in order to simplify the process for entities wishing to serve as the “last mile delivery” of financial services to rural areas.^{54, 55, 56}

A Crypto Solution

The Call for A Better Solution

While the efforts undertaken by the Indian government have made meaningful strides in creating a more efficient foundation for financial services, there is still much to be achieved. Even when financial services providers are able to access rural populations, their services are often limited. A business entity licensed to offer restricted depository services to rural villagers, for example, may still be prevented from providing loans or other credit products.⁵⁷ Even if they were licensed to offer such products, borrower due diligence and absence of an efficient repayment-tracking system disincentivize participation in this space.⁵⁸ Rural populations must also contend with inefficient delivery of these minimal services – often encountering issues such as ATM malfunctions or inadequate customer support from financial institutions.⁵⁹ A more efficient system, designed to operate under these less formalized conditions, could prove to be the answer.

⁵³ Unique Identification Authority of India, “My Aadhaar,” Unique Identification Authority of India | Government of India, accessed March 28, 2021, <https://uidai.gov.in/>.

⁵⁴ Abhijit Matkar, Devbrat Kumar, and Ayan Roy Choudhary, “Payments Banks Could Be Unbanked India’s Banking Solution” (Nielsen, 2018), <https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/nielsen-featured-insights-payments-banks-unbanked-indias-banking-solution.pdf>.

⁵⁵ RBI, “Discussion Paper on Engagement of ‘for-Profit’ Companies as Business Correspondents,” accessed March 28, 2021, https://www.rbi.org.in/scripts/bs_viewcontent.aspx?Id=2234.

⁵⁶ RBI (2020), Ibid

⁵⁷ Matkar, A., Kumar, D., & Choudhary, A. R., “Payments Banks could be Unbanked India’s Banking Solution,” Nielsen, 2018, <https://www.nielsen.com/wp-content/uploads/sites/3/2019/04/nielsen-featured-insights-payments-banks-unbanked-indias-banking-solution.pdf>

⁵⁸ Wall Street Journal, “A Branch Far, Far Away: The Challenges of Banking Rural India. YouTube”, YouTube, 2015b, April 23, <https://www.youtube.com/watch?v=5MHf9R1jryg>

⁵⁹ Wall Street Journal, “Banking on Tablets in Rural India,” YouTube, 2015b, July 16 https://www.youtube.com/watch?v=EpF_YBYv_Hw

An efficient, digital solution – such as that offered by cryptocurrency technology – would play well with India’s favorable telecommunications infrastructure. India boasts the world’s cheapest mobile data.⁶⁰ It is estimated that, by 2022, 830mm individuals will own smartphones.⁶¹ Increasing access to the internet fulfills a key requirement of digital financial solutions via cryptocurrency.

Crypto Savings, Insurance, Lending & Payment Plan (CSILPP) -- A Crypto Solution

As rural populations are currently deprived of more advanced financial services, a comprehensive set of cryptocurrency-based offerings could be used to boost financial inclusion amongst these individuals. A Crypto Savings, Insurance, Lending, and Payment Plan (CSILPP) could be just that solution.

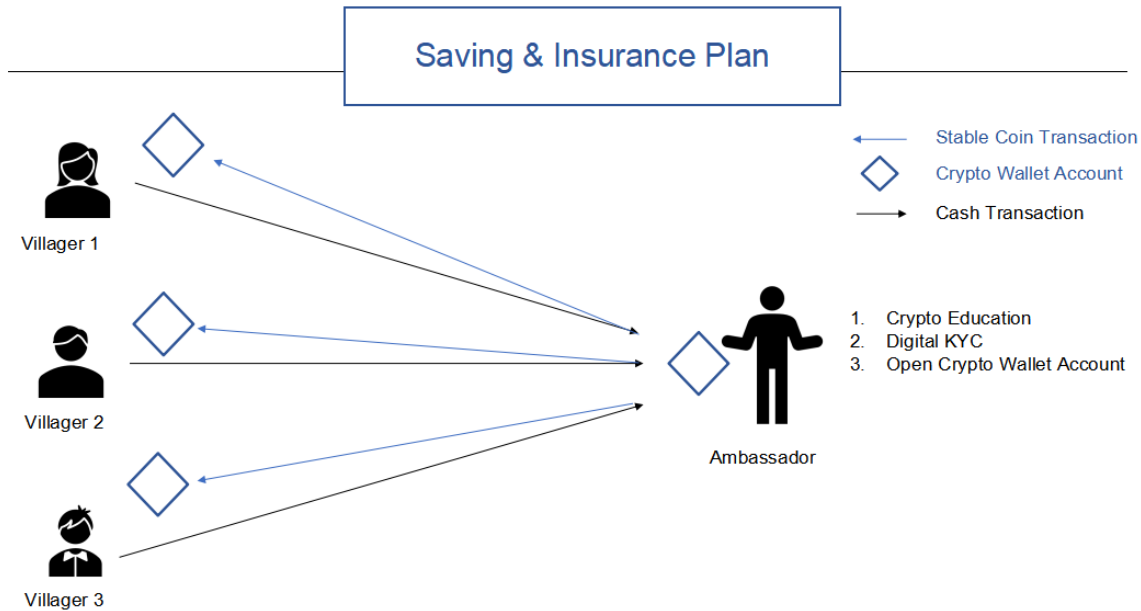
The key to this solution would be a network of Digital Ambassadors who travel from geography to geography, providing financial education and mobile KYC for target populations. These individuals, responsible for multiple villages in a particular rural region, would be responsible for transitioning individuals to cryptocurrency accounts, managing loan origination, and serving as a point of reference for the financial products and services provided.

Each component of CSILPP can be implemented on a standalone basis.

⁶⁰ Hariharan, S, “At \$0.09/GB, India’s data plans cheapest”, The Times of India, (2020, August 25), <https://timesofindia.indiatimes.com/business/india-business/at-0-09/gb-indias-data-plans-cheapest/articleshow/77728709.cms>

⁶¹ ENS Economic Bureau, “ICEA report: 83 crore smartphone users by 2022”, The Indian Express, (2020, July 10), <https://indianexpress.com/article/technology/tech-news-technology/icea-report-83-crore-smartphone-users-by-2022-6499952/>

Saving & Insurance Plan: The Digital Ambassador would visit any given village on a periodic basis and exchange fiat currency for stable-coins – allowing individuals to begin saving in a more secure fashion. Savings may also be incentivized as part of an insurance product.



