

CRYPTOCURRENCIES AND THE FUTURE OF MONEY

Money and Trust
in Argentina

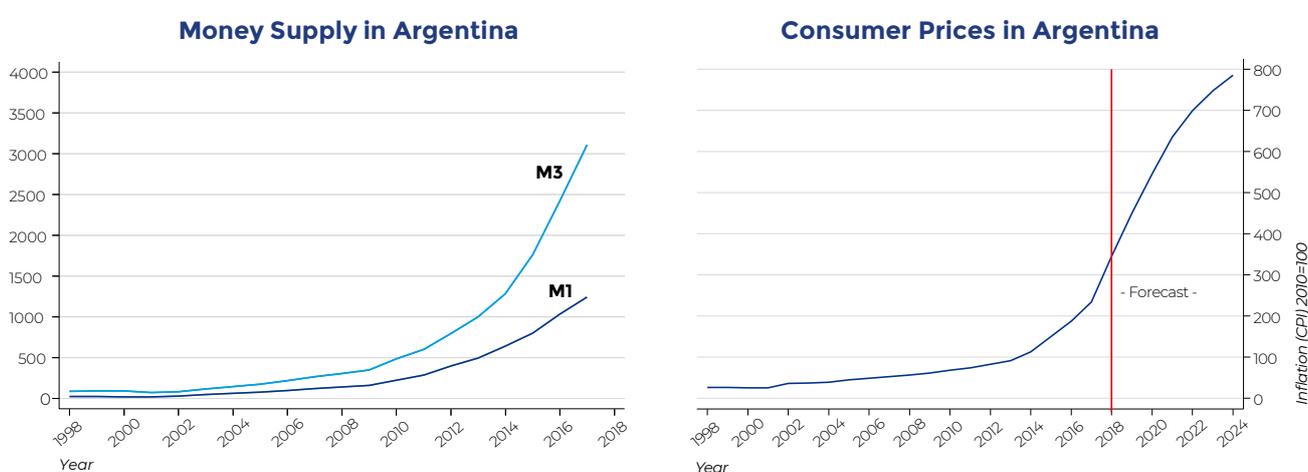
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I. BACKGROUND

It is hard to believe, but less than a century ago the US and Argentina were rivals, competing to become the economic powerhouse of the new world. In fact, a recent study by the Maddison Project¹ indicates that, in the years of 1895 and 1896, Argentina was the country with the highest GDP per capita in the world. The economic fall of Argentina over the last century has been the focus of many studies in different areas of economics in what became known as the ‘Argentine Paradox’: when a developed country experiences a reversal, while the rest of the world is growing.

Argentina has faced several crises over the last few decades. Between 1998-2002, Argentina went through the worst recession of its recent history. In December 2001, in a climate of political and social unrest, the country partially defaulted in its international obligations. In the following month, it abandoned the convertibility of the Argentine Peso to the US Dollar; a regime that had been in place since 1991.



DATA SOURCE: IMF International Finance Statistics (left) and IMF World Economic Outlook (right)

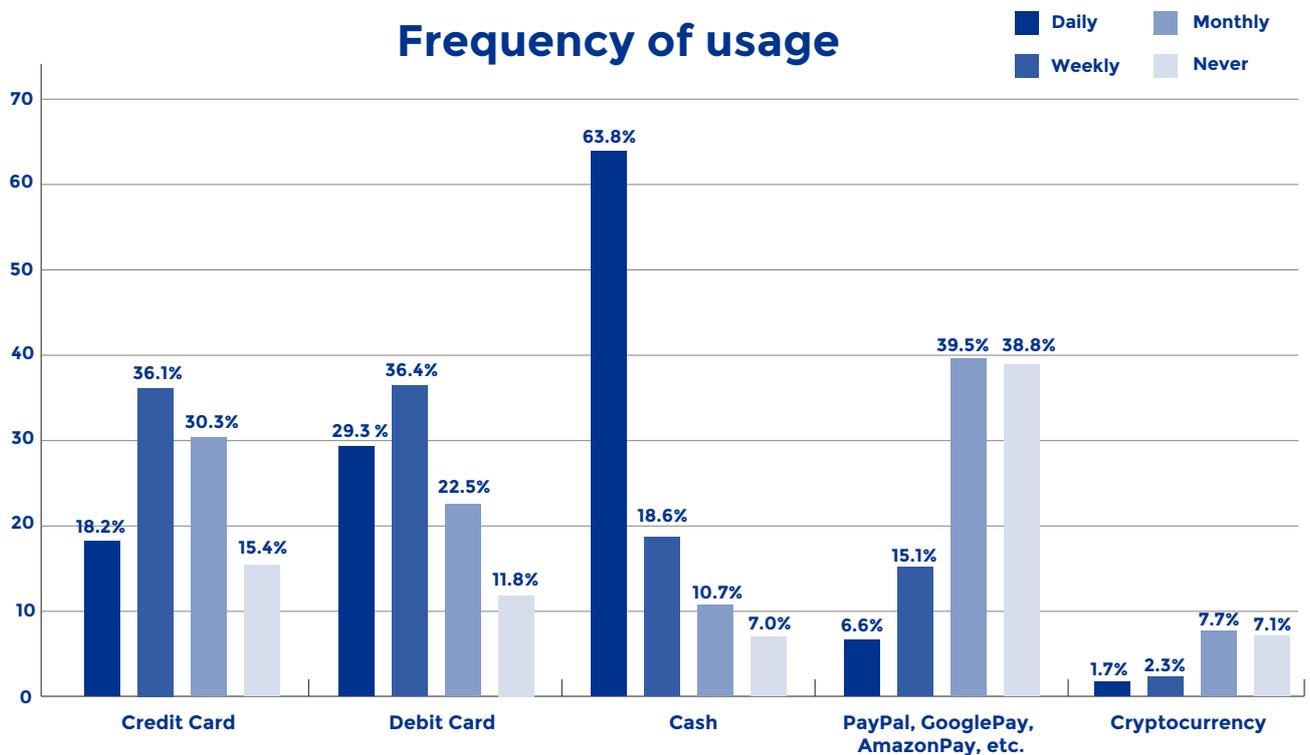
More recently, the ghosts of its past came back to haunt the country. Still not being able to fully recover from the fiscal issues of the early 2000s, Argentine budget began to collapse and inflation kicked back once again in 2016. In 2018, president Mauricio signed up to an IMF program with the value of \$58 Billion, the biggest in IMF’s history. The program included a set of austerity measures to stabilize debt and control inflation. Nevertheless, as these measures were starting to have real effect and inflation started to fall in 2019, Argentine voters, unhappy with Macri’s austerity measures, decided to reject his plans and elect Alberto Fernandez and Cristina Kirchner (seen as anti-austerity and against the IMF plan by markets). As a result, since then, Argentina is facing a severe financial shock. As we stand today, the Argentine CDS is pricing a default probability of more than 80%.

