

# The Gloom of Central Banking

*Does the CB's toolbox have what it takes to contain a private, decentralised cryptocurrency? Or: Bitcoin seen through the eyes of a central banker.*

On October 29th, the ECB published a 55-page report titled “*Virtual Currency Schemes*”.<sup>1</sup> With this dysphemistic title, the central bank refers to private, unregulated initiatives of virtual currency. With 183 references in the text, it seems obvious that specifically the fast growing peer to peer currency *Bitcoin* is under scrutiny.<sup>2</sup>

In what follows, I sketch an evolution of how central banks—the monopolists of the current fiat money paradigm—have dealt with the threat of free market competition coming from the internet, and how they are now reacting to the sudden appearance of an enigmatic rival.

Be warned that this is a subjective take on the issue. People from central bank and government circles will no doubt accuse me of being unbalanced and unfair in my interpretations and conclusions. So be it. My goal here is to scrape off the veneer of these reports and thus catch a glimpse of what may actually be happening behind the closed doors of Basel and Brussels.

“...virtual currencies could have a substitution effect on central bank money if they become widely accepted.”

*ECB Report, 10.29.2012*

## Understanding central banker psychology

It's my belief that the most perceptive central bankers today are very worried about what is happening in the world, or more specifically, what's happening *to their world*. Distrust and anger with their policies is something central bankers have always had to deal with. **But now, for the first time, they are faced with a solution which poses an existential threat to their monopolized fiat currency: the arrival of decentralized private currencies.**

Before we dive in to the central banks' reactions to this new development, let us focus on what makes the wheels of central banking spin, and how they have reacted to digital currencies in the past.



**Bitcoin's fixed money supply and decentralized nature makes it tough competition for central banks around the world.**

(src image: the economist)

“The expectation of a general progressive upward movement of all prices does not bring about intensified production and improvement in well-being. It results in the “flight to real values,” in the crack-up boom and the complete breakdown of the monetary system.”

*Ludwig von Mises, 1949*

“But exactly which fire is the Fed trying to put out? Why does the Fed think its actions can put out these particular flames? How does the Fed know that its balance sheet will act as water rather than oxygen?”

*Peter R. Fisher, BlackRock management director and ex central banker, 2009*

<sup>1</sup> <http://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>.

<sup>2</sup> The only other currency that receives more than a sideways mention is the stagnating Linden Dollar of the online game *Second Life*, which in 2011 had a market cap of some \$29 million. Here is what the text says: “...of particular interest are the schemes designed to compete against real currencies as a medium of exchange. For the time being, the most prominent case is Bitcoin...” Src: “Virtual currency schemes”, p. 19.

## The original function of central banking

Central banks have historically been created to serve three goals:

1. Defending the monopoly of fiat money
2. Institutionalizing fractional reserve banking
3. Institutionalizing seigniorage

### 1. Defending the monopoly of fiat money

Historically, money was minted by private parties, giving the general public the freedom to choose the best money available in the market place. This changed with the coming of central banking, which imposed a monopoly on money, allowing the government to control a vast amount of wealth and making it much easier to borrow from the next generations by selling T-bonds to the banks.

Fiat money as defined in the recent ECB report:

*“any legal tender designated and issued by a central authority. People are willing to accept it in exchange for goods and services simply because they trust this central authority. Trust is therefore a crucial element of any fiat money system.”<sup>3</sup>*

### 2. Institutionalizing fractional reserve banking

The role of central banks as the lender of last resort is to make whole the fractional reserve banks (banks that only keep a fraction of their reserves truly available to their customers) whenever they run into trouble—in other words, to bail them out on a systematic basis.

It's important to note how this role of lender of last resort also forces central banks to support massive expansion of government spending: if private banks are allowed to play around with customer deposits, it becomes very tempting for these banks to load up on government bonds at the expense of the saver.

