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LAURA ALFARO
CARLA LARANGEIRA
RUTH COSTAS

El Salvador: Launching Bitcoin as Legal Tender

On June 5, 2021, El Salvador's president, Nayib Bukele, announced the country's adoption of bitcoin, a digital currency, as legal tender. As El Salvador became the first country in the world to do so,[1] its president claimed it would be a boon for financial inclusion, investment, innovation, and economic development. With a population of 6.5 million, El Salvador suffered from persistently low economic growth, soaring public debt, and a strong dependence on remittances, which could potentially become cheaper and faster to access in bitcoins.

Elected with a landslide victory in early 2019 while in his late 30s, Bukele ended decades of two-party dominance over a crime-ridden nation.[2] The Salvadoran president inherited an opposition-controlled National Assembly that often hindered his policies. So, to push forward his national security agenda and implement measures to contain the Covid-19 pandemic, he increasingly relied on presidential decrees and disregarded Supreme Court rulings. In 2020, *The Economist* reported that Bukele might be "[...] on course to become Latin America's first millennial dictator."[3] Still, by early 2021, he held high approval rates among Salvadorans, with Gallup, a global analytics firm, reporting that 91% of survey respondents approved his performance in managing the pandemic.[4] By the time Bukele adopted bitcoin as legal tender, his party Nuevas Ideas (New Ideas) had gained majority in Congress, after winning a legislative election in early 2021.

Bitcoin, a decentralized, peer-to-peer cryptocurrency system, differed from most fiat money because it was not issued or supported by a government, and it was not handled by publicly regulated banking institutions.[5] By June 2021, the bitcoin market had a capitalization of over $700 billion,[6] with trading as its most relevant use.[7] Among asset classes, it had one of the more volatile trading track records,[8] experiencing an over 300-fold increase in price from 2013 to 2021 and priced at $36,685 to BTC in early June 2021.[9] Industry experts claimed that, although the bitcoin adoption as medium of exchange moved at a "glacial pace," transactions were gaining traction.[10] Nonetheless, many private investors and merchants looked at bitcoin with apprehension as a result of its volatile pricing and the somewhat shady connotation the term "crypto" still seemed to carry.[11]

El Salvador's Bitcoin plan called for the adoption of the digital currency alongside the U.S. dollar, the country's official currency since 2001. The move was met with both enthusiasm from Bitcoin supporters and skepticism from credit agencies and multilateral finance institutions. The latter—including the International Monetary Fund (IMF), which had received a request from El Salvador for

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a financial assistance program in excess of $1 billion—believed it could bring macroeconomic instability to the local economy.[12] Warren Buffet, a billionaire investment guru, was also skeptical about the digital currency: "In terms of cryptocurrencies, generally, I can say almost with certainty that they will come to a bad ending," he said in 2018.[13] *The Financial Times*, on the other hand, sustained that bitcoin could be used in daily life, particularly in countries with a history of financial instability or high barriers to access traditional financial products.[14] Was bitcoin a viable currency for Salvadorans? What implications would its adoption have for the country's economy and its people?

El Salvador

Modern Political History

El Salvador was the smallest and most densely populated country in Central America,[a ,15] with 73% of its population living in urban areas (see **Exhibit 1** for map).[16] Throughout most of the 20th century, the country was marred by political and social turbulence, with a long military regime (1931-1979) followed by a civil war (1979-1992) and both marking decades of repression, profound social inequality, and human right abuses. At El Salvador's civil war, the nation's Armed Forces—supported by the United States with over $4 billion in aid, military training, and weaponry— [17] fought against the leftist movement *Farabundo Martí para la Liberación Nacional* (FMLN). "[...] Tiny El Salvador has suddenly burst upon the world stage," reported the New York Times in 1981. "Many in Washington worry about an updated version of the old domino theory, with the blocks falling much closer to home." Concerns over Central America's fate grew stronger as a pro-Cuba government rose to power in neighboring Nicaragua, while Guatemala's right-wing regime was also under attack by impoverished peasants.[18]

After the war came to an end, with a peace treaty brokered by the United Nations in 1992, El Salvador's economy was in shambles; its infrastructure, dilapidated; and its population, decimated—approximately 20% had emigrated to the U.S. or other Central American countries—and profoundly divided.[19] The FMLN subsequently became a political party and a leading contender for the National Republican Alliance (ARENA), a right-wing party that dominated national presidential elections up to 2009.[20] Post-war recovery efforts were temporarily dampened in 1998 by Hurricane Mitch,[21] which left millions homeless,[22] and again in 2001, when a major earthquake hit El Salvador, causing losses of $1.6 billion, [23] almost 13% percent of the country's GDP.[24] El Salvador's full recovery from its civil war was later hindered by rising criminality, pervasive social inequity, and a weak economy.[25]

Dollarization

El Salvador adopted the U.S dollar as legal tender in 2001, converting all wages, prices, financial accounts, and transactions. It also started to gradually remove *colones*, the national currency, from circulation.[26] El Salvador's dollarization followed Ecuador's. Yet, while the latter dollarized its economy amidst an acute economic crisis and rampant inflation,[27] El Salvador's dollarization unfolded within a context of low and stable inflation, manageable debt levels, and a solid banking system.[28] Still, the country's economy had not grown as fast as many of its neighbors in previous years, [29] with GDP expanding 2.2% in 1999, while Guatemala, Costa Rica, and Nicaragua grew respectively 3.8%, 4.2%, and 7%.[30]

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[a] Central America included the following nations: Guatemala, El Salvador, Nicaragua, Honduras, Costa Rica, Panama, and Belize.

Both the U.S. Treasury Department and the IMF commended El Salvador's decision, with then Treasury Secretary Lawrence H. Summers stating, "Combined with a strong economic policy framework, this step should help contribute to financial stability and economic growth in El Salvador and its further integration into the global economy."[31] By 2011, an IMF study concluded that the Salvadoran dollarization proved largely beneficial, leading to a reduction in the currency risk premium implicit in local interest rates. It estimated lending and deposit rates in commercial banks were 4 to 5 percentage points lower, generating substantial savings for the economy, with net interest savings of 0.5% and 0.25% of GDP per year respectively for the local private and public sectors. Moreover, the IMF claimed that the U.S. monetary policy contributed to stability of inflation and output in El Salvador.[32]

Other analysts viewed dollarization as having mixed results. With the power of supplying money and setting interest rates deferred to the U.S. Federal Reserve, El Salvador's government could only rely on fiscal policies to drive the country's economy.[33] The government's gross-debt-to-GDP ratio ballooned from 37% in 2001 to 57% in 2011.[34] While dollarization favored bilateral trade with the U.S., competing countries benefited from their depreciated currencies.[35] Dollarization was also associated to increased levels of received remittances, reducing transactional costs.[36]

Economic and Social Outlook

By 2019, with a nominal GDP of $27 billion and a per-capita GNI nearing $4,000, El Salvador ranked among the poorest nations in Latin America, where the average per-capita GNI was over twice as high.[37] Almost a third (32%) of the Salvadoran population was considered poor.[38] The country faced limited growth over the past decades, with GDP rising by more than 3% just twice in the 2000-2019 period.[39] (See **Exhibit 2** for selected economic indicators.) El Salvador's informal economy threatened production improvements,[40] and its overall economic performance was overdependent on the U.S. via remittances, exports, and investments. (See **Exhibit 3** for main trade partners.) Remittance represented 21% of GDP in 2019 (see **Exhibit 4** for balance of payments). This rendered the country unable to safeguard itself from global economic crises as well as from international trade and financial swings.[41] Exports of goods and services, which accounted for 30% of El Salvador's GDP in 2019,[42] relied on a concentrated export base, with almost 40% of exports driven by apparel, clothing accessories, textile yarn, and related products.[43]

With a public debt that accounted for 71% of its GDP in 2019,[44] El Salvador needed a radical reform to be able to both service its debt and support new ventures (see **Exhibit 5** for public finance indicators).[45] El Salvador's public debt was the second highest in Central America, with 61% owed to investors and 31% to multilateral agencies in 2018.[46] According to local analysts, poor budgeting practices were among the main causes for the growing debt.[47] El Salvador strengthened its Fiscal Responsibility Act in 2018, setting a declining path for its public debt and anchoring it to 60% of its GDP by 2030. After that, Standard & Poor's upgraded the country's sovereign debt rating to B- in December 2018 (see **Exhibit 6** for ratings),[48] and sovereign bond spreads trended below Latin America's regional average (see **Exhibit 7** for spreads).

