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THE ROLE OF CRYPTOASSETS AS LEGAL TENDER: THE EXAMPLE OF EL SALVADOR

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ABSTRACT

On 7 September 2021, El Salvador became the first jurisdiction to adopt bitcoin as legal tender. This initiative has raised as much enthusiasm as it has scepticism and potentially opens the door for other countries to follow suit. The initiative is underpinned by a law passed by the Legislative Assembly, with the more functional aspects left to a series of technical standards drawn up by the Central Bank of El Salvador. To facilitate its operational roll-out, the Government has opted to provide Salvadorans with a digital wallet and has also launched an ambitious educational programme aimed at the population as a whole. International organisations consider that this proposal poses significant risks to the overall economy, potentially compromising the Salvadoran monetary system and the integrity of its financial sector, and undermining the State's revenue-raising capacity. Many questions remain over the final outcome, which will largely depend on the country's ability to overcome not only the difficulties evidenced in the initiative's launch, but also other pre-existing structural shortcomings.

Keywords: cryptoassets, bitcoin, monetary policy, monetary system, legal tender.

JEL classification: E42, E44, E52, E62, O10, O33.

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Introduction

On 7 September 2021, El Salvador officially became the first jurisdiction to adopt bitcoin as legal tender. This marked the culmination of a transition lasting just under three months since what has come to be known as the "Bitcoin Law"[2] was adopted via an expedited procedure, passed by a qualified majority in the Legislative Assembly.

The initiative was originally unveiled by the President, Nayib Bukele, who, in a video broadcast at Bitcoin 2021, announced the guiding principles of his proposal. At the time he argued that rolling out bitcoin would bring a wide range of benefits for citizens and firms, underscoring above all its potential to slash the cost of remittances and to boost financial inclusion.[3] Furthermore, the President reasoned that bitcoin becoming a universally accepted means of payment would result in a significant saving of public funds by reducing the dependence on physical dollars which are costly to import.

The announcement was met with significant scepticism internationally (international organisations, rating agencies) and domestically, where it has been the subject of protests ever since. By contrast, among the "crypto community" the decision was mostly met with enthusiasm, in the belief that it blazed a trail for other regions to potentially follow.[4]

The initiative's key features

The law regulating the introduction and use of bitcoin as legal tender in El Salvador is characterised by its brevity.[5] Consequently, it lacks the technical detail that would,

1 The author thanks Juan Ayuso, Carlos Conesa, José Manuel Marqués and Ana Fernández for their comments.

2 Adopted on 9 June 2021 as Decree No 57 of the Legislative Assembly of the Republic of El Salvador.

3 Both matters are of huge importance to the country, as 70% of its population is unbanked and remittances accounted for 25% of GDP in 2020. At present, hefty fees (sometimes up to 30%) are levied on recipients when collecting remittances.

4 So far, no other country has been as ambitious in its approach as El Salvador. However, other jurisdictions are adopting measures to regulate or strengthen the role of cryptoassets in their economies. With its draft bill on encryption, Panama aims to boost the use of blockchain in the public sector and in banking, and afford, in addition, certainty and security to cryptoassets in order to attract foreign investment to the country. Ukraine, for example, has drawn up a draft bill on digital assets to regulate their use. In the European Union, the proposal for a regulation on Markets in Crypto-Assets (MiCA) essentially aims to lay the foundations for the orderly development of these markets.

5 Specifically, Decree No 57 comprises 16 articles, which, including the name of the law itself, run to no more than 732 words.

a priori, be expected. As it is currently worded, the law goes no further than to recognise "bitcoin as unrestricted and unlimited legal tender in any transaction", including the payment of tax obligations.[6]

The measure does not seek to replace the US dollar as El Salvador's official currency. Furthermore, the law stipulates that the US dollar will continue to be used as a reference currency for accounting purposes and leaves the USD-to-bitcoin exchange rate to be freely determined by market forces.