### 3. Institutionalizing seigniorage

The easiest way to define modern seigniorage is ‘money printing’, or ‘controlled debasement of the currency in favor of the rulers’. A more sophisticated/convoluted definition can be found at the BIS:

*“In a historical context the term seigniorage was used to refer to the **share, fee or tax which the seignior, or sovereign, took to cover the expenses of coinage and for profit.** With the introduction of paper money, larger profits could be made because banknotes cost much less to produce than their face value. When central banks came to be monopoly suppliers of banknotes, seigniorage came to be reflected in the profits made by them and*

*“The first step towards understanding the complexities of modern financial institutions and terminology is to find out where they came from. Only understand the origins of an institution or instrument and you will find its present-day role much easier to grasp.”*

*Niall Ferguson, 2008*

*“When you or I write a check there must be sufficient funds in our account to cover the check, but when the Federal Reserve writes a check there is no bank deposit on which that check is drawn. When the Federal Reserve writes a check, it is creating money.”*

*‘Putting it simply’,  
Boston Federal Reserve Bank*

*“...if one day in the future the existent financial system based on the monopoly of a public central bank were ever completely privatized and a free-banking system subject to general legal principles were established ... the current tangled web of administrative banking regulations would be replaced by a few clear, simple rules included in the Civil, Commercial and Penal Codes.”*

*Jesús Huerta de Soto, 1999*

*“J.P. Morgan's fondness for a central bank was heightened by the memory of the fact that the bank of which is father Junius was junior partner ... was saved from bankruptcy in the Panic of 1857 by an emergency credit from the Bank of England.”*

*Murray Rothbard*

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<sup>3</sup> “Virtual Currency Schemes”

*ultimately remitted to their major or only shareholder, the government.*"<sup>4</sup>

Now that most fiat money is digital, the cost of money creation is also virtually zero, making seigniorage all the more easy and profitable. Seigniorage comes in especially handy if the government cannot longer pay off its' debt with the revenues of tax income. Quoting from a 2011 BIS paper:

*"At the limit, if government is to remain solvent, monetary policy has no alternative but to print money to generate the seigniorage revenues needed to meet interest payments in the debt."*<sup>5</sup>

### What keeps a central banker up at night

The reason why I tell all of this, is that it is crucial to understand how a modern central bank *by design* is forced to embrace both seigniorage (money printing) and its role as lender of last resort (sponsoring fractional reserve banking). The former is the source of profit that keeps the day to day government wheels turning, and the latter is needed to keep the state's long term debt machine spinning.

And two mechanisms only function as long as the general population is prepared to cooperate. It is the citizens who hold the pin in the proverbial grenade, because it is *from them* that the government buys the services it earns with seigniorage, and it is *from them* that the banks use deposits to lend money to the government.

A run on the banks or a refusal to accept that the monopolized money has actual value will cause this centralized system to stop functioning, greatly deminishing the economic privileges of governments, banks, and central banks.

By continually being involved in seigniorage and the propping up of fractional reserve banks, a central bank operates in an environment that in the blink of an eye can turn into an economic warzone. So in order for the central banking system to keep functioning in the medium term, the trust of the general population is crucial.

I quote from the report on "Virtual Currency Schemes":

***"The reputation of central banks is a key element in determining the effectiveness of their various policies, especially monetary policy. A reputation is hard to earn, but very easy to lose. Since central banks are institutions to which people look in order to establish how much trust to place in money, they are very concerned about their reputation."***



image: St. Louis Fed

"...the central banks became more and more subordinate offices of the treasuries, mere tools for the performance of credit expansion and inflation. It does not make any difference practically whether they are or are not owned by the government and directly managed by government officials. In effect the banks granting circulation credit are in every country today only affiliates of the treasuries."

Ludwig von Mises, 1949  
in *Human Action*

"I'm struck by a phrase used by my friend Allan Meltzer in a recent phone conversation. He said, "It's a race between the inflation rate, the tax rate, and controls, and all three are going to win."

ex-secretary of the treasury  
George P. Shultz, 2009

<sup>4</sup> "Implications for Central Banks of the Development of Electronic Money", october 1996, p.15.

