The virtual euro

Recent discussions in the EU-parliament on FinTech allude to the virtual euro.[1] However, the virtual euro is much more than technology. It raises fundamental questions on design and governance of the monetary system.

Currently, the general payment system is executed on bank balance sheets, and supported by interbank settlement, under public supervision. It depends on short term credit, governed by the central bank. In the past, when distance mattered, this made sense, although it made the money system prone to runs and risks. It enabled us to conveniently hold money and make payments over distance. Nowadays, with virtual money, it is possible to hold money and make payments over distance, without involvement of any bank balance sheet. That enables us to make the general money system much more safe and simple, and to implement proper demarcations between public and private affairs in the financial system.

Currently, most of the money in circulation is issued by commercial banks. They typically 'lend' it into circulation, requiring interest and repayment. This implies in bank money the urge to yield a profit, and extract value from its utilization. That hinders the transition to a more sustainable economy, based on good stewardship rather than exploitation. When banks 'lend' money, they don't actually lend any goods. They extend credit. Bank money does not represent a good that is lent or placed in custody. It is a *monetary money claim*, that is fractionally backed by central bank money, which is a money claim as well. This renders the monetary system inherently unstable, and makes society pay a high price for its money system.

Five presidents

"As the vast majority of money is bank deposits, money can only be truly single if confidence in the safety of bank deposits is the same irrespective of the Member State in which a bank operates. This requires single bank supervision, single bank resolution and single deposit insurance."

Junker, J-C. (2015), D. Tusk, J. Dijsselbloem, M. Draghi, M. Schulz, Completing Europe's Economic and Monetary Union, European Commission.

The five presidents do not want us to consider the true value of a money claim on a bank. They use government power to obscure and level credit risks, thereby distorting competition, implying moral hazard and burdening society with private risk taking. They don't solve the problem with our money system, they create it.

Use of money claims as money at nominal value is unnatural. The value of a money claim is naturally determined by its inherent counterparty risk, and does typically not equal its principal amount. Without grave government interference, money claims cannot generally trade at par and be used as money on a nominal footing. This is reflected in the efforts of 'the five presidents' to implement single bank supervision, single bank resolution and single deposit insurance.[2] Consequently, banks are exempt from regular insolvency procedures, and are able to pass on the cost of private risk taking to society. To a large extent, competition in the financial sector is impaired because of structural government interference with the banking system, associated with general use of money claims as money.

At the naissance of the virtual euro, this is up for fundamental reconsideration.

Virtual currencies are commonly linked to blockchain, a technology that generates trust among independent online participants. For the virtual euro however, blockchain is not essential because trust in the virtual euro does not stem from application of certain technologies. It stems from transparency and good governance of the monetary system, ruled by law, under institutional oversight.

Nevertheless, blockchain-based virtual currencies give important insights. They show that central banking is unnecessary in a virtual euro system. Virtual money (like bitcoin), is not a claim on the issuing entity. And payment with virtual money does not involve any bank balance sheet. Bank liquidity, bank balance sheets, and interbank settlement are irrelevant for virtual money. All operational functions of the central bank can be discontinued in a virtual money system.

Digital Cash / virtual money

Payment from payer to payee
- ✓ No bank balance sheet involved
- ✓ No bank liquidity involved
- ✓ No interbank settlement involved

No asset backing
- ✓ Plain fiat money, created at sovereign will
- ✓ Backed by good governance and protocol

At least as convenient as bank money

Moreover, because of its nature, the virtual euro is outside the scope of the ECB-mandate. It is not physical cash (notes and coins) and not a central bank liability. It is the exclusive competence of the Union (3 TFEU). Virtual money is not a contractual claim (financial asset), and consequently needs no asset backing. Its issuance is not a function of assets hoarded on a bank balance sheet. It is a function of direct legitimate governance of the virtual money system, bound by a zero-inflation target, and in tune with the productive capacity of society. It derives its purchasing power from these capacities, and should be governed such that it enables society to flourish to its full potential.

Currently, the legal framework for the financial sector has a dual character, consisting of prudential and financial oversight. Prudential oversight is instrumental for use of money claims as money. It obscures and levels counterparty risks implied in bank money, to foster exchange at par. This dual character provides banks with a type of funding that is not available to non-banks: bank deposits. Bank deposits are a special form of borrowed capital, exempt from prospectus requirements. Depositors are not expected to consider the risks associated with lending money to a bank. Instead, the government takes responsibility for bank solvency, by conduct of prudential oversight, thereby hampering proper risk allocation by market processes.

In a virtual euro system, this dual character of financial oversight is no longer justified. A single system for financial oversight would suffice, focusing on risk transparency and consumer protection. That would simplify financial law, and reduce administrative burdens considerably. Banks would lose their special status, but also the costs and stifling legislation that come with it. In the financial sector a level playing field would emerge, with no fundamental distinction between banks and non-banks. The credit system would profit from undistorted competition, and get better equipped to accommodate market demands.