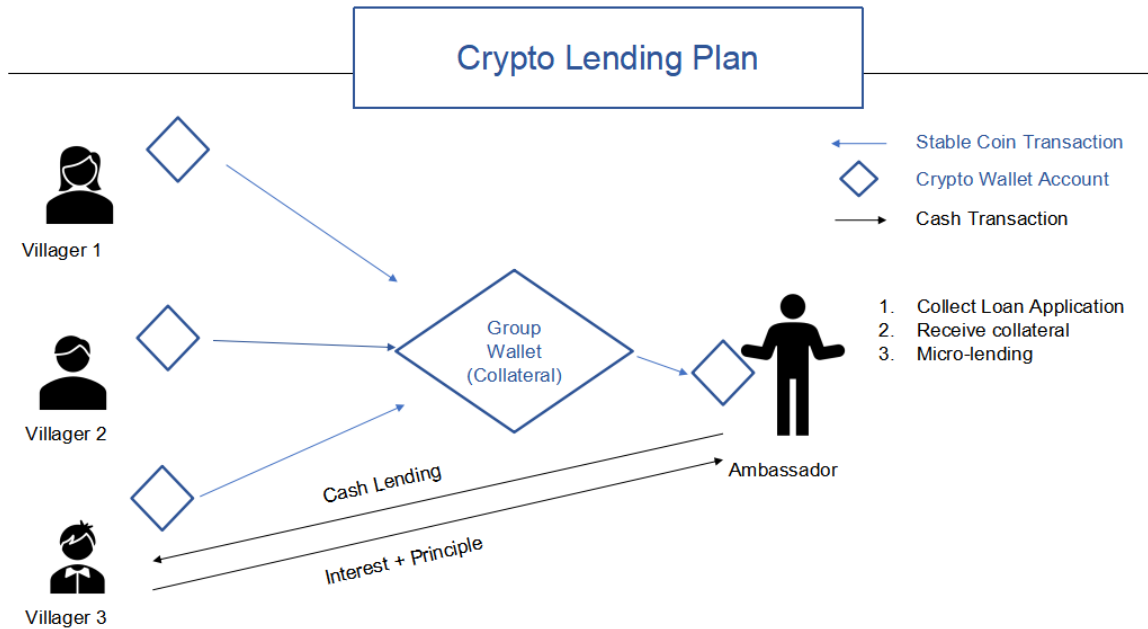
Crypto Lending Plan: Using the Digital Ambassador as a centralized point of contact, community members could leverage their cryptocurrency holdings to collateralize loans to individuals within their geography. The Digital Ambassador would manage disbursement of the loan and monitoring of repayments.

Existing micro-lending efforts have unreasonably high interest rates (24% or more⁶²) – due to credit risk and lack of collateral. A small business loan from the State Bank of India, for example, only costs ~11%.⁶³ Through pooled “credit checks” (based on fellow community-

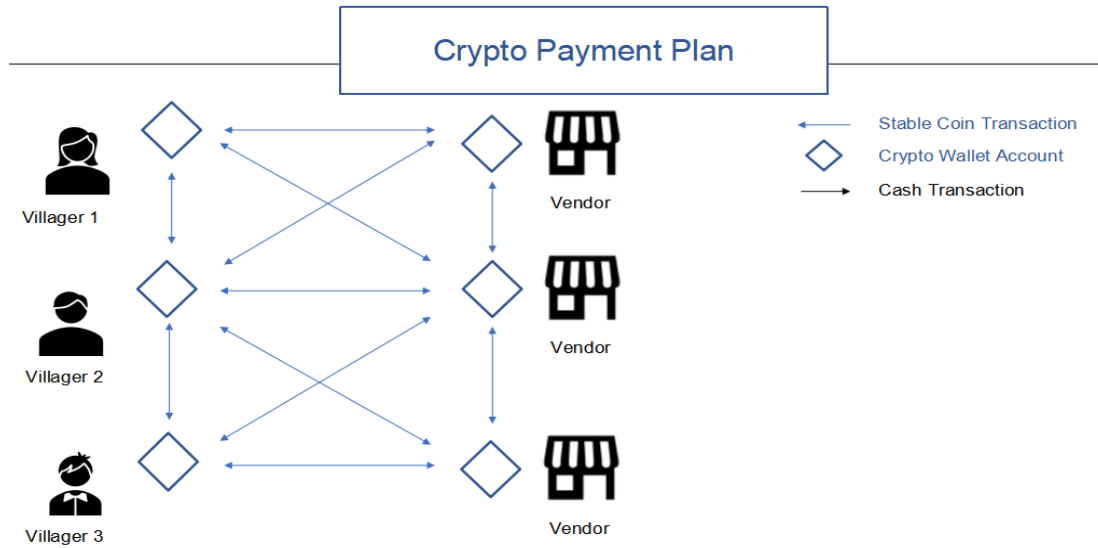
⁶² Vaya India, “About Us. <http://www.vayaindia.com/about-us#>”, (2021, February 17),

⁶³ “MyLoanCare - Compare and Apply Loans & Credit Cards” in India, (2021, March 26), MyLoanCare. <https://www.myloancare.in/business-loan/s>

members' trust) and collateral from collective stable-coin holdings, it should be feasible to bring these interest rates more in line with favorable offerings elsewhere.



Crypto Payment Plan: The Savings & Insurance Plan and Lending Plan both serve as entry points for a broader cryptocurrency ecosystem. Once a sufficient number of individuals are included in the network, a broader push to begin payments – both peer-to-peer and merchant/vendor transactions – could take place.



Digital KYC: As of August 2020, 1.26bn Indian citizens have been assigned a unique 12-digit number, linked to biometric and demographic data, through the Aadhar system. This identification system can be leveraged for the Digital Ambassadors to perform mobile KYC and AML checks on prospective customers. It could also be used to track delivery of various financial literacy and education components to individuals – to measure and ensure progress in the space.

CSILPP integrates various financial products in order to facilitate the adoption of a cryptocurrency solution. With such a design, cryptocurrency companies could boost financial inclusion and lower the count of unbanked individuals in India – leading to untold benefits for both these individuals and future generations.