<sup>5</sup> Source: "Perceptions and Misperceptions of Fiscal Inflation", p 2. (<http://www.bis.org/publ/work364.htm>)

## Early reaction to online competition (1996)

### What central banks were up against in the early days

The first serious investigation into the issue of 'e-money schemes' happened in 1995, when the central bank governors of the G10 commissioned a series of studies on this subject.<sup>6</sup>

Back then, all online competition shared some crucial features. For one, the e-money was usually a balance sheet liability to the institution that issued it. In other words, it was a currency 'backed' by fiat money on the bank account of the issuer (or later by gold, as with e-gold).

Next, in order to avoid abuse of their payment units, e-money issuers "require[d] that information on the device or supplied by the user be validated against data held by a central system operator or issuer in secured central databases"<sup>7</sup>, and that "centralized systems at the acquirer verify merchant transaction logs to ensure that no transactions have been transmitted more than once."<sup>8</sup>

In other words, central banks were up against **initiatives that were centrally organized, systems that required all data to be stored in a centralized database, where the clearing as well occurred in a single place, and where the e-money is a balance sheet liability of the institution.**

Another common feature was that electronic payment systems in 1995-'96 almost always required identification of the user. Anonymity was hardly ever possible. So even if the central authorities would allow the use of alternative electronic means of payment (which they did), the user was always at **risk of restriction or confiscation.**

### What central banks were concerned about

Knowing what we know about the original functions of central banking, their main fears are most likely to evolve around their monopoly of the currency, their function as lender of last resort for banks, and especially around their ability to gain profits by means of seigniorage.

This is indeed what reading the section 'issues raised by the development of e-money' in the 1996 BIS report confirms.<sup>9</sup> It is remarkable that even 16 years ago, one can sense a hint of an existential fear about the advent of e-money:

*"The introduction of e-money could potentially have an effect on the demand of monetary aggregates and on the formulation of monetary*



"...the central banks became more and more subordinate offices of the treasuries, mere tools for the performance of credit expansion and inflation. It does not make any difference practically whether they are or are not owned by the government and directly managed by government officials. In effect the banks granting circulation credit are in every country today only affiliates of the treasuries."

Ludwig von Mises, 1949



Douglas Jackson of e-gold in his office full of secret service documents with evidence against him. Jackson was forced to virtually close shop in 2005.

<sup>6</sup> Results of the investigation were the report from the 'task force on security of electronic money' from august 1996, entitled 'Security of Electronic Money', at <http://www.bis.org/publ/cps18.htm>, and also the report 'Implications for Central Banks of the Development of Electronic Money' from october 1996, at [www.bis.org/publ/bisp01.pdf](http://www.bis.org/publ/bisp01.pdf).

<sup>7</sup> "Security of Electronic Money", p. 6.

<sup>8</sup> "Security of Electronic Money", p. 17.

<sup>9</sup> "Implications for Central Banks of the Development of Electronic Money", from p. 4 onwards. One can clearly see the concern about a loss of oversight / supervision / control ('disturbance of monetary policy', 'money laundering'), and also the worries about a diminished income from seigniorage.

policy. ... It is conceivable that a **very extensive substitution** could complicate the operating procedures used by central banks to set money market interest rates. However, since e-money is expected to substitute for mostly for cash rather than deposits it is highly unlikely that operating techniques will need to be adjusted significantly."

More than fear to become irrelevant however, there were concerns about how with the lower demand for central banks' cash, the seigniorage income would diminish:

*"Since banknotes in circulation represent non-interest-bearing central banks liabilities, a **substitution of e-money for cash would lead to a corresponding decline in central bank asset holdings, and the interest earned on these assets that constitutes central bank seigniorage revenue.** ... even a moderate loss of seigniorage could be of concern to some governments, particularly in countries with large budget deficits."*<sup>10</sup>

As an illustration of how serious a concern this was, on page 8 of the report there is a table listing eleven countries and their respective seigniorage revenue estimates. For example, the table estimates that if every Dutch citizen would carry a prepaid card with the equivalent of \$100 of e-money, then seigniorage revenues would be reduced from 0,46% of GDP to 0,03% of GDP—a drop of 93%!

