

# Bitcoin vs. Sovereign Money

## On the Lure and Limits of Monetary Reforms

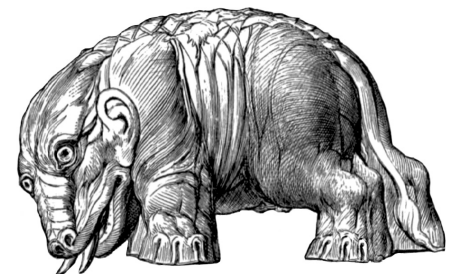
Axel T. Paul

### Abstract:

Although indispensable and in daily use, money and more specifically money creation in our two-layered fractional reserve banking system is still poorly recognized by social science at large. Its main features are outlined in order to identify (a) money's double nature to be private and public at once and (b) inflation and speculative excess as two of its inherent dangers. Bitcoin and sovereign money are discussed as prominent examples of, on the one hand, private or libertarian and, on the other hand state-oriented or social-democratic monetary reforms, each intended to solve one of the two systemic problems our currency order. The new money's respective advantages notwithstanding, it is shown that neither Bitcoin nor sovereign money can overcome money's double nature or realize the dream of an eventually neutral money.

**Keywords:** Bitcoin, sovereign money, money creation, monetary reform

**Axel T. Paul** teaches sociology at the University of Basel, Switzerland. His fields of research and expertise are the political economy of money, violence and social evolution. **E-Mail:** [axel.paul@unibas.ch](mailto:axel.paul@unibas.ch)



Our money finds itself in a crisis. With this, it is not only meant that as of recently the euro's survival has seemed to be threatened and, as a matter of fact, continues to be (Scharpf 2014). Moreover, our very monetary system being in crisis is a view not only shared by critics who on principle oppose capitalism (cf. Graeber 2011). In fact, doubts equally exist amongst generally market-friendly economists and amongst mentors and practitioners in the field of alternative economics about whether the constitution of our monetary order is able to meet both the economic and sociopolitical challenges of our time (cf. Emunds/Reichert 2013). Even the central banks are at their wits' end and are seizing exceptional means in order to try and rescue a system that is in danger of getting out of control (cf. Esposito in this issue).

This general criticism of money, albeit not necessarily in an anti-capitalist way, not only applies to the Eurozone but also to the monetary order itself; i.e. to our two-level monetary system with private commercial banks at its base and a politically independent central bank on the top. This monetary system, so the general tenor of the market-oriented critics, may not or no longer be in the position to provide the economy with 'good money', i.e. a medium enabling the exchange of goods and services and their production or its provision, instead of, as it seems or is in fact often the case, hindering it all.

Of course, the choir of money critics does not sing unanimously. Depending on the diagnosis of the central flaw(s) of the system, one arrives at different conclusions of what should be done (cf. Degens 2013; Dodd 2014, ch. 8). However, it is quite likely that the dream of an economy in which money simply facilitates the supposedly 'proper' economic activities of its actors, of a monetary system that works because it is not 'felt', will remain a dream, not only because our capitalist economy would never have come into being without a previous or at least concomitant institutionalization of money (Ingham 2004, ch. 5-6) or because finance as a technology to manage risk cannot be disposed of, but also because money cannot be reduced to being neither a form or derivative of private property nor a creature of the state (or any other community for that matter). In fact, it is both (Orléan 2011, 153-163).

The state cannot enforce the use of its currency for settling private deals – or if it could, it would lower the volume of trade which it can and must tax –, and the private actors, on the other hand, cannot invent a private currency without necessarily providing for third-party enforcement and moreover mechanisms to control, or rather maintain the belief in, its value (stability). Money, as any other institution, is a working fiction that depends on being treated as if it existed independently of the practical and cognitive acts that actually uphold it (Douglas 1987). What can be and actually is recurrently tested, however, is the degree to which this institution can be used to serve particular interests. While private owners of money preferably try to protect 'their' money from political interferences, the state, on the other side, tries to assure its regulatory capacity, not necessarily in order to protect the common good, but also and simply to stay in the game. No wonder, then, that one can find divergent and even contradictory proposals to rectify a, at least from the point of view of its critics of one of the two camps, deficient currency order.

**[1]** By opposing and comparing two of these proposals, namely Bitcoin and

**[1]** Of course, neither all critique nor all alternative money proposals can easily be classified as 'private' or state-oriented. There is at least a third 'middle' current of critique that could be labeled 'communitarian' (cf. Degens in this issue).

sovereign money, we might, however, get a better understanding of why it is rather unlikely that, even if our currency order is certain to evolve, seemingly radical reform proposals will in fact transcend the inherently contentious character of the institution of money.