In addition, to foster the widespread use of bitcoin in the domestic economy, the law requires that the State promote alternatives that facilitate the conduct of transactions in the virtual currency and its automatic and instant conversion into dollars, at the users' discretion.

Lastly, the law confers on the Government the power to design and implement the institutional architecture it considers necessary to ensure its proper application. Moreover, it leaves definition of more practical matters to subsequent Central Bank of El Salvador (Banco Central de la Reserva) and Financial System Superintendency (Superintendencia del Sistema Financiero) regulations.

To further the development of the required operational framework, after the aforementioned law was passed, the Government sought and obtained approval to create a $150 million fund at the State development bank of El Salvador (BANDESAL). This fund has a dual purpose: a) to ensure that bitcoin can be converted into dollars outside of the private sphere;[7] and b) to implement the public incentives established to boost the use of bitcoin among the population.[8]

Last August the Central Bank of El Salvador published draft technical standards intended to regulate the conduct of the authorised financial institutions that will provide USD-to-bitcoin conversion services. This proposal is a key component of the ecosystem, making those institutions responsible for its smooth functioning. In other words, even though it expressly acknowledges that this payment system will depend on other agents' conduct,[9] it relies heavily on financial institutions to ensure that other agents observe both the principles established in the aforementioned draft standards and the local regulations and best practices applicable to them.

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6 However, it exempts those parties clearly lacking access to the technology needed to accept payment in bitcoins from the obligation to do so.

7 In principle, this fund acts as a State guarantee for bitcoin holders, ensuring their virtual currency holdings can be converted into US dollars (and vice versa) on demand and instantaneously.

8 The Government has initially planned to give any person who so requests a non-refundable $30 grant in bitcoin that can only be exchanged for products and services denominated in the virtual currency. This amount will be paid directly into the digital wallet developed by the Government (Chivo).

9 Such as wallet providers, exchanges, payment gateways, custodians, bitcoin ATM owners, etc. For financial institutions to be able to reach agreements with such firms, the law stipulates that the latter must satisfy a series of requirements: be entered in an official register, comply with corporate governance standards, have technical skills and financial resources commensurate with the services they provide, ensure the suitability of selected managers, etc.

Thus, the technical standards establish a common set of requirements to adequately safeguard consumer interests (transparency, privacy, complaints channels) and the integrity of the financial system (compliance with anti-money laundering and counter terrorist financing (AML/CTF) obligations). They also help to strengthen the security and operational resilience of exchange systems (contingency mechanisms). Financial institutions are expected to contractually bind third parties to these obligations.

Without prejudice to the foregoing, the law also bestows on the financial authorities certain powers of direct intervention in any of these other links in the value chain. These powers notably include, for example, the right to immediate access to all information that such agents hold on the transactions conducted or the ability to audit their activity. Furthermore, certain operators are subject to other types of obligation, such as the duty to address complaints filed by customers.

Owing to bitcoin's unique features, these standards approach more fully two particularly key operational areas. Specifically, they address in detail pre-contractual information aspects, requiring the inclusion of references to the volatility of the virtual currency's value, the impossibility of reversing transactions once performed, the non-viability of re-establishing customer keys if they are lost and the potential significance of cyber risks/fraud.

In the AML/CTF realm, the standards further implement FATF Recommendation 16 as regards the information that must be obtained, held and reported on the originators and beneficiaries of bitcoin transfers.[10] Specifically, they point to the need to compile aspects such as the bitcoin address used in the transaction, that of the bitcoin ATMs or wallets,[11] the transactions' equivalent US dollar value, the transactions' hash and the IMEI of the mobile or similar device.

To foster the adoption of bitcoin, the Government has also designed an ambitious capacity-building programme that, among other measures, includes informative sessions to be run nationwide by 4,000 instructors. The instructors will be accessible at 50 set locations (branches equipped for cash withdrawal or payment initiation) and will also provide other on-demand training to the general public. Their main mission will therefore be to explain how to download and use the wallet, and to teach people how to use the bitcoin ATMs.[12]

As regards the more technical aspects, the Government has launched an official wallet (Chivo wallet) that can be used to send or receive remittances, make or receive

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10 In order to identify and report suspicious transactions, take freezing action and prohibit conducting transactions with designated persons and entities.