### What they could do about it

From my reading<sup>11</sup> of the reports, these are the possible measures that surface:

- Force the central clearing unit to make available all user data and transaction logs;
- Place value limits on transactions;
- Collect data from financial institutions with which there is interactions by the users of the electronic money;
- Become issuers of e-money themselves;<sup>12</sup>
- Charging banks for the various services they provide<sup>13</sup>

Remember, we've seen above that all systems back then had centralized clearing. This clearly was their achilles heel. The BIS made it very clear that it intended to encourage exploiting this weakness:

*"If issues such as security and money laundering are felt to be of sufficient concern, **there might be a desire to regulate not just who can issue e-money but also the types of e-money product that can be offered.** For example, restrictions might be placed on the maximum value that consumers and retailers are allowed to hold or on user-to-user transactions,*

"It is sometimes suggested that debasing the coinage is akin to trickery, the subject being 'deceived' into selling coin or bullion by an increase in the mint price which, the fact of an adulteration of the fineness of the coin being unknown to the seller, conceals from him that in reality he may be receiving not more, but less, intrinsic value in return."

J.D. Gould, 1970

"Yet outside the state apparatus a tendency toward relative concentration has also become apparent for the same reason—not, as should be clear by now, because of any trait inherent in capitalism, but because the ruling class has expanded its rule into civil society through the creation of a state-banking-business alliance and, in particular, the establishment of a system of central banking. If a concentration and centralization of state power then takes place, it is only natural that this be accompanied by a parallel process of relative concentration and cartelization of banking and industry."

Hans Hermann Hoppe, 1990

<sup>10</sup> 'Implications for Central Banks of the Development of Electronic Money', p.7.

<sup>11</sup> Source is mostly 'Security of Electronic Money'. Most of the possible interventions are described in the section 'Use for Criminal Activities' of the 1996 report. Reading this section, in combination with the section 'issues raised by the development of e-money', one can quite easily derive what powers the authorities possessed to battle or control the new system if they wanted to.

<sup>12</sup> Implications for Central Banks of the Development of Electronic Money', p.7: "...they may also need to take an active interest in the development of e-money products...", see also p.10: "...to consider issuing e-money themselves..."

<sup>13</sup> Implications for Central Banks of the Development of Electronic Money', p.11.

or scheme operators might be required to monitor transactions.”<sup>14</sup>

The ultimate solution for compensating the loss of seigniorage is obviously the printing of more money, the variations of which are described on page 10 of the report.

## Current CB reaction to online competition (2012)

After the 1996 reports, the central banks kept an occasional interest in the development of e-currencies emerging from the free marketplace. There are for example the 2000 and 2001 reports ‘Survey of electronic money developments’, as well as the reports ‘The role of central Bank money in payment systems’ from 2003, and the ‘Survey of developments in electronic money and internet and mobile payments’ from 2004.

However, it seems that with the rapid development of Bitcoin, the central banks have woken up from complacency and are spurred to take action (or to at least pretend to): *“Virtual currency schemes have been subject to increased press coverage, even being featured in respectable media publications. The ECB has been contacted a number of times in recent months by academics, journalists and concerned citizens, who want to know its view or want to warn the institution about potential problems with virtual currency schemes.”*<sup>15</sup>

These wake up calls have resulted in two reports. The first, published in may 2012, is the BIS report ‘Innovations in retail payments’, focused on the expected developments of the next 5 years, and the second, published in october 2012 and mentioned earlier, is the ECB report ‘Virtual Currency Schemes’. What follows is an examination of these two reports: what are the CB’s up against, what are their concerns, and what do they will try to do about it. After that, I wrap up this article with some concluding thoughts.

## What CB’s are up against now (1): a very different context

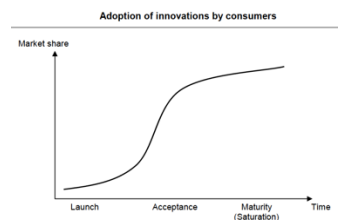
By the end of 1996, there were some 36 million internet users worldwide. By now that number has grown to some 2,4 billion, about one third of the world population. Due to network effects, this creates the **possibility for extremely fast global adoption of new technologies**.