To summarize, the economic and monetary history of Argentina is obviously an intense one and, as recent times suggest, things can change abruptly. In order to better understand Argentines knowledge, attitudes, and levels of trust in different types of money the IE Business School has conducted an in depth survey on ‘Cryptocurrencies and the Future of Money’ which is based on a representative sample of 1,000 respondents across the country. Nonetheless, besides the significantly worse conditions of the country’s economy, our results suggest that Argentines have a lot in common with their fellow Latin Americans (Brazilians and Mexicans), when it comes to their preferences and understanding about different types of money.

1 See: <https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2018>

II. CURRENT USAGE OF MONEY IN ARGENTINA

Because of the problems regarding the instability of the Peso, Argentina hasn't been able to develop such a well-structured financial system as their neighbors in Brazil. Still, Argentina has a fairly financialized monetary system. 54% of Argentines use credit cards daily or weekly while 65.7% use debit cards at the same frequencies. Cash is, by far, the most used method of payment, with 82.4% of our sample using it at daily or weekly frequencies. The share of Argentines that use online payment companies at a daily or weekly frequencies (21.7%) is significantly smaller than those of other Latin American countries (37% for Brazil and 35.1% for Mexico). This could be attributable to the lag in financial infrastructure development in Argentina.



SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

As in other countries, cryptocurrencies are the least used method of payments in Argentina. Our research indicates that only about 4.6% of Argentines use cryptocurrencies on a daily or weekly basis. This number is in line with that of other countries in our sample.² Those who advocate that cryptocurrencies can offer an alternative for countries where high (and volatile) inflation is a problem are probably dissatisfied with the status quo management of the Argentinian economy and financial sector since 2016. As inflation started to creep back and drove the Argentines away from the Peso, they decided, once again, to use US Dollars as their 'trusted' currency, rather than a more radical alternative such as privately issued digital currencies.

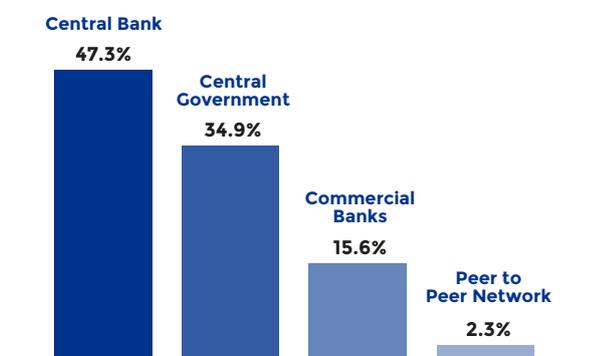
² Sample includes Argentina, Brazil, France, Germany, Mexico, Spain, UK, USA

III. KNOWLEDGE OF AND TRUST IN MONEY IN ARGENTINA

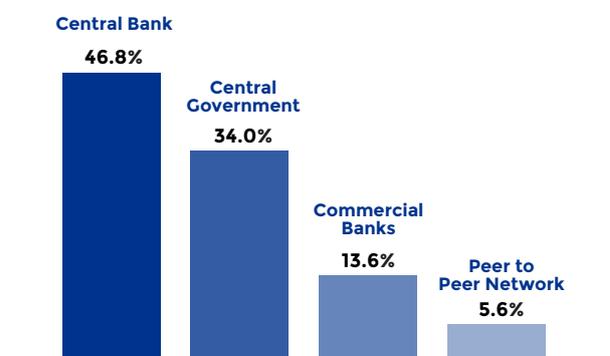
Our survey indicates that Argentines seem to have a fairly limited understanding of how money is created and managed. When asked who is responsible for creating and managing money in the country, almost fifty percent of the people (47.3%) gave the central bank as their answer. The central government and commercial banks were the second and third most voted institutions, with 34.9% and 15.6%, respectively. Only 2.3% answered that money is created and managed by peer-to-peer networks.

When asked who should create and manage money in Argentina, the answers were very similar to the numbers for the previous question. This presents an interesting fact. Even though Argentina has faced many monetary problems in its recent history, in an aggregate level, people don't seem to want to change the current form in which money is created and managed in the country.

Who creates & manages money in Argentina?



Who should create & manage money in the Argentina?



SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

“How would you rank these institutions in terms of how much you trust them to create and manage money in your country?”

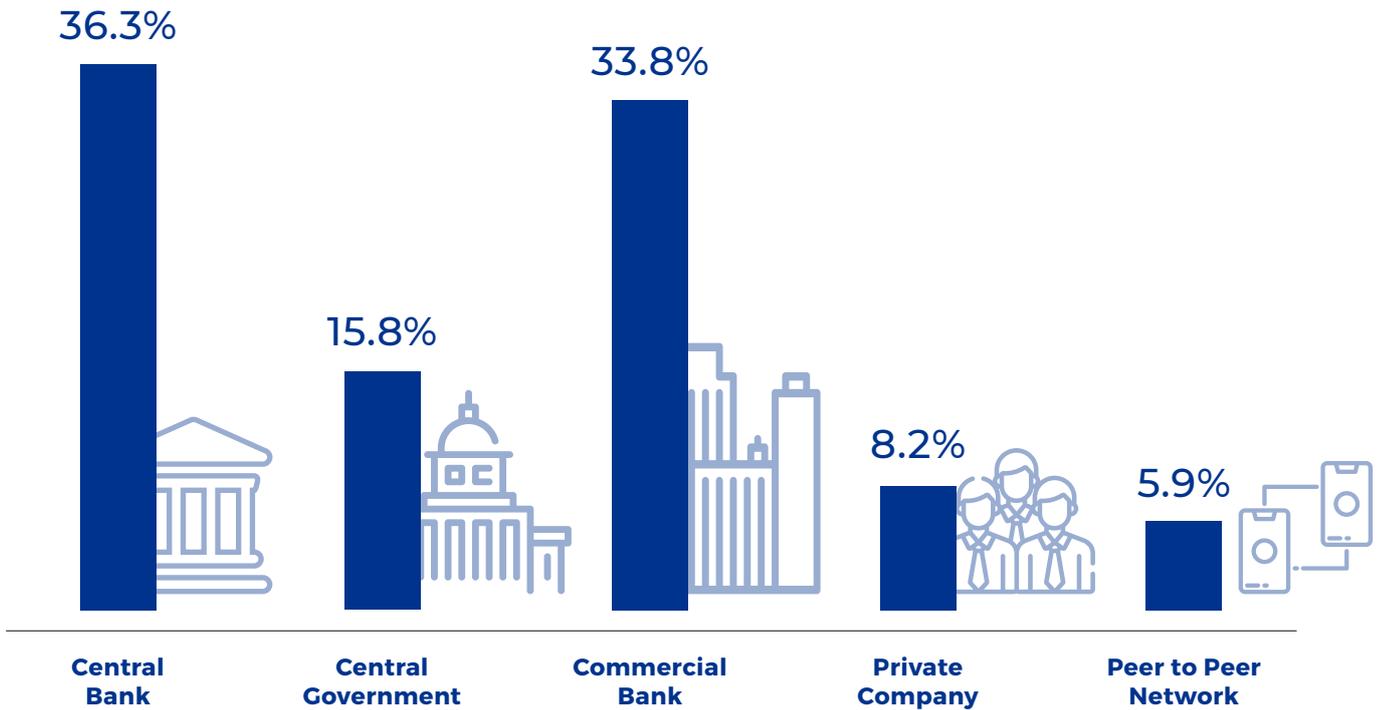
These results are consistent with Argentines ranking of different institutions in order of degrees of trust in their ability to create and manage money. The central bank and commercial banks seem to have the highest degree of trust amongst Argentines, while the central government, private companies and peer to peer networks have limited levels of public trust.