11 A wallet is a user-friendly app for managing cryptoasset transactions. To use it, first you must unlock and decrypt it. To do so you need private keys that evidence ownership of the funds and enable the transactions to be validly signed. These keys can remain under the exclusive control of the user outside the wallet (only the user can control the funds) or, alternatively, be held by the wallet service provider.

12 Around 200 at present.

payments and convert bitcoin into dollars or vice versa.[13] To encourage the use of bitcoin, Chivo wallet can be downloaded and installed for free and users (including merchants) are not charged fees on their transactions. This wallet will support instant transactions as it runs, like the wallets detailed in the following paragraph, on Bitcoin's Lightning Network.[14]

Another option, with increased functionalities, is the service provided by the firm Strike, which is responsible for one of the country's most successful mobile payment apps. Unlike the aforementioned wallet, in this case fees are charged; however, in exchange it enables users to operate with bank accounts or debit cards. El Salvador has a third digital wallet (Bitcoin Beach), whose distinctive feature is that the private keys are not controlled by users, but rather by trusted third parties acting as joint bitcoin address holders. In addition to the aforementioned proposals, the ecosystem will accommodate other alternatives.

Main criticisms

In addition to the objections raised by opposition parties, who believe the initiative called for a more considered debate, and the measure's apparent lack of popular support,[15] the international financial community discerns in the project a series of important macroeconomic, financial and legal problems.

Indeed, without referring explicitly to El Salvador, the International Monetary Fund (IMF) swiftly published a blog post on the potential role of private cryptoassets as legal tender in countries marked by inflation, exchange rate instability and a lack of credible institutions (see Adrian and Weeks-Brown, 2021). The World Bank subsequently followed suit in a similar vein.

In their analysis, both institutions pointed once again to these assets' unsuitability as a store of value, given their price fluctuations, and, therefore, as a vehicle to promote saving and financial inclusion. Cryptoassets' price instability likewise calls into question their practical viability as a widespread medium of exchange among the population.

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13 In principle, the Chivo wallet is restricted to Salvadorans, who must register for the service beforehand. They need not be an El Salvador resident, facilitating its use by the Salvadoran diaspora to send remittances. However, some of the wallet's functionalities may be limited for non-residents. To top up their wallets, registered users can either go to one of the top-up service points (only in El Salvador) and hand over cash, or do so online using a credit card or via a financial institution belonging to the El Salvador banking system.

14 Bitcoin's Lightning Network is a recent protocol that seeks to overcome the scalability restrictions traditionally associated with this cryptoasset. Put simply, it is based on the creation of temporary payment channels that operate off-chain. These channels are open for a limited time, restrict participation to a group of specific parties and enable them to instantly exchange transactions (up to the maximum funds deposited in the channel) following authorisation (sign-off). However, once the channel is closed, those payments are validated in batches again on the general blockchain to ensure data integrity.

15 For instance, a survey by the Centre for Citizen Studies (Centro de Estudios Ciudadanos) at the Francisco Gavidia University revealed that 24% of the public felt it was a bad decision and 53.5% a very bad decision. Just 12.9% considered it a good decision and 6.5% very good.

The IMF also warned of other significant economic harm that could stem from granting cryptoassets legal tender status. For instance, it cautioned that cryptoassets as legal tender in parallel with another national currency could ultimately result in time and resources being squandered in choosing which money to hold for each purpose and at each juncture, as opposed to engaging in productive activities.[16] It also emphasised that accepting cryptoassets in payment of taxes could jeopardise government revenues and constrain the effectiveness of fiscal policy as a stabiliser.

Likewise, the IMF expressed concern that monetary policy could lose bite, since, in this case, monetary autonomy is surrendered to an unknown outside influence. This specific form of decentralising governance over the national monetary system is fraught with risks since, unlike other external references such as the US dollar, it is extremely difficult to anticipate the determinants of cryptoasset price developments. Another drawback to this situation is the increased reliance on more erratic international capital flows, which could, in turn, trigger major fluctuations in the prices of domestic goods and services.