Before I present and discuss first Bitcoin and then sovereign money, I will, however, assuming that some of the readers of this journal might not be well acquainted with the basic features of our current system of money creation and management (cf. Ingham 2007, ch. 7), quickly outline how it works and identify two specific problems which Bitcoin and sovereign money are supposed to solve.

## I.

‘This note is legal tender for all debts, public or private’ is the sentence found on all dollar bills. The dollar is the legal means of payment in the USA, i.e. the American state guarantees that wherever American law applies, monetary contractual obligations can be amortized by payment of the sum in question. The same goes for other state currencies. ‘Real money’ is solely money handed out by central banks, commissioned by the state. A fraction of this central bank money is being passed around in the form of cash. The rest of central bank money is being held by commercial banks – albeit not in the form of physical stocks but rather in the form, i.e. under the name, of so-called reserves. Commercial banks get hold of central bank money by going into debt with the central bank and in return depositing securities for these credits. By deciding the level of the key interest rate, i.e. the rate at which commercial banks can get into debt with ‘its’ central bank, the latter influences the extent to which central bank money is in demand. Besides that, the central bank may increase the quantity of central bank money by means of buying up securities and, conversely, by selling securities from proprietary possession. In principle, the central bank is in a position to produce money ‘out of nothing’, metaphorically speaking, to print money at discretion and, in reverse, to let money vanish ‘into nothing’ or annihilate earned cash.

The danger that is inherent to this special position of the central bank is obvious – and constitutes one of two systemic problems of our current monetary order I want to point out. The central bank can put more money into circulation than is actually needed by the economic stakeholders, and thus generate inflation (Hayek 1950). Equally problematic is the case of an under-supply of the economy with central bank money, so that generally sinking prices, or deflation, would not represent a decreasing need for goods but rather a general lack of money. A diachronic price comparison would be impossible in both cases, and misallocations would result. The legal mandate of the central banks is thus to observe the economic development of their respective currency area in an extensive and preferably forward-looking way in order to adapt the provided quantity of money to the present demand. Nevertheless, notwithstanding the deflationary world economic crisis of 1929–1931, Japan’s deflationary economic troubles since the early 1990s and the possibly deflationary situation the Eurozone is currently in, it is the specter

of politically induced inflation and not deflation that haunts owners of capital and motivates the private or rather libertarian thread of monetary reform (Gedeon 1997).

Orthodox economic theory, or libertarianism for that matter, considers money to be nothing more than the exchange value that one owner of goods is willing to part with in exchange for other goods he or she desires. By having once secured the rights to minting coins out of gold or other precious metals national institutions performed the service of standardizing money, but at the same time they got hold of a position that allowed them to manipulate the standard of coins at their own discretion. Eventually, the misuse of money by the state or its agents went too far when materially unsecured paper money entered the picture. This enabled political authorities to create money at will and to thereby slowly but surely dispossess private money owners.

Thus, as a precondition for a central bank to fulfill its task of keeping the price level constant, political independence is supposed to be required (Nordhaus 1975). Basically, political independence means that the central bank cannot be instructed by the government to decrease or increase the quantity of money. Otherwise, the central bank could be ordered, independent of real growth rates, to activate the printing press in order to use the excess, i.e. unsecured money – to, ‘for example’, indirectly buy votes before elections take place. In fact, central bank independence has been institutionalized throughout the OECD-world and continues to be enshrined as the *conditio sine qua non* of monetary stability (McNamara 2002). To libertarians, however, even the formal independence of central banks has not fundamentally changed the situation. Up until this very day, central banks’ monetary policies inevitably depend on the stipulations of whoever is in power (Orléan 2008). Furthermore, economic players depend on putting faith not only in these political institutions but also in commercial financial intermediaries without having a direct commercial relation with them but rather with their respective business partners. Thus, according to libertarian critics of our present two layered banking system, public and private financial intermediaries appropriate money, that supposedly has once been invented by private economic players to simplify their trade and thus belongs to them only.