In line with the results from other countries in our sample (see footnote 2), the institutions that have the higher level of trust to issue and manage money after the central bank are the commercial banks. The levels of trust in commercial banks in Argentina are very similar of those in neighboring Brazil. Regarding the trust in the central government, the levels are more similar to Mexico, but in all Latin American countries the central government is clearly placed well behind central banks and commercial banks as the third institution with respect to its level of trust to create and manage money.

Way behind commercial banks, the central bank and government are peer to peer network and private companies. Private companies are marginally more preferred to create and issue currency than peer-to-peer networks, which ranks last. This mistrust of Argentines in peer-to-peer networks to perform the role of a 'monetary authority' might explain why, when running away from the Peso, they have adopted the US Dollar rather than a cryptocurrency alternative.

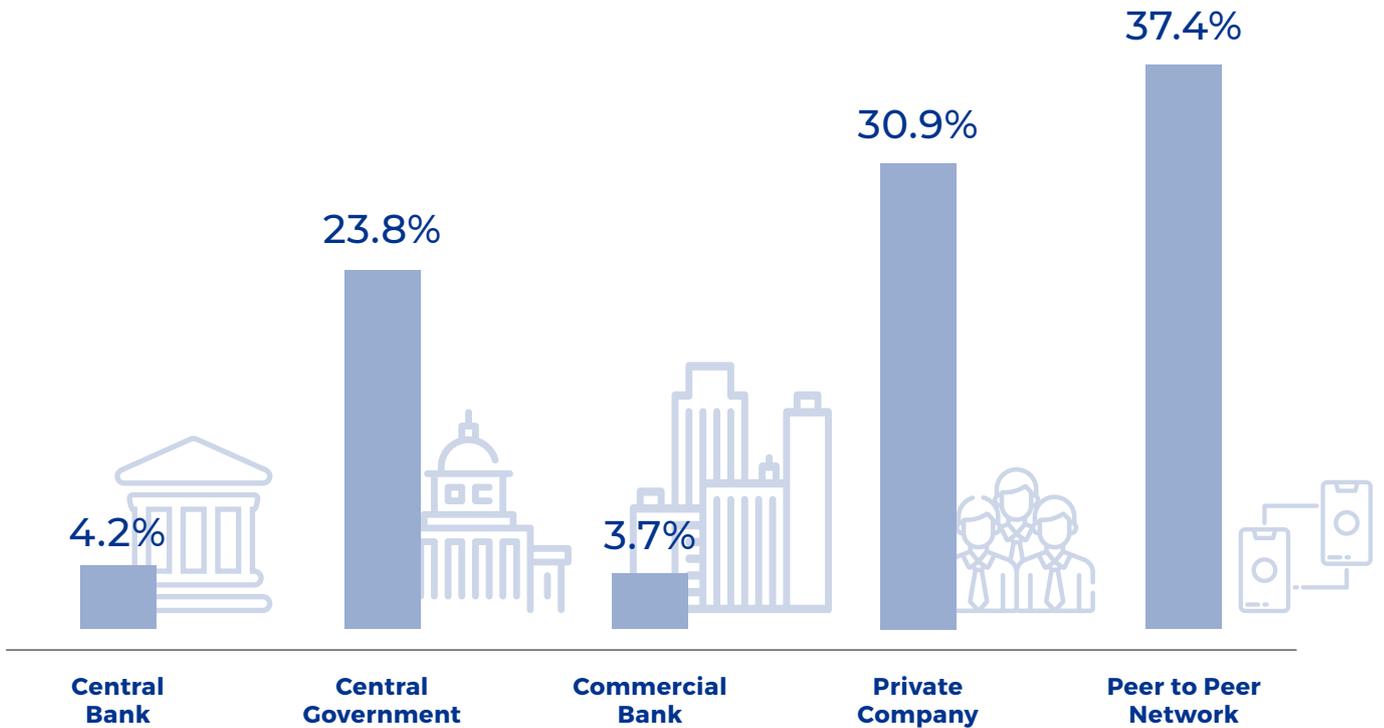
Who ranked institution as first choice

% of respondents



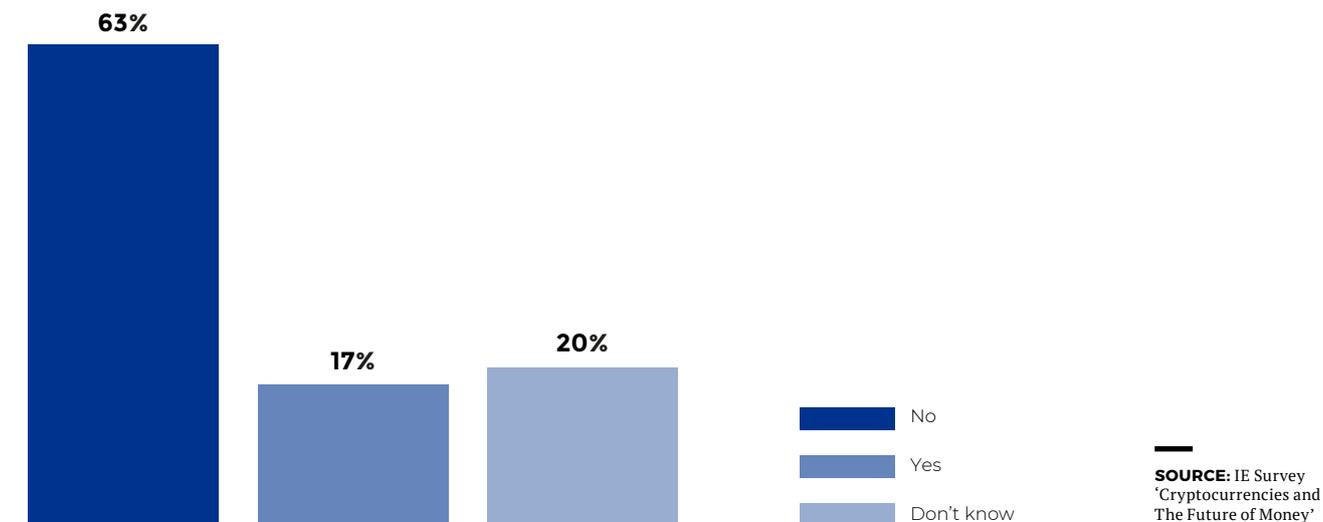
Who ranked institution as last choice

% of respondents



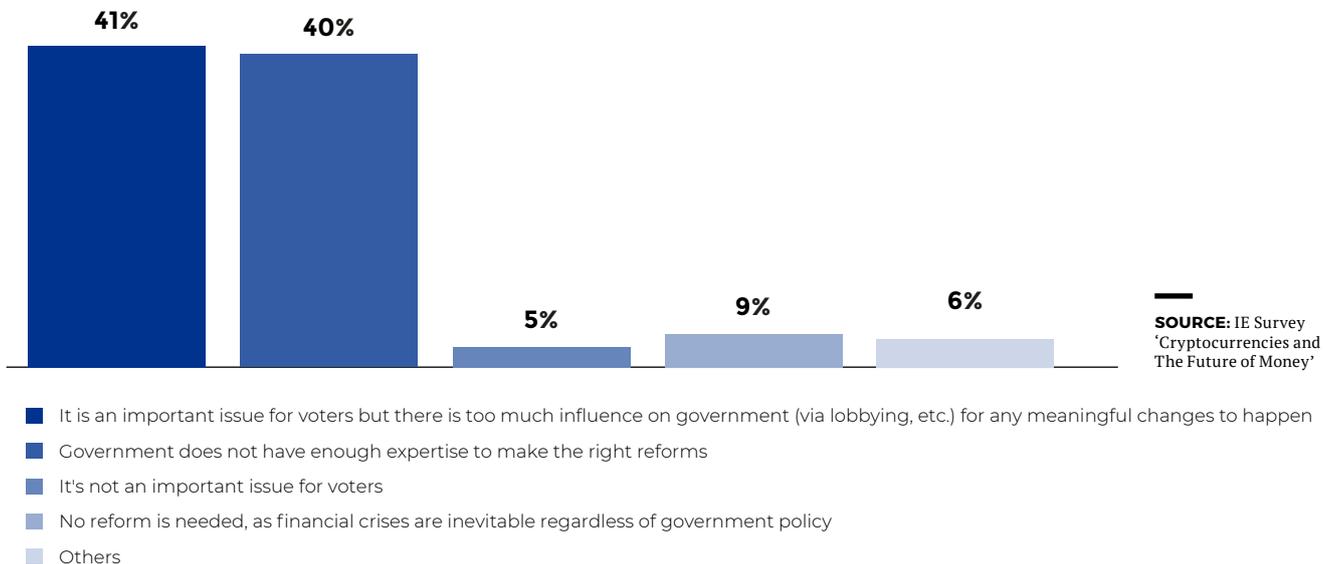
Argentina is probably one of the nations in the world that has suffered the most from financial crises over the last few decades. Therefore, even though the 2008 crisis wasn't particularly severe (in comparison to the 1998-2002 financial crisis and the unfolding economic downturn at the time of writing this