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Money Creation – And Yet Central Banks Run It!

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Over-financialization and the fragility of economic systems in the industrialized world is an increasingly debated topic among academics and wherever public policies are formulated, which includes central banks[1]. Financial intermediation plays a key role in the functioning of modern economies. But *high finance*, as named by President Franklin Delano Roosevelt (who called for severe regulatory measures after the *Great Depression*, after which the Glass-Steagall Act was introduced), has become more disruptive over the past decades. This is reflected in the dynamics of financial cycles, in the volume of public and private debt, in the frequency of "Minsky moments"[2]. Over-financialization is illustrated by the share of finance/financial industry in overall economic activity; in the US, for instance, it went up from 2-3 percent of GDP in the 1950s to 7-8 percent of GDP in 2007-08, with an amazing share in corporate profits, to over 40 percent in the years leading up to the recent crisis[3]. At the end of the day, what matters most for individuals and for society as a whole is what money is used for; for, it is one thing to invest in the real economy, and another thing to speculate on financial assets and resort to very high leverage. Speculation happens especially in fully-fledged, deep financial markets, although investors seek opportunities in emerging economies too.

The Great Recession has reignited the debate on "who creates money", on the relationship between *base money*/*outside money* supplied by central banks and the *inside money*, which is created by commercial banks. It is in this context that the old controversy regarding the fractional-reserve banking system should be placed. This dispute should be linked with the equally old observation that the financial system is prone to crises, to instances of panic – to "runs".

What has been quite surprising to not a few is that a deep crisis hit so badly advanced economies –which rely, presumably, on solid institutions and knowledgeable regulatory authorities. No wonder then that some voices have gone beyond the need for tight financial regulation and supervision efforts and have come up with proposals aimed at a fundamental rethinking of the banking/financial system. Mervyn King[4] (who was governor of the Bank of England until 2013), Adair Turner[5] (former Chairman of the UK's Financial Services Authority), John Kay[6], Jaromir Benes and

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[1] See also Robin Greenwood and David Scharfstein, "The Growth of Finance", *Journal of Economic Perspectives*, Vol. 27, No. 2, Spring 2013; Ugo Pagano *et al.* "Is Europe overbanked?", *ESRB Report*, June 2014; for emerging economies see also Ratna Sahay and Martin Čihák, "How much finance is too much: stability, growth and emerging markets", 20 May 2015, IMF blog.

[2] "Minsky moments" refer to highly destabilizing situations for the economy which are brought about by finance – as described by Hyman Minsky (*Stabilizing an Unstable Economy*, Princeton University Press, 1986). Paul McCulley coined the phrase back in 1998.

[3] Over-financialization is also illustrated by the rising share of transactions that do not concern the real economy, but are rather financial transactions, with an increasing number of them based on derivatives – it is what one can dub as "finance for its own sake", which extracts undue rents from economy. I addressed this issue in *Which way goes capitalism* (CEU Press, 2009), and "New Europe and the Great Recession", Transilvania Studies Center, Cluj-Napoca, 2017.

[4] Mervyn King, *The End of Alchemy. Money, Banking and the Future of the Global Economy*, London, Little Brown, 2016.

[5] Adair Turner, *Between Debt and the Devil*, Princeton, Princeton University Press, 2016.

[6] John Kay, *Other People's Money. Masters of the Universe or Servants of the People*, London, Profile Books, 2015.

Michael Kumhof of the IMF[7], Martin Wolf, are among those involved in this debate. How banks are perceived by many citizens in not a few countries is also the proposal made in Switzerland for a referendum on fractional-reserves; similar heated debates have raged also in Iceland, a country which was brought to its knees by banks' follies, as it did happen also in Ireland and in the United Kingdom – the latter being the birthplace of the 1986 Big Bang (deregulation wave).

The thoughts below dwell on money creation and the relationship between central banks and commercial banks, the money vs. credit debate, money creation and financial stability, unconventional policies, crypto-currencies and the money supply.

1. Commercial banks precede central banks

Central banks came up long after commercial banks; over time they developed their functions as we know them today: currency issue, monetary policy, lender of last resort (LoLR), deposit guarantee, safeguarding financial stability[8]. Some "central banks" were established to serve another purpose as well: to finance military state campaigns, as was the case in England and France. This is what we would nowadays refer to as direct financing of general government budget deficits via money printing.