A further difficulty – a second key problem of our monetary order I want to single out – results from the fact that the creation of money by central banks represents only the first, respectively the last, link of a significantly longer chain of money creation (McLeay et al. 2014). Commercial banks as debtors of central banks and recipients of central bank money do not simply pass it on to their commercial and private clients but instead use it in order to provide a security for their *book money*, which they may have already created via current account or book crediting. Book money creation means that the banks grant credits to their clients for settling their own liabilities towards other economic stakeholders. The debtor of a bank might request his credit to be paid out in cash; in practice, however, he most likely will settle his payable liabilities by transferring a part of his book money to a third party. Book money is treated by bank clients as cash. Ultimately, also the receiver of a book money transfer will only rarely ask for a disbursement of the sum

accredited to his account. Therefore, banks only have to hold a fraction of their accredited book money available in cash.

In order for a change from book money to cash to be able to nonetheless take place in individual cases, legal minimum reserve rules exist. In textbooks about banking and finance practice, money creation is often explained with the help of the money multiplier (cf. Krugman/Wells 2009, 393-396). According to this model, a mandatory minimum reserve of, for example, 10% would allow a commercial bank to lend 900 euros in cash out of an amount of 1,000 euros in its possession. These 1,000 euros may be borrowed either from the central bank or from savers. As soon as the 900 euros lent are paid into a further commercial bank, this bank may lend 810 euros of the amount to the next; 90 euros need to be held available as cash. In this way, the series continues so that on the base of 1,000 euros in cash, eventually 10,000 euros of book money can be created. Within this explanatory frame, the central bank would be capable of limiting the money creation of the commercial banks via the mechanism of the minimum reserve. However, this explanation is wrong or at least skewed, not because there aren't any minimum reserve rules or banks do not comply, but rather because book money creation *precedes* the deposit of reserves. As a matter of fact, credits are first and only as a reaction to this do commercial banks accommodate central bank money. They are able to do so because the central bank, responsible for preventing the credit business from crashing, stands by for providing the commercial banks with reserves anytime. Of course, the commercial banks have to pay interest to the central bank, the *raison d'être* of the deal, however, is that an even higher interest shall eventually be earned by lending out (parts of) the money. In practice, this means that commercial banks are almost indefinitely able to create book money.

As with politically dependent central banks, inflation might result and actually results, in this incidence, however, rather in the form of rising asset than rising consumer prices. In fact, the bulk of book money, which is rarely, or at least should not be, credited without the debtors procuring collateral, does not go towards consumption, but investive and/or speculative purposes. In times of low real growth and interest rates, a situation the Western world has now faced for more than two decades (Teulings/Baldwin 2014), book money or rather different book monies have been fueling the massive expansion of the financial sector. In order to ensure, on the one hand, that interest claims can be met and, on the other, that the total volume of credits can be further expanded, an ever-increasing number of financial 'products' were invented. At the heart of the financial markets breaking free, if we are to describe it as such, hides a circuit of 'money production' conducted by the banks that has spiraled out of control (Paul 2012, 9-44). It was already known before the last global financial crisis that the bursting of speculation bubbles can put the real economy in jeopardy (Fisher 1933). What counts in times of such crises is central bank money alone, precisely because bloated *promises* of payment then turn into *obligations* of payment. And as not only the last – and lasting – crisis made clear, it is the states that had to move in to rescue a system that got out of control. Thus, the main problem that the states, its



financial regulatory agencies and, not least, the social-democratic partisans of a political framing of capitalism are confronting is less ‘common’ inflation than *speculative excess*. This is the flaw in the system social-democratic monetary reformers want to rectify.

It goes without saying that the remedy one proposes must relate to the diagnosis. Those that fear that political manoeuvres undermine the value of money, despite the formal independence of central banks, will focus on the depolitization of money, whereas those who deplore the lacking capacity of the state to control money creation will favour, conversely, a political taming of our monetary order. By discussing two examples of libertarian and social-democratic reform proposals, Bitcoin and sovereign money, it shall be shown that, if these projects, as in the case of Bitcoin, gain ground or, as in the case of sovereign money, should be implemented in the first place, the opposite of what is intended or at least substantial non-intended consequences will most likely ensue. Instead, on the one hand, circumventing third-party encroachments on bilateral deals, there will be a return of the intermediation and regulation that should have been avoided. On the other hand, the ‘cleansing’ of the economy from fictitious enterprise will also stifle the real growth that should have been stimulated.

## II.

In lieu of subjecting money to the political interests of national institutions, libertarians argue that it should revert back into the monetary good it is supposed to have once been. Some call for a return to the gold standard (Paul 2009). Others instead believe that the selection of the best currency ought to be left to the market. Hayek suggested a denationalization of currencies already in the 1970s (Hayek 1976; 1979): Private money distributors could simply offer different private currencies to market players. The currency which in practice proves to be the most stable in value would eventually dominate the market.