Lastly, in its blog post the IMF alluded to problems such as those relating to safeguarding financial market integrity, the compatibility between access to digital technology and equality, the adverse environmental impact of many cryptoassets and, ultimately, the implications for the solvency of banks compelled to hold a significant stock of cryptoassets on their balance sheet in order to support, as required by law, business operations and society's demands.

Initial impressions of the new law's entry into force

The launch of the initiative suffered some setbacks. First, the official bitcoin price plunged 17% after BANDESAL acquired the equivalent of $21 million (400 units) to set up the fund. BANDESAL made the most of this situation to purchase a further 150 units of the virtual currency (at a value equivalent to $7 million), prompting a fresh drop in the market price. It was not until 12 September that a partial correction could be glimpsed.

Second, there were various practical difficulties in downloading and installing the digital wallet, including the application not being available in several of the leading app stores.[17] This was compounded by various configuration glitches, ultimately resulting in access to the wallet being disabled until the lack of server capacity could be addressed.

A further constraint has been the opacity and lack of consensus with which the project has been carried out. Hence, the main global rating agencies all downgraded

16 This is a particularly important factor for El Salvador, given its scant capacity for production, saving (11.6% of GDP) and investment (13.2% of GDP). Institute for Financial Studies data for 2020.

17 Google Play and App Store appear not to include it in their catalogues as yet.

their sovereign ratings for El Salvador. Agencies such as Moody's based that decision on the notable worsening of governance in the country and the attendant heightening of tensions with the United States and the IMF, at the very moment when debt renegotiations are ongoing with the latter. In its view, these circumstances compromise El Salvador's capacity to access the external financing it needs to service debt. The market response to the adoption of bitcoin was immediate, with a sharp downward adjustment in both long and short-term bond prices.

Initial thoughts

The adoption of bitcoin as legal tender is a disruptive initiative mired in controversy. Although El Salvador was not the first country to consider the measure, it has pioneered its implementation, serving, in the eyes of many, as a testing ground for jurisdictions with weak currencies or fully dollarised economies that hope to end their reliance on the US dollar.

As is, the project faces numerous practical uncertainties that raise doubts over the initiative's medium-term future. For instance, it is difficult to judge who really bears the foreign exchange risk stemming from bitcoin's market fluctuations. It is unclear whether the fund, with the amounts allocated to it, will be able to absorb such fluctuations, nor the outcome once the fund is depleted. Ultimately, any future losses may have to be borne by taxpayers.

Also unknown is the market's actual capacity to function and to meet the demands of its potential users, i.e. through the emergence of value-added services in the form of innovative cryptoasset-related products. In this connection, the central role entrusted to banks in the functioning of the bitcoin ecosystem is striking, given that El Salvador has one of the lowest rates of financial inclusion in the world.[18]

Another significant challenge is overcoming the technical barriers associated with bitcoin usage. With little over 50% of the population having internet access and smartphone penetration barely reaching 40%, El Salvador trails the rest of Central America in terms of digital skills. It remains to be seen how successful the Government's public support programmes and other actions intended to accelerate user migration to the digital realm will be.

On a somewhat more positive note, a substantial regulatory push has been made in response to the concerns over bitcoin potentially being used in money laundering or terrorist financing. The regulations proposed by the central bank are unquestionably

18 El Salvador stands 15th from bottom in the World Bank's Global Findex. This is due to, among other factors, low levels of financial education among the population, together with a distrust of institutions, public bodies and, broadly speaking, the entire economic and financial sector owing to high levels of perceived corruption.

comprehensive and, in theory, help bolster the control measures against such risks. However, their effectiveness in practice depends on banks' capacity to control the actions of other agents in the ecosystem and on their supervisors' ability to assess (and correct if necessary) those controls; numerous question marks loom over both these matters.

7.10.2021.

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