Adding up to almost $6 billion in 2019, El Salvador's remittances to GDP ratio was among the world's highest (see **Exhibit 8** for remittance data).[49] A 2016 Inter-American Development Bank study estimated that 70% of the country's population received remittances, with an average monthly transfer of $195 that amounted to 50% of a household's income. Indeed, 79% of recipient households were poor or at risk of falling into poverty.[50] Although varying by service provider, the average transaction fee for sending remittances to El Salvador was 3.5% in 2019, down from 5.3% in 2012.[51]

Another key characteristic of Salvadoran households was the lack of formal access to financial institutions. Only 30% of Salvadorans had a bank account. Among the poorest 40%, this rate was even lower—only 19% of them owning an account—while female and rural adults also had disproportionally lower levels of access.[52] Labor informality was also high, with almost 70% of Salvadorans informally employed,[53] which was conducive to cash-based transactions.

Although El Salvador had implemented several structural reforms over the past years, including trade liberalization and privatization of some state-owned companies, the country's business environment remained challenging. El Salvador ranked 85th (out of 190) in the World Bank's Doing Business Index for 2019,[54] with widespread corruption, violence, and drug trafficking hampering business and investment. [55] By 2019, El Salvador was regarded as the world's deadliest place outside a war zone— [56] partially a civil war legacy, as the conflict had left the country awash in weapons and gunmen.[57] An estimated 500,000 Salvadorans were involved in gangs and money involved in gang transactions, combined with the amount lost resulting from violence amounted to $4 billion per year or 15% of the country's 2019 GDP.[58]

Nayib Bukele

Rise to Power

Bukele studied law at a local university and dropped out to work at Obermet,[b] an advertising agency owned by his father, [59] a wealthy businessman of Palestinian descent (with a net worth estimated at $20 million in 2015) who prospered upon the founding of multiple enterprises across the textile, pharmaceutical and advertising and media industries.[60] While at Obermet, Bukele managed an advertising account for the FMLN.[61] He first entered El Salvador's political scene in 2012, being elected mayor of the 7,000-people town of Nuevo Cuscatlán as part of an FMLN party coalition. [62,63] Bukele launched several social programs, including a signature English-language studies scholarship initiative for low-income youngsters. He donated his full $2,000 salary to this program,[64] bringing widespread national attention to his initiatives through savvy social media communication.[65]

In 2015, Bukele was elected mayor of San Salvador, the country's political and economic capital, with a population of above 300,000.[66] He was credited with making the city more organized, safer, and cleaner, as well as revitalizing the historic district.[67] He also rolled out several social programs aiming to reduce violence, such as the construction of new sport grounds, libraries, and marketplaces. In 2017, *Time* magazine profiled Bukele as a "Next-Generation Leader, "characterizing him as the "mayor saving minors."[68]

Bukele distanced himself from the FMLN with outspoken criticism and was expelled from the party in 2017. Analysts claimed that the expulsion of the party's most popular politician, compounded by poor governing, damaged the FMLN, which lost several previously held districts and senate seats in a 2018 election.[69] Shortly after, Bukele announced he would run for president,[70] also proclaiming the creation of a new political party, *Nuevas Ideas*. He eventually joined the Grand Alliance for National Unity (GANA), a small right-wing party, for his campaign,[71] as *Nuevas Ideas* only became a formal party later in 2018, which prevented it from registering for the early 2019 election. [72]

[b] In 2016, *La Prensa Gráfica*, a Salvadoran online publication, reported Obermet had $20 million in publicity contracts from over 16 government institutions from 2012 to 2016. Throughout this time, the FMLN held power through two consecutive presidential terms (2009-2014 and 2014-2019).

For observers, Bukele ran an unconventional campaign, with an "informal millennial style." He communicated largely via social media, shying away from debates and massive rallies. He also emphasized that education, health, and parks should be available to all citizens, not just the rich.[73] Moreover, Bukele promised to fight corruption, running on the slogans "Give us back what was stolen" and "There is enough money when nobody steals it."[74] These messages resonated in El Salvador, where three former presidents (from the FMLN and ARENA) had in previous years been indicted for corruption and one, jailed.[75]

In February 2019, Bukele won with 53% of votes, making him the youngest Salvadoran to reach presidential office. After the election, he claimed his victory marked the end not just of the two-party system, but of a post-war period dominated by the main protagonists of the war.[76] The New York Times reported, "The dramatic win for Mr. Bukele, 37, who was running as an outsider, underscores the deep discredit into which the country's traditional parties have fallen. Voters appeared to be willing to gamble on a relative newcomer to confront the country's poverty and violence, shutting out the right- and left-wing parties that have dominated Salvadoran politics for three decades."[77]

Bukele's Administration

Upon inauguration in June 2019, Bukele had to deal with a National Assembly dominated by the opposition. In February 2020, tensions erupted after the latter denied approval for a $109-million loan for a plan to crack down on violence.[78] On Bukele's instructions, armed troops marched into the National Assembly to coerce legislators into approving the loan, but they refused,[79] and the incident led to an international outcry.[80]

In March 2020, Bukele called for COVID-19 restrictions, closing the country's borders and imposing stringent quarantine measures. Over Twitter, he ordered the military and police to arrest individuals who broke the lockdown, overriding a Supreme Court ruling prohibiting their arrest.[81] A political stalemate between the president and the opposition-controlled National Assembly continued throughout 2020.[82] Local reporters pointed out that Bukele repeatedly disregarded Supreme Court resolutions that declared several of his executive orders and policy moves unconstitutional and abuses of power.[83] "Both [Bukele and National Assembly members] have an eye on legislative elections scheduled for early next year and appear unwilling to cede any advantage," gauged the Washington Post.[84]

By the time Salvadorans returned to the polls in February 2021 for a legislative election, Bukele boasted approval rates of over 75% across 13 different surveys on his performance as president.[85] His response to the pandemic was well regarded by most Salvadorans: in addition to direct aid of $300 granted to families, thousands of basic food supplies were delivered, along with a three-month suspension on bill payments for electricity, water, and internet,[86] as well as subsidies for struggling sectors. Still, El Salvador's GDP contracted by 8% in 2020,[87] and public debt ballooned to 89% of the GDP.[88] Bukele was also credited for having contributed towards better security conditions, with homicides decreasing to 19 per 100,000 people, down from 50 when he was elected. The president attributed this improvement to his anti-crime plan, which deployed army forces on both streets and jails.[89] However, local media reported that a government agreement with gangs had contributed to these results.[90]

February's election delivered Bukele and his *Nuevas Ideas* party a majority of over 60 out of 84 congress seats. A European Union delegation observing the election reported that, although results properly reflected citizens' votes, the campaign was run amidst a highly unequal context favorable to

Nuevas Ideas. It pointed out that Bukele used public resources to benefit his party and cancelled public funds to cities ruled by the opposition in June 2020.[91] The *New York Times* commented:

> [...] The president delights followers by trolling his enemies on Twitter and reveling in his triumphs on TikTok. [...] For Salvadorans accustomed to generations of political leaders who paid lip service to democracy while enriching themselves from the public till, Mr. Bukele's transgressions don't seem to matter much. [...] The president has avoided an overflow of coronavirus cases in hospitals and has handed out cash to poor Salvadorans to blunt the pain of the economic crisis. And while local news media reported that a sharp plunge in murders under Mr. Bukele resulted from a government deal with criminal gangs, many Salvadorans are just happy to have a respite from violence.[92]

On May 1st, during the first day in session, the National Assembly voted to oust five Supreme Court judges and the Attorney General—a power move that political scientists considered a self-coup.[93] While a *Nuevas Ideas* congress member justified their removal by stating they had stood in the way of the government's strategy to control the pandemic,[94] *El Faro*—a local independent publication, known for its fierce criticism of Bukele's government—revealed that the ousted Attorney General was overseeing a corruption investigation into two of Bukele's ministers and was also investigating secret ties between Bukele's government and Mara Salvatrucha-13,[95] one of the country's most powerful gangs.

The president stated that the ousting of judges was sustained by Article 186 of the Salvadoran Constitution, which allowed the National Assembly to destitute court magistrates on "specific causes previously established by the law," upon approval by two-thirds of the Assembly.[96] However, observers pointed out that Bukele did not follow due process for dismissing the judges and violated the Constitution's Article 172, which guaranteed independence of magistrates.[97] The ousting of Supreme Court judges and the Attorney General, who were replaced by loyalists, was rebuked by the international community.[98] "El Salvador is living through a dark chapter [of its history]," wrote El Faro.[99] "Human rights organizations have constantly denounced the government's policies and laws approved by a Congress dominated by [Bukele's] supporters, which represent violations and threats to human rights [in the country]."[100] Bukele tweeted in reply to his critics, "With all due respect: we're cleaning our house [...] and that is none of your business."[101] National Public Radio´s (NPR) Carrie Kahn reported:

> The judges were known for their independence. […] [But] Sergio Arauz, an editor at […] *El Faro*, says Bukele, with his voracious tweets and attacks on the press, controls the narrative in the country, framing himself as a great reformer […] Arauz, whose news site is frequently criticized by the president, says what Bukele wants is absolute power. "He's an autocrat," he says. […] [U.S.] President [Joseph] Biden has made strengthening democratic institutions and fighting corruption in Central America central to his plan to curb migration from the region. But Bukele isn't deterred.[102]

Bitcoin

A decentralized, peer-to-peer cryptocurrency system, Bitcoin secured digital money cryptographically in a way that it was almost forgery-proof and could not be spent simultaneously more than once.[103] Created in 2008 by either a programmer or group of programmers known with the fictitious name of Satoshi Nakamoto, Bitcoin was widely regarded as the first cryptocurrency.[104] Bitcoins could be used as a medium of exchange for other currencies or for goods and services, and were stored into a digital wallet, accessed through a smartphone or computer.[105]

The paper published by "Nakamoto" advocated the creation of Bitcoins to build a new monetary system that made the access to funding and transaction services "more democratic" after the 2008 financial crisis,[106] decentralizing transactions from bank intermediaries and making the digital currency accessible to everyone.[107] Critics, however, disputed the allegations that bitcoins contributed to a more "democratic" financial system. Economists Nouriel Roubini and Brunello Rosa wrote in 2018:

> Cryptocurrencies such as bitcoin result in the concentration of wealth, not greater equality […] One need only consider the massive centralization of power among cryptocurrency "miners," exchanges, developers, and wealth holders to see that [it] is not about decentralization and democracy; it is about greed. […] For example, a small group of companies […] control between two-thirds and three-quarters of all crypto-mining activity. […] Wealth in the crypto universe is even more concentrated than it is in North Korea. Whereas a Gini coefficient of 1.0 means that a single person controls 100% of a country's income/wealth, North Korea scores 0.86, the rather unequal United States scores 0.41 and bitcoin scores an astonishing 0.88.[108]

Mining Bitcoins

"Mining" was the computing-intensive process used to validate Bitcoin transactions. Miners competed to prove the validity of a transaction by solving computer-based algorithms and were rewarded with a pre-determined number of newly-created bitcoins (which were halved every four years). Miners with higher computer capacity typically had better chances of being first in validating a transaction.[109] Once the algorithm was solved, the transaction was added to the blockchain, a shared, immutable ledger that facilitated the process of recording transactions and tracking assets in a business network, reducing risks and costs for all involved parties.[110] The currency system was designed with a fixed supply—capped at 21 million bitcoins—that was expected to be reached in February 2140.[111]

By 2021, crypto mining was a multi-billion-dollar and volatile industry, influenced by factors such as bitcoin price volatility and regulation.[112] In 2021, China, a global mining leader, banned crypto mining. As a result, many miners moved to the United States, but China's move seemed to indicate that regulators around the world were tightening their grip on digital currencies.[113] The mining industry was dominated by industrial outfits,[114] which became more sophisticated and energy-intensive over time, using complex machinery to speed up operations.[115] Several "cryptocurrency mines" emerged, some of them with an estimated 25,000 machines running calculations 24 hours a day. Cambridge University's Bitcoin Electricity Consumption Index revealed that mining consumed 133.68 terawatt hours a year of electricity, more than Sweden did in 2020.[116]

Bitcoin: Financial Asset or Currency?

Since Bitcoin's creation, investors showed substantial interest in digital moneys. Some even viewed them as milestone in monetary history, as there were more than 4,000 of these new currencies by 2020 (see **Exhibit 9** for other cryptocurrencies).[117] By mid-2021, bitcoin remained the leading cryptocurrency in market capitalization (over $700 billion),[118] with trading as its most prevalent use.[119] It was available through exchange platforms, which worked like online stockbrokers, offering tools to buy and sell various digital currencies with different prices, fees, withdrawal options, and security features.[120] The daily trading volumes over the first four days of June 2021 hovered from $34.6 billion to $41.8 billion, totaling over 200,000 daily transactions in June (see **Exhibit 10** for transaction volumes).[121] By then, there were 18.8 million bitcoins in circulation, more than twice as many as in December 2011 (8 million).[122]

Bitcoin had one of the more volatile trading histories among asset classes[123] (see **Exhibit 11** for prices over time). Investors faced several issues associated with its ecosystem, such as fraud schemes, lacking regulatory frameworks, and legal constraints. Experts believed the Bitcoin market had grown more mature over the past few years, with institutional investors no longer shying away and regulators working on dedicated norms (see **Exhibit 12** for regulation).[124] Still, the price of the digital currency dropped 15% in May 2021 after Elon Musk, the billionaire CEO of automaker Tesla, tweeted that Tesla would no longer accept bitcoins due to environmental concerns.[125] Months before, Tesla had acquired $1.5 billion worth of bitcoins, stating it would bring "more flexibility to further diversify and maximize returns on our cash." The company had also said bitcoin would be accepted as payment for its products, becoming the first major automaker to do so.[126]

By 2021, only 15,000 businesses out of 213 million companies operating worldwide[127] accepted cryptocurrencies as payment—including global firms like Starbucks and Whole Foods.[128,129] Chainalysis, a company that tracked Bitcoin transactions, estimated that $4 billion in bitcoin was sent through payment processors in 2019. In turn, credit card transactions amounted to $3.7 trillion in the U.S. in 2018.[130] As compared to credit cards, bitcoin payments benefited most merchants from reduced processing fees (card transactions typically involved more intermediaries for processing). Still, most merchants converted bitcoin payments for fiat, not only because they had to pay for their inventory and their employees' wages in regular money, but also because they preferred to avoid the volatility risk.[131]