Essentially, due to the political power of economically prevalent states enabling them to hold on to their monetary monopolies, a currency competition as envisioned by Hayek has not become reality for decades. Advances in modern information processing and communication technology, however, have recently helped the libertarian dream of a denationalized currency to come true. Bitcoin is not the sole but the most successful virtual currency which, starting in 2009, has tried to compete with national currencies (Dodd 2014, 362-372; Castronova 2014). Certainly, its attractiveness not only lies in its value being independent from national institutions. Over and above, the attractiveness of virtual currencies is deemed to be heightened by their easy handling, their counterfeit protection as well as the anonymity involved in their trading.

For a start, Bitcoin can be understood as a software that organizes a decentralized computer network which allows subscribed users to either exchange units of value by delivering goods and services or to actually create these units of value (European Central Bank 2012, 21-24; Koenig 2016, ch. 5). The

transmission of bitcoins [2] takes place directly from one user to another; there are no intermediary institutions which might themselves profit from the transactions of payments. A bitcoin is a virtual unit of value composed of coded data strings that are not secured by any actual goods or physical values. Such a unit of value can be purchased in exchange for traditional currencies. There are stock markets just for the purpose of such exchanges. One trait of electronic data – and a bitcoin is nothing more than just that – is that it can be copied quite easily. In order to ensure that a bitcoin is not fake or has been spent more than once, a special safety mechanism is needed. This consists of the bitcoin changing its identity with each transaction in a way which makes all prior transactions traceable. Put differently, a bitcoin tells the story of where it or all its shares have been transferred to. Owners of a bitcoin at a particular point in time, however, remain anonymous; they too are encrypted into mere data strings.

Of course, a bitcoin's identity needs to be verifiable by all users of the currency in equal measures. This is achieved by both sides of a Bitcoin transaction laying the bitcoins' identity bare to the entire network and third parties subsequently putting an effort into the verification, i.e. the computational recapitulation of all of the past transactions of the bitcoins in question. Once this examination is over, the new bitcoin identities, expanded by a further transaction, are announced to the entire network. Hence the network has access to something that can be described as an all-encompassing, decentralized and thus unforgeable main log – the so-called blockchain. The incentive for users not directly taking part in the transaction in question to control the bitcoins is that the user who is the quickest to verify the transaction is rewarded by the system with new bitcoins. Thus each transaction taking place also augments the total sum of bitcoins available within the entire system.

To prevent an inflation of money, the amount of bitcoins that can be gained by means of verification decreases over time. Ever-increasing processing power is needed in order to add an entry to the main log. Moreover, the system is programmed for the last of a total of 21 million of bitcoins to be 'mined' in 2040. As is the case with a currency secured by gold, the currency thus cannot be created at will; however, in contrast to actual gold, of which more can always be found, the amount of bitcoins is limited right from the beginning. The production of bitcoins can neither be forced nor can the currency be inflated in the long run. In both cases an algorithm regulates and terminates the process of money creation. Maurer and colleagues (2013, 262) tellingly call this Bitcoin's 'digital metallism'.

The number of advantages, i.e. the currency's assumed value stability, its apolitical status, its safety and anonymity as well as the absence of intermediaries, has adherents expecting that over the course of the following decades Bitcoin will come to eventually prevail against our deficient monetary order (Vigna/Casey 2015). However, on the one hand, the assumed advantages of an apolitical currency are contrasted by a fundamental disadvantage (cf. Weber 2016, 26-37), which, at the very least, puts the former into perspective. Furthermore, it can be demonstrated that key problems inherent to the current monetary system cannot be solved by Bitcoin, but simply resurface.

[2] I refer to Bitcoin when the currency is meant and use bitcoin when I talk of its units.

Much to the disadvantage of the currency, though most likely by intention, by deciding to limit the amount of bitcoins eventually available, the inventors of Bitcoin have built a deflationary bias into the system. In the long run, this is an unavoidable effect of limiting the number of bitcoins to 21 million. If a greater sum of goods is traded with a constant total amount of money, the prices of goods are bound to decrease. Such a fate would not be dramatic *per se*, if an average decrease in prices would *not* motivate consumers to postpone consumption to a later point in order to obtain a fuller shopping cart for the same price than would presently be the case. The mere fact that this restraint in consumption results in trade and, consequently, also production sinking, prompts today's authorities in monetary policies to shy away more from deflation than from a slight inflation (Bernanke 2002). Bitcoin users are, admittedly, not merely promised a currency that is stable in value, but also one whose value increases. However, the price for such asset security will be a stagnation of the real economy.