The virtual euro reduces the complexity of both the money system and financial law. But there is more. It can even repair imbalances accumulated in the current monetary system. The eurozone has strong incentives to consider this, as it could deleverage the financial system, without the North having to pay for the South. How this could work is described in 'Deleverage without a crunch'; a working paper prepared by Dutch NGO 'Ons Geld' ('Our Money'), to sharpen insight into the impact of the virtual euro.

To properly understand this, it is important to keep in mind that virtual money is not a money claim, and not a bank liability. It is an intangible liquid asset. It differs fundamentally from bank money, which is a contractual claim (financial asset), with a corresponding liability, recorded on a bank balance sheet.

The monetary authority that administers the virtual euro resembles a public key register like the cadastral system, rather than a bank. It has no claim, nor liability regarding the objects it administers. They are not put on its balance sheet either. Therefore, the monetary authority does not need to hoard financial assets, like sovereign debt, to balance its books. On the contrary, to avoid market distortion and undue influences on the money system, it should not be allowed to trade in financial and other assets.

Unlike a central bank, the monetary authority does not need to engage in private business to implement its policies. It can manage the virtual euro system directly, with a new class of monetary management tools, based on real-time insight in both stock, flow and allocation of virtual euro. That renders monetary management much more precise, effective and predictable than it currently is, without any need for moderate inflation. It also improves the structure of the monetary system, by strict demarcation of public and private affairs.

The virtual euro is best understood as the digital counterpart of the physical euro: notes and coins. It is an object of ownership, and not a contractual claim. Therefore, we refer to 'digital cash', rather than 'virtual money'. Like physical cash, digital cash can be withdrawn from the bank. 'Deleverage without a crunch' is based on such digital cash withdrawals.

In its practical application, digital cash is a substitute for bank money. It can work at least as conveniently as bank money, and transition to a digital cash system could be implemented seamlessly, by mandatory conversion of all euro denominated demand deposits into digital cash. Accountholders would not experience any difference in the use of those converted deposits. The change is in the back-end; payment accounts no longer give access to the bank's balance sheet, but to the personal digital wallet of the accountholder, containing virtual euro.

Digital cash does not need to replace physical cash. Physical and digital cash can coexist without negative impact on the monetary system. Coexistence of digital cash and bank money however, is problematic, as it might contribute to financial instability. 'Deleverage without a crunch' therefore, is a scheme in which during a limited time frame, bank money and other monetary money claims are converted per demand into virtual euro. Bank money that is not converted during this time frame, will rank as regular borrowed capital (bonds), subject to regular financial oversight, including prospectus requirements.

The virtual euro raises fundamental questions about the current and future monetary system. Bank liquidity, bank balance sheets and interbank settlement are irrelevant for a virtual euro system. The current dual system of prudential and financial oversight would not be needed either. This can significantly reduce the complexity of financial law and the monetary system. All core functions of a central bank would become superfluous. Instead a new class of direct and efficient monetary management tools would emerge, enabling the conduct of monetary policy from a stately position, without the need for the public monetary authority to engage in private business. With the virtual euro, the money system can be made much safer and simpler. In the process, there is an opportunity to deleverage the financial system, freeing the eurozone from the debt deadlock in which it is currently trapped.

Edgar Wortmann – Stichting Ons Geld

Central Bank Digital Currency (CBDC)

The Bank of England is currently considering the issuance of Central Bank Digital Currency (CBDC). CBDC gives non-banks access to the balance sheet of the central bank. That is to say, it enables non-banks to hold 'deposits', at the central bank. Such 'deposits' represent a rather safe form of liquidity. With CBDC the central bank competes directly with the commercial banks. Depositors can decide to hold deposits at the central bank and/or at commercial banks. They cannot however, directly convert commercial bank money at the central bank into central bank money, for that endangers financial stability. Instead, the Bank of England proposes to issue CBDC only by spending it into circulation, typically through the purchase of sovereign debt.

According to the Bank of England, use of CBDC could lower the distortionary costs of money, thereby increasing steady state GDP by 3%. It would also enhance counter-cyclical monetary management, and stabilize inflation.[3]

CBDC is a step in the right direction, contributing to a less distortionary money system. However, CBDC is not virtual money, and CBDC does not make the money system safe and simple, as virtual money does. The expected increase of GDP (3%) is rather limited, compared to a 10% productivity gain attributed to a bolder policy of replacing all bank deposits with state issued money.[4]

[1] FinTech: influence of technology on the future of the financial sector http://www.europarl.europa.eu/oeil/popups/ficheprocedure.do?lang=&reference=2016/2243(INI).
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[3] Barrdear, J., M. Kumhof (2016). The macroeconomics of central bank issued digital currencies, Bank of England Staff Working Paper, No. 605. Available at: http://www.bankofengland.co.uk/research/Documents/workingpapers/2016/swp605.pdf.
[4] Benes, J., M. Kumhof (2012). The Chicago plan revisited. IMF Research Department Working Paper, WP12/202, IMF. Available at: http://www.imf.org/external/pubs/ft/wp/2012/wp12202.pdf.
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