Bitcoin use for daily transactions was also deterred by a lack of understanding and the association of "crypto" with criminal activities.[132] News reports had highlighted the use of Bitcoin in unlawful operations, such as in an online marketplace called Silk Road that the FBI shut down in 2013 for selling illegal drugs.[133] The *New York Times* also reported that the amount of cryptocurrency spent on so-called dark net markets (which sold stolen credit card information and illegal drugs) rose 60% to $601 million in the last quarter of 2019.[134] Cryptocurrencies had also been used to evade foreign capital controls, with $50 billion moved from China-based digital wallets to other parts of the world in 2020.[135]

Still, Bitcoin had been accepted as an attractive medium for international remittances, estimated as an over-$500-billion market. Cryptocurrencies allowed remittance senders and receivers to access cheaper rates than those offered by banks and remittance service providers.[136] In Sub-Saharan Africa, for instance, while the average remittance transaction fee was 9% in the first quarter of 2020, peer-to-peer crypto networks charged between 2% to 5%, according to LocalBitcoins, a trading platform.[137] In Venezuela, a country plagued by hyperinflation and political instability, digital monies became popular for émigrés to send remittances in a currency that would preserve their value.[138]

Is It Money?

By the early 2020s, the bitcoin was still regarded by several leading economists as a "highly speculative asset." Janet Yellen, former U.S. Federal Reserve head, observed, "It has long been thought that for something to be a useful currency, it needs to be a stable source of value, and Bitcoin is anything but."[139] She also warned in 2017: "It doesn't constitute legal tender."[140] Scott A. Wolla, economic education coordinator at the Federal Reserve Bank of St. Louis, commented on the digital currency's limitations, "The store-of-value function has also been diminished because of hacking attacks, thefts, and other security problems. [...] Because bitcoin prices fluctuate dramatically [...], retailers must recalculate their bitcoin price frequently, which is likely to confuse both buyers and sellers. [...] Bitcoin often trades at different prices on different exchanges, which further complicates pricing decisions by sellers."[141]

Yet, in several emerging markets, cryptocurrency adoption was catching on. Chainanalysis ranked Vietnam first on its 2021 Crypto Adoption Index (which measured the amount of cryptocurrency received by trading platforms and retailers), followed by India and Pakistan (see **Exhibit 13** for Index results).[142] Digital money advocates pointed Latin America, where people had to protect their assets amidst economic crises, as a perfect market for cryptocurrencies.[143] The *Financial Times* wrote:

> Regulators in Europe and the U.S. have issued stark warnings about the dangers of trading crypto. [...] But in the developing world, there are signs that crypto is quietly building deeper roots. [...]As a store of value, as a means of exchange, and as a unit of account, national currencies in some developing countries too often fall short. Unpredictable inflation and fast-moving exchange rates, clunky and expensive banking systems, financial restrictions, and regulatory uncertainty, especially the existence or threat of capital controls, all undermine their appeal. [144]

Bukele's Bitcoin Plan

On June 5, Bukele broadcasted to Bitcoin 2021—a conference in Miami billed as the biggest Bitcoin event in history—that bitcoin would become legal tender.[145] Bitcoin, he said, would reduce the reliance on expensive dollars and keep more money in Salvadorans' pockets.[146] He didn't tell anyone in El Salvador of the Bitcoin plan before the public announcement.[147] On June 8, the Bitcoin Act was approved by the Salvadoran National Assembly, with 62 out of 84 votes, and would come into force Coming into force 90 days after its publication. The Bitcoin Act established that, while all businesses would be required to accept bitcoins (unless they lacked the technological infrastructure to do so), customers could choose whether to do their transactions in bitcoins or dollars. Exchange rates would be set by the market, and the government would guarantee automatic convertibility from bitcoin to dollars through the creation of a $150-million trust at BANDESAL, El Salvador's development bank.[148]

Intent on positioning the country as a Bitcoin hub, El Salvador's president instructed the state-owned geothermal electric company LaGeo to develop a plan to offer bitcoin mining facilities using renewable energy from the country's volcanoes.[c] [149] He also set out to lure bitcoin enthusiasts by offering citizenship to those who had invested in at least three bitcoins (equivalent to roughly $120,000 in mid-June 2021).[150] Yet, the preparations for the new currency adoption within a 90-day period faced multiple challenges, including a World Bank rejection to provide technical assistance to the government's plan. "[…] This is not something the World Bank can support given the environmental and transparency shortcomings," stated a spokesperson.[151]

Technological and financial infrastructure had to be built, including the deployment of a network of 200 bitcoin ATMs in public spaces to allow Salvadorans to cash out in dollars, as well as the development of an official digital wallet called *Chivo*—"cool" in local slang—that would connect to the new ATM network.[152] To encourage its use, *Chivo* would offer $30 in bitcoin (which could be used for payments and transfers to other *Chivo* wallets)[153] as a welcome package to every Salvadoran who installed it. It would also be able to receive international remittances. The government would subsidize transmission costs and keep actual dollars, so that recipients would get virtual dollars displayed in their app. *Chivo's* development was promoted by Bukele himself and three of his brothers, who were thought to be the main bitcoin advocates in his inner circle.[154] In total, the National Assembly approved

[c] El Salvador generated a quarter of its total electricity from geothermal resources. Geothermal power generation has increased nearly five-fold since 1990 in Central America, most notably in El Salvador, the country with the second largest geothermal generation share after Iceland. Source: International Renewable Energy Agency.

over $200 million in spending linked to the Bitcoin project, with $150 million being used to finance BANDESAL's convertibility trust and $30 million for *Chivo* wallet incentives.[155]

Potential Implications

Bukele claimed there were practical reasons for El Salvador's economy to adopt bitcoin as legal tender. "We can receive remittances at almost no cost and at the speed of light [...] plus financial inclusion for the 70% who are unbanked," he said.[156] The president estimated that money service providers like Western Union and MoneyGram would lose $400 million a year in remittance commissions if Salvadorans adopted bitcoin at scale, while other financial experts estimated this figure could be as high as $1 billion.[157] Kenneth Suchoski, a fintech analyst, challenged this view: "[…] Most of the volume in the remittance industry is going from developed markets to emerging markets, primarily to people—families and friends—that operate in cash. To the extent that bitcoin isn't adopted and there's no widespread acceptance, these remittance providers are still going to be relevant for the years to come."[158]

Carlos Acevedo, former president of El Salvador´s Central Bank (2009-2013) also noted that, although the Chivo wallet could allow for remittances without incurring fees, the government would have to spend significant public resources on its Bitcoin plan. "There is no such thing as a free lunch. Although Salvadorans do not pay direct fees for using the Chivo wallet, millions were spent in this project, most likely with taxpayer money. The amount of public investment was never fully disclosed," he said. Acevedo also questioned the plan's impact on financial inclusion: "Around 20% of the population do not have mobile phones, or they own unsophisticated devices, which are incompatible with the Chivo app. Additionally, connectivity in El Salvador can be problematic, and basic financial education is quite low among the poor."

Bukele also believed Bitcoin could make his country less dependent on U.S. dollar emissions and their associated inflation and interest rate implications.[159] Indeed, in 2020, the U.S. Federal Reserve printed unprecedented amounts of money to stimulate a pandemic-hit economy, [160] with money stock indicators rising from $16.3 trillion in May 2020 to $19.2 trillion in June 2021.[161] By then, the Fed forecasted the U.S. annual inflation at 3.4%, well above its 2% target. Jerome Powell, the Fed's chairman, blamed Covid-19 for the supply hold-ups and shortages that fueled price rises.[162] However, observers pointed out that, given the role of remittances from the U.S. in the Salvadoran economy (24% of GDP in 2020)[163] and the fact that the U.S. was the country's main trade partner, it was difficult for El Salvador to avoid a strong relationship with the dollar.