report), it is understandable that Argentines don't believe that the government has taken meaningful steps since 2008 to prevent another financial crisis. In fact, Argentina is the country in our sample where the highest percentage of the population (63%) have answered that the government has not taken meaningful steps by regulating the banking sector since 2008 to prevent another financial crisis.

Government has taken meaningful steps by regulating the banking sector since 2008 to prevent another financial crisis



When asked why the government has not taken meaningful actions, the responses of Argentines were mainly concentrated in two options. A total of 41% of Argentines believe that this an important issue for voters but there is too much influence on government for any meaningful changes to happen. Another 40% of Argentines answered that government does not have enough expertise to make the right reforms. Of the remaining options, 5% said this is not an import issue for the voters, 9% defended that no reform is needed and 6% believe in some other reason.

Why no meaningful steps have been taken

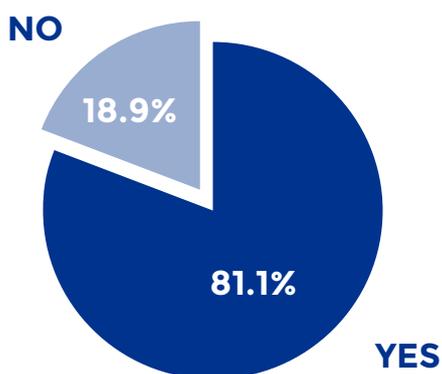


IV. ATTITUDES TOWARD CRYPTOCURRENCIES IN ARGENTINA

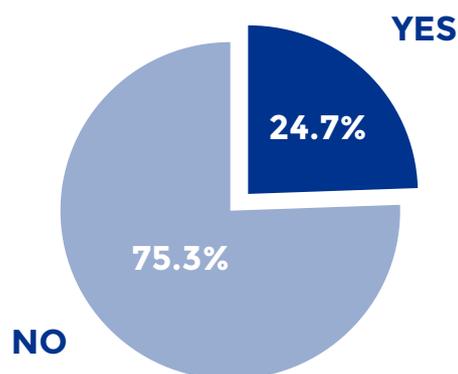
According to the results of a 2019 Statista Global Consumer Survey³, Argentina is amongst the countries where cryptocurrencies have been relatively well accepted by the population in terms of use and ownership. The country ranks fourth in terms of cryptocurrency adoption worldwide, with 16% of Argentine respondents saying they use or own cryptocurrencies.