Concerns: Current Government's Attitude Towards Crypto

A History of Banning Cryptocurrency in India

The history of cryptocurrency in India has been anything but stable. If we trace the recent history of cryptocurrency policy in India⁶⁴, the Indian Central Bank, Reserve Bank of India (RBI), issued a statement on December 24, 2013, stating “Virtual currencies are not backed by a central bank and their value isn’t underpinned by an asset and thus a matter of speculation.” This was the first instance where RBI raised concerns about Crypto in India. It was followed by a second statement on February 1, 2017 stating “It’s thus safe to assume that the crypto boom that followed 2016’s demonetization was an unintended consequence of that particular experiment. The emphasis on digital payments led to a search for alternatives to traditional online banking and drove tech-savvy customers to cryptocurrency exchanges.”

Subsequently, two public interest litigations were filed in the Supreme Court in October and November 2017, one requesting to ban buying and selling cryptocurrencies in India, and the second asking for them to be regulated. Both of them are still pending in the Supreme Court⁶⁵. Followed by that, in November 2017, the government constituted a committee to study issues regarding virtual currencies and recommend actions. Meanwhile in December 2017, the Ministry of Finance compared them to Ponzi schemes. While the committee had not yet finalized reports, on April 6, 2018, the RBI prevented all banks from dealing in virtual currencies and providing services to any organization dealing with cryptocurrencies. This put a severe strain on the

⁶⁴ “Cryptocurrency in India: The past, present and uncertain future”, The Economic Times, (2021, March 9), <https://economictimes.indiatimes.com/tech/trendspotting/cryptocurrency-in-india-the-past-present-and-uncertain-future/articleshow/81410792.cms>

⁶⁵ “Cryptocurrency Regulation in India – A brief history”, ArcticStartup, (2020, December 1), <https://arcticstartup.com/cryptocurrency-regulation-in-india-a-brief-history/>

industry and trading volumes fell by 99%. By August 2018, about 95% of jobs were eliminated in the sector. The decision of the RBI was challenged on May 15, 2018. On the other hand, in July 2019, the committee created in November 2017 submitted its report, wherein it recommended a complete ban on “private cryptocurrencies” in India. The current legislation under discussion barring private cryptocurrencies in India is the direct result of the recommendations of that committee.

Although the government had been taking various measures to curb cryptocurrency usage, on March 4, 2020, the Supreme Court struck down RBI’s banking ban on crypto, terming it unconstitutional. One of the reasons for striking it down was that cryptocurrencies are unregulated but not illegal in India. The cryptocurrency market again turned bullish and saw a boom after this judgement.

However, as the crypto community was celebrating this boom and the country was coming out of the COVID-19 lockdown, the Indian government announced on Jan 29, 2021 that it would introduce a bill to create a central bank backed digital currency and simultaneously ban all private cryptocurrencies. The introduction of the bill read as follows⁶⁶; “To create a facilitative framework for [the] creation of the official digital currency to be issued by the Reserve Bank of India. The bill seeks to prohibit all private cryptocurrencies in India. However, it would allow certain exceptions to promote the underlying technology of cryptocurrency and its uses”. The bill has been named the “Cryptocurrency and Regulation of Official Digital Currency Bill 2021”⁶⁷.

⁶⁶ “Cryptocurrency in India: “The past, present and uncertain future”, The Economic Times, (2021b, March 9), <https://economictimes.indiatimes.com/tech/trendspotting/cryptocurrency-in-india-the-past-present-and-uncertain-future/articleshow/81410792.cms>

⁶⁷ Helms, K, “Indian Official Provides Updates on Crypto Bill and Transition Period for Crypto Holders: Report. Bitcoin News”, (2021, February 16), <https://news.bitcoin.com/indian-official-cryptocurrency-bill-transition-period-crypto-holders/>

The proposed legislation intends to criminalize the possession, sale, issuance, and transfer of the cryptocurrency⁶⁸. The announcement again jolted the industry. If the proposed law is enacted, India would become the first major economy where holding cryptocurrency would be illegal. Even China does not punish holding of cryptocurrency although it has banned mining and trading. In fact, the law recommends jail of up to 10 years for those who mine, generate, hold, sell, transfer, dispose of, issue or deal in cryptocurrencies.⁶⁹ However, according to Bloomberg quant⁷⁰, the government will provide existing investors a certain period to exit the holdings. The report further stated that although Finance Ministry officials have been quite hawkish, the Finance Minister stated that a decision shall be taken following due process – calming nerves to some extent. Therefore, there is quite an uncertainty as to whether this bill will be introduced and, if so, when it will be introduced – although various media outlets reported that it has been proposed to be tabled in the current session of the Parliament.

Apart from that, there has been another issue, that of taxation of cryptocurrency transactions. There were reports⁷¹ that the Indian Finance Ministry is deliberating on imposing an 18% tax on cryptocurrency trading in the country. The Finance Ministry estimated that total cryptocurrency transactions in India amounted to around \$5.5bn and the proposed 18% GST on cryptocurrency transaction would generate approximately \$1bn in additional tax revenue for the government.

⁶⁸ Sharma, H, “Explained: Cryptocurrency Ban, Regulation And Its Arguments In India”, The Indian Wire, (2021, March 27), <https://www.theindianwire.com/business/explained-cryptocurrency-ban-regulation-and-its-arguments-in-india-308791/>

⁶⁹ Ahmed, A, “India to propose cryptocurrency ban, penalising miners, traders - source”, U.S. (2021, March 15), <https://www.reuters.com/article/uk-india-cryptocurrency-ban-idINKBN2B60QP>

⁷⁰ Jha, S, “Intent On Ban, India To Give Transition Time To Crypto Investors — BQ Exclusive”, BloombergQuint, (2021, February 14), <https://www.bloombergquint.com/business/intent-on-ban-india-to-give-transition-time-to-crypto-investors-bq-exclusive>

⁷¹ Jafar, B, “India to Impose 18% Tax on Bitcoin Trading. Finance Magnates | Financial and Business News”, (2020, December 29), <https://www.financemagnates.com/cryptocurrency/news/india-to-impose-18-tax-on-bitcoin-trading/>

The report further stated that the Ministry has requested that the Indian government recognize cryptocurrency as an intangible asset to impose a GST on cryptocurrency transactions. This news has once again made the cryptocurrency community uncomfortable due to lack of clarity.