The central banks are very aware of this: *“Social networks have grown dramatically over the past few years and already have a large base of customers who are familiar with new technologies and hence predisposed to adopting innovative payment solutions. These solutions should be carefully monitored because of the potential risks associated with the rapid growth of those unregulated solutions.”*<sup>16</sup>

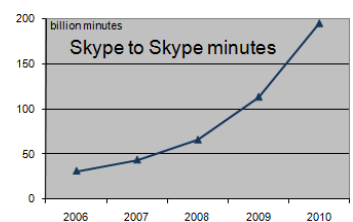
Central banks are up against *“a moving target”*<sup>17</sup>, and they know it.

“Menaced by an external drain, the monetary authorities do not always resort to credit restriction and to raising the rate of interest charged by the central banking system. They devalue. Yet devaluation does not solve the problem. If the government does not care how far foreign exchange rates may rise, it can for some time continue to cling to credit expansion. But one day the crack-up boom will annihilate its monetary system.”

Ludwig von Mises, 1949



Courtesy of the BIS in its report ‘innovations in retail payments’, a representation of how quickly consumers adopt innovations: the (in)famous S-curve.



Skype is an example of extremely fast adoption of new online technologies.

<sup>14</sup> Implications for Central Banks of the Development of Electronic Money’, p.9.

<sup>15</sup> “Virtual currency schemes”, p. 9.

<sup>16</sup> “Innovations in retail payments”, p. 50.

<sup>17</sup> “Innovations in retail payments”, p. 38.

## What they are up against now (2): radically different solutions

The success of Bitcoin and the large media interest in it should be no surprise: this cryptographic currency (as well as its future descendants) is radically different from the e-money that was around in 1996 and after. To wit, in contrast with 'traditional' e-money:

### 1) Bitcoin is not backed by fiat money or by physical commodities

I quote: "Virtual currency schemes differ from electronic money schemes insofar as the currency being used as the unit of account has no physical counterpart with legal tender status."<sup>18</sup> And: "Its exchange rate with respect to other currencies is determined by supply and demand and several exchange platforms exist."<sup>19</sup>

### 2) Clearing of bitcoins happens decentralized in a P2P network

From the ECB report: "Virtual currencies are held outside the traditional banking channels. ... The accounts to be debited and credited are held within this organisation, which is the virtual community operator."<sup>20</sup> More specifically, "Bitcoin is based on a decentralized, peer-to-peer (P2P) network, i.e. it does not have a central clearing house, nor are there any financial or other institutions involved in the transactions. Bitcoin users perform these tasks themselves. In the same vein, there is no central authority in charge of the money supply."<sup>21</sup>

### 3) Bitcoin can operate independently from the banking system

Also, in the 1996 reports there was mention of the frequent interaction between e-money and traditional banks. In 2012 this has become less obvious: "it cannot be ruled out that, over time, non-banks will develop more independent strategies and will no longer need to ally themselves with banks."<sup>22</sup>

Less interaction with the fractional reserve banking system, which is fundamentally dependent on the central banks, also means less control for the latter over what goes on in the money market in general.

### 4) Clearing is ultra fast and cheap

"[Bitcoin] transactions are carried out faster and more cheaply than with traditional means of payment. Transactions fees, if any, are very low and no bank account fee is charged."<sup>23</sup>

### 5) Money supply is automatically limited by the Bitcoin protocol

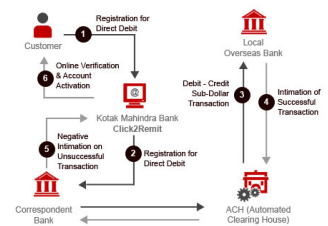
The ECB: "...the supply of money does not depend on the monetary policy of any virtual central bank, but rather evolves based on interested users



Evolution of the bitcoin price

"A peer-to-peer (abbreviated to P2P) computer network is one in which each computer in the network can act as a client or server for the other computers in the network, allowing shared access to various resources such as files, peripherals, and sensors without the need for a central server. P2P networks can be set up within the home, a business, or over the Internet."