The results from our survey indicate a similar level of knowledge and acceptance, albeit with a significantly higher percentage of Argentines saying they own cryptocurrencies. A total of 81.1% of Argentines in our sample said they have heard of cryptocurrencies while 24.7% said they own cryptocurrencies. Although the proportion of Argentines that own cryptocurrency is significantly larger in our survey, the ordering of the countries is the same of that found by the Statista Global Consumer Survey. That is, in our sample, Argentina is the country with the second highest share of respondents saying they own crypto currency, being only after Brazil.

Have you heard of cryptocurrency?



Do you own any cryptocurrency?



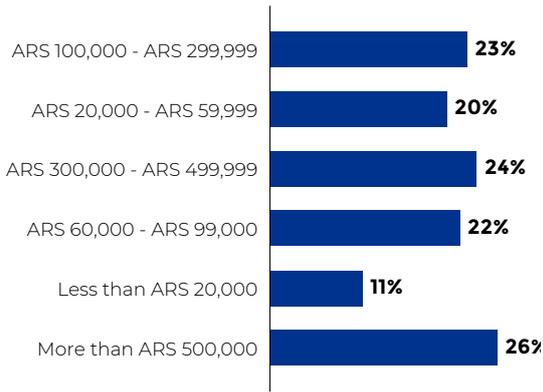
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

*Percentage based on all Argentinian respondents

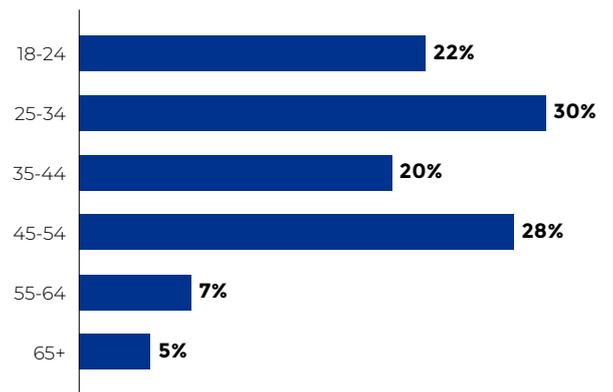
In terms of how ownership of cryptocurrency is distributed across different levels of income, age, education and gender, the results follow the same pattern of other countries in our sample. The percentage of Argentines that ownership of cryptocurrency is higher amongst those with higher levels of income and education. However, even if this percentage increases with income, in Latin American countries (Argentina, Brazil and Mexico) the ownership of cryptocurrency is much more evenly spread across different levels of income than in the developed markets considered in our study (USA, UK, Germany and Spain). Age also seems to be an important dimension with respect to the ownership of cryptocurrency, with younger generations being more likely to own these currencies than the older ones. Finally, as it generally is the case for assets and currencies that involve more risk, the ownership of cryptocurrency is significantly higher amongst males than females.

³ Available at: <https://www.statista.com/chart/18345/crypto-currency-adoption/>

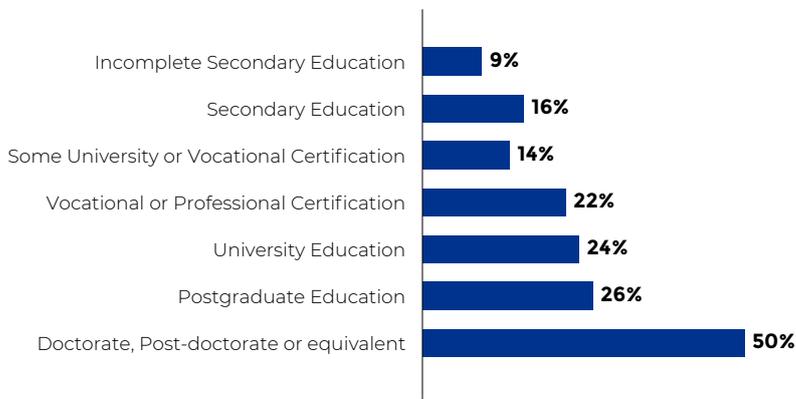
Ownership of cryptocurrency by income



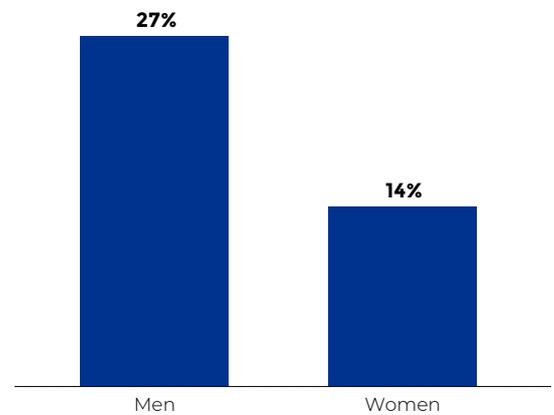
Ownership of cryptocurrency by age



Ownership of cryptocurrency by education



Ownership of cryptocurrency by gender



SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

For those who do own cryptocurrency, the motivation behind ownership in Argentina are very similar to those of the other countries in our sample. The vast majority of Argentines who own cryptocurrencies do so as an investment (62%). Only approximately 11% of those who own these currencies have them to make purchases, while around 26% have answered they own cryptocurrencies both as an investment and for transaction purposes.

Why do you own cryptocurrency?



SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

Among those who do not own cryptocurrency, the most common reason given (which is unique characteristic of Latin American countries in our sample), the most common answer, by far, was that they don't know how to buy them. This is contrasted by the main reason given by European and US respondents who most common reason was that cryptocurrencies were too risky. This indicated that Latin Americans are more open to these currencies, once that, not only they have a higher percentage of people who own cryptocurrencies, but the main reason why they don't own them is because they don't know how to buy.

Analyzing the Argentine case, we can recall that approximately 25% of Argentines said they own cryptocurrency while the remaining 75% answered that they don't. Nevertheless, we now know that out of the 75% that don't own these currencies, about 40% do so because they don't know how to buy them. When taken together, these two facts mean that approximately 65% of Argentines either own cryptocurrencies or only (or mostly) don't do so because they don't know how to buy them. This is a very impressive number, and indicates the openness of Argentines to cryptos. In fact, this number is very similar in other Latin American countries (Brazil and Mexico), suggesting the openness of the region to these types of currencies.

It is worth mentioning that still a significant share of the Argentines who don't own cryptocurrencies in our sample have answered that they do not own these currencies because they believe they are too risky (17.3%), they are not useful for purchases (19.4%) or they see no advantage over existing money (12.3%).

Why do you not own cryptocurrency?



SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

V. THE FUTURE OF CRYPTOCURRENCY IN ARGENTINA

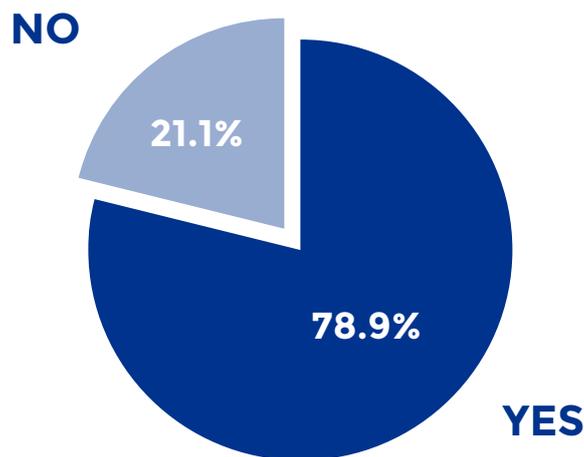
In order to get a better understanding of Argentines openness to a new type of digital money, we asked respondents:

Q20: “Suppose that a new cryptocurrency was designed by a private company (or group of companies) that could be used to make all of your day-to-day transactions (it is accepted by all sellers) and has a stable value over time (low inflation/deflation). This currency could also be converted to other currencies at a very small cost. Would you prefer to use this currency over your current method of payment?”

The open-mindedness of Argentines to other types of currency is reinforced by their answers to this question. Their responses follow the same pattern of those of the other Latin American countries in our sample (Brazil and Mexico). Possibly because of the poor experiences they had with Fiat money in the 80s and 90s, the majority of people in these countries answered yes. As it was already discussed, Argentina’s inflationary problem is not only in the past, but also in the present. This might be reason why Argentina is the country in which the highest percentage of the people in our sample have answered yes (78.9%) when asked if they would use an effective private currency with the properties mentioned in the question above.

Moreover, as it can be seen bellow, the positive answer with respect to the use of such private currency is fairly evenly spread across levels of income, age, education and gender⁴.

Would you use an effective private currency?

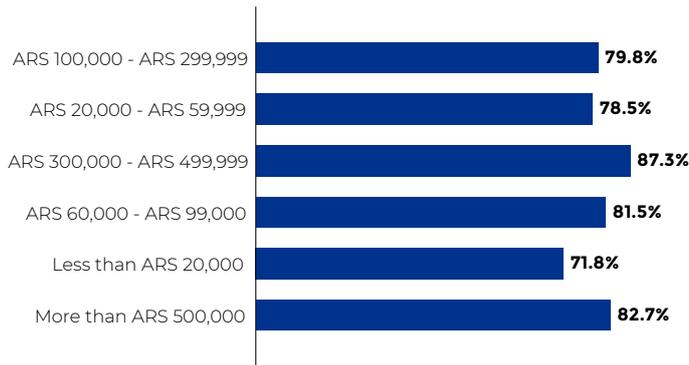


SOURCE: IE Survey ‘Cryptocurrencies and The Future of Money’

⁴ With a slight reduction in older groups of the population which is completely understandable to anything related to technology.

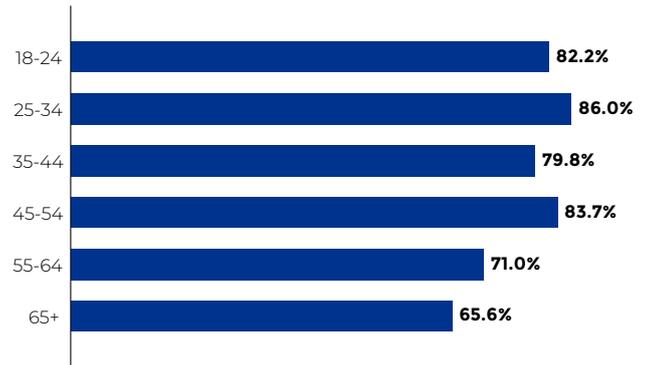
Would you use an effective private currency?

BY INCOME



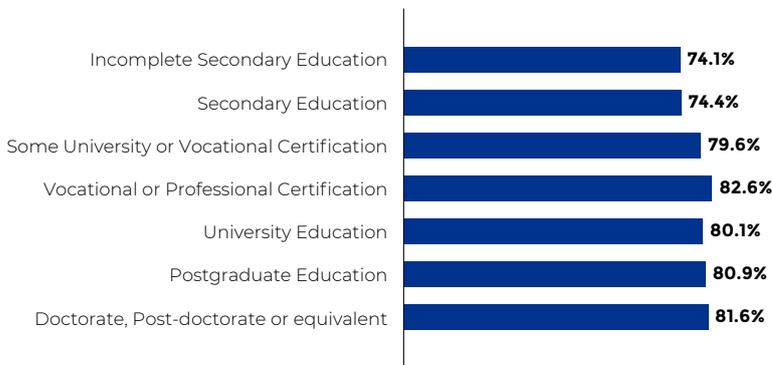
Would you use an effective private currency?

BY AGE



Would you use an effective private currency?

BY EDUCATION



Would you use an effective private currency?

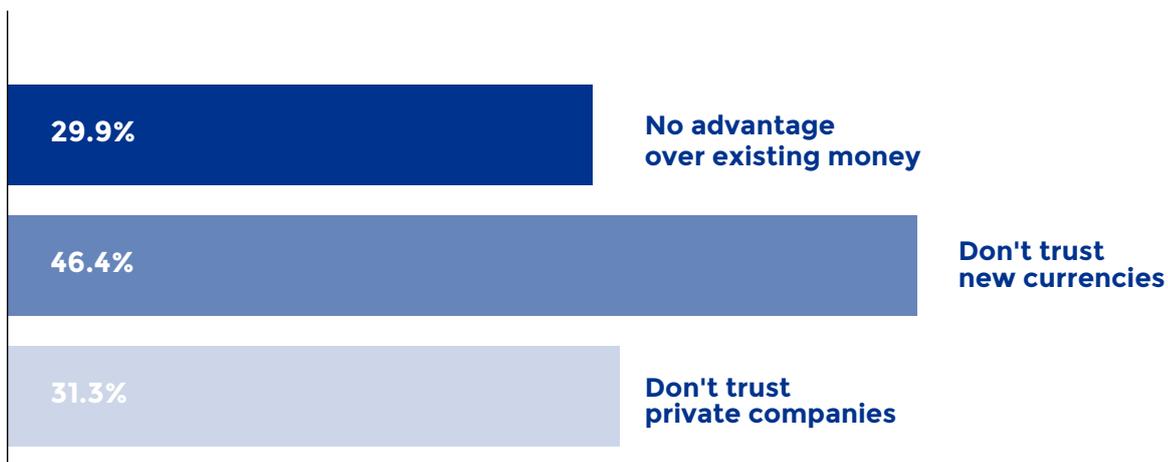
BY GENDER



SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

For those who answered they wouldn't use the effective private currency with the characteristics described, the most common reason was that they don't trust new currencies (46.4%). Among the remaining 53.6% who answered no, 31.3% said they don't trust private companies, while 29.9% argued that this new currency would offer no advantage over the existing forms of money.

