

# GLIMPSES AT A NEW GOLD STANDARD

Iulian Oneașcă<sup>34</sup>

## **Abstract:**

*The digital revolution and the explosion of a wide variety of currencies challenge the knowledge, understanding, and regulation of the phenomenon. The article synthesizes the evolution of money in the world, seeking to deepen the approach of its study. In particular, the analysis aims at identifying standards and values as reflected by the evolution of money. The approach goes beyond current practices in highlighting the evolution of society, considering the expenditures and harvesting of socio-human energy, as approximated by prices and the corresponding circuits of money. The analysis emphasizes influences of the market, authority, and technology. The results suggest a spiral evolution in currency production, initially oriented by the principle of self-organization, and then by market forces, social needs, and efficiency. Knowledge, technology and trust mark the new gold standard of future money. Trust has yet to confirm.*

**Keywords:** Money, Cryptocurrency, Socio-human energy

**JEL classification:** F60, O10

Society is a complex system of relationships characterized by self-organization (Thelen and Smith, 2006, p. 259; Mathiesen et al., 2011). The system functions like a firm. “By forming an organisation and allowing some authority (an ‘entrepreneur’) to direct the resources, certain (...) costs are saved” (Coase 1937, p. 393). These are transaction costs (Arrow 1970, p. 60), including, amongst others information costs (North, 1992). Minimising them through legislation, justice and economic-administrative measures, leads to an increase in efficiency (Coase, 1960).

The main resources in society are people’s energies. People, communities, and societies lead their lives expending and harvesting (socio-human) energy. This is the common denominator of all their communications (sociology), actions (exchange of energy, in economics), rules (law), decisions (politics), thoughts (psychology), and so on, according to the aspects covered by international standards (social sciences—Ford and disciplines—ISCED-F); they bring together the knowledge about society and approximate reality.

In pursuing goals and fulfilling lives, people create and assign values. Such values are found in all sciences and disciplines of the known existence of societies (e.g., sociology—equality; economy—goods and services; justice—rule of law; politics—reputation, number of supporters and votes).

In economy, values are expressed through prices, coordinating the economic system. Money is the modern metric of prices; it approximates the socio-human effort. Thus, the flows of money reveal the circuit of socio-human energy, inside and across borders.

## **The Money**

The primary functions of money are to store, serve as a unit of account and a medium of exchange for values (Vaz et al., 2021). Traditions of reciprocity and barter (Elliott, 2018), as the oldest forms of exchange, could not store or measure values, while their possibilities to serve as a medium of exchange were narrow.

From time immemorial, people have practiced the exchange of goods to meet their needs as best they could. They created the first forms of money—primitive money—as early as the Neolithic and Bronze Ages. The means of exchange have evolved from prehistoric symbolic currencies (e.g., miniatures of utensils, tools, and weapons, or ornaments), to more valuable and practical ones,

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<sup>34</sup> European Institute of Romania, Regina Elisabeta 7-9, Bucharest, e-mail: iulian.oneasca@gmail.com

cattle (ancient Germans) and livestock currencies (standard in ancient Persia) (Einzig, 1949; Hudson, 2020). The process favoured a downward trend in money production costs: from manufactured symbolic products, to natural, and more valuable and abundant ones. In the beginning, money only served as a means of payment. This is the case with the Babylonians monetizing grain and silver; the process had administrative and fiscal motivations. Thus, the intervention of the authority led to the emergence of a system of exchange, based on weights, measures, and purity standards (Hudson, 2020; Innes 1913, p. 386).

In a disconnected world, a wide variety of would-be currencies co-existed with early monetary systems, such as the ones founded on base metal currency in ancient Greece, crude bronze in ancient Italy and Rome, and copper unit of account in ancient Egypt (Einzig, 1949).

A common and ageless problem of all sovereigns and societies has been the need for more money. To address the issue, the monetary system functions as a public good. It allows governments to provide national money. The system “permeates people’s everyday lives and underpins the economy” (BIS 2021, p.66). Its authority relies on trust in currency (BIS 2021, p.70).

Throughout most of Europe’s history, the governments usually paid their credits by “raising a tally” (Innes 1913, p. 398). Another method—manufacturing money—was limited by the value and availability of the commodity of which money was made. Therefore, the increase in the money supply was obtained by cutting the production costs of coins, reducing the quantity or quality of that particular commodity making the money (Fox, 2018). A cheaper solution involved the issuing of paper money; thus, governments would set its value and finance the deficits (Velde, 2018).

