



منتدى الاستراتيجيات الأردني
JORDAN STRATEGY FORUM

Money in the Era of Digital Transformation

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1. Background:

Over time, the nature of money has changed. The earliest forms of money used to be coins made of something that has value (gold and silver). These coins were phased out, and paper money (notes) was introduced. These notes / **“representative money”** used to be backed by and could be exchanged for specified amounts of gold or silver.

Over time, representative money led to the use of what is called **“fiat money”**. Today, all currencies, including the Jordanian Dinar are fiat currencies. They are not backed by commodities like gold or silver. Their value is based on trust. Fiat money is accepted because it serves as a store of value, unit of account, and as a medium of exchange. Fiat money is an acceptable form of payment by the government of the issuing country.

Money is anything that serves three basic functions, and these are medium of exchange, unit of account, and store of value.

- A. Medium of Exchange.** To facilitate the exchange of goods and services, people agree on something that serves as money. Without money, people have no choice but to rely on barter. This process (barter), however, is not practical.
- B. Unit of Account.** Money is used to measure the value of any transaction. If one buys a car, the price would be quoted in Dinars and not in, say, bushels of corn. Money is a consistent means of measuring the value of goods and services.
- C. Store of Value.** If one earns x Dinars, he / she can keep them and spend them any time in the future. People store the Dinars because they know they will have value in the future.

Relative to the above-mentioned observations about **“Money”**, governments, central banks, private sectors, and the average citizen as well, should not ignore the growing interest in **“cryptocurrencies”** and **“digital currencies”**.

Cryptocurrencies are digital assets. A cryptocurrency is a decentralized digital currency. A cryptocurrency has no central party that controls it. Transactions are processed and recorded on a blockchain which maintains all transaction records and keeps track of who owns what.

Proponents of cryptocurrencies argue that they will become the future of money. However, one should note the following points:

- A. To be used as money, it is essential that cryptocurrencies enjoy price stability. Stability ensures they can be exchanged for goods and services. Previous experience shows that this is not the case.
- B. Cryptocurrencies are looked at as speculative assets. Indeed, when people expect the value of a cryptocurrency to increase, they would buy it today and sell it tomorrow. Under this scenario, people would not use the currency to buy goods and services. In other words, one can question these currencies in their medium of exchange function. That is why **“stable-coins”** were introduced. These are digital currencies that **“peg”** their value to an underlying asset, which could be a fiat currency, commodity or even another cryptocurrency. Some of the well-known stable coins are Facebook’s Libra or USD Tether (which is pegged to the price of the U.S. dollar).

Financial regulators are now responding to cryptocurrencies. Regulations vary considerably. While some governments have embraced cryptocurrencies, others are banning or limiting their use. Central banks around the world, including the U.S. Federal Reserve, are considering introducing their own digital currencies (Central Bank Digital Currency / CBDC) to compete with the crypto boom.

Relative to the above-mentioned observations about cryptocurrency, it is important to note that during the early part of 2022, the crypto company was valued at about \$32 billion. Since then, the company has become bankrupt and its founder, Sam Bankman-Fried, is charged with criminal fraud.

A CBDC is a digital version of government-backed fiat money. A CBDC is virtual money backed and issued by a central bank.

“A digital liability of a central bank that is widely available to the general public. In this respect, it is analogous to a digital form of paper money... A CBDC would differ from existing digital money available to the general public because a CBDC would be a liability of the Federal Reserve, not of a commercial bank... The central bank would retain the power over the supply of the currency and would be able to control the value directly with monetary policy” (Money and Payments: The U.S. Dollar in the Age of Digital Transformation / Research & Analysis / Board of Governors of the Federal Reserve System / January 2022).

A CBDC can be used as legal tender for transactions (i.e., paying wages or buying goods and services). If this is the case, one should ask the following question:

The fact that individuals and businesses can transfer money from one bank account to another (digitally), what is the impact of introducing CBDC on the banks themselves?

From the outset, one should remember that in the traditional banking model, individuals and all types of institutions receive money and deposit them in banks. In turn, banks use their customers' deposits to make loans while at the same time keeping a proportion as reserves mandated by central banks. In other words, banks make a profit by lending their customers at a higher rate than they pay to their depositors.