Wikipedia



Traditional clearing is slow and cumbersome for parties involved.

<sup>18</sup> "Virtual currency schemes", p. 5.

<sup>19</sup> "Virtual currency schemes", p. 6.

<sup>20</sup> "Virtual currency schemes", p. 17.

<sup>21</sup> "Virtual currency schemes", p. 21.

<sup>22</sup> "Innovations in retail payments", p. 51.

<sup>23</sup> "Virtual currency schemes", p. 21.

performing a specific activity. ... the scheme has been specifically designed in such a way that the money supply will develop at a predictable pace." ... "The fact that the supply of money is clearly determined implies that, in theory, the issuance of money cannot be altered by any central authority wanting to "print" extra money."<sup>24</sup>

## 6) Complete discretion is possible

"...transactions are anonymous as accounts are not registered and Bitcoins are sent directly from one computer to another." ... "these transactions are very difficult to trace back".

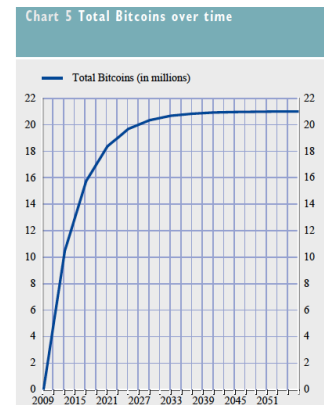
An example is offered: "a movement of USD 900,000 conducted in 100 different online transfers of USD 9,000 might be easy to spot, but the power of a large, widely-dispersed online network that enables this money to be moved in 100,000 transactions with randomised amounts, generally in the USD 6 to USD 15 range, might not be so easy to pinpoint."<sup>25</sup>

## 7) De facto international, allowing for even more discretion

"... a variety of entities and intermediaries, each located in a different country, could be involved in the transaction, without any of them really having all the information on the transaction."<sup>26</sup>

## 8) (As of now) entirely unregulated

Interesting to note that while the 'electronic money schemes', which as per the EU definition have been 'issued on receipt of funds of an amount not less in value than the monetary value issued'<sup>27</sup>, are supervised and regulated currencies, **Bitcoin currently falls out of the scope of all existing regulation and is thus entirely unregulated in the European Union.** The report does suggest that French courts are looking in to the issue, and states that "the issue of Bitcoin's legal framework has been raised in the European Commission's Payments Committee".<sup>28</sup>



**Bitcoin money supply is capped at 21 million bitcoins.**

" 'ECB concludes that bitcoin is currently not regulated and supervised by any public authority.'—It would be more accurate to say that State-sponsored regulation is largely irrelevant because of the inherent design properties of a P2P distributed computing system. But happily, this is still a conclusion that I can agree with and recommend that it remains the case"

*John Matonis, nov 3rd 2012*

<sup>24</sup> "Virtual currency schemes", p. 24-25.

<sup>25</sup> "Virtual currency schemes", p. 44.

<sup>26</sup> "Virtual currency schemes", p. 44.

<sup>27</sup> "Virtual currency schemes", p. 43.

<sup>28</sup> "Virtual currency schemes", p. 43.



## Summary

The ECB summarises the difference between what it calls ‘electronic money’ (known since 1996) and the new ‘virtual currency schemes’ of which Bitcoin is the prime example as follows:<sup>29</sup>

Table 2 Differences between electronic money schemes and virtual currency schemes

	Electronic money schemes	Virtual currency schemes
Money format	Digital	Digital
Unit of account	Traditional currency (euro, US dollars, pounds, etc.) with legal tender status	Invented currency (Linden Dollars, Bitcoins, etc.) without legal tender status
Acceptance	By undertakings other than the issuer	Usually within a specific virtual community
Legal status	Regulated	Unregulated
Issuer	Legally established electronic money institution	Non-financial private company
Supply of money	Fixed	Not fixed (depends on issuer’s decisions)
Possibility of redeeming funds	Guaranteed (and at par value)	Not guaranteed
Supervision	Yes	No
Type(s) of risk	Mainly operational	Legal, credit, liquidity and operational

Source: ECB.

