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El Salvador's law: a meaningful test for Bitcoin

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El Salvador's law on Bitcoin Legal Tender

El Salvador's law

On June 9th, 2021, El Salvador's government published in the official gazette the legislation making the digital currency Bitcoin legal tender within the country. The legislation went into effect on September 7th, 2021. With El Salvador being the first country in the world to formally make Bitcoin a legal tender it is too soon to tell what the implications are globally, but one thing is for sure this is the first domino to fall in broader global adoption.

The **immediate effects of the legislation** include:

- Bitcoin may be used to discharge debts, without limitation, in any transaction;
- Bitcoin may be accepted as payment for goods or services;
- any tax payment may be paid in bitcoin;
- any previous obligation expressed in US dollars may be paid in bitcoin;
- accounting standards will continue to use the US dollar as the reference currency and the government will provide a system that will allow users to make an automatic and instant conversion of bitcoin into US dollars.

Why is El Salvador Interested in Bitcoin?

There are three main reasons for El Salvador to embrace Bitcoin:

- **Increasing efficiency in international remittances:** more than 20% of El Salvador's GDP comes from remittances, according to the World Bank¹, meaning that a large part of the population depends on money transfers from outside the country. This collides with a very complex reality where the cost of a remittance from the United States to El Salvador can be up to 30-50% of the value of the transfer, in addition to the difficulties and costs related to time needed for collecting physical money.
- **Decrease the percentage of underbanked people:** approximately 70% of the population in El Salvador does not have a bank account². Bitcoin technology could allow a larger part of the population to have an easier access to financial services.
- **Reduce reliance upon the US Dollar:** one of the main goals of Salvadoran law is to embrace Bitcoin as a neutral store of value for savings.

¹ <https://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?locations=SV>

² <https://twitter.com/nayibbukele/status/1401341311853252613?lang=en>



Reactions of World Monetary Authorities

International Monetary Fund

The International Monetary Fund (IMF) **has warned El Salvador** against digital currency plans to use Bitcoin as national currency³. The IMF asserts that the adoption of Bitcoin as legal tender raises a number of macroeconomic, financial and legal issues that require very careful analysis.

According to the IMF, El Salvador's law requires significant investment as well as difficult policy choices, such as clarifying the role of the public and private sectors in providing and regulating digital forms of money.

The IMF focuses on any internal economic impacts related to domestic prices that could become highly unstable. Even if all prices were quoted in Bitcoin, the prices of imported goods and services would still fluctuate massively, following the whims of market valuations.

It's important to note that the **greatest risk** mentioned by the IMF is the one linked to a **more widespread adoption of Bitcoin** and its relative implications on macroeconomic stability.

World Bank

The World Bank **has initially rejected⁴ a request from El Salvador** to help with the implementation of Bitcoin as legal tender.

They note that while the Salvadoran government approached for assistance on Bitcoin, this is not something the World Bank can support given the environmental and transparency shortcomings.



³ <https://blogs.imf.org/2021/07/26/cryptoassets-as-national-currency-a-step-too-far/>

⁴ <https://www.google.com/url?q=https://www.bbc.com/news/business-57507386&sa=D&source=editors&ust=1629979016968000&sg=AOvVaw1aBf6114NJATdZkjXfa1lj>



Technological Implementation Model

Transaction could take place on Bitcoin Lightning Network

One of the main issues with Bitcoin lies in the fact that transactions on the Bitcoin network are quite expensive and may take some time to be processed. One possible solution, that will be implemented in Salvador, lies in the usage of **Lightning Network**.

Through the use of the Lightning Network, which is a “layer two” solution built on top of the Bitcoin blockchain, Bitcoin payments could be processed in a matter of seconds, with negligible commissions paid by users.

The usage of such a solution could also help accepting Bitcoin as a means of payment.

Lightning Network could also not be limited to only support small retail transactions (e.g. paying for a coffee, a book or a lunch, etc.), but it also constitutes the base layer to support relevant use cases as for instance remittances, reducing the actual high fees and long wait times.

Lightning Network is built on top of Bitcoin Network, **to understand more about** the subject please refer to:
<https://www.pwc.com/it/it/industries/fintech/bitcoin-april-2018.html>

How Salvadorans could access Bitcoin system

One of the most complex challenges to be solved is to allow the **access and purchase of bitcoins** in all El Salvador through simple and efficient processes, with the aim of eliminating the complexities and costs associated with purchasing fees and reducing phenomena such as the application of premium prices on top of the spot price due to the complexity of accessing the crypto market.

For these reasons, Salvadorans may access bitcoin through a **Government Exchanger**.

The Exchanger should not have a purchase fee for Citizens and the price must be aligned with that of the other private Exchangers present in the territory of El Salvador in order to avoid arbitrage operations. In reality, it is possible to hypothesize that the Government itself may carry out arbitrage operations, with respect to the spot price of the exchangers located outside El Salvador.



Custodial and non-custodial wallets

Salvadoran citizens may choose whether to **manage their bitcoins** via custodian or non-custodial wallet.