Commercial banks went through a period of "free banking", which translated into unhindered competition and the absence of a central bank as issuer of a single currency and lender of last resort. The fractional-reserve system does not, therefore, originate in a philosophy (paradigm) of central bank functioning; it precedes the advent of central banks and is the outcome of commercial banks' realizing that they can grant loans and expand their balance sheets/business way beyond own funds and deposits taken. It may be asserted that central banks inherited the fractional-reserve system, but imposed prudential rules on the banking system – reserves to be held at the central bank, capital and liquidity requirements to be met in relation to bank assets, etc.

A central bank, as an issuing house, must ensure trust in the currency, particularly when dealing with fiat money. Modern economies are monetary *par excellence*, using money in financial and exchange transactions[9].

When central banks became issuing houses and LoLR, fractional reserves interacted with monetary policy. This happened because central banks tried to ensure price stability by controlling the quantity of money (monetary aggregates) and, during the past decades, especially via monetary policy rates (inflation targeting) – through the price of money. The shift away from controlling the quantity of money (monetary aggregates) to controlling the price of money, via the monetary policy rate, was grounded in the excessive variability of the relationship between base money and broad money, between the money issued by the central bank and the "inside money" created by commercial banks.

[7] Jaromir Benes and Michael Kumhof, "The Chicago Plan Revisited", IMF Working Papers, WP/12/202.

[8] See also Charles Goodhart (*The Central Bank and the Financial System*, Cambridge (US), MIT Press, 1995) and Charles Kindleberger (*A Financial History of Western Europe*, Oxford, Oxford University Press, 1993).

[9] The means-of-exchange function cannot be separated from interpersonal relationships. In a prison, cigarettes or bread crusts operate as money substitutes, having a means-of-exchange and, sometimes, even store-of-value function.

2. The money vs. credit debate

The money vs. credit argument is old, amid the evolution of the fractional-reserve banking system. More than half a century ago, a much debated report in the UK claimed that credit is also money (the Radcliffe Report). This thesis is revisited in a Bank of England study by Michael McLeay, Amar Radia and Ryland Thomas[10], which triggered, arguably, overdone controversy. This holds true to the extent one considers that inflation targeting, through the control over the price of money (via the policy rate), has stimulated credit expansion and made the *financial cycle*[11] more ample.

However, even by assuming that commercial banks create "money" (inside money) via lending, it should be stressed that this **is done by virtue of a *mandate***. The latter means that commercial banks work with/multiply base money (high powered money); they do not work with their own money. Banks use equity and deposits to acquire monetary resources. That in the UK, for instance, the central bank's money creation has come to account for merely around 3 percent of broad money does not change the process of money creation fundamentally, in the sense that the Bank of England can, ultimately, contain credit expansion through the price of money (through the policy rate and the transmission of the signal to money/financial markets). Refuting this causality chain is like denying the role of prices in the economy, in the expansion or contraction of economic activity; or it would be tantamount to the assumption that commercial banks ignore the price of money pursued by the central bank – and, hence, that there would not be a monetary policy any longer. It is true that the transmission mechanism can be impaired, even break down, particularly during hard times (like in the recent financial crisis), but this does not invalidate the role of central banks in fulfilling their basic functions.

A telling evidence shows that the cash injected by a central bank into the banking system lies at the root of money creation. When the financial system ran the risk of collapse, as in the recent big financial crisis, central banks in the US and in EU Member States, the ECB itself, had no choice but to inject massive liquidity, base money; it was not commercial banks that "injected themselves" with money they had created. There is one more thing worth mulling over: when panic strikes, people withdraw their money from banks and may choose to keep it in "money vaults". Money could be transferred over to banks perceived as safer, yet a system-wide run on banks can be countered only via liquidity injections from a credible LoLR, which is an issuing house (a central bank).

Even if cash were abolished, things would not fundamentally be different because the functions of cash would be taken over by e-money (there are already suggestions in this regard, based on the need to cap the outflow of cash from the banking system). Cash could be replaced, let's say, by purchasing power units (PPUs) that would circulate electronically only. Banks' equity and deposits would be solely in this form; reserves at the central bank would also consist of such units. In other words, cash would drop out of the money-creation process without altering the relationship between base money and broad money. Commercial banks would provide loans in PPUs and credit expansion would hinge on household and corporate demand relative to the price of money (interest rates).

[10] Michael McLeay, Amar Radia and Rydland Thomas, "Money Creation in the Modern Economy", *Quarterly Bulletin*, Q1, Bank of England, 2014.