Paper money was first introduced in China at the end of the tenth century to substitute the Chinese coins, also used in Japan and Korea (Wray, 2012). From the middle of the twelfth century, for almost three hundred years, paper bills circulated throughout the empire (Pickering, 1844; Pfaff, 2010). Europe experienced their first paper money two centuries later (Wray, 2012). By the 18<sup>th</sup> century, precious metals (silver and gold) served as the main commodity money (Samuelson and Nordhaus, 2009). A century later, paper money coexisting with precious metal coins, were dominant (Velde, 2018).

As soon as governments have learnt to secure cheap money, its over-supply emerged. It happened with the issuance of paper money in 15<sup>th</sup> century China (Pickering, 1844; Wray, 2012), and with the influx of precious metals from the New World in Western Europe, between 15<sup>th</sup> century and the first half of the 17<sup>th</sup> century (Moosa, 2014). Monetary inflation has also been triggered by larger variations in the supply of money caused by fiat currencies adopted by many countries, from the 18<sup>th</sup> century onwards (Ögren, 2019). Therefore, stable money and fixed exchange rates have become major concerns for domestic and foreign trade.

## **Gold Standard and Currency Unions**

History highlights three major foreign exchange systems: the gold exchange standard, the Bretton Woods system, and the current flexible exchange rate system (Samuelson and Nordhaus 2009, p. 661).

The gold standard was used intermittently from 1717 to 1936 (Samuelson and Nordhaus, 2009, pp. 554-555). The classical gold standard had become the predominant national and international monetary system in the world until the beginning of the First World War (Officer, 2018). The novelty is not the gold as a standard—Europe used the pound as a unit of account since Roman times—but the establishment of the international gold standard to support commodity money in countries (Wray 1993, p. 31). The Gold as money or medium of exchange unified domestic and foreign trade; the only difference was that countries had different units for their gold coins (Samuelson and Nordhaus 2009, p. 555; Wray 1993, p. 32). It exhibited rudiments of automatic and policy-induced money supply, which promoted either stability or fostered instability (Officer, 2018).

Currency unification is an important way to reduce the transaction costs of monetary systems. In addition to the unification of domestic currencies (Germany and the USA), there are two failed currency unions in Western Europe that are worth mentioning (Ögren, 2019); they precede the

current Economic Monetary Union decided in Maastricht in December 1991. The Latin Monetary Union (1865–1926) consisted of France, Belgium, Italy, Switzerland and later Greece; it was more a coinage union, rather than a full monetary one (Einaudi, 2018). Denmark, Sweden and Norway formed the Scandinavian Currency Union (1873-1924); the gold standard restrained their monetary policies in the absence of a common central bank (Krim, 2004). The absence of common trade and fiscal policies, as well as political union, has led to the disintegration of these monetary unions.

The Bretton Woods system (1945-1971) has marked the emergence of a first international monetary system. It entailed the cooperation of central banks, supervised by the newly created International Monetary Fund (IMF) that continues to operate as a central bank for central banks (Samuelson and Nordhaus 2009, p. 557). The Bretton Woods system went beyond previous experiences of currency unions, introducing fixed but adjustable exchange rates (Samuelson and Nordhaus 2009, p. 558). The system collapsed in 1971 because of two fundamental drawbacks. The difficulty of maintaining fixed exchange rates while reducing international imbalances by demand-driven policies, created an adjustment problem; as the dollar became the world reserve currency and the system turned into a gold dollar standard, an ample US balance of payment deficit raised a confidence problem in terms of dollar stability (Kugler and Straumann, 2018).

The gold standard has strengthened the economy's freedom from government intervention. With its collapse, governments turned to economic policies to stabilize production and employment (for details of the process, see Croitoru, 2018).

## **Digital Money and Cryptocurrencies**

Historically, monetary plurality prevails (Amato and Fantacci, 2018). The development of digital economy and the emergence of digital money continue the tradition, offering alternative media of exchange. The current digital revolution revolutionizes money and payments systems; it has the potential to generate a departure from the traditional model of monetary exchange (Brunnermeier, 2021). Central banks issue digital currencies (CBDCs); they offer the advantages of central bank money: settlement finality, liquidity and integrity (BIS 2021, p. 65). Private provision of digital money is growing rapidly; it dominates the payment system in China (WeChat's and Alipay's digital wallets); provides successful money transfer services in Africa (Safaricom's M-Pesa) and others announce plans for social media networks ("stable coin" Libra of Facebook).