Within the context of the traditional banking model, it is also useful to remember that banks can generate a lot of credit / create money. This process can best be illustrated with a simple example.

An individual or a business deposits JD 100 at a bank. If the minimum reserve ratio is 10%, the bank can lend JD 90 and keep JD 10 in reserve. When the borrower deposits this amount in his / her account, the JD 90 is treated as a fresh deposit, and as a result, the bank can lend JD 81 and keep the 10% (JD 9) in reserve. This process is repeated many times over. In other words, the initial JD 100 deposit increases the money supply by a much larger amount. In fact, with a reserve ratio of 10%, the initial JD 100 deposit, can create a total of JD 1,000 of "created money".

The process of money creation is risky credit. For example, some borrowers may default on their borrowed funds. In addition, depositors may want to withdraw more cash than is available for withdrawal. These risks (credit and liquidity) are cushioned by the equity capital of banks, deposit insurance schemes, and the possibility of the central bank lending banks with liquidity problems (**lender of the last resort**).

The introduction of CBDC involves few implications to the traditional banking model.

- 1.** CBDCs are liabilities of the central bank. This makes CBDCs safer than commercial-bank digital money. Unlike in the traditional banking model, depositors do not carry risk, and this eliminates the need for deposit insurance. In addition, credit risk is spread across the entire population / depositors, and not just each individual bank.
- 2.** If individuals and businesses withdraw too much money out of banks by purchasing CBDCs, the ability of banks to lend would be "restricted". Banks might find themselves borrowing from the central bank to finance their lending activities. In other words, central banks become **"lenders of the first resort"**.
- 3.** With CBDCs, all transactions can be monitored. Central banks can quickly identify banks that are struggling. Central banks do not need to rely on the reports provided by banks, and as a result, their remedial action would be swift.

- 4. By paying interest on CBDC holdings, central banks can directly transmit monetary policy to** households and businesses, instead of relying on banks. Monetary policy is a set of policy measures implemented by central banks to influence money supply and interest rates for maintaining price and foreign exchange stability.
- 5.** Transacting with CBDC doesn't require a bank account. An unbanked person / consumer with a smartphone could easily transact over a mobile application. This observation should integrate people into the financial system who were traditionally outside of it.

However, a CBDC is not without problems.

- 1.** One risk is privacy. For example, some governments can use the digital for domestic surveillance.
- 2.** The role of a central bank as a wholesale lender of the first resort brings in problems. "State-controlled" credit could potentially be susceptible to political pressure for sector-focused lending. Would there be formal criteria for determining which banks would qualify for central bank funding? And how much? Would it be possible to "manipulate" the criteria?
- 3.** The issue of security or cyber security becomes more important. With a CBDC, if the central bank gets hacked, the whole system could be fatally compromised.
- 4.** "CBDCs require a complex regulatory framework including privacy, consumer protection, and anti-money laundering standards which need to be made more robust before adopting this technology" (Atlantic Council).

Finally, based on the Atlantic Council's "Central Bank Digital Currency Tracker", it is worth noting the following quotations.

1. "114 countries, representing over 95 percent of global GDP, are exploring a CBDC. In May 2020, only 35 countries were considering a CBDC".
2. "11 countries have fully launched a digital currency, and China's pilot, which reaches 260 million people, is set to expand to most of the country in 2023. Jamaica is the latest country to launch its CBDC".
3. "In 2023, over 20 countries will take significant steps towards piloting a CBDC. Australia, Thailand, Brazil, India, South Korea, and Russia intend to continue or begin pilot testing in 2023. The ECB is also likely to start a pilot next year".
4. "18 of the G20 countries are now in the advanced stage of CBDC development. Of those, 7 countries are already in pilot".



Finally, it is important to note that in February 2022, the Governor of the Central Bank of Jordan (CBJ), Dr. Adel Sharkas, stated that "with regards to the plans to issue a Jordanian digital currency, a study is underway to develop a legal digital currency linked to Jordanian dinar".

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Commercial-bank Digital Money is Money traded digitally through smart apps and digital platforms of banks.



Central Bank Digital Currency Developments



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