[11] See also Claudio Borio, "The Financial cycle and macroeconomics. What have we learnt?", BIS Working Paper No 395, December 2012.

Commercial banks cannot create *inside money* (by granting loans) in an unlimited manner, by disregarding the price of money which is set by the monetary policy rate and the monetary transmission mechanism. It is true that, in an environment of very low policy rates (as is currently the case), monetary policy effectiveness is very much reduced. But even so, if demand for credit is highly subdued, commercial banks cannot embark on a money creation spree.

Several observations are warranted with regard to the relationship between central banks and commercial banks in today's world, when banking systems are no longer based on a gold standard or other metal equivalents:

– money in the system is fiduciary, it is based on ***trust***, on the guarantees provided by public authorities (the state);

– commercial banks may not supply other money than that which is sanctioned by central banks. In economies where other currencies are in circulation as well (with substantial dollarization, euroization), it is possible to grant loans denominated in foreign currencies which are accepted by the central bank (though other currencies may also circulate in the informal economy);

– commercial banks are licensed by central banks;

– commercial banks are under the central bank's regulatory and supervisory scope.

Periods of time with intense deleveraging are also proof that base money sets the tone in the economy. Inside money (i.e. the money created by commercial banks via multiplying credit) may vanish suddenly, whereas base money is not affected unless there is an outflow of non-residents' funds. This is what happened in numerous economies during the current crisis' years[12]. While the stock of "inside money" may contract via deleveraging, base money does not automatically decrease – unless the system witnesses outflows of funds. Granted, the monetary base could be caught in what Keynes called the "liquidity trap"; during a deep crisis, the liquidity preference skyrockets.[13]

Lending should be viewed in relation to the expansion of banks' financial operations. It is noteworthy that, in the context of over-financialization, the bulk of large banks' net income comes from trading, arbitrage, derivatives. Given growing interconnectedness, the result is an increasing fragility of the banking system as a whole.

3. Money creation and financial stability

There are two big challenges that a central bank has to overcome when it comes to monetary/financial stability: a) the effectiveness of the monetary policy transmission mechanism, via monetary aggregates control, or through the monetary policy rate – both instruments (a quantitative and a price tool respectively) trying to influence the level of economic activity, price dynamics (inflation); and b) what the money that is multiplied by banks is used for.

[12] The Romanian economy was no exception either, with the private credit-to-GDP ratio shrinking from around 39 percent in 2008 to below 29 percent in 2016.

[13] For an interesting model on monetary policy and *inside money* see Monika Piazessi and Martin Schneider, "Payments, Credit and Asset Prices", paper presented at the BIS annual conference, Luzern, 21 July, 2017.

In recent decades monetary transmission has relied in most of the industrialized world on inflation targeting (IT), after it had been noticed that a control of monetary aggregates was pretty approximate, mainly due to money demand instability. But the recent financial crisis, while not bringing the end of IT, has shown major drawbacks of this regime too; these drawbacks refer to an under-looking of systemic risks and overreliance on price stability at the expense of financial stability (by disregarding financial asset prices). Extreme events ("Black Swans", as named by Nassim Taleb), as well as rising *uncertainty* (Mervyn King calls it "radical uncertainty", *op. cit.*) which is to be distinguished from *risk*[14], have also revealed the limitations of approaches which presume a smooth functioning of markets ("the efficient markets hypothesis"). Hence, a growing dissatisfaction has emerged with macroeconomic models. As Claudio Borio from the Bank of International Settlements (BIS) put it, models in which the role of finance is underplayed are like "Hamlet without the Prince".

The other challenge, which does not pertain solely to a central bank, but rather to the financial system in its entirety, to the economy, is ***what is done with money***; when the prevailing use is speculation, deeply distorted financial cycles take shape, and this ends up in *boom and bust* episodes. A financial system that fosters speculation and indebtedness[15] is disruptive for the economy and unavoidably leads to deep crises – especially when contagion effects are strong. The past decades have witnessed a huge rise in the *interconnectedness* among banking/financial entities through the sheer size of derivatives.