Moreover, there are at least two structural contradictions in Bitcoin's design for which the currency itself cannot be blamed, just as little, however, as they apply to established currencies only. The first objection is simple. Just as much as the blockchain technology intends to replace trust, users are asked to trust in the software they are using. Admittedly, Bitcoin is based on an open source code that can be checked by anyone. However, for most users, truly understanding this code might be as difficult as observing all inner workings of a traditional bank. The majority of users, therefore, only assume the system to be functioning, just as advertised by its proponents. Additional trust must be paid to one's own hardware. If one's own computer fails, makes mistakes, gets tracked or hacked, security goes down the drain. Put differently, in the case of Bitcoin, 'system trust' addressed to technology replaces trust in organizations, their statutes and personnel. At all events, trust continues to play a major role.

The second contradiction stems from the most probable return of financial intermediaries and thus the rebirth of precisely a major part of the system that Bitcoin had been designed to abolish. After all, why should users who do not put sufficient trust into the security of their personal computers not turn to third parties for the storage of their bitcoins? Why should today's banks not advertise funds containing bitcoins? Bitcoin stock markets have already been established years ago. Last but not least, why should it not be possible to grant Bitcoin credits or to apply for such? How and why should it not be an option that these credits become secured not by 'real' bitcoins, but only by claims to bitcoins in the same way that our book money is only a claim to cash and not cash itself? Especially if and inasmuch Bitcoin has a future, a financial market centring on exactly this will arise (cf. Maurer in this volume). This market will be crowded by serious Bitcoin bankers and virtual swindlers alike. Eventually, all of this will create the need for regulation so that one ultimately ends up with exactly what one wanted to avoid.



### III.

The second money reform project I would like to discuss is the concept of sovereign money (Huber/Robertson 2000; Huber 2011; cf. Benes/Kumhof 2012; Sigurjonsson 2015). It aims at restricting speculation and – contrary to the example of Bitcoin, which calls for the marketization of money – extensively nationalizing money. It is based on a simple idea: Any money held by bank customers in their accounts ought to be changed into, or, practically, be declared henceforth as being, central bank money. Private commercial banks could no longer just use credit transactions for the creation of book money at their own convenience. Rather, the capability of creating central bank money would be reserved for the central bank only.

Such a restructuring of the money market would affect the actual assets of neither banks nor customers. After swapping book money with sovereign money, no one would possess more or less than previously. Positive balances would remain positive and debts would remain debts. The sole difference would be that all of it would be central bank money. A redefinition of book money as central bank money or, in the proponents' language, sovereign money, would 'simply' have the effect that money stocks would also be moved in the field of cash-free transactions. All this is contrary to the current practice of merely settling payment promises with each other, which allows for an uncontrolled creation of new payment promises that are treated like actual money. Banks would, therefore, turn into exactly what laymen usually think them to be, i.e. financial intermediaries that, on the one hand, conduct payment transactions for their customers and, on the other – and in particular –, supply *previously saved* money for investment purposes. Banks would be asked to forgo their privilege of creating book money. Instead, the creation of money would become the prerogative of the state.

In addition to the continuing possibility of commercial banks borrowing money from the central bank, new money would be injected into the economy by leaving it up to the national government to use at its own discretion. A growing economy would demand an increase in the total amount of money in circulation. The government, or parliament, would be free to decide whether the additional money ought to be spent on the purchase of services, social contributions, lowering taxes or the amortization of debts. An inflationary effect of such a policy should be ruled out, if the central bank, politically as independent as ever, would adjust the amount of money circulating according to expected economic growth. Reducing the total amount of money would be possible by raising taxes or selling off assets that are in the central bank's possession.

Ultimately, a reform simply brought about by juridical means, is supposed to eradicate the speculative exuberance of the current monetary system. Of course, in order to be a proponent of sovereign money, one must see this problem to be far graver than the danger of political instrumentalization and the related threat of inflation. However, the diagnosis according to which our economic system has become more vulnerable to crises, due to its forced financialization, is shared by many experts (cf. Deutschmann 2005). Thus,

how should we judge the idea of sovereign money? What might be possible reasons for objecting to such a reform? In the case of Bitcoin experience has already been gathered. Even if assessments are partly based on speculation, they relate to observable trends. The same does not apply to a sovereign money reform. Putting it into reality would mean entering new territory. It would be a venture even though technically speaking its realization would be quite simple. Yet while so far Bitcoin only supplements the current monetary order, sovereign money is intended to replace this very system. Thus, running through possible consequences of such a change becomes necessary (cf. Weber 2014, 78-82; Breton/Coudert 2016), especially because actual experience cannot be drawn from.