“It is clear that, even under central banking, if the public is or becomes unwilling to hold any money in bank deposits or notes and insists on using only gold, the inflationary potential of the banking system will be severely limited. Even if the public insists on holding bank notes rather than deposits, fractional reserve bank expansion will be highly limited. The more the public is willing to hold checking accounts rather than cash, the greater the inflationary potential of the central banking system.”

Murray Rothbard, 1983

## What central banks are concerned about now

The worries central banks have today go beyond their 1996 issue that they could miss out on some seigniorage revenues.

One can imagine the nervousness behind the following statement about virtual currencies, whereby a central bank, possibly for the first time ever, feels like it is really being left out:

*“...traditional financial actors, including central banks, are not involved. The issuer of the currency and scheme owner is usually a non-financial private company. This implies that typical financial sector regulation and supervision arrangements are not applicable.”<sup>30</sup>*

But it is more than just not being able to join the seigniorage party, central banks are now in fact faced with very real competitors:

*“a virtual currency scheme may also be implemented to compete with traditional currencies, such as the euro or the US dollar.”<sup>31</sup> And: “[Supporters] see Bitcoin as a good starting point to end the monopoly central banks have in the issuance of money.”<sup>32</sup>*

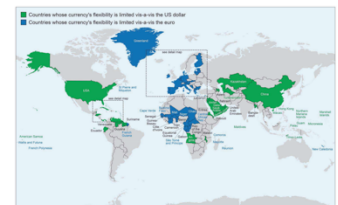
This of course goes against the function of central banking as a monopolist of the money supply:

*“In virtual currency schemes the unit of account is changed...This is not a minor issue”<sup>33</sup>*

And the ECB thinks, not surprisingly, that their monopoly over the money supply should be protected:



image source: The Economist



In green the currencies under dollar influence, in blue the currencies under euro influence.

Source: German Bundesbank

<sup>29</sup> “Virtual currency schemes”, p. 16.

<sup>30</sup> “Virtual currency schemes”, p. 5.

<sup>31</sup> “Virtual currency schemes”, p. 5.

<sup>32</sup> “Virtual currency schemes”, p. 22.

<sup>33</sup> “Virtual currency schemes”, p. 16.

*"it is important to safeguard a currency's role as a unit of account, ... [virtual currencies] would threaten to undermine the role of money in providing a single unit of account as a common financial denominator for the whole economy."*<sup>34</sup>

## What central banks will try to do about it

Here are some of the strategies one can discern from the reports:

### 1. Attempt to discredit

The ECB report, honest as it is in places about Bitcoin, is riddled with attempts to put the cryptocurrency in a bad daylight: it is a 'scheme' that poses all sorts of risks for the user, that will be used by criminals for all kinds of purposes, and that can jeopardise the credibility of the entire financial system (as if the central banks themselves have no responsibility in this respect).

Here is one quote that can serve as illustration:

*"Virtual currencies are not only affected by credit, liquidity and operational risk without any kind of underlying legal framework, these schemes are also subject to legal uncertainty and fraud risk, as a result of their lack of regulation and public oversight."*<sup>35</sup>

### 2. Attempt to supervise

As usual, the first step to controlling a new initiative, is to try and gather information and impose registration procedures:

*"...a likely suggestion could sooner or later involve virtual currency scheme owners registering as financial institutions with their local regulating authorities."*<sup>36</sup>

The obvious reaction to this suggestion is: who owns the Bitcoin P2P network? Answer: nobody—which makes it most likely that financial authorities will focus on intermediary parties such as the exchanges to try to assert control. In the case of GLBSE, one of the bitcoin stock exchanges, the threat of supervision proved enough to intimidate its founder into closing shop.