The electronic wallet adopted in the first instance by the Salvadoran people is the **Government wallet** named “Chivo”⁵. Chivo is the first entry point for Salvadorans who want to access and detain bitcoin and it assumes the dual role of Exchanger and Wallet (also supporting Lightning Network).

The use of the Chivo wallet will have no cost, there will be no commissions to send or receive remittances, or to make or receive payments, or to convert bitcoin to dollars or vice versa. Chivo wallet is also compatible with other Bitcoin wallets. And there’s no compulsion and users are allowed to use other wallets, if they desire so.

From the available description of the service, Chivo may represent a custodial wallet as it doesn’t appear to be a wallet where users have full control over their funds as with any non custodial wallet would have to pay fees and wouldn’t be able to convert seamlessly between Bitcoin/US dollars as there are no such native service on the Bitcoin blockchain. It remains to be seen as to what the true nature of this newly launched solution will be. On the other hand, Salvadorans could choose to rely on other **non-custodial solutions** where nobody has access to funds besides the user (eg. Bottlepay, Breez, Zap, Éclair, etc.).

One of the best known non-custodial wallets that has already found widespread adoption starting in early 2021 in El Salvador is the U.S. based wallet Strike⁶, a Venmo-like payment platform, also leveraging on its Lightning Network wallet called Zap.

Strike is mainly focused on use cases like **remittances**, in such a way as to allow Salvadorans to exchange cross-border money with negligible fees using Bitcoin technology. In this case, Strike moves fiat

by buying and selling bitcoin in real time over the Lightning Network and the process works so that Strike will first auto-convert fiat (of the sender) into bitcoin. That bitcoin is then sent to a Strike Lightning node residing in the jurisdiction of the recipient. An auto-conversion between bitcoin and Fiat Money finishes up the transaction and deposits fiat in the Strike app.

So in this case, the choice to rely on a custodial wallet rather than a non-custodial will greatly depend on the trade-off in terms of security and efficiency of the offered services.

Conversion with the US Dollar

No commission will be charged to merchants and the **Development Bank of El Salvador** (Bandesal) will facilitate automatic convertibility (presumably setting up a Bitcoin reserve), which means that businesses that get paid in bitcoin can also opt to receive US Dollars. The money that is held or received (in dollars or bitcoin) in the Chivo wallet can be withdrawn in cash (US dollars) at any time. Also, the conversion could be performed through one of the more than 200 dedicated ATMs spread over the land⁷.

It’s important to note that Chivo Mobile App will be available for downloading from September and any El Salvador citizen who registers the wallet can receive \$30⁸ worth of Bitcoin from the Government. The president said that “those 30 dollars are to promote the use of bitcoin and to encourage people to download the App”. The only Chivo money that can’t be converted into actual money is this \$30⁸ free credit. This is intended to be spent, and at that point the merchant can then withdraw it for dollars.

⁵ <https://finance.yahoo.com/news/el-salvador-reveals-official-bitcoin-064414265.html>

⁶ <https://www.google.com/url?q=https://www.nasdaq.com/articles/strike-launches-in-el-salvador-2021-03-31&sa=D&source=editors&ust=1629978852255000&usg=AOvVaw15lyw0Jai6YUS3x5321yOt>

⁷ <https://www.bloomberg.com/news/articles/2021-08-23/el-salvador-readies-bitcoin-rollout-with-200-atms-for-conversion>

⁸ <https://www.bloomberg.com/news/articles/2021-06-25/el-salvador-offers-30-of-bitcoin-to-citizens-to-boost-its-use>



Implications of Bitcoin as legal tender

Legal implications in El Salvador

El Salvador government should create the **regulatory framework** and finalize a system for the conversion of bitcoin to US Dollar as all businesses must accept bitcoin as legal tender unless they do not have access to the technology needed to process the transactions.

It is also unclear what impact the move will have on the valuation of El Salvador's currency reserves and how this might affect its credit in the **Capital Markets**. All existing obligations in the country may be payable in either bitcoin or US dollars, including bank loans. Capital gains will not be taxed and taxes can be paid in bitcoin, which could attract foreign inflows of bitcoin to the country.

Furthermore, to be able to accept bitcoin, the vendors have to tackle aspects related to the inclusion of the asset in the **Balance Sheet, P&L and Tax Reports** and to the **volatility risk**.

From a fiscal point of view, Salvadorian companies paid in Bitcoin have to register the cost of assets at T0 (the moment the respective coins were received) and report it at the end of the period under the Cash and cash equivalent account from IFRS.

If the entities traded Bitcoin during the reporting period, the realised gain or loss will be calculated using the FIFO method. If the Bitcoin was held, without being traded, the gain or loss will be considered unrealised, calculated using the FIFO method as well.

Volatility of the held assets can be managed by the Salvadorian companies relatively easily, by converting the Bitcoin into US dollars shortly after receiving it (daily or weekly). However, two main difficulties arise. One of them is the FIFO accounting for the entire period which will require significant attention from the accounting department. The second difficulty can be setting and displaying prices in Bitcoin. We haven't identified yet prices in El Salvador fixed in Bitcoin and variable in US dollars. They are set in US dollars, and the Bitcoin equivalent has to be calculated at the time of payment. Intentional or unintentional conversion errors might appear, therefore both parties have to perform their independent price calculation.