Analysts have questioned the ability of the government to apply taxation standards to cryptocurrencies which were created for other assets.⁷² However, as far as crypto exchanges are concerned, the taxation percentage has bothered them instead of the taxation itself and many analysts are of the view that it should not be more than 1%, otherwise the profits will reduce and trading will shift to international exchanges or peer-to-peer. Even gold transactions are charged a 3% GST. The issue of taxation has brought another issue to the fore and that is whether cryptocurrencies are to be considered a commodity, currency, capital asset, or business income.⁷³

Why Ban it?

It is important to analyze why the Indian government wants to ban cryptocurrency, especially when it is booming in the country and given the fact that India has a lot of potential in the sector given its strong base in the I.T industry. In fact, the former Indian Finance Minister called digital currencies ‘illegal tender’. But despite that, the government is planning the ban as RBI is concerned about investors' protection due to anonymity of cryptocurrency transactions and the lack of intrinsic values of a currency which is not backed by tangible assets. The authorities are concerned that it might lead to a new level of scamming and internet fraud⁷⁴ as some investors have been using it in the dark web. Other analysts are of the view that the government does not

⁷² Shome, A, “Proposed Indian Crypto Tax Could Kill the Local Industry. Finance Magnates | Financial and Business News”, (2021, January 1), <https://www.financemagnates.com/cryptocurrency/regulation/proposed-indian-crypto-tax-might-kill-the-local-industry/>

⁷³ Shome, A, “Proposed Indian Crypto Tax Could Kill the Local Industry. Finance Magnates | Financial and Business News”. (2021b, January 1), <https://www.financemagnates.com/cryptocurrency/regulation/proposed-indian-crypto-tax-might-kill-the-local-industry/>

⁷⁴ “Finology Blog”, Finology, (2020, September 23), <https://blog.finology.in/investing/cryptocurrency-in-india>

have control over cryptocurrency as they are not part of the process when someone buys or sells a cryptocurrency.⁷⁵ Further, some analysts are of the view that investment in cryptocurrency comes with a lot of risks because of the volatility attached and the poor investors may lose a lot of money. Other reasons include the worriedness of Indian regulators about the use of cryptocurrency for illegitimate transactions.⁷⁶ It is also feared that cryptocurrencies can be used for illegal activities including money laundering and betting. They see cryptocurrency as a safe haven for tax evaders and anonymity as a big risk factor.⁷⁷ A major objection of regulators is its anonymity and it is expected that in due time, there will be a conflict between regulation and anonymity because many cryptocurrencies have been linked with terrorist attacks. The government wants to regulate the function of cryptocurrencies, which stands in direct opposition to a foundation principle of the cryptocurrency movement – its provision of anonymity.⁷⁸

But even banning cryptocurrency is not simple. First, it will have different effects on the rich and the poor, as the rich can invest in cryptocurrency from outside India and as a result, continue to benefit from digital innovation while ordinary people cannot.⁷⁹ Further, due to its deregulated nature, investors may be able to access services offered by the outside world just like other banned online services/websites that can be accessed through virtual private networks (VPNs). It

⁷⁵ “Why India Wants Crypto Trending Online; Cryptocurrency Ban In India?”, <https://www.gizbot.com/>, (2021, February 14), <https://www.gizbot.com/internet/news/why-india-wants-crypto-trending-online-cryptocurrency-ban-in-india-072667.html>

⁷⁶ TaxGuru Consultancy & Online Publication LLP, “Cryptocurrency, its history & considerations for tax in India. TaxGuru”. (2020, October 4). <https://taxguru.in/goods-and-service-tax/cryptocurrency-history-considerations-taxation-india.html>

⁷⁷ Sharma, H. “Explained: Cryptocurrency Ban, Regulation And Its Arguments In India. The Indian Wire”. (2021b, March 27). <https://www.theindianwire.com/business/explained-cryptocurrency-ban-regulation-and-its-arguments-in-india-308791/>

⁷⁸ Finology Blog, Finology, (2020b, September 23). <https://blog.finology.in/investing/cryptocurrency-in-india>

⁷⁹ McIntosh, R. “The End of Crypto in India? Proposed Crypto Ban Has Big Implications. Finance Magnates | Financial and Business News”, (2021, February 16). <https://www.financemagnates.com/cryptocurrency/news/the-end-of-crypto-in-india-proposed-crypto-ban-has-big-implications/>

will also prompt users to access cryptocurrencies through peer-to-peer (P2P) trading, using cash to buy or sell virtual currencies and using external wallets to store and transfer crypto-assets.⁸⁰

The crypto community is unhappy about the proposed ban.⁸¹ They feel India will not be able to realize the full economic potential of these innovations. It is estimated that a great deal of wealth has been created due to cryptocurrencies, which will be lost given the proposed ban. Investors fear that by making the holding of cryptocurrency illegal, the government will create underground markets.⁸² It will thus deprive the country of valuable earnings and foreign investors will also be disincentivized to invest in this promising technology. Therefore, investors are of the view that instead of an outright ban, the government should regulate the sector.

Indian CBDC Project

As mentioned above with regard to the proposed law, the Indian central bank has become the latest monetary regulator to explore the idea of launching a Central Bank Digital Currency (CBDC) along the lines of the Chinese digital currency. The proposed bill also includes a ban on all private cryptocurrency exchanges. In this regard, the RBI recently released a booklet named ‘Payment and Settlement Systems in India’, divulging its stance on the digital version of fiats. The Central Bank stated, “Private digital currencies (PDCs) / virtual currencies (VCs) / cryptocurrencies (CCs) have gained popularity in recent years, Nevertheless, RBI is exploring

⁸⁰ Aki, J, “Report: India Mulling Banning IP Addresses of Crypto Exchanges. InsideBitcoins.Com”. (2021, March 23), <https://insidebitcoins.com/news/report-india-mulling-banning-ip-addresses-of-crypto-exchanges>

