

THE RELATIONSHIP BETWEEN ELECTRONIC MONEY AND FREE BANKING

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Abstract. This paper is focused on the relationship between e – money and free banking percepts. The discussion details how e – money helps to address three main aspects of the free banking debate: the lender of last resort function, currency backing and multiplicity of currencies. In this article we have focus on possible implication for the future central banking, rather than predicting radical change to the current monetary policy framework. If the incumbent central banks could be let to behave in a way, which would make their currencies as attractive as those, produced by the private sector, the benefits of the free banking system may be attained even without displacing current institution or currencies.

Keywords: free banking, account based electronic payment systems, e-money, currency backing, multiplicity of currencies.

1. Free Banking – definitions and characterizations

The location of monetary policy in central banks is a recent development in the history of finance. Central banks became monetary policy makers only as the gold standard was replaced by fiat money, which was controlled by governments. There are alternatives to central banking as practised today, like currency boards, full convertibility (under a commodity standard) and free banking. White (1995) defines free banking as “a monetary system without a central bank, under which the issuing of currency and deposit money is left to legally unrestricted private banks,” a definition representative of a general consensus in the free banking literature - see, for example, Dowd (1993).

White points out that, as a monetary regime, free banking consists of two main elements – unregulated issue of transferable bank liabilities and unmanipulated supply of base money or basic cash. There is no government role in regard to the quantity of money produced inside or outside the banking industry, and outside money free of central bank control is desirable. Money issue is not seen as a device of governments to achieve their goals, but operates as the means for individuals to pursue their own purposes. That said, White (1995) does not reject the idea of a clearing house at the centre of the financial system when without a central bank; his view is that this should be a market mechanism designed to eliminate imperfections within the financial system.

As envisaged by Dowd and others, free banking is regarded as the multiple issue of currencies by competing banks, whose notes, however, are interchangeable and redeemable against a “community-recognised commodity”, while option clauses protect against “sudden excessive demands for liquidity”. This last is an arrangement that obviates the need for a lender of last resort, since free banking is a system in which monetary and financial stability are guaranteed by market determination of the preferred currencies and interest rates. Dowd (1996) has underlined the basic requirements for successful free banking based on private money. One of them was the emergence of a clearing system. Another was the use of option-clauses - auto-control mechanisms used in cases of ‘fire-sales’ to defend against bank-runs. The final one was the development of a private lender of last resort within the financial sector to help individual institutions that were solvent but facing a liquidity crisis. In an earlier study, Dowd defined the distinctive features of a free banking system as:

- multiple note issuers who would guarantee to redeem their notes in a commodity
- recognised as valuable;
- a regular note exchange between note issuers;

- the insertion of option clauses into the convertibility contracts to protect the note issuers against sudden excessive demands for liquidity (Dowd, 1993).

Free banking as an alternative to central banking was discussed by Capie, Goodhart, Fischer, and Schnadt (1994). Although they described today's free banking proposals as a "somewhat fringe academic exercise without much support from financial practitioners," they emphasised that free banking ought not to be discounted as an alternative to central banks and currency boards for the operation of monetary systems. They pointed out that the preference of governments for central banking stems from national pride and seigniorage interests, while the financial community in general and commercial banks in particular support the central banking option for two reasons of their own. First, commercial banks economise systemic non-interest bearing reserves by offering a safety-net. As a result they are able to reduce individual bank capital requirements when providing leadership in joint exercises like establishing payments and settlement systems. Second, commercial banks enjoy an influence on central bank decisions through the dynamics of the relationships between controllers and controlled, supervisors and supervised. (This influence may not, however, extend to the full theory of capture, which argues that commercial banks capture central banks and thus approve their operations.)

It can be identified four problems associated with free banking theory:

- it may lead to extra transaction costs;
- some additional bank reserves of real assets may be needed;
- there may be possible minor inefficiencies connected with multiple note issue;
- it seems indeterminate how the system as a whole behaves since free banking theory relies on the law of flux. (the theory of reflux is explain on the situation where a note issuing bank will lose/gain reserves at the clearing if it expands faster/slower than other competing note issuing banks).

They then summarised four responses of free banking advocates to the argument that free banking may lead to bank runs and contagious panics. The first is the denial of the likelihood of such events in a free, competitive system. The second is the argument that an implicit central bank safety net or a deposit insurance scheme invites moral hazard (absent in free banking), while intrusive regulation to minimise moral hazard leads to further distortion and misallocation of resources. The third is that free banking decreases susceptibility to instability through its adoption of self-regulatory mechanisms like option clauses, clearing houses, and narrow banking. The fourth is the denial of any sizeable externalities and social losses in excess of internalised private losses in the case of banking failures. Such possible externalities were not found to be potentially greater in banking than in other industries.