In this context it is helpful to picture what would happen if an ongoing Swiss initiative for the introduction of sovereign money were successful ([www.vollgeld-initiative.ch](http://www.vollgeld-initiative.ch)). Such a change would effect the drying-out of an important business model: not financial intermediation, but that of book money creation. In order to prevent a drop in profits, compensatory higher credit interests or, at least, rising fees would have to follow. However, due to international competition, customers would hardly accept such changes. At least, three options would be available to banks: First, they could renounce domestic affairs, leave Switzerland and move abroad. Second, they could offer foreign currency accounts to their debtors, which involve, apart from exchange rate risks, better interest conditions. Third, and most probably – based on the history of money having been dominated by private and national players struggling for who gets to define money matters (Davies 2002, 29-33) – banks would invent alternative, money-like securities which would allow customers to get into debt (cf. Bryan et al. and Mader in this issue). Just as one cannot prevent resourceful companies from offering credits based on bitcoins (however, not ‘physical’ bitcoins, but claims to conditioned payments of bitcoins), banks would start offering what could be called book money 2.0. Though under particular circumstances, this money could be changed into sovereign or national money, a complete change would be unlikely as long as third parties exist who accept it in lieu of payment. National regulations on minimum reserves cannot prevent the functioning of a system in which banks create *(a) new (form of) book money*. Moreover, there is not even the need for inventing new book money. It would suffice if shares of, say, money market funds were treated like money. Though for players such as banks and their customers such proceedings are tied to a higher liquidity risk, they might accept them as long as indebtedness in money surrogates remains cheaper than that in actual money.

From the point of view of the state or its agents, feasible and, when faced with all of the evasive manoeuvres mentioned above, virtually necessary counter-measures would imply corresponding prohibitions. Dealing in foreign currencies as well as dealing in surrogate currencies could be, granted that banks do not move abroad, legally obstructed and, if necessary, prosecuted. But even if there would be no opposition and no attempts of evasion, a sovereign money reform would entail a heightened regulatory effort. Above all, not only the price level would have to be monitored, as is current practice, but

also the actual amount of money. However, how can the need for new money really be determined? What or how many investments will be successful, how many will fail? In all of this, central banks face two major problems. The first one being that the central bank authorities are less capable of gauging the demand for new money, i.e. credit, than an indefinite number of market players acting in a decentralized way (Hayek 1969). The second difficulty lies in the fact that from a macroeconomic perspective, all investments have to be financed *in advance* (Schumpeter 1934, 140-159). Before newly produced goods can be sold and a surplus value arises, machines have to be bought, materials obtained, and wages paid. Only in hindsight can it be determined whether calculations were right and whether more money actually remains than has been invested. However, a priori it is not only unknown, but also 'unknowable', which and how many investments will generate growth. Assuming that it might even be possible, an (all too) effective money supply control might turn out to be a dead-end brought about by central planning.

Furthermore, political conflicts between governments and parliaments on the one side and the central banks on the other are bound to erupt. While it is intended by proponents of sovereign money that a state's debt capacity remains highly limited, this proposal unwittingly entails that in the case of surplus money, governments and parliaments would have to, *by order of the central bank*, raise taxes. The parliament's budgetary sovereignty would thus be undermined. Not elected economic and social politicians would instrumentalize the central bank, but, quite on the contrary, independent central bankers would put a leash on economic and social policies. Ensuing tensions can currently be glimpsed when considering the example of the austerity measures externally forced upon Eurozone countries like Greece.