⁸¹ Helms, K, “Indian Parliament to Consider Bill That Creates Digital Rupee While Banning Cryptocurrencies in Current Session”, Bitcoin News, (2021a, February 2), <https://news.bitcoin.com/indian-parliament-bill-digital-rupee-banning-cryptocurrencies/>

⁸² Jha, S, “Intent On Ban, India To Give Transition Time To Crypto Investors — BQ Exclusive”, BloombergQuint, (2021b, February 14), <https://www.bloombergquint.com/business/intent-on-ban-india-to-give-transition-time-to-crypto-investors-bq-exclusive>

the possibility as to whether there is a need for a digital version of fiat currency and in case there is, then how to operationalize it.⁸³”

The RBI has been considering a CBDC for quite a while – an inter-departmental group was formed in 2018 to make an analysis and recommend future course of action. In 2019, the RBI governor stated that it was still early to consider digital currency, yet now the proposed law has been listed in the Parliament. However, India faces various challenges in this regard such as geographical diversity and socio-economic divisions. The RBI is exploring options of an offline payment system for the regions that do not have access to regular internet. A pilot was initiated by the RBI in August 2020 and its results are expected soon.

Although the proposed bill to create a CBDC also mentions the banning of private crypto exchanges, China is considered a world leader in Bitcoin mining – which means a healthy blockchain environment without private players is at least theoretically possible.⁸⁴ Hence, it is possible that after China and India, other countries might also follow suit.

What's Next?

Know the changeable regulatory situation in India's crypto market

As mentioned in the above sections, there are risks that India's government will impose a ban on commercial cryptocurrency trading. However, in March, Indian Finance Minister Nirmala Sitharaman said that they are not shutting off all options and people will be given adequate

⁸³ Shome, A, “India Explores Possibility of a CBDC Launch. Finance Magnates | Financial and Business News”. (2021c, January 26), <https://www.financemagnates.com/cryptocurrency/news/india-explores-possibility-of-a-cbdc-launch/>

⁸⁴ McIntosh, R, “The End of Crypto in India? Proposed Crypto Ban Has Big Implications. Finance Magnates | Financial and Business News.” (2021b, February 16), <https://www.financemagnates.com/cryptocurrency/news/the-end-of-crypto-in-india-proposed-crypto-ban-has-big-implications/>

windows to experiment with blockchain, bitcoins and cryptocurrency.⁸⁵ This left room for a crypto regulation instead of a complete ban.

From the market side, entrepreneurs formed the Association of Blockchain & Crypto Entrepreneurs (ABCE) to engage in a dialogue with the government.⁸⁶ Increasing the impact of associations like this and encouraging discussion regarding best practices and regulatory framework on cryptocurrency would be beneficial for India's future crypto policy change from a ban to regulation.

Key Policy Entities in India to Watch On

Herein are some key policy regulatory entities related to the crypto industry in India, which are worth keeping an eye on for their stance or policy changes towards cryptocurrency.

Inter-Ministerial Committee (IMC)

According to the 2020-2021 Annual Report of the Ministry of Finance, the Indian government has constituted an Inter-Ministerial Committee (IMC) under the Chairmanship of Secretary of the Department of Economic Affairs for cryptocurrency-related issues. It aims to examine the current legal framework for the regulation of digital currencies/ cryptocurrencies and recommend measures to handle crypto-related issues. IMC includes members from Ministry of Electronics and Information Technology (MeiTY), the Securities and Exchange Board of India (SEBI) and Reserve Bank of India (RBI). The IMC submitted its *Report of the Committee to propose specific actions to be taken in relation to Virtual Currencies* to the Indian government in February 2019.

⁸⁵ Desk, I. T. W, “Not shutting all options on cryptocurrency, says Finance Minister Nirmala Sitharaman at India Today Conclave”, India Today, (2021, March 15), <https://www.indiatoday.in/business/story/not-shutting-all-options-on-cryptocurrency-says-finance-minister-nirmala-sitharaman-at-india-today-conclave-1779328-2021-03-15>

⁸⁶ Business Standard, “Indian startups join hands to ensure dialogue with Centre for crypto market | Business Standard News”. (2021, February 20), https://www.business-standard.com/article/companies/indian-startups-join-hands-to-ensure-dialogue-with-centre-for-crypto-market-121022000141_1.html

In the report, the committee introduced *the Banning of Crypto currency & Regulation of Official Digital Currency Bill, 2019*, which is still being examined by the Government. The committee currently stands against private crypto business, but welcomes central bank digital currency. It “recommends that all exchanges, people, traders and other financial system participants should be prohibited from dealing with cryptocurrencies”, while “having an open mind regarding the introduction of an official digital currency in India”.⁸⁷ However, it’s worth noting that, despite of the current stance against cryptocurrencies, the committee advised the government to establish a standing committee to follow the technological development at home and abroad and to revisit these crypto issues when needed. The committee is also in favor of the advancement of distributed ledger technology (DLT) and has proposed to promote the use of the technology in finance and other fields.⁸⁸

Ministry of Finance

The Ministry of Finance serves as the Indian Treasury Department. It consists of five departments, including the Department of Economic Affairs and the Department of Revenue, which currently oversees cryptocurrencies per the Prevention of Money Laundering Act (PMLA), 2002. As cryptocurrencies raise anti-money laundry challenges, it is reasonable to expect a crypto-related amendment to PMLA before the industry could move any further in India. Currently, “it is unclear whether the reporting obligations prescribed under Chapter IV of

⁸⁷ Department of Economic Affairs | Ministry of Finance, “Report of the Committee to propose specific actions to be taken in relation to Virtual Currencies”. (2019, February 28th). <https://dea.gov.in/sites/default/files/Approved%20and%20Signed%20Report%20and%20Bill%20of%20IMC%20on%20VCs%2028%20Feb%202019.pdf>

⁸⁸ Ibid

the PMLA extend to wallet operators, crypto-asset exchanges or third-party bitcoin services” and most operating crypto companies follow self-regulation and KYC/AML norms.⁸⁹

Reserve Bank of India

The Reserve Bank of India (RBI) is the central bank of India. As it defines currency and oversees the payment, clearing, and settlement systems in India, RBI’s attitude towards cryptocurrency has a critical impact on the industry. Currently, cryptocurrency does not fit into any of RBI’s legal definitions of currency, money, or coin, under the Indian Coinage Act, 2011; Reserve Bank of India Act, 1934; or the Payments and Settlement Systems Act (PSSA), 2007.⁹⁰ If a crypto payment token is intended to be used as a payment method in its own payment system, changes to PSSA would be required.⁹¹