Still, economists pointed to other potential risks associated with bitcoin adoption, while the IMF stated that widespread cryptocurrency use could threaten "macroeconomic stability" and harm financial integrity due to its links with illicit activities. In 2020, for the first time in over three decades, the IMF had granted El Salvador a $389-million emergency financial assistance package to help meet urgent balance-of-payment needs stemming from the Covid-19 pandemic.[164] The loan, according to the Salvadoran finance minister, would be part of an extended fund facility of $1.3-$1.4 billion over three years, offered at a 1.4% rate with a five-year grace period. Analysts claimed the loan could "make or break country finances." [165] In April 2021, El Salvador´s short-term debt reached a record high of $2.6 billion.[166] Luis Membreño, a Salvadoran economist, pondered:

> Our financing sources are drying out. But my impression, given the delays and stalling of negotiations, is that, unless Bukele agrees to certain requirements, including improving the deteriorating democratic conditions in El Salvador, the IMF loan or any

> further financial support from the U.S. [the largest contributor to the Fund] and the E.U. will not materialize.

In May 2021, the U.S. State Department published a list naming public officials in Central America with links to drug trade or corruption—including Bukele´s Chief of Cabinet and other individuals associated with his government. Although this list did not have any legal repercussions, it served as a preliminary notice to the later disseminated Engel List,[167] which also named individuals suspected of corruption and antidemocratic conduct in Guatemala, El Salvador, and Honduras, and could lead to sanctions such as a U.S. visa revocation.[168] The day after the State Department released its first list in May, Bukele asked the National Assembly to authorize a new cooperation agreement with China, which, in late 2019, had already signed off on eight mega projects (such as a stadium and other infrastructure, culture and industry developments) already underway in El Salvador.[169] "Bukele believes his Bitcoin plan could make El Salvador less dependent on the U.S. Although he is reaching out to other potential allies, such as China, Russia, and Turkey, none of these relationships seem to be significantly strong. His foreign policies are simply erratic," Membreño concluded.

The Bitcoin plan was also criticized by credit rating agencies for putting El Salvador's economic stability at stake,[170] while exposing ordinary citizens to the impact of crypto speculation.[171] By then, the country faced debt repayments to the tune of $2 billion due in 2021.[172] "Having that risky exchange rate volatility is what was trying to be avoided when El Salvador adopted the dollar," said Jaime Reusche, of the rating service Moody's, which downgraded El Salvador in July partly because of the Bitcoin Act. "This clearly has no precedent," he remarked.[173]

However, Bukele downplayed warnings and viewed his plan as an opportunity to spearhead an economic revolution. "Almost all classical economists have defied bitcoins. [...] This is just exercising our sovereign right to adopt legal tenders, [...] like we adopted the U.S. dollar in the year 2001. [...] The only difference probably is the reasons why we are doing this; [...] in 2001, it was probably done for the benefit of the banks, and this decision is done for the benefit of the people." [174]

Others thought El Salvador's Bitcoin plan could lead other economies to follow a similar path. Jorge Cuéllar, a scholar on Central American Studies, elaborated:

> […] Other Latin American states are beginning to view cryptocurrency as a worthwhile enterprise. [...] It is no coincidence that Latin America is home to so many crypto havens. 'Banking the unbanked' has played a key role in the economic strategies of many Latin American countries striving to synchronize their informal economies with the rhythms of global accumulation circuits. [...] For bitcoiners, El Salvador's reforms will provide valuable data on the social utility of cryptocurrency, demonstrating its function as a viable fiat currency.[175]

Bitcoin Becomes Legal Tender

On September 7, 2021, bitcoin officially became El Salvador's legal tender. Bitcoin prices fell as much as 17% from its value the day before, hitting $42,921.3. Although the reasons for this fall were unclear, the currency was surrounded by investor hype on "Bitcoin Day" in El Salvador. Bukele himself suggested El Salvador used the selloff to buy more bitcoins, tweeting, "Buying the dip," and "150 new coins added."[176]

By mid-September, thousands of Salvadorans protested in the country's capital against bitcoin as a legal tender for fear of future economic instability, while others held signs reading "Bukele Dictator."[177]

El Salvador bond spreads to U.S. Treasuries hit a record high at 986 basis points, as investors grew more concerned that the country would not manage to close a potential $1-billion loan agreement with the IMF.[178] Tensions with the U.S. and the international community resurfaced upon the National Assembly´s decision in early September to allow consecutive presidential reelections (which had been prohibited in the Salvadoran constitution since the 19th century),[179] paving the way for Bukele to run for a second five-year term in 2024. U.S. *Chargé D´Affaires* to El Salvador, Jean Manes, stated after the event, "We've seen what happens when other countries in the region have followed this path, like in the case of Venezuela, where Chávez was elected democratically, but worked little by little to acquire more power and limit independence. […] We know where that road leads."[180]

In a tweet on October 6, Bukele reported three million *Chivo* downloads—some 500,000 more than initially targeted. Yet, the Salvadoran Foundation for Economic and Social Development (FUSADES) informed that only 12% of consumers had used bitcoins since their adoption, and only 7% of businesses had sold in bitcoins. Bitcoin adoption, argued a FUSADES analyst, was hindered by the lack of financial education among both consumers and businesses and their reluctance to use digital wallets.[181] In August, Bukele announced that the government would not enforce the legal requirement for all businesses to accept bitcoins.[182] "As long as adoption is not enforced, which has been the case so far, people are happy," said Membreño. Still, in early October, *Time* magazine reported that "Uber drivers, waiters, and store owners are day-trading the cryptocurrency on their phones [...] The ease with which users can top up their balances and switch instantly between dollars and tiny, fractional amounts of the cryptocurrency makes it a perfect tool for speculation." [183]

The *Chivo* app implementation also ran into some difficulties, with reports of glitches, fraud, and theft. In October, hundreds of Salvadorans complained that hackers had illegally activated their wallets to claim their $30-bitcoin incentive.[184] Membreño remarked, "Bukele thought that, by giving Salvadorans a $30 incentive, a Bitcoin ecosystem would be created. Instead, people are transferring the $30 from their own *Chivo* wallet to other people's wallets and cashing out the benefit in dollars. With these fraud reports and money disappearing from *Chivo* wallets, they simply do not trust the system."

Observers also grew wary of the lack of transparency around the Bitcoin plan rollout. One of the concerns was that the *Chivo* wallet was registered as a private company and received funding from a government electricity company,[185] with limited transparency over the use of this funding. Also worrisome was the lack of Central Bank oversight over the digital currency, despite its legal tender status.[186] Bloomberg reported that there was no public information about the state of the $150-million BANDESAL trust fund used to back bitcoin transactions. The agency added, "El Salvador's President Nayib Bukele is probably the only head of state in the world who uses public funds to trade bitcoin with his phone […]." [187]