2. Electronic money

Electronic money has different shapes. Up till very recently, electronisation of the payment systems has been based on improvements in account-based systems, their reach (domain) and their speed. Account-based systems record all the transactions and authorise them centrally, whereas non-account-based systems circulate e-tokens through telecommunication networks or on smart cards and may allow transactions without central authorisation. Account-based e-money systems are really very little different from the debit card of credit card networks of EFT systems currently in use. Token-based e money, "e-cash", on the other hand, is radically different in the sense that it introduces an electronic form of currency.

The formal definition of e-money offered by the European Central Bank is as follows: "an electronic store of monetary value on a technical device that may be widely used for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transaction, but acting as a prepaid bearer instrument" (ECB 1998, p.7). This definition highlights some important aspects of e-money:

1. The fact that it stores monetary value on a technical device with a capacity to be used widely for making payments.
2. Its role as a prepaid bearer instrument, excluding account-based electronic payment instruments such as credit and debit cards and EFT payments.
3. Its use to cover payments to undertakings other than the issuer, essential to differentiating e-money products from single purpose prepaid cards like telephone cards.
4. Its ability to by-pass bank accounts or any other financial service providers' authorisation.

Because it does not specify the type of technical device used, such a definition serves as a useful starting point and is well suited to a development that is in an emerging state, the full technical potential of which remains unclear. In particular, the above definition includes card-based schemes, which can be used in conventional retail commerce, as well as various types of “cyber money” which are designed to circulate in the Internet. The definition is unsatisfactory, however, in two respects: Firstly, it may overemphasise the technical distinction between account-based and token-based systems, which have ultimately similar effects. Secondly, it does not distinguish clearly enough two quite distinct kinds of e-money issuance strategies: the conventional strategy of a new electronic payments medium and the more radical one of electronic issue of alternative, competing currencies (not based on conventional, government-organised monies).

We might call the two different kinds of e-money "representative" and "independent" e-money, respectively. As long as it is representative of legal tender under a given monetary policy framework, 'e-cash' is a form and extension of cash generally, an addition to coinage, notes, cheques and debit and credit cards, etc. In this respect, e-money is clearly nominal in its effects - such as increasing velocity - and may be regarded as neutral in terms of systemic change. It has important implications for the current monetary framework, in that it makes for easier payments, revolutionizes monetary base management, and enriches currency choice through making it easier to use several currencies and/or to switch between them. It would reduce the demand for conventional central bank money. But, e-money as a mere representation of a given currency may have no different effect on monetary policy frameworks than what has already been caused by advanced payment systems, which have decreased the proportion of currency in circulation to total money stock especially in the last couple of decades.

However, the impact of e-money would seem to be most significant when it comes to the electronic issue of non-bank money, that is, money issued without reference to banking reserves. If e-money is introduced as independent money, not a representation of any conventional currency, it may have the potential to revolutionise the competition among monetary policy frameworks. This impact may well be different for developed and developing countries: For developed countries, it may provoke 'currency competition' among core currencies like Dollar and Euro, or perhaps between these traditional currencies and new, privately issued monies (if the performance of the incumbent central banks is seen as unsatisfactory by money users). For developing countries, it may facilitate and speed up currency substitution to dollarisation and/or Euroisation.

3. Electronic Money and Free Banking

The direct or indirect relationship between e-money and free banking has been addressed quite often recently. For example, Browne and Cronin (1996) pointed out that laissez-faire banking could emerge endogenously over time in response to technological improvements in information and financial products. As a result, regulation of the banking industry after e-money could prove unjustified because of the system's likely inherent stability and efficiency. White (1995) argues that the technology gives an opportunity to issue private bank notes as smart card balances, which are transferable without bank involvement. He adds that digital payment technology has begun to foreshadow a world in which central bank currency is obsolete - replaced, perhaps, by privately issued currency in the form of balances written to smart cards or downloaded to personal computers and transferred by means of electronic wallets or over the internet. He also investigates the potential of e-money to make small denomination currencies interest-bearing for the first time in the history, and concludes that, when combined with anonymity e-money would facilitate the public's turning away from government-based notes and coins.

If we now turn our attention to the relation between e-money and free banking, it seems to us that e-money has very significant, even synergetic, effects. Not only does e-money foster a clearer understanding of the nature and workings of money, and thus of its 'proper' management with its influence on banking and finance that has been analysed in the earlier section, but its electronic issue may provide a technical means to bring free banking into play. Provided the electronic issue of money does not become subject to excessive regulation or outlawing¹, it may enrich currency choice through a process of substitution that has been supported by the e-money based financial service provision. Chief influences of electronisation which suggest such a scenario are the following:

- because bits and bytes are more easily re-defined than banknotes and coins, it may be easier to revise or change currency representation, leading, in the case of countries, to easier entry

and exit to monetary unions, and facilitating intercurrency switching by end-users and, therefore, private money issue. This view may be supported by the long planned currency conversion in the Euro area with conventional banknotes and coins;