Securities and Exchange Board of India

The Securities and Exchange Board of India (SEBI) regulates securities and commodity markets in India. As some cryptocurrencies share the characteristics of securities, such as tokens issued through ICOs, these types of security tokens should be regulated under SEBI’s Securities Contracts (Regulation) Act, 1956 (SCRA). If India decided to pursue a cryptocurrency ban, an amendment to the act could be expected.⁹²

⁸⁹ “GLOBAL CRYPTOASSET REGULATORY LANDSCAPE STUDY”, Cambridge Centre for Alternative Finance | Judge Business School | University of Cambridge (2020), <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2019-04-Ccaf-Global-Cryptoasset-Regulatory-Landscape-Study.Pdf>.

⁹⁰ Centre, V. A. E., “Inter-Ministerial Committee on Regulation of Cryptocurrency in India: A Critical Analysis (Part I). Medium”, (2019, August 26), <https://esyacentre.medium.com/inter-ministerial-committee-on-the-regulation-of-cryptocurrency-in-india-a-critical-analysis-b0f00d41f97d>

⁹¹ “GLOBAL CRYPTOASSET REGULATORY LANDSCAPE STUDY”, Cambridge Centre for Alternative Finance | Judge Business School | University of Cambridge (2020), <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2019-04-Ccaf-Global-Cryptoasset-Regulatory-Landscape-Study.Pdf>.

⁹² Ibid

Conclusion

While there are certainly a variety of regulatory challenges, the activity in the space can be taken as a positive sign that real potential lies within the Indian market. If a responsible and trustworthy operator were to begin operations – with a clear focus on bolstering the government’s pre-existing financial inclusion efforts – it is reasonable to conclude that cryptocurrency solutions may be given a controlled green light.

Indonesia

Introduction

Indonesia has the third-largest unbanked population in the world after China and India, much of which is concentrated in rural communities. According to a 2019 report by Google, Temasek, and Bain & Company, out of its 270mm population, Indonesia has around 47mm underbanked and 92mm unbanked adults.⁹³

However, as we see the fast and continuing coverage of internet usage and fintech developments in the region, cryptocurrencies and related blockchain transformations are offering Indonesians alternative options to manage their financing plans. Through our research and interviews, we see crypto assets are becoming more widely used in Indonesia as local startups' efforts and governmental support is making Indonesians more aware of the value of cryptocurrencies.

Through our analysis, we offer recommendations about how a crypto-asset exchange could break into the Indonesian market. First, it is important to build up a strong relationship with the local government, to secure approvals and licenses needed to operate businesses there. And then we propose getting in touch with the un(der)banked through educational programs and marketing campaigns to build up its brand recognition gradually and enable future successes.

Indonesia's cash-based economy in transition

Indonesia is currently the world's second largest cash-based economy, and according to the interviews we conducted: holding, storing, and paying with actual cash is still the norm for most

⁹³ AJ Cortese, "Serving the Unbanked: Driving Financial Inclusion in Indonesia's Rural Areas (Part 2 of 2)," KrASIA, November 5, 2020, <https://kr-asia.com/serving-the-unbanked-driving-financial-inclusion-in-indonesias-rural-areas-part-2-of-2>.

Indonesians. However, according to a recent McKinsey & Company study, Indonesia has outrun the world in digital adoption and has the highest score of digital adoption growth in 2014-2017 with 99%, outpacing countries including India, South Korea, UK, and US. Indonesian women in particular have been eager early adopters.⁹⁴ A survey actually showed that 48% of women aged 25–28 and 46% aged 29–34 are already using digital currency to buy everyday necessities such as food, beverages, and groceries online.⁹⁵ Thus, it is clear that technology adoption regarding daily financing solutions is becoming more widespread in Indonesia.

As Indonesia becomes more involved with technological transformations, people have become aware of the fintech options available for them to transact and invest. In fact, Indonesians are now turning towards cryptocurrencies. According to the Indonesia Crypto Outlook Report, the blockchain and crypto-asset industry in Indonesia grew 2,263% between 2015-2020. The estimation of traders in Indonesia reached over 1.5mm in 2020.

Cryptocurrencies' market potential in Indonesia

Through our research and expert interviews, we found out that Indonesia has an emerging consumer market of extensive commercial potentials for cryptocurrencies.

It has a dynamic community of start-ups that are working on increasing the awareness and promoting the adoption of cryptocurrencies in the region. For instance, a start-up named Pundi has rolled out its Pundi X POS smart device in cafes, shops, and convenience stores to enable customers pay with cryptocurrencies: through the Pundi X system, cryptocurrency will be “first converted to fiat currency in real-time through its connection with exchanges”, and then the fiat

⁹⁴ Yudistra Nugroho, “All Eyes on e-Money: The Race to Reach 180M Unbanked Indonesians | Think With Google,” Google (Google, July 2018), <https://www.thinkwithgoogle.com/intl/en-apac/future-of-marketing/machine-learning/all-eyes-e-money-race-reach-180m-unbanked-indonesians/>.

⁹⁵ *Ibid*

currency will be transferred to the merchant.⁹⁶ Several startups including Pundi, Indodax, and TokoCrypto have obtained licenses from Indonesia's Commodity Futures Trading Regulatory Agency (Bappebti) to operate trading platforms.⁹⁷ The close-knit and energetic network of cryptocurrency and blockchain-related startups is rapidly accelerating the adoption of crypto assets in the region. There has been a vast amount of support from the public to encourage further developments. Bank Central Asia, Indonesia's largest bank, has garnered support from the government to come forward and host a local hackathon for students, developers, and startups to encourage the development of blockchain technology in the region.⁹⁸

Besides that, we also witness a relatively large client base for buying and trading cryptocurrencies in Indonesia. According to a report published by HootSuite and We Are Global in January 2020, about 11% of internet users in Indonesia own some sort of cryptocurrencies.⁹⁹ As 76% of the Indonesian population is expected to own a smartphone in 2021, the market conditions will become even more favorable for a cryptocurrency adoption. Industry players also believe that the adoption of cryptocurrencies will be broader as people will become even more familiar with this asset through local startups and multinational companies that "increasingly make crypto part of their product rotation".¹⁰⁰

⁹⁶ Sharon Lam, "Indonesia Is Ripe For Cryptocurrency Disruption -- Could It Be Asia's Next Bitcoin Hub?" *Forbes* (Forbes Magazine, November 2, 2017), <https://www.forbes.com/sites/lamsharon/2017/11/01/indonesia-is-ripe-for-cryptocurrency-disruption-could-it-be-asias-next-bitcoin-hub/>.

