

Technical Paper 06 Version 2

Central Bank's Perspective: EXC as reserve currency

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Abstract:

Due to its possessing a mechanism for automated money supply within GMF, EXC is designed incorporating enormously value-added features around the use of reserve currencies. Unlike fiat currencies, the money supply of EXC is determined completely automatically by an algorithm with no human intervention. EXC is also designed to have no correlation with the US dollar, Euro, Japanese Yen, Chinese Yuan or Sterling. This might be attractive for those countries' governments who are looking for an alternative vehicle currency to the US dollar. As EXC is equipped with all the necessary characteristics of the sort of super national currency which John Maynard Keynes envisaged in 1942, it has the potential to become a new reserve currency.

As central bankers and governmental officials become more environmentally consciousness, it is likely that countries will move away from being a cash society towards becoming a cashless society.

The obvious utility value of EXC as compared with other digital currencies lies in: (1) its design which acts to deter people with criminal intentions from using it, (2) its having the highest level of security, (3) fast settlement & convenience for users, (4) capability to process large volume transactions, and (5) its automated liquidity providing feature.

A central bank which adopts the floating exchange rate system, can issue its own fiat currency and swap its newly issued fiat currency for EXC with GMF. We have designed the EXC Platform which might be able to reduce the cost of cash in circulation if a group of countries uses it effectively. We have also designed it such that the EXC tokens could function as foreign reserves if our digital central bank could be regarded, for example, as a digital version of the IMF.²

Background:

Risk of US dollar devaluation

Since the abolishment of the fixed rate between the US\$ and Japanese Yen at the rate of US\$/Yen360, the US dollar has depreciated more than 3 times against the Japanese Yen.³ US President Trump seems to be trying to balance the huge US trade deficit through the imposition of tariffs against its own long term allies. A recent IMF report has pointed out

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² The mechanism of issuing its own currency to receive EXC as the foreign reserve is the same principle as the creation of the IMF by quotas contributed by several developed countries' governments at the time.

³ Sterling had devaluated more than 5.8 times against Japanese Yen from Yen856.4 in 4th January 1971 to Yen147.1 on 17th Sep 2018.

that the Trump administration through its substantial tax cuts will benefit the high income segment of the US population and expand government debt rapidly. The implication is that US public sector debt levels may not be easily reduced by the primary balance target, even by the next administration which follows Mr. Trump.

In the US political arena, President Trump /The White House and the Law Enforcement branch & Media disagree over many important issues, something which we have not witnessed in any of the democratic countries. President Trump is moving away from its long standing NATO allies, and moving closer towards Russia. Meanwhile, Russia's President Putin has made it clear that Russia believes it is unfair that the US enjoys the benefit of being dollar remains the vehicle currency, especially after the Fed has irresponsibly dramatically increased the money supply after the 2008 Credit Crisis. Russia is seriously considering to launch its own digital currency, Crypto Ruble.

John Maynard Keynes, trained as a mathematician, was skilled at establishing economic theories through the study of political economy and probability theories. The EXC Platform was created through the application of three scientific areas, i.e., physics, probability and information technologies. With scientific theories, EXC was designed to be easily understood by people who are not familiar with the concept of digital money. As such, it has the greatest potential to become a first super national currency, an alternative unit of measure when the Fed expands its balance sheet together with rising US government debt. Under the current environment, EXC's price movements might be more stable relative to asset prices while asset prices around the globe in US dollar terms have increased sharply since the Credit Crisis, which was certainly not the intended consequence of the central banks of the developed countries.

Vis-à-vis cryptos. What comes after crypto gold standard?

Bitcoin is referred to as "digital gold coin" by Bitcoin believers. Satoshi Nakamoto's White Paper has been successful in making people believe that digital gold has significant intrinsic value and utility value even when there has been no mechanism to store value embedded in Bitcoin.

Satoshi's White Paper has given many engineers the idea of developing an alternative crypto currency.

Keynes was very insightful, and was successful not only in establishing economic theories, but also was instrumental in influencing the world to promote the use of the US dollar, together with Harry Dexter White, as the vehicle currency replacing gold through the creation of the IMF as the central bank of central banks. The creation of the IMF has made a huge positive impact to increase the total of foreign reserves among member countries, which facilitates the growth of international trade, fostering sustainable economic growth.

Ideal Digital Currency System is the same

Whether it is crypto-currency or fiat currency, the ideal digital platform seems to be the same. The ideal system needs to have (1) a design which deters potential criminals and fraudsters

from using it, (2) the highest level of security, (3) fast settlement & convenience for users, (4) capability to process large volume transactions, and (5) an automated liquidity providing feature.