- thanks to the opportunities for transparency afforded by Internet applications, money can be backed as easily by commodities as by indices, or both. It does not mean to turn back to commodity backed currencies but the monetary institutions may not take the risk of inflating their currencies because of these opportunities that has been available with the advent of e-money technologies;
- the increasing use of distribution channels such as the Internet, digital TV and mobile phones, may enable ‘good money’ to reach end-users more easily. Conversely, end-users that have need of a reliable medium of exchange may find it easier to reach better alternatives;
- ease of access to e-money may speed up the formation of a critical mass, the moment when people generally become willing to accept the new proposed unit of account because they become convinced that it now enjoys widespread recognition and appropriate worldwide liquidity and systemic support. This potential of e-money allows institutions to challenge mismanaged currencies with stronger proposals.

Insofar as free banking considers that sound money not only delivers price stability but also financial stability, it may now be only a matter of time before free banking *challenges* central banking in practical fact with the advent of e-money. Such a development would be influenced by the manner in which free banking addresses three key questions which e-money serves to emphasise:

1. The role of the lender of last resort

Under present monetary policy framework, the misbehaviour of one financial institution can have disastrous consequences for the financial system as a whole with regards the risk for a total collapse of the money stock. In order to prevent contagious risk, central banks are given the sole right to issue money without limit and for as long as it takes, provided the situation is in extremis and the danger is systemic. The lender of last resort is a costly arrangement and there is always a risk for socialisation of private losses. On the other hand, free banking leaves it to the market to ‘discipline’ bad money and it does not entertain the need for a lender of last resort. It is believed that the system will never fall into a systemic risk because the invisible hand of market mechanism forces every individual financial institution to be ready against bankrupts. It is also believed that weakened and unfeasible institutions will be replaced by the competitors before they create any systemic risk. If the danger still persist, Dowd and others envisage ‘option clauses’, whereby in extreme circumstances banks can exercise compensatory delays to withdrawals. This is a concept of prudence – appealing to the depositor to avoid rash investment and precipitate action.

E-money serves to reinforce free banking by providing it with a powerful instrument for its realisation and it may decrease the need for a lender of last resort for at least two reasons. The first one is because option clauses becomes very easy to arrange, manage and realise, thanks not only to the electronic of money but also electronic finance, electronic distribution channels and electronic relationship management. E-money serves to decrease the costs of making and performing on option clauses and all manners of contracts between issuers and users. Secondly, it creates new frameworks to analyse individual defenders of the integrity of money so as to take individual decisions, which in the end, eliminates systemic structuring within the financial service provision. It allows individual institutions to develop personalised relations with the end users so as to be ready to convince them on the quality of their service in case of a fall of a financial institution. Lender of last resort function is not to save individual institutions and unless one failure does not effect other members of the financial system, there will be no need for it in the first place. With increased end-user awareness supported by e-money, no economic entity will question the overall stability of the system when they can easily reach to the data that can convince them about the integrity of money that they rely on.

2. Currency backing

If one is clear that a lender of last resort is not envisaged by free banking because it is not necessary, one can turn one’s attention to two related topics – the cover of money (backing of currency) and a multiplicity of currencies (currency competition). The unit of account function of money generally has two aspects. On the one hand, for money to enjoy general acceptance, the unit of account needs to be widely recognised, otherwise circulation will be impeded and people will not wish to use it. Thus, for example, the US dollar

currencies and (b) their mutual convertibility into real rather than fiat or, perhaps better put, sound rather than unsound, cover. In this respect, e-money easily extends the reach of good money with the best cover to the end holder, functioning successfully both as a medium of exchange and as a store of value. Every holder of money also gets to choose from among currencies that are independent of local availability constraints. The multiplicity of currencies in this regard makes more than one unit of account available as the common denominator in trade at both local and international levels with the right to choose the currency that is most preferred. This practice is limited at the moment on the level of currency substitution but e-money extends the reach of good money and increases the level of competition among national and international, which helps to save individually strong money with sustainable integrity.

Conclusions

For two main reasons, e-money may lead to a new era for free banking type practices. Firstly, innovation in payment technology is reducing the fixed costs of banking business. Being cheaper than printing, distributing and retrieving banknotes through banking systems, the creation of digital strings of money is likely to reduce the cost of maintaining a payment system infrastructure for the economy as a whole. This may attract more economic entities to provide financial services as the natural barriers to entry to the banking sector become less effective. Secondly, as the computing power of new generations of computers increases, risk management and data processing with huge amounts of entries might become risk-free and less costly to process. It may then be possible that the information monopoly of banks relating to financial services may deteriorate, giving further opportunities for non-banks to supply financial services to customers. Such a development may decrease the special treatment of banks over against other firms, so that the argument about the private positions of banks in an economy may become even harder to defend.

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