⁹⁷ Khamila Mulia, "With Singapore as a Reference, Indonesia Holds Promise for Cryptocurrencies," *KrASIA*, January 8, 2021, <https://kr-asia.com/with-singapore-as-a-reference-indonesia-holds-promise-for-cryptocurrencies>.

⁹⁸ "The State of Blockchain & Crypto-Assets in Indonesia, Malaysia, and Singapore," *Blockchain for Europe*, accessed April 17, 2021, <https://www.blockchain4europe.eu/news/the-state-of-blockchain-crypto-assets-in-indonesia-malaysia-and-singapore/>.

⁹⁹ Khamila Mulia, "With Singapore as a Reference, Indonesia Holds Promise for Cryptocurrencies," *KrASIA*, January 8, 2021, <https://kr-asia.com/with-singapore-as-a-reference-indonesia-holds-promise-for-cryptocurrencies>.

¹⁰⁰ *Ibid*

The Indonesian government's views on cryptocurrencies

With the rapid growth of a crypto-asset market in Indonesia, the government issued new regulations in 2018 and 2019 to illustrate their support for the expansion of crypto industry. Prior to 2018, the Indonesian government had no specific regulations to cover the selling and purchasing of cryptocurrency as a commodity or the provision of cryptocurrency trading platforms. In September 2018, crypto assets were legalized as a commodity in Indonesia by the Ministry of Trade of the Republic of Indonesia. In addition, in February 2019, Indonesia's Commodity Futures Trading Regulatory Agency (Bappebti) issued four regulations for the legal operation of cryptocurrency exchanges. It provided a legal framework for crypto assets to trade in futures and other derivative market.¹⁰¹

However, the use of cryptocurrency as a means of payment is strictly prohibited under Law No. 7 of 2011 regarding Currency (the Currency Law), which states that the Indonesian Rupiah is the only lawful currency in Indonesia, and that all payment and transactions must be settled with Rupiah.¹⁰²

Cryptocurrency traders have complained that the minimum capital requirement for physical traders is too high. Under Article 24 of the new regulations, a physical trader of crypto assets is required to transfer 100bn rupiah (about USD 7.13mm) to their accounts, at least 80bn rupiah of which should be kept as a deposit.¹⁰³ The Indonesian government, which recognizes cryptocurrency only as a commodity, has expressed concerns about the risks and illegal

¹⁰¹ Benedictus Giovanni, "New Regulation on Cryptocurrency Business in Indonesia," Gaffar & Co. Law, January 16, 2020, <https://gaffarcolaw.com/news-insights/new-regulation-on-cryptocurrency-business-in-indonesia/>.

¹⁰² *Ibid*

¹⁰³ Jeffrey Gogo, "Indonesia's Futures Regulator Issues New Regulations for Crypto Assets," Bitcoin News, October 22, 2019, <https://news.bitcoin.com/indonesias-futures-regulator-issues-new-rules-for-crypto-assets/>.

exchanges in the crypto environment. As a result, they consider that the high minimum capital standard is needed to address the issues.

As of now, cryptocurrencies are not recognized as means of payment in Indonesia mainly because the government believes that virtual currencies are highly volatile as they do not have backing from an authority or underlying assets to prices.¹⁰⁴ The central bank stated: “Virtual currencies are vulnerable to bubble risks, and susceptible to be used for money laundering and terrorism financing, therefore can potentially impact financial system stability and cause financial harm to society.” Deputy Governor Sugeng made it clear that the central bank was very supportive of financial technology but would like to maintain Indonesia’s financial stability.¹⁰⁵

Recommendations for expanding in Indonesia

Based upon the analysis above, we have come up with two use cases targeting governmental relations management and consumer market entry & expansion, in exchange to spread its reach in the region.

A. Working as the government’s external advisor to deepen influences

To start with, a crypto-asset exchange should aim at establishing solid relationships with the Indonesian governments by making the proposal to as the external advisor to help craft programs and regimes that would boost the development of Indonesia’s crypto asset ecosystem. For instance, the exchange could take the initiative to advise the government on starting a help-and-

¹⁰⁴ Sujha Sundararajan, “Indonesia Central Bank: Cryptocurrency Payments 'Not Legitimate',” CoinDesk (CoinDesk, January 15, 2018), <https://www.coindesk.com/indonesias-central-bank-cryptocurrency-payments-not-legitimate>.

¹⁰⁵ Erwida Maulia, “Bank Indonesia Declares Bitcoin Payment Illegal,” Nikkei Asia (Nikkei Asia, December 7, 2017), <https://asia.nikkei.com/Economy/Bank-Indonesia-declares-bitcoin-payment-illegal>.

learn project that connects established cryptocurrency exchanges in the US with blockchain and cryptocurrency start-ups in Indonesia.

Pairing those start-ups with their US peers would accelerate the process of sharing and learning: Indonesian startups will learn from US corporates' hands-on experiences in operating cryptocurrency and blockchain-related businesses, while the exchange and other US institutions could have access to the first-hand insight and data from local entrepreneurs about the Indonesian market. It could be a win-win situation as the Indonesian cryptocurrency ecosystem will be built upon business models that have proven successes, while the US counterparts will have the pertinent information (policies, user patterns, etc.) to accelerate expanding their businesses to a brand-new market.

It will be exceptionally important for the exchange to build up a close relationship with the Indonesian government by aiding the development of a cryptocurrency adoption, so that it can be easier for an exchange to apply for trade licenses, and any other regulatory approvals in Indonesia. Besides, as a crypto-asset exchange strengthens its connections with the Central administration, it might be easier, in the future, for a crypto-asset exchange to persuade governments to further release regulations on the use of cryptocurrency as a currency and a payment tool.