In November, Bukele announced a plan to build a "Bitcoin City" at the base of the Conchagua volcano, where bitcoin would be mined. Construction would begin in 2022, and city residents would be exempted from paying taxes, except for a value added tax (VAT). To finance this project, El Salvador planned to issue the world´s first bitcoin-backed sovereign bond and raise $1 billion,[188] in partnership with Blockstream, a digital assets infrastructure company. Half of the "Bitcoin Bond's" proceeds would go to buying bitcoin, while the other half would be used for energy and bitcoin mining infrastructure.[189] The 10-year bond would offer investors an interest rate of 6.5% with additional dividends after five years and would be traded on the Bitifinex platform. The government considered raising $5 billion through additional bitcoin-backed bond offerings.[190] "By selling bitcoin-backed bonds […], El Salvador will bypass the Wall Street banks and international institutions that have had a century-long choke hold on loans to developing economies. There are signs that this could escalate into a full-scale public battle as global financiers angle to retain control of the system," reported CoinDesk, a media outlet dedicated to cryptocurrencies.[191] Samson Mow, Chief Strategy Officer at Blockstream, expected a domino effect as countries followed El Salvador´s lead and decoupled from the U.S. dollar system. By December 2021, Mow stated there were already $300 million worth of "soft commitments" to the bond expected to be issued in 2022.[192]

The Road Ahead

In late 2021 and early 2022, bitcoin prices tumbled, falling from nearly $69,000 in early November to $33,000 on January 24. Analysts claimed that investors were in a "risk-off mood," embracing a "flight to safety" approach across most asset classes in light of the Federal Reserve´s plan to raise interest rates.[193] By then, Bloomberg estimated that Bukele had spent about $71 million to buy bitcoins, based on data provided by his tweets. By January, losses were estimated at 14%. "There's no official information about the amount of Bitcoin the government has purchased, the price they paid, or how much is in reserve," said Ricardo Castaneda, a Salvadoran economist at the Central America Fiscal Studies Institute.[194]

In late January 2022, the IMF's executive directors "urged the authorities to narrow the scope of the bitcoin law by removing Bitcoin's legal tender status." The Fund admitted that the bitcoin wallet represented a positive effort to boost financial inclusion, but it called for "strict regulation and oversight of the new ecosystem."[195] (See **Exhibit 14** for Bukele´s response to the IMF statement.) In 2021, El Salvador boasted a GDP growth of 9%[196] and a record remittance increase of 27%.[197] "But Salvadorans may face a reality check in 2022," warned Membreño. "It will be difficult to sustain this boom in the current economic, political, and global context, with the impact of new Covid-19 variants and so on." The country's budget gap doubled to almost 6% of GDP in 2021 since Bukele took office in 2019. [198]

Was El Salvador´s Bitcoin plan, as some analysts and enthusiasts claimed, the dawn of a new monetary age? Or was it another sign of weakened governance in El Salvador? Would Salvadorans embrace this new digital currency, and, if so, what implications would this have? Would Bitcoin expose a population with little financial education and a limited economic safety net to the fate of a highly volatile cryptocurrency market?[199] Or would they learn how to hedge its benefits to their advantage, paving the way for other emerging economies to follow suit?

Exhibit 1 Map of El Salvador and Central America

Source: University of Texas Libraries, The University of Texas at Austin, Perry-Castañeda Library Map Collection, https://maps.lib.utexas.edu/maps/americas.html, accessed November 2021.

Exhibit 2 El Salvador´s Select Economic Indicators, 2010-2019

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
GDP, current prices (U$$ billion)	18.5	20	21	22	23	23	24	25	26	27
Real GDP growth (%)	2.1%	3.8%	2.8%	2.2%	1.7%	2.4%	2.5%	2.3%	2.4%	2.6%
GNI per capita, Atlas method (current US$)	2,880	3,060	3,210	3,350	3,400	3,440	3,510	3,600	3,820	3,990
Real GNI per capita growth (%)	2.0%	3.3%	1.2%	1.3%	1.2%	1.7%	1.5%	1.3%	1.9%	2.8%
Consumer price inflation (average, %)	1.2%	5.1%	1.7%	0.8%	1.1%	-0.7%	0.6%	1.0%	1.1%	0.1%
Broad money growth (annual %)	0.1%	-2.1%	1.3%	2.4%	0.3%	6.9%	3.1%	11.1%	6.1%	11.3%
Unemployment, total (% of total labor force)	4.9%	4.3%	3.8%	3.7%	4.2%	4.0%	4.4%	4.4%	4.0%	4.0%
Multidimensional poverty headcount ratio (% of total population)	…	…	…	…	40.5%	…	39.4%	38.9%	33.8%	32%
Poverty headcount ratio at $5.50 a day (2011 PPP) (% of population)	42.1%	42.1%	39.5%	35.6%	35.5%	32.6%	31.4%	29.5%	26.3%	22.3%
Gini Index	43.5	42.3	41.8	43.4	41.6	40.6	40	38	38.6	38.8

Source: Casewriters, with information from the World Bank Open Data, https://data.worldbank.org/, accessed November 2021.

Note: World Bank Definitions: (1) GNI is the sum of value added by all resident producers, plus any product taxes not included in output valuation and net receipts of primary income (employee compensation or property income from abroad). (2) Broad money measures the sum of currency outside banks, demand deposits outside of the central government, time savings and foreign currency deposits other than in the central government, bank and travelers' checks and other securities such as certificates of deposits and commercial paper. (3) The Gini index measures the extent to which the distribution of income among individuals or households within an economy deviates from a perfectly equal distribution, with 0 representing perfect equality, while an index of 100 implies perfect inequality. (4) The Multidimensional Poverty Measure (MPM) seeks to understand poverty beyond monetary deprivations (which remain the focal point of the World Bank's monitoring of global poverty) by including access to education and basic infrastructure along with the monetary headcount ratio at the $1.90 international poverty line.

Exhibit 3 El Salvador´s Main Trade Partners, 2019 (% of amount traded)

Exports		Imports	
United States	40.4%	United States	29.8%
Guatemala	15.4%	Guatemala	12.5%
Honduras	15.1%	Mexico	8.3%
Nicaragua	6.4%	Honduras	5.7%
Costa Rica	4.3%	Costa Rica	2.9%
Others	18.5%	Others	40.9%

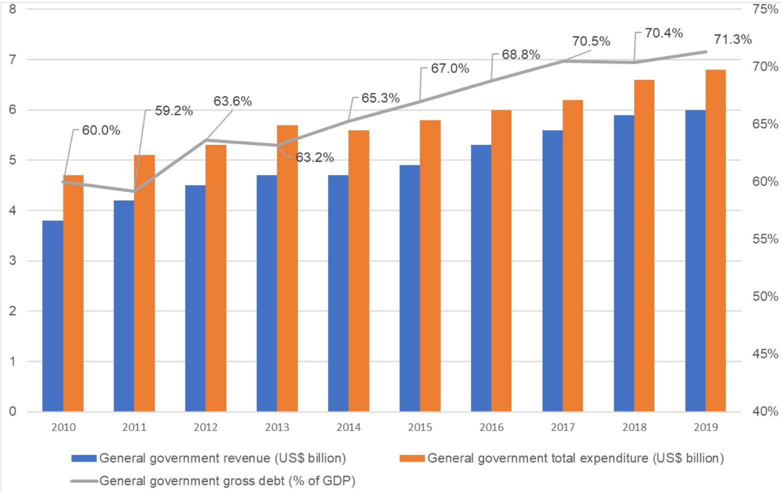
Source: Casewriters, with data from The Observatory of Economic Complexity, El Salvador Country Profile, https://oec.world/en/profile/country/slv?compareExports0=comparisonOption5 accessed February 2022.