Why not?

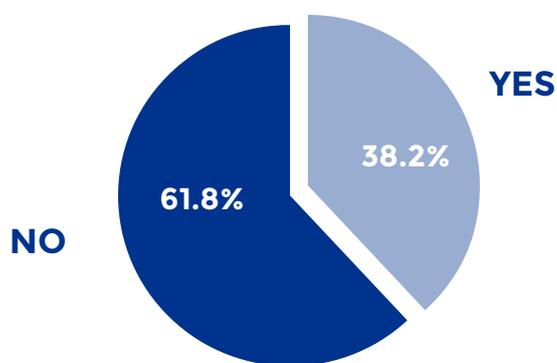


SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

Despite their relatively high degree of openness to new types of money, Argentines don't share this enthusiasm when it comes to a private currency issued by Facebook. When asked if they trust Facebook to issue a Private currency, only 38.2% of the Argentines in our sample answered yes. Although this number is much higher than those who answered yes in more developed economies (US, UK, Germany and Spain), it still signals that people don't trust Facebook to become a monetary institution.

As was the case to a generic privately issued currency, the answers to this question were fairly evenly spread across levels of income, education and gender. People at the highest level of income and in the two highest levels of education have more trust on Facebook to issue a currency, possibly because they might have a better understanding about the potential benefits of Libra (Facebook's currency) in comparison to other cryptocurrencies. With respect to age, we can observe a significant decrease in trust on Facebook as we move towards older age groups. Finally, males are marginally more likely to trust Facebook to create and manage money (53% of males against 43% of females).

Trust in Facebook to issue a private currency



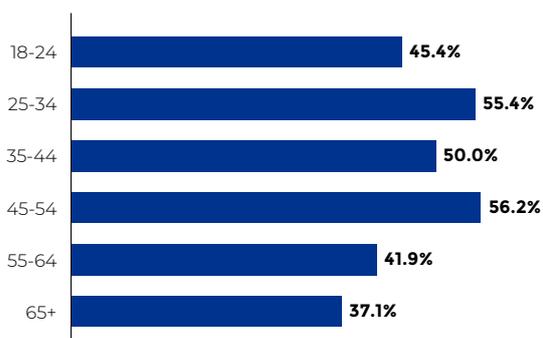
Trust in Facebook to issue a private currency

BY INCOME



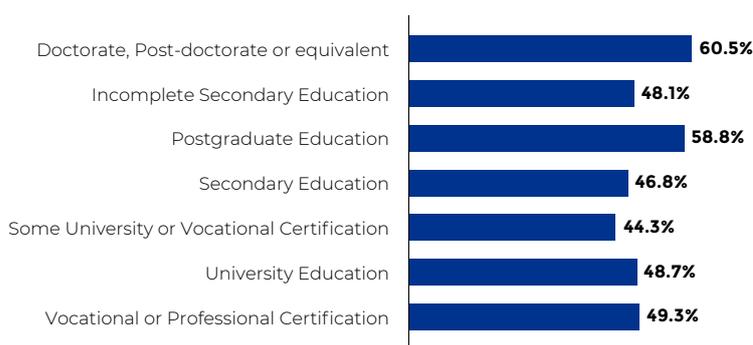
Trust in Facebook to issue a private currency

BY AGE



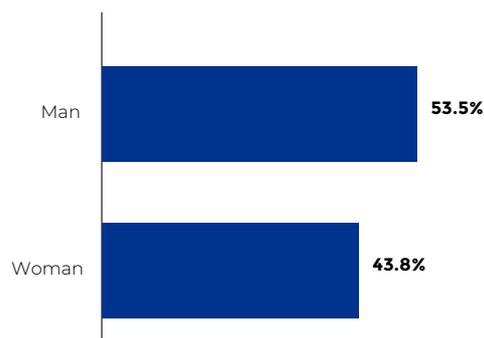
Trust in Facebook to issue a private currency

BY EDUCATION



Trust in Facebook to issue a private currency

BY GENDER



VI. A CONJOINT ANALYSIS OF PREFERENCES FOR MONEY IN ARGENTINA

While the above discussion is helpful in gaining a deeper understanding of Argentine usage, knowledge, trust of money. Understanding exactly what characteristics of money are important to Argentines requires a systematic approach. Fortunately, a choice based conjoint analysis is an excellent way to measure the relative ‘utilities’ that Argentines gain from different types of money which vary across each attribute. We can look at how each of five main attributes are valued against each other. To do this, from the sample of 1,000 adult Argentina residents, we provided each respondent with ten frames, each of which provided the respondent with a choice between three hypothetical currencies with varying attributes. For the purpose of this exercise, we characterized ‘money’ as having five underlying attributes:

1. **Issuer/backer** refers to who issues and/or backs that currency. This could be a central bank, a commercial bank (private sector company), or a peer-to-peer nonprofit like Bitcoin (private sector peer to peer).
2. **Acceptability** refers to where are able you use the currency. Is your currency accepted by all sellers of goods/services or only some sellers of goods/services (within the area in which you buy/sell goods and services)?
3. **Transaction costs** are there costs involved in making the transaction (these are commonly known as ‘fees’, ‘premiums’ or ‘spreads’).
4. **Price Stability** refers to the expected change in the amount of goods and/or services you can buy over the course of a month with the same amount of currency (i.e. x\$ in October will be worth y\$ in November)
5. **Digital/physical.** All currency that is stored outside of your personal physical possession can be considered as digital.