Market-led forces have created digital money and the cryptocurrencies. These are digital assets, with no backing or intrinsic value. Thus, they are immaterial and have no nationality. Their usage require no card or even bank account; for transaction purposes an electronic 'wallet' and a private key or a third-party custodian is required to access the funds (BIS, 2021). Cryptocurrencies can hide the wealth and its sources; most blockchains enable pseudonymity, others offer fully private transactions (WEF, 2021). A general definition refers to a "type of digital asset that uses distributed ledger, or blockchain technology to enable a secure transaction" (Härdle et al. 2019, p.1). A common trait is the network of peers with equal standing. Each participant has an active role, poses a copy of the ledger and consents algorithmically on the correct ledger (Härdle et al. 2019).

Cryptocurrencies reached a certain maturity, after more than a decade of market evolution. They display utility (WEF, 2021), have a potential for "cheap, secure, and near-instant transactions" (Härdle et al. 2019), are practical and convenient, as well as efficient in transaction time, offer faster payment, and simplicity of the payment process (Titov et al., 2021). Thus, their use is significant. Currently, the aggregate of cryptocurrencies is valued at around \$2 trillion in market capitalization (Coin Market Cap, 5<sup>th</sup> September 2021). Lending applications relying on cryptocurrencies and decentralized trading venues command roughly \$65 billion in on-boarded assets (WEF, 2021). Currently, there are over 6300 cryptocurrencies (Coin Market Cap, 5<sup>th</sup> September 2021); the most widespread and used ones are Bitcoin, Ethereum, Cardano, Binance Coin, Tether and XRP (Coin Market Cap, 5<sup>th</sup> September 2021).

The blockchain technology has a considerable potential to contribute to sustainable development; so far, the focus is on financial applications and speculative gains in cryptoassets (United Nations, ESC, 2021).

## Discussion and Conclusions

The standard in manufacturing (issuing) money spirally evolved. It started from traditions of reciprocity and barter with the primitive money, went to livestock, commodity money and fiat money, arriving to modern fiduciary currency. Thus, in a bottom-up fashion, the transitory standards expanded from individuals, to collectivities, and then to societies. The market required an international monetary system to encompass the whole world and address its corresponding transactions costs. The international monetary system--in a top-down approach--has introduced new monetary standards and provided adequate means for trans-border payments. The progress relied on market structuring and regulations. Globalisation and growing market forces also contributed. Favourable market conditions and unmet social needs generated bottom-up initiatives; entrepreneurs have capitalized on information, technology and communications, and created advanced (crypto)currencies. Thus, they overtook market regulations and bypassed global governance.

The money standard, old and new, has always followed the market need; what the market required, the authorities and the entrepreneurs provided. Technology accompanied the evolution of money, from coin minting to the issuance of paper money and digital money.

For many centuries, domestic and international exchanges of goods relied on possessions and precious metals. The intrinsic value of money laid initially in its commodities, then in trust, and gold standard, arriving at modern fiduciary money and digital currencies. Anticipating the evolution of society, knowledge becomes the most precious possession in society, its new gold. Trust has yet to confirm.

The cryptocurrencies and their future--relying on knowledge, market and trust--foreshadow the new gold standard of monetary systems. These reproduce the advantages of gold: limited supply and industrial uses, relatively indestructible. The production embraces however the entire world; cryptocurrencies know no boundaries. At the same time, the measure of knowledge is no longer rooted in power, but in the energy of the people, world market and trust.

The evolution of money display a constant reduction in transaction costs and improvement in system's efficiency. At the same time, short-lived experiences show that all monetary governmental arrangements eventually fail. The progress can be robust and lasting, provided that it be in line with the self-organisation principle. It is a matter of rules quality or governing competences, as it is one of mobility and adaptation. Entrepreneurship and the growing world market exhibit such traits. Fragmented world society and its market wild forces would always prevail over any socio-human administrative arrangements. Their energies and flows would be overwhelming.

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