The recent success of Telegram Open Network's team raising \$1.7 billion from the concept of the fourth point of the above illustrates the degree to which the technologies which the EXC Platform is able to offer may be attractive with any of the crypto-currencies.

Proposal to central banks in developing countries

By using modern technologies, we are able to emulate a simplified version of the IMF's core activities.

Any country needs to spend a lot of money if it wishes to maintain a cash society. For example, the Nikkei Newspaper reported that the Japanese spend \$17.6 billion every year to move cash around among their ATM machines and their bank branches every year⁴ according to Boston Consulting Study. Tufts University's study in 2013 estimated the cost of keeping cash for the US government is \$200 billion annually.⁵ These costs are born by financial institutions, and are passed on to the residents of each country either by way of fees or by way of the interest spread between the lending rate and the borrowing rate.

Some developing countries which have not yet spent too much money establishing cash supply chain, may benefit by moving towards a cashless society. This is just like a developing country has avoided spending a lot of fixed line telephone capital cost and saved billions of dollars.

⁴ Source: <https://asia.nikkei.com/Politics-Economy/Economy/Japan-s-love-of-cash-is-a-costly-business>
Original BCG study, please look at <https://www.bcg.com/about/news/press/default.aspx>

⁵ Source: The Fletcher School of Law and Diplomacy at Tufts University has undertaken a comprehensive study for the cost of cash in the US. Page 35 of the study, conclusion says;

'Conclusions As is the case with consumers and businesses, the government also bears costs from the use of cash in the economy. Most importantly, the anonymous nature of cash allows cash transactions to remain unreported, and contributes to the tax gap of approximately \$400 billion. Assuming very conservative parameters, the tax revenue lost to public coffers from cash-related improper tax reporting is more than \$112 billion each year. The "true" value is much higher. However, by applying the approach of "what are the minimum assumptions IBGC considers", it is possible to identify the conditions under which the overall cost of cash in the United States approaches \$200 billion annually. IBGC applied a conservative estimate attributing only twenty-five percent of the under-reporting of taxable income to cash use and it yields a figure that when added to the costs estimates for consumer and businesses results in an aggregate cost of approximately \$200 billion. To establish a frame of reference, it is useful to note that by applying the full 52%, estimated by Nina Olson, the National Taxpayer Advocate, as the proportion of tax revenue lost due to under-reporting by self-employed taxpayers, the cost to the government alone exceeds \$200 billion.' See details at <http://fletcher.tufts.edu/CostofCash/~media/Fletcher/Microsites/Cost%20of%20Cash/CostofCashStudyFinal.pdf>

For example, Egypt has an option to move directly towards being a cashless society by using the EXC platform which will save large sums of money.

The Egyptian Pound price is determined by the market as Egypt adopted the floating exchange rate system recently. The Egypt central bank is able to issue Egyptian Pounds and exchange them for 5,000 EXC with GMF. The Egyptians will not feel the pain as they have no need to raise other foreign reserves, but instead issuing their own fiat currencies. The Egyptian central bank enjoys two benefits. It can reduce the cash in circulation cost of Egyptian society and can provide a faster, more secure, more convenient payment system to their citizens and residents. The other benefit is the chance to increase the value of their foreign reserves by reserving 5,000 EXC instead of US dollars in the long-run.

This illustrates the following. If any country adopts the floating exchange rate system, they can receive a benefit similar to that of the US, EU, China and Japan whose currencies are included as the global foreign reserves in the form of SDR, IMF's pegged money.

If central bankers believe there is the potential that its value could appreciate vis-à-vis the US dollar, Japanese Yen, Euro, Chinese Yuan or Sterling Pounds, exchanging their own currency with 5,000 EXC would bring double the benefit to their nation.

Conclusion

The EXC Platform is designed to offer similar benefit which IMF offered to its original members. The EXC Platform is suitable for those countries' central bankers who recognize the high cost of maintaining cash in society. Once they become environmentally conscious, they will wish to have a low cost digital platform which can support a secure cashless payment system. Due to the patentable design of the EXC Platform, one set of the EXC Platform can support a territory of 30 million population with 172 million settlements per day, with 0.22 micro watt energy cost per transaction. This is by far the lowest energy cost for any payment system, with the potential of scalability. Thus, the EXC Platform is suitable for any country's central bank to consider as an option to pursue an ecological digital money system.

Changes to structure

The supervisors may amend this document and the structure, functions or any other aspects of Excor, GMF, the EXC Platform, the EXC token and/or the token offering at any time in their sole discretion if, for example (but not limited to), the tax, legal or regulatory position changes or it is more favourable from a tax, legal or regulatory position to make such amendments.