When the US Fed was established back in 1913, what J.P. Morgan and others had in mind was the need for a lender of last resort in order to put an end to financial panic, to contagion (like that of 1907). But saving someone who deserves to live on is one thing and rescuing an entity just because it is "too big to fail" is another. There is a big dilemma in this respect. Similarly, the bail-in procedure, which is part of an overhaul of the functioning of banks in the European Union, illustrates an attempt to involve investors in solving highly intricate situations, against the backdrop of very strained public budgets. However, bailing-ins themselves present pitfalls. And in the case of big banks, gigantic financial entities, bail-outs will probably be resorted to eventually for fear of system contagion. No wonder Simon Johnson (former chief economist of the IMF), Neel Kashkari (one of the promoters of the package of measures known as TARP, whereby the collapse of the financial system in the US, and actually worldwide, was averted in 2008) and others advocate a break-up of giant banks. In his current position as president of the Federal Reserve Bank of Minneapolis, Kashkari said that huge banks are a systemic risk in itself to the economy, that they are "too big to fail", and that they need to be broken "into smaller pieces", to be shrunk[16]. Size is clearly a huge policy issue, but not less is interconnectedness; this is because even smaller entities can bring the whole system down if contagion is unstoppable.

The problem for central banks is therefore two-pronged: a) what kind of monetary policy to pursue (alongside macro-prudential measures/MPP) and b) how to regulate the financial system so as to mitigate/prevent crises. This is the context that has triggered debates on regulatory and supervision reform, as well as on the reform of the banking/financial system.

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[14] Which implies assessing events and associating probabilities of occurrence.

[15] This is the "debt overhang" often referred to by Kenneth Rogoff and also the key theme of Adair Turner's book (*op. cit.*)

[16] Neel Kashkari, "Fed official proposes bank break-up", *Financial Times*, 17 February 2016.

4. Unconventional policies

Quantitative easing (QE), which has been resorted to by major central banks as a means to stimulate economic activity – in an environment of very low monetary policy rates (ZLB – zero lower bound), translates into bond purchases on secondary markets; this is tantamount to injecting base money into the system (also through purchases of government securities). For instance, the Fed's balance sheet ballooned from USD 800 billion in 2008 to more than USD 4 trillion at end 2014. At the same time, inflation was stuck to very low level, with the "liquidity trap" and disinflationary (deflationary) pressures at work globally.

In economies where capital markets play a major role (the US being the outstanding case), quantitative easing seeks to alter bonds' yields to maturity, which in turn would, arguably, entail a change in the propensity for current vs. future consumption; the assumption is that the economy faces an aggregate demand shortfall, to which adds a strong hysteresis effect (amid chronic underutilization of resources). In Europe, where banks account for three fourths of economy funding, bets are particularly on the impact exerted by low interest rates on lending. However, the limited effectiveness of QE in this respect is quite visible. The problem is that the transmission mechanism is fractured, as lowering of interest rates does not stimulate credit demand as it is hoped for. But this should not be surprising in an environment of big debt overhang and high uncertainty.

Unconventional policies are an expression of concern about the state of economies, about the dwindling effects of implemented policies; some officials have dubbed the current state of affairs as "sailing in uncharted territories". Yet unorthodox policies themselves have limitations and twisted effects. That concerns are running high is also obvious in that some prominent voices allude to "helicopter money", a phrase which was coined by Milton Friedman decades ago; this money, it is imagined, would feed through into consumption not via commercial banks, but as fiscal stimulus from the public budget. Budget deficits could be monetized as well through this method. One should not forget that, in the early years of post-communist transition, deficit monetization was carried out to the dismay of many who underestimated the structural strain in economic systems when new relative prices called for a drastic reallocation of resources. But price liberalization caused pretty high inflation in transition (post-communist) economies (where repressed inflation was the modus operandi of the command system), whereas the Great Recession has entailed a much keener appetite for liquidity holdings, the so-called "liquidity trap" being at work.

5. Crypto (parallel)-currencies and the money supply

Bitcoin and other crypto-currencies (currencies that are not issued by central banks) have made a name for themselves against the backdrop of the Great Recession. At the start, it may have been the fear of huge instability and, eventually, of big inflation, which has fostered the emergence of parallel currencies as safer assets. But inflation has hardly materialized (at least, until now) and, instead, deflation (debt-deflation) has turned into a major headache for central banks and governments. And instability, disruptions and rising uncertainty are ongoing concerns in the global economy.

Crypto-currencies epitomize, arguably, another feature of the impact of the Great Recession on society: a dramatic diminution of the trust citizens have in governments, policy elites; and central banks are seen as key institutional constructs of the modern public policy institutional architecture and guardians of economic stability in a