Last but not least it is highly probable that a state that introduces sovereign money will sooner or later have to introduce controls of international capital flows. Though credit takers may move abroad, investments in 'safe' sovereign money might, especially in times of little growth and low interest rates, attract foreign savings. Rising demand for sovereign money on an international level would drive the currency's exchange rate upwards and thereby lower the country's export opportunities. To counteract such a revaluation, the central bank could and should print domestic money and sell it in exchange for foreign currencies. However, this would increase the amount of money without such an augmentation having any relation to the growth prospects of the domestic economy. Whether such a surplus of money unrelated to actual demand – unrelated because it is not needed for consumption or investment purposes – could ever be 'sterilized', cannot be foreseen. In any case, it cannot be ruled out that the inflated amount of money, which had been put in place in order to counteract the pressure of revaluation, might eventually compromise trust in the currency's recoverability. In fact, even without sovereign money, Swiss central bankers have in the past faced and are currently facing the problem of, on the one hand, having to throttle the price upsurge of the Swiss franc, without, on the other hand, stifling the national finance industry. If the Swiss people were to vote for the introduction of sovereign money, this dilemma would only get worse. Direct foreign

investments in Swiss central bank or sovereign money would only become more attractive than they already are. Limitations of capital movements and (even higher) negative interest rates would logically ensue, given that, as foreseen by proponents of sovereign money, the control of the total amount of money remains the only aim of monetary policy – instead of equally, what already today is the case despite the formal independence of central banks, pursuing and balancing *different* economic aims.

#### IV.

The scenario described above might never come true. Prognoses are nothing but prognoses, and the future remains unpredictable. Unforeseen circumstances and unconsidered facts might eventually play into the hands of a sovereign money reform rather than complicating it. In any case, a sovereign money reform remains an experiment whose outcome cannot be known. Yet it is not unlikely that the reform's answer to dangerous speculation might come at the price of economic stagnation. For critics of continuous growth, this might even be a desired outcome, but for sovereign money reformers it certainly is not. Furthermore, were the central banks to become as independent as the latter hope for, conflicts between this institution and democratically elected bodies in charge of taxation would inevitably ensue. Of course, the reformers are acquainted with criticism leveled at their venture. Nonetheless, what is striking, and disconcerting especially to critics that are basically in favour of eventually nationalizing the monetary system, is that the sovereign money reform is presented as a merely technical project.

Interestingly, the same holds true for the adherents of Bitcoin. For them the blockchain technology replaces the need for trust as well as regulation and simultaneously shields the value of the virtual currency from political manipulations. Granted that Bitcoin assumes an important role in the execution of trade, granted moreover that, as algorithmically foreseen, the total amount of eventually circulating bitcoins can actually be limited, the unavoidable effect would be falling Bitcoin prices. Yet, it is incomprehensible why a Bitcoin deflation should not have the same disastrous consequences as the deflation of 'real' money has. In addition, we have seen that the need for trust has only been shifted from organizations to technology itself. But what happens when technology fails? Who is allowed to correct faults in the system? Moreover, who mediates and has the last say regarding quarrels about damages resulting from cyber attacks? Who ensures that property rights are respected and enforced in virtual worlds? And finally, who will prevent the emergence of a full-blown financial market dealing with Bitcoin credits and derivatives whose workings and necessary oversight will create private and public intermediaries similar to those that govern our fractional reserve banking system?

Of course, all this is not to say that sovereign money or Bitcoin will inescapably flop. On the contrary, the malfunctioning of our monetary system is too grave for it not to be re-regulated, the opportunities virtual currencies entail are too luring for them not to be seized, but there is no reason to assume

that a future monetary order or future monies will not be as disputed as our present system is. Money has been and will continue to be – be it in the form of Bitcoin or under the regime of ‘truly’ central banks – a *political institution* inevitably characterized by clashing interests and inconsistencies. Though I do not wish to glorify our current currency order as the best of all possible worlds, I nonetheless would like to warn against excessive hopes of having completely different kinds of monetary systems.