The following comment should probably be interpreted in this light:

*"[Registering as a financial institution] is a similar trajectory to the one PayPal has undergone, as it was granted a banking licence in Luxembourg in 2007 after its service became popular. This is not an easy step, but it looks like the only possible way to strike a proper balance between money and payment innovations on the one hand, and consumer protection and financial stability, on the other."*<sup>37</sup>

"The history of the last century shows ... that the advice given to governments by bankers, like the advice they gave to industrialists, was consistently good for bankers, but was often disastrous for governments, businessmen, and the people generally."

*Carroll Quigley  
(Bill Clinton's mentor), 1966*



**Assets of the world's largest central banks are rising rapidly, indicating large scale seigniorage.**

"However, the central bank's cash pool solves "liquidity problems" [with banks] only for a while. Once the commercial banks get used to the ready supply of money in emergency situations, they lose fear of such situations and start issuing titles on an even larger scale! Thus, rather than solving the problems of fractional reserve banking, central banks merely create moral hazard and multiply those problems".

*Guido Hülsmann, 2000*

<sup>34</sup> "Virtual currency schemes", p. 37.

<sup>35</sup> "Virtual currency schemes", p. 17.

<sup>36</sup> "Virtual currency schemes", p. 44.

<sup>37</sup> "Virtual currency schemes", p. 44.

### 3. Attempt to regulate

Whereas in 1996 there were plenty of ideas about regulation, Bitcoin has left at least the ECB dumbfounded about how it can impact the development of this new currency:

*“...governments and central banks would face **serious difficulties** if they tried to control or ban any virtual currency scheme, and it is not even clear to what extent they are permitted to obtain information from them. In the particular case of Bitcoin, which is a decentralised peer-to-peer virtual currency scheme, **there is not even a central point of access, i.e. there is no server that could be shut down if the authorities deemed it necessary.**”<sup>38</sup>*

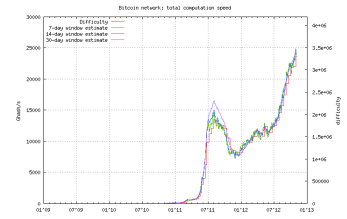
The only concrete suggestion I could find was to try and “impose minimum reserve requirements on virtual currency schemes”,<sup>39</sup> which is a bit ridiculous because Bitcoin specifically allows people to be their own bank, not having to rely on third parties to safekeep their deposits.

### Conclusion

The paradigm of faith based fiat currencies is 40 years old, and it is now faced with serious challenge.

There is a lot of talk these days about ‘currency wars’, which many interpret as a fight between central bankers to replace the US dollar with a new world reserve currency. As the recent reports of the BIS and ECB indicate however, fiat currencies might all be fighting on a ship that is slowly sinking, as *“it can reasonably be expected that the growth of virtual currencies will most likely continue”*<sup>40</sup>

With central banks around the globe well on the path of printing at least the present-day fiat currencies into oblivion, investors and fund managers likely do themselves a favor by keeping a keen eye on what is going on in the dynamic universe of decentralised cryptocurrency, where, at least for the moment, Bitcoin is the most prominent game in town.



Evolution of the computing power of the Bitcoin network: in 9 months time from 10.000 Ghash/s to 25.000 Ghash/s.

“Bitcoin is ‘regulated’ by its peers and mathematics. And Bitcoin is not a currency like fiat money. It is a value transfer system which is given value only by its users. So the ECB, FED, etc. have no mandate to control a ‘virtual currency’ just because they call it (bitcoin) that! It will just go underground. Bitcoin is like Light and Air. Free to use and transfer. Owned and issued by the people and NOT the State!”

*Michael Parsons, a former executive with Emirates Bank, Moscow Narodny Bank, and KPMG Moscow<sup>41</sup>*

<sup>38</sup> “Virtual currency schemes”, p. 42.

<sup>39</sup> “Virtual currency schemes”, p. 35.

<sup>40</sup> “Virtual currency schemes”, p. 47

<sup>41</sup> Source is the 3 november Matonis article: <http://tinyurl.com/sldotmatonis>.