Assessing the global implications

Some commentators have speculated that El Salvador's adoption of Bitcoin as legal tender could make Bitcoin fall within the definition of "money", that means a medium of exchange currently authorized or adopted by a domestic or foreign government.

The **new legal definition of Bitcoin** may pose important implications both within El Salvador itself and for other governments around the world that may need to adjust their legislation.

Regarding the global perspective, several financial authorities are closely monitoring the continuation of El Salvador's actions in order to understand what are the implications and any legislative adjustments that must occur. The observations concern both the common legal representation of Bitcoin at a global level, therefore everything concerning the fiscal and regulatory framework, and the impact from a business point of view for actors such as Exchangers, VASPs, etc. and the necessary adjustments to provide in order to not fall into regulatory inconsistencies.



New global crypto services are needed

Bitcoin as a legal tender brings **new business opportunities**, not only in El Salvador, but globally.

Indeed, If Salvadorans will use Bitcoin to receive remittance, it means that senders from other countries will require enablement services to exchange local currencies with Bitcoin and send them over Lightning Network to El Salvador, so they will need banking services as well.

It remains to be seen whether the traditional actors who today hold the power in the remittances market will offer new crypto services themselves or will the new incumbents offer this type of services.

Other countries may follow El Salvador

El Salvador's move could result in a **domino effect** that may lead other countries to adopt Bitcoin as a legal tender, as well.

Many of the countries that today suffer from the same social and economic issues, could closely observe El Salvador's experiment to assess if the same move can also be exploited within their borders.

In this sense, some countries have already moved into an exploratory phase^{9 10}.

⁹ <https://www.reuters.com/technology/is-paraguay-set-make-bitcoin-legal-dont-bet-it-2021-06-25/>

¹⁰ <https://www.reuters.com/business/finance/remittance-costs-key-take-up-salvadoran-bitcoin-plan-development-bank-2021-08-24/>



What could happen in the future

Scenarios and challenges

Bitcoin legal tender in El Salvador can strongly influence the future of such decentralized currency, demonstrating how it is possible to use **Bitcoin as a medium of exchange** in everyday life and how this is made sustainable and scalable thanks to the use of new systems such as the Lightning Network.

The El Salvador experiment could certainly prove to be a real gamechanger, but there are different risks that will have to be addressed:

- **Economic and financial risks:** the adoption of Bitcoin in the Salvadoran's financial system could pose some risks related to the financial and economic stability of the country. Such risks will need to be addressed in order not to pose any threat to Salvadoran's financial stability;
- **Technological challenges:** Bitcoin is a new technology and the tools needed to interact with it are still new and sometimes complex. In order to mitigate the risks of little usage of Bitcoin by Salvadoran citizens, it will be necessary to provide efficient technological solutions which on one hand will create new financial services accessible to all and on the other hand will have to be user friendly and easily usable by all;
- **Social challenges:** the key to this challenge will be to be able to convince Salvadorans to adopt bitcoin as medium of exchange, making them understand the potential benefits for the population;

- **Security risks:** in the process of adopting Bitcoin as a legal tender, there exists some risks related to matters such as Know Your Customer (KYC), Anti-Money Laundering (AML) and Combating of Financing of Terrorism (CFT). This is especially true when non-custodial wallets will be used by citizens. It is therefore needed to provide user verification processes in line with the regulations and standards in order to mitigate security risks.

At this point, there are many potential scenarios that could happen as a result of El Salvador's move and it will be very important to observe what will happen in the future.

PwC closely follows the events in El Salvador

As **PwC**, we are active to support all clients who intend to observe this phenomenon more closely in order to assess in advance any future implications, leveraging on our expertise in the Crypto market and on our cross competencies in the Legal, Tax, Accounting and Risk Management field.



Update to date (October 2021)

The legislation went into effect on September 7th, 2021. After almost one month, it has been observed a relevant growth in terms of mass adoption and usability:

- **3 million citizens** are using the nation's Bitcoin wallet, Chivo. That is almost 50% of the country's population¹¹;
- An average of **\$2 million per day in remittances** are transacted through the Chivo wallet¹²;
- An average of more than **65k of transactions per second on Chivo wallets**¹³;
- An average of more than **14k of transactions per day on Chivo ATMs**¹⁴;
- Since September 7th, **Salvadorans have inserted more cash** (to buy bitcoin) than what they are withdrawing from the Chivo wallet ATMs¹⁵;
- Furthermore, El Salvador's government is strongly promoting Bitcoin adoption, through initiatives such as **discounts on the fuel** if paid with Chivo wallet¹⁶.



¹¹ <https://twitter.com/nayibbukele/status/1444775650292899840>

¹² <https://twitter.com/nayibbukele/status/1445923488083107845>

¹³ <https://twitter.com/nayibbukele/status/1442533230540886019>

¹⁴ <https://twitter.com/nayibbukele/status/1442533230540886019>

¹⁵ <https://twitter.com/nayibbukele/status/1445923488083107845>

¹⁶ <https://twitter.com/nayibbukele/status/1443410462129983490>



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