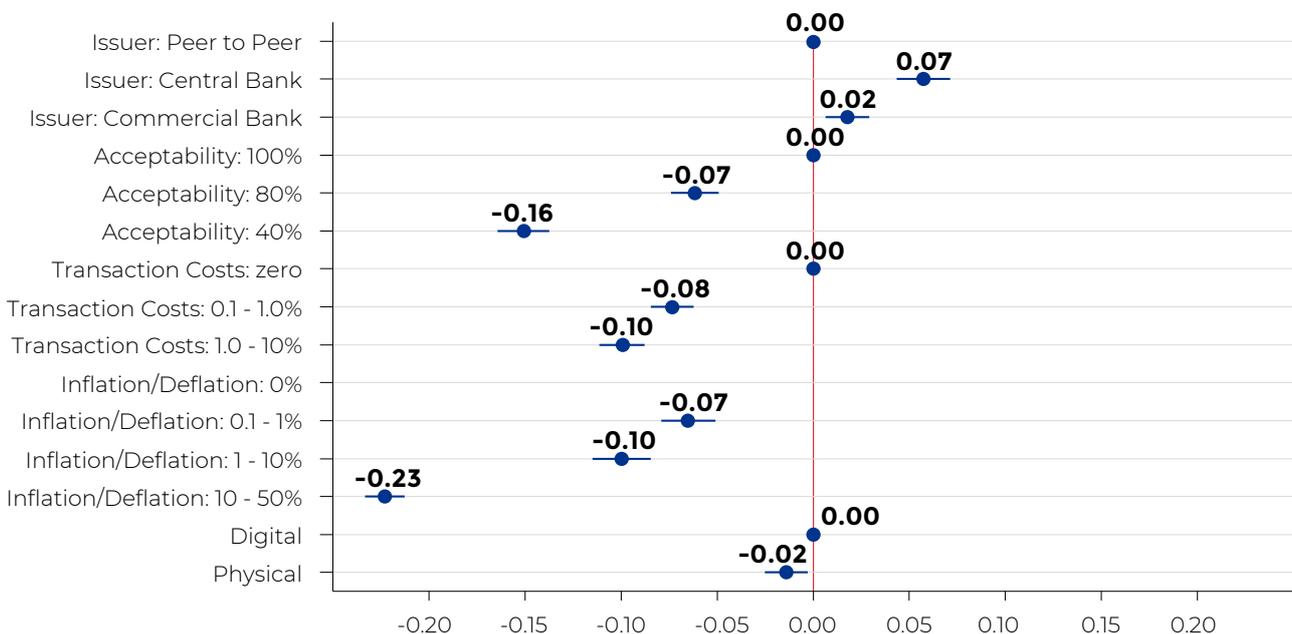
Each of these five attributes was assigned between two and four options shown below.

ATTRIBUTE	ATTRIBUTE CHARACTERISTIC
ISSUER/BACKER	<ul style="list-style-type: none"> • Central bank • Private sector commercial bank • Private Sector peer-to-peer network
ACCEPTABILITY	<ul style="list-style-type: none"> • All sellers accept the currency • 80% of sellers accept the currency • 40% of sellers accept the currency
TRANSACTION COST	<ul style="list-style-type: none"> • Zero • 0.1-1 of the transaction value • 1-10% of the transaction value
PRICE STABILITY	<ul style="list-style-type: none"> • Max monthly inflation/deflation of 0% (100=100) • Max monthly inflation/deflation of 0-1% (100=99, or 100=101) • Max monthly inflation/deflation of 1-10% (100=90, or 100=110) • Max monthly inflation/deflation of 10-50% (100=50 or 100=150)
DIGITAL/PHYSICAL	<ul style="list-style-type: none"> • Digital • Physical

To give an idea of what each of these frames would look like an example is provided below where respondents would be asked to choose their preferred one of the three hypothetical currencies with predefined characteristics across each of the five attributes.

	CURRENCY 1	CURRENCY 2	CURRENCY 3
MONEY ISSUER	Central Bank	Private sector corporation	Private sector peer-to-peer
LEVEL OF ACCEPTABILITY	80% of sellers accept the currency	All sellers accept the currency	40% of sellers accept the currency
COST OF TRANSACTION	Fee of between 0.1 and 1% of the transaction value	Fee of between 1 and 10% of the transaction value	Zero
PRICE STABILITY	100 (local currency) could be worth between 99 and 101 next month	100 (local currency) will be worth 100 next month	100 (local currency) could be worth between 90 and 110 next month
DIGITAL OR PHYSICAL	Digital	Digital	Physical

This gives us 30,000 (1,000 respondents with ten frames of three options) observations reflecting the preferences of Argentines for money across our five attributes. The easiest way to interpret the results in a meaningful way is by examining the average marginal effects of each attribute choice. Effectively, these can be viewed as premiums/discounts place on specific characteristics of money. For example, we can see from the figure below that Argentines place a significant premium on central bank issued money and are very averse to high inflation/deflation and low acceptability rates. The advantage of using a conjoint based approach is that we can directly compare different characteristics with each other. Looking at the figure below, Argentines have a strong aversion to currencies with high inflation or deflation, especially when this is above 10% a year. There is also a strong aversion to currencies with low acceptability (under 50%) and a fairly strong aversion to transaction costs. Lastly, when comparing digital with physical money, Argentines appear to have a slight preference for digital money.



The results from the conjoint survey show that preferences of Argentines are very similar to those of other countries. There is one dimension, however, that Argentines seem to care a bit more than other countries. They have a very strong aversion to currencies with high levels of inflation. As it has been already discussed throughout in this discussion, it is completely understandable that Argentines feel this way. From all countries in our sample, Argentina is the only country that has faced (and continues to face) the problem of hyperinflation in recent years. Therefore, Argentines know, from their past and current experience, how high levels of inflation can hurt economic well-being. For most of the countries in our sample, it has been many decades since the people haven't experienced inflation in the double digits. Therefore, it is hard for them to even imagine, the impact of such inflation on their preferences. For the Argentines, however, yearly inflation of 50%+ is an unfortunate reality.

Nevertheless, if we look at other dimensions, traditional forms of money seem to be doing a good job in Argentina. These traditional forms of money (cash, credit cards and debit cards) all fulfil the other dimensions that Argentines care about: acceptability and low transaction costs. Moreover, although the answers to other questions indicated the openness of Argentines to cryptocurrencies and private money, the results from the conjoint survey show that they have strong preferences for money issued by a trusted third part, and particularly by their central bank. Finally, the results from Argentina and other Latin American countries present an interesting fact. While in developed countries (US, UK, Germany and Spain) people prefer physical to digital forms of cash, in Latin American countries the preference goes the other way. Obviously, there are many reasons why this can be the case, but, once again, inflation emerges a very likely answer. All the Latin American countries considered in our study have experienced hyperinflation in the 80s-90s (and even until now in the Argentine case). As it is well known, poorly managed cash is a terrible choice in an environment with high inflation. These inflationary experiences might help to explain the preferences for digital forms of money in Latin America.



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RECOMMENDED CITATION:

CGC, Cryptocurrencies and the Future of Money.
Madrid: Center for the Governance of Change,
IE University, 2019.

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