## References

- Benes, J.; Kumhof, M. (2012) The Chicago Plan Revisited. *IMF Working Paper* 12.
- Bernanke, B. (2002) *Deflation: Making Sure „It“ Doesn't Happen Here*.  
Remarks Before the National Economists Club, Washington, D. C. <http://www.federalreserve.gov/boarddocs/speeches/2002/20021121/default.htm>  
(04.11.16).
- Breton, R.; Coudert, V. (2016) L'Initiative 'monnaie pleine'. In: *Banque & Stratégie* 345: 16-19.
- Castronova, E. (2014) *Wildcat Currency: How the Virtual Money Revolution is Transforming the Economy*. New Haven: Yale University Press.
- Davies, G. (2002) *A History of Money: From Ancient Times to the Present Day*. Cardiff: University of Wales Press.
- Degens, Ph. (2013) Alternative Geldkonzepte: Ein Literaturbericht. *MPIfG Discussion Paper* 13/1.
- Deutschmann, Ch. (2005) Finanzmarkt-Kapitalismus und Wachstumskrise.  
In: Windolf, P. (ed.) *Finanzmarkt-Kapitalismus. Analysen zum Wandel von Produktionsregimen*. Wiesbaden: VS: 58-84.
- Dodd, N. (2014) *The Social Life of Money*. Princeton: Princeton University Press.
- Douglas, M. (1987) *How Institutions Think*. London: Routledge & Kegan Paul.
- Emunds, B.; Reichert, W.-G. (eds.) (2013) *Den Geldschleier lüften! Perspektiven auf die monetäre Ordnung in der Krise*. Marburg: Metropolis.
- European Central Bank (2012) *Virtual Currency Schemes*. Frankfurt am Main: ECB.
- Fisher, I. (1933) The Debt-Deflation Theory of Great Depressions. In:  
*Econometrica* 1: 337-357.
- Gedeon, Sh. J. (1997) The Modern Free Banking School: A Review. In: *Journal of Economic Issues* 31 (1): 209-222.
- Graeber, D. (2011) *Debt: The First 5000 Years*. New York: Melville House.
- Hayek, F. A. (1950) Full Employment, Planning and Inflation. In: *Institute of Public Affairs Review* 4: 174-184.
- Hayek, F. A. (1969) Der Wettbewerb als Entdeckungsverfahren. In: *Freiburger Studien*. Tübingen: Mohr: 249-265.
- Hayek, F. A. (1976) *Denationalisation of Money: An Analysis of the Theory and Practice of Concurrent Currencies*. London: Institute of Economic Affairs.
- Hayek, F. A. (1979) Toward a Free Market Monetary System. In: *Journal of Libertarian Studies* 3 (1): 1-8.



- Huber, J. (2011) *Monetäre Modernisierung. Zur Zukunft der Geldordnung*. Marburg: Metropolis.
- Huber, J.; Robertson J. (2000) *Creating New Money. A Monetary Reform for the Information Age*. London: New Economics Foundation.
- Ingham, G. (2004) *The Nature of Money*. Cambridge: Polity.
- Koenig, A. (2016) *A Beginner's Guide to Bitcoin and Austrian Economics*. München: Finanzbuchverlag.
- Krugman, P.; Wells, R. (2009) *Macroeconomics*. New York: Worth Publishers.
- Maurer, B.; Nelms, T. C.; Swartz, L. (2013): 'When Perhaps the Real Problem is Money Itself!' The Practical Materiality of Bitcoin. In: *Social Semiotics* 23 (2): 261-277.
- McLeay, M. et al. (2014) Money Creation in the Modern World, in: *Bank of England Quarterly Bulletin* 51 (1): 14-27.
- McNamara, K. (2002) Rational Fictions: Central Bank Independence and the Social Logic of Delegation. In: *West European Politics* 25 (1): 47-76.
- Nordhaus, W. D. (1975) The Political Business Cycle. In: *Review of Economic Studies* 42 (2): 169-190.
- Orléan, A. (2008) Monetary Beliefs and the Power of Central Banks. In: Touffut, J.-Ph. (ed.) *Central Banks as Economic Institutions*, Cheltenham: Edward Elgar: 7-21.
- Orléan, A. (2011) *L'Empire de la valeur: Refonder l'économie*. Paris: Editions du Seuil.
- Paul, A. T. (2012) *Die Gesellschaft des Geldes: Entwurf einer monetären Theorie der Moderne*, Wiesbaden: Springer VS.
- Paul, R. (2009) *End the Fed*. New York: Grand Central Publishing.
- Scharpf, F. (2014) No Exit from the Euro-Rescuing Trap? *MPIfG Discussion Paper* 14/4.
- Schumpeter, J. (1934) *Theorie der wirtschaftlichen Entwicklung. Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus*. Berlin: Duncker & Humblot.
- Sigurjonsson, F. (2015) *Monetary Reform: A Better Monetary System for Iceland*. Reykjavik.
- Teulings, C.; Baldwin, R. (2014) (ed.) *Secular Stagnation: Facts, Causes and Cure*. London: CEPR Press.
- Vigna, P., Casey, M. J. (2015) *The Age of Cryptocurrency: How Bitcoin and Digital Money are Challenging the Global Economic Order*. New York: St. Martin's Press.
- Weber, B. (2014) Geld und Demokratie: Reformdebatten um ein krisenhaftes Verhältnis. In: *Leviathan* 42 (1): 67-93.
- Weber, B. (2016) Bitcoin and the Legitimacy Crisis of Money. In: *Cambridge Journal of Economics* 40: 17-41.