B. Helping Indonesian street vendors invest in cryptocurrencies

Second, it is a unique opportunity for the exchange to truly get in touch with the un(der)banked population, educate them benefits of cryptocurrencies, and then onboard them. Through our interviews with local experts, we learned that a potential group of people that the exchange that could work with, are street vendors, who make and store large amounts of cash at home, as they deem it much safer than depositing it into banks (despite some of them having bank accounts).

Given the fact that those people hold a lot of cash in their hands, it certainly presents a potential opportunity for a crypto-asset exchange to break into the market by advocating street vendors to invest in cryptocurrencies.

To firstly reach those people, the exchange could launch educational programs both in person and virtually to advocate the key values of investing in cryptocurrencies. And it's crucial for the exchange to come up with comprehensive marketing plans to publicize its brand name and the programs it has. The exchange could create advertising campaigns in public spaces where those street vendors live and work, go Facebook live on a regular basis to lead cryptocurrency discussion and promote future events and, collaborate with KOLs on Instagram to reach the targeted audiences. Given the fact that digital literacy is high in Indonesia, it is expected that the budgets should be allocated more to digital marketing, to increase the efficiency of campaigns among street vendors. However, it should also be noticed that the crypto-asset exchange needs to check with the government constantly, to make sure that the marketing campaigns are in line with the regulations.

After educating and persuading the street vendors to take a look at cryptocurrencies, it is then the right time to roll out the following steps to help them invest in crypto assets. For street vendors who have bank accounts, it would be straightforward to the exchange to simply go through the KYC, AML, and other compliance procedures to open an account with the exchange and, buy and trade cryptocurrencies afterwards. For those street vendors who don't have an account, the exchange should probably come up with creative solutions to help them manage their wealth. One thing that the exchange could aim at doing is to create a "crypto mutual fund" among those street vendors, enabling them to deposit their cash into the exchange, which will be kept in a centralized account, through which the exchange will hire traders to manage the funds on a

regular basis. Compliance would be extremely important in this scenario, as the exchange would probably need to work with external agencies to oversee and inspect the flows of money in the funds to strictly to comply with compliance requirements. It would also be important to have similar roles with relationship managers to update those street vendors on a regular basis, so that they are informed of their investments. Such multi-dimensional services and support will facilitate the process of enabling Indonesian street vendors to manage their wealth through cryptocurrencies.

In words, marketing will be key in building up the exchange's influence in the region among street vendors, because a widely recognized brand name, among a dynamic community of cryptocurrency startups, is important to drive future commercial successes through trades and exchanges of cryptocurrencies on that exchange's platform.

Regulatory/commercial concerns

The three key concerns for the use cases would be as follows:

- 1) It might be the case that Indonesian government's attitudes towards foreign corporations might not be as favorable as expected, so that starting the exchange's business there would be somewhat difficult.
- 2) The campaign and education might not be as effective as predicted, and the number of people who decide to hold and trade cryptocurrencies through the exchange might be limited.
- 3) The compliance process might be difficult to undertake, as the crypto-asset exchange needs to invest in recruiting qualified experts who are familiar with the rules and establishing a

comprehensive system to ensure that everything complies with the regulatory standards in Indonesia.

Conclusion

Based on the analysis above, we can tell that there exists a big opportunity for crypto exchange platforms to access Indonesian markets through taking part in both private and public sectors. Relevant government agencies, including the Central Bank of Indonesia, are continuing their internal discussions on the best way to regulate and expand the market. It is only a matter of time, for Indonesia to open up more to the use of cryptocurrencies, and to the expansion of foreign institutions that will play an important role in making the cryptocurrency market more dynamic.

V. Conclusion

The crypto-asset space is both highly active and highly polarizing. While many market entries have been pursued for a variety of financial applications, the matter of which firm(s) will establish dominance in the global sphere is yet to be determined.

Industry players who choose to act now can count on a variety of development to provide various competitive advantages. Ripple's regulatory troubles in Mexico have created a fleeting opportunity for a new actor to establish dominance in the US-Mexico remittances space. In India, the private sector has an opportunity to demonstrate all the good crypto-assets may do within the economy – soothing key government actors and potentially gaining powerful allies in the process. Lastly, a globally established firm can cut through the array of competition in Indonesia through a combination of organic and inorganic tactics in order to bring the market to the next stage in its crypto-journey.

Only time can tell who will succeed and how, but one thing is clear: there is no better moment to launch such an initiative than now.

VI. Thank You

This paper would not have been possible without the guidance of Professor Annemarie McAvoy and the countless academics, regulators, and industry professionals who shared their time with us over the past few months. For that, we are immeasurably grateful.

VII. Afterword

In evaluating opportunities to utilize cryptocurrency to aid the unbanked and underbanked globally, it was interesting to consider the ways in which the industry and regulatory environment might be shaped in coming years. It is not a matter of “if”, but “when” a major economy issues definitive guidance on the role cryptocurrency will play in their society – guidance which might very well serve as a model for the rest of the world to follow.

It has also become clear that the early action might yield competitive advantages on the national level. Should the United States choose to accelerate its regulatory decision-making processes, the country might very well secure a dominant position in this highly innovative space.¹⁰⁶ If it does not do so, it risks ceding such competitive advantages to other nations – potentially China.

Setting aside the motivations which accompany international competition, a decisive voice within the cryptocurrency industry – and clear avenues to pursue meaningful developments in financial services with regulatory clarity – would allow governments to shape the course of the future of this financial architecture. The cryptocurrency community is full of many bold claims – ranging from utopian to anarchist. Regardless the degree to which any of these materialize, the technology underlying these assets has proven to offer novel approaches to a great many financial processes and will certainly weave their way into financial systems of tomorrow.

As of this last writing, momentum seems to be picking up within the United States – we can only hope it will continue and ultimately form the basis of a more transparent, efficient, and equitable financial future.

¹⁰⁶ Perlman, Noah. “How To Ensure the U.S. Leads in Cryptocurrency Now and in the Future”. Forbes. April 20, 2021. <https://www.forbes.com/sites/forbesfinancecouncil/2021/04/20/how-to-ensure-the-us-leads-in-cryptocurrency-now-and-in-the-future/?sh=34c5b38108fd>

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