Exhibit 4 El Salvador's Balance of Payments, 2015-2019 (% of GDP)

	2015	2016	2017	2018	2019
Current Account	-3.2	-2.3	-1.9	-3.3	-0.6
Merchandise trade balance	-21.2	-19.2	-19.4	-21.7	-21.2
Exports of goods (f.o.b.)	18.9	17.9	18.7	18.2	17.7
Import of goods (f.o.b.)	40.1	37.1	38.1	39.9	38.9
Services, net	4.1	3.3	2.9	3.4	4.6
Primary income, net	-4.7	-5.2	-5.6	-5.6	-5
Secondary income, net	18.6	18.8	20.2	20.6	21
Of which: workers´remittances (credits)	18.2	18.8	19.9	20.6	20.9
Capital Account, net	0.3	0.3	0.3	0.8	0.8
Financial Account					
(Net lending (+)/Net borrowing (-))	-3.7	-5.1	-3.4	-4.8	-4
Foreign direct investment, net	-1.7	-1.4	-3.6	-3.2	-2.4
Portfolio investment, net	-0.3	-1.5	-1.3	0.4	-0.1
Other investment, net	-1.8	-2.2	1.4	-2	-1.5
Errors and Omissions, net	-0.3	-1.3	-0.7	-2.3	-1
Overall balance	0.5	1.9	1.2	0	3.3
Financing	-0.5	-1.9	-1.2	0	-3.3
Change in reseve assets (- = increase)	-0.5	-1.9	-1.2	0	-3.3
Exceptional Financing					
Of which: IMF					
Memorandum items					
Gross international reserves	11.9	13.4	14.3	13.7	16.5
In months of imports	3.1	3.6	3.8	3.5	4.3
In percent of total short-term external debt	138.1	127.8	174.6	172.4	200.8
External debt	66.1	67.4	66	64	64.7

Source: International Monetary Fund (IMF), El Salvador 2021 Article IV Consultation, p. 38, https://www.imf.org/en/countries/slv?selectedfilters=Article%20IV%20Staff%20Reports#whatsnew accessed February 2022. Data from Central Reserve Bank of El Salvador and IMF staff estimates.

Exhibit 5 Governance Finance Indicators, 2010–2019



US$ Million	**2016**	**2017**	**2018**
Gross financing requirements	2,214	2,236	1,861
Overall deficit	751	631	695
Public debt amortization	1,463	1,605	1,166
External	305	323	355
Multilaterals and bilaterals	305	323	355
Bonds	-	-	-
Domestic	1,158	1,282	811
of which short term debt	1,000	1,047	768
Sources of financing	2,215	2,237	1,860
External	292	955	548
Multilaterals and bilaterals	292	354	548
Bonds	-	601	-
Domestic	1,923	1,282	1,312
Pension funds	(520)	(560)	366
Short-term debt	1,243	732	833
Others, including floating debt	1,316	1,095	113
Use of Central Bank deposits	(116)	15	-

Source: Casewriters, with information from International Monetary Fund´s World Economic Outlook and 2019 Article IV Consultation, www.imf.org accessed November 2021.

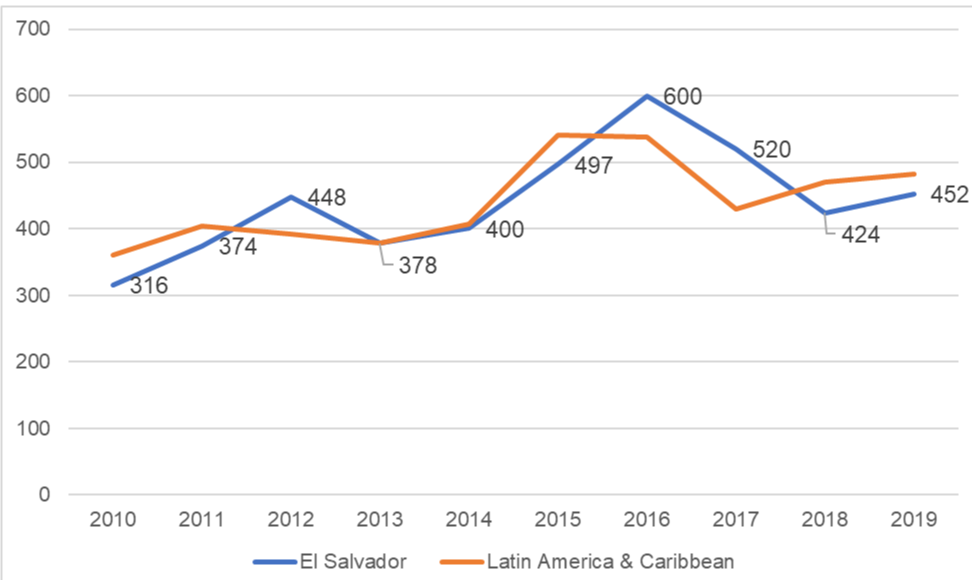
Note: The general government gross debt consists of all liabilities that require payment of principal or interest to creditors in the future.

Exhibit 6 El Salvador´s Long-Term Debt Credit Ratings, 2017-2019

Moody's			S&P			Fitch		
	Rating	Outlook		Rating	Outlook		Rating	Outlook
11-Apr-17	Caa1	Stable	5-May-17	CC	Negative	3-May-17	CCC	
23-Feb-18	B3	Stable	3-Oct-17	CCC+	Stable	6-Oct-17	B-	Stable
			14-Dec-17	...	Positive	11-Jun-19	B-	
			28-Dec-18	B-	Stable			

Source: Casewriters, with information from Expansión, https://datosmacro.expansion.com/ratings/el-salvador, accessed November 2021.

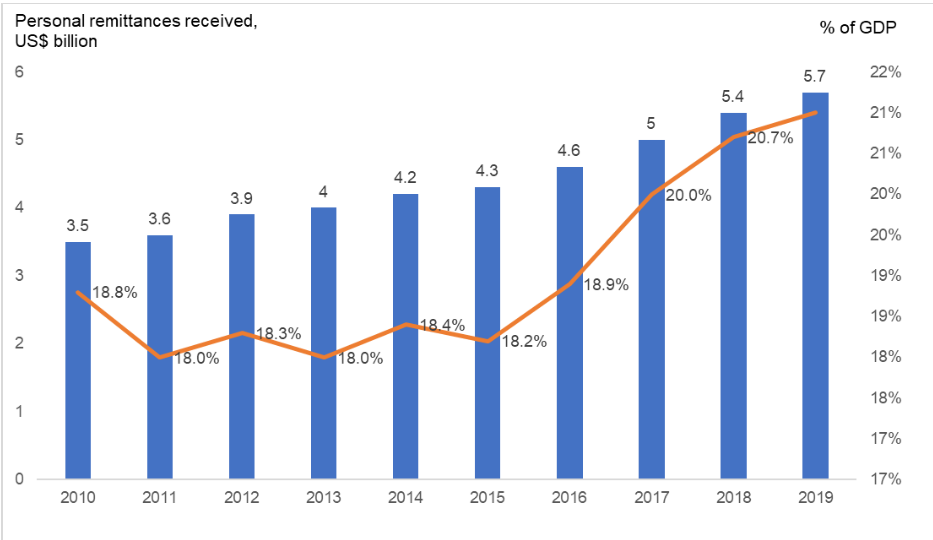
Exhibit 7 El Salvador's and Latin America's Emerging Market Bond Index (EMBI), Annual Average Spreads, 2010–2019



Source: Casewriters, with information from the World Bank Global Economic Monitor database, https://databank.worldbank.org/source/global-economic-monitor-(gem), accessed November 2021.

Note: J.P. Morgan devised the EMBI as a benchmark index to measure the overall performance of emerging market countries' government and corporate bonds that complied with a number of liquidity and structural requisites.

Exhibit 8 Personal Remittances Received in El Salvador, 2010-2019



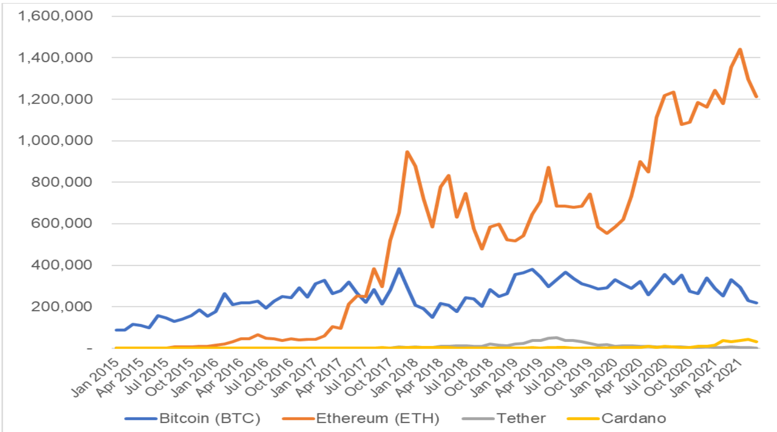
Source: Casewriters, with information from the World Bank Open Data, https://data.worldbank.org/, accessed November 2021.

Exhibit 9 Selected Cryptocurrencies' Profiles and Trading Information, June 4, 2021 (in US$)

Currency	Profile	Price	Volume Traded (billions)	Market Cap (billions)
Bitcoin (BTC)	BTC was the first crypto-currency launched and is used for store of value, trading and as a means of exchange.	$36,895	$41	$706.6
Ethereum (ETH)	Both a cryptocurrency and a blockchain platform, ETH is favored by program developers because of its potential applications, such as smart contracts that automatically execute when conditions are met.	$2,702	$34.2	$307.3
Binance Coin (BNB)	Launched in 2017, BNB can be used to trade and pay fees on Binance, globally one of the largest crypto exchanges, and it can be also be used as payment medium or even to book travel arrangements.	$386	$5	$62.6
Cardano (ADA)	ADA relies on proof-of-stake validation, which expedites transaction times and decreases energy usage. ADA also enables smart contracts and decentralized applications.	$1.7	$4.6	$55.9
Tether (USDT)	USDT is a stable coin backed by the U.S. dollar—with its price pegged at $1 USD—commonly used by investors with less appetite for volatility.	$1	$92.7	$62.3

Source: Compiled by casewriters, using information from "Top 10 Cryptocurrencies in November 2021," by Kat Tretina and John Schmidt, *Forbes* magazine, https://www.forbes.com/advisor/investing/top-10-cryptocurrencies/ and Tether, by Jake Frankenfeld, Investopedia, https://www.investopedia.com/terms/t/tether-usdt.asp and market data from CoinMarketCap https://coinmarketcap.com/, accessed November 2021.

Exhibit 10 Daily Transaction History of Select Cryptocurrencies, 2015-2021



Source: Casewriters, with information from Statista, "Daily Transaction History of 16 Selected Cryptocurrencies up to November 7, 2021," available through Baker Library, Harvard Business School, accessed November 2021.

Exhibit 11 Bitcoin Price Evolution, 2013-2021, in US$

January – June 2021

Source: CoinMarketCap https://coinmarketcap.com/, accessed November 2021.

Exhibit 12 Bitcoin Regulation in Select Countries

Country	Recognition and Definition of Crypto Assets	Know Your Customer (KYC) and Anti-Money Laundering (AML) Requirements	Taxation
United States	Crypto assets lack a clear regulatory framework and are recognized by the Securities and Exchange Commission (SEC) as securities, while the Commodity Futures Trade Commission (CFTC) and Treasury respectively recognize crypto as a commodity and currency.	Crypto exchanges fall under the regulatory scope of the Bank Secrecy Act (BSA) and must register with the Financial Crimes Enforcement Network (FinCEN). They are also required to comply with AML and combating-the financing-of-terrorism obligations.	The Internal Revenue Service (IRS) classifies cryptocurrencies as property for federal income tax purposes.
United Kingdom	The Financial Conduct Authority (FCA) policy statement PS19/22 (2019) provides guidance on crypto assets and the applicable regulatory regime for each type. Rule PS20/10 (2020) prohibits the sale of investment products that reference cryptocurrencies to retail clients.	The FCA requires custodian wallets and crypto exchanges to register according to the 5th European Union AML Directive published in 2018.	Capital gains tax may apply to the sale, exchange, use (for payment), transfer, and donation of crypto assets.
China	The Civil Code (2020) recognizes cryptocurrency as inheritable property. However, China has banned crypto-currency exchanges and mining operations.	Since China has prohibited virtual asset activities, many AML/KYC requirements remain inapplicable.	Income earned from the purchase and sale of “virtual currencies” is considered taxable income for individual income tax computed under “property transfer income.”
India	In 2018, the Reserve Bank of India (RBI) banned entities from dealing with crypto-related businesses. RBI’s ban was overturned by India’s Supreme Court.	No official regulation, implemented discretionally by crypto exchange platforms.	The Central Board of Direct Taxation states that investors must pay taxes on crypto trading profits.
Nigeria	Since 2017, the Central Bank of Nigeria (CBN) and the Securities and Exchange Commission have recommended that financial institutions neither transact in	CBN requires banks to ensure their clients follow appropriate KYC/AML procedures.	Cryptocurrencies are described as intangible assets other than goodwill and do not pay any taxes.

Country	Recognition and Definition of Crypto Assets	Know Your Customer (KYC) and Anti-Money Laundering (AML) Requirements	Taxation
	crypto nor hold the accounts for crypto exchanges. However, they have agreed to collaborate and conduct research on crypto regulation.		

Source: Compiled by casewriters with information from "Navigating Cryptocurrency Regulation: An Industry Perspective on the Insights and Tools Needed to Shape Balanced Crypto Regulation, " Global Future Council on Cryptocurrencies, World Economic Forum, September 2021, https://www3.weforum.org/docs/WEF_Navigating_Cryptocurrency_Regulation_2021.pdf, and "Cryptocurrency Regulations Around the World," by Timothy Smith, Investopedia, https://www.investopedia.com/cryptocurrency-regulations-around-the-world-5202122, and "How India´s cryptocurrency exchanges are countering dirty money," by Neil Borate, Livemint, https://www.livemint.com/money/personal-finance/how-india-s-cryptocurrency-exchanges-are-countering-dirty-money-11610971368439.html, accessed November 2021.

Exhibit 13 Global Crypto Adoption Index, July 2021–June 2021

Country	Index Score	On-chain value received	On-chain retail value received	P2P exchange trade volume
Vietnam	1	4	2	3
India	0.37	2	3	72
Pakistan	0.36	11	12	8
Ukraine	0.29	6	5	40
Kenya	0.28	41	28	1
Nigeria	0.26	15	10	18
Venezuela	0.25	29	22	6
United States	0.22	3	4	109
Togo	0.19	47	42	2
Argentina	0.19	14	17	33

Source: Chainanalysis 2021 Global Crypto Adoption Index, https://blog.chainalysis.com/reports/2021-global-crypto-adoption-index, accessed November 2021.

Note: The Global Crypto Adoption Index is made up of three metrics: (1) on-chain cryptocurrency total valued received by the country, weighted by purchasing power parity (PPP) per capita; (2) on-chain retail value received, measuring the activity of non-professional, individual cryptocurrency users for retail transactions under $10,000, also weighted by PPP per capita; (3) P2P exchange trade volume, weighted by PPP per capita and number of internet users in the country.

Exhibit 14 President Bukele´s Twitter Response to IMF Statement, January 2022

Source: Twitter, January 25th, 2022, https://twitter.com/nayibbukele accessed January 2022.

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[1] Sigalos, MacKensie, "El Salvador looks to become the world's first country to adopt bitcoin as legal tender," CNBC, June 2021, https://www.cnbc.com/2021/06/05/el-salvador-becomes-the-first-country-to-adopt-bitcoin-as-legal-tender-.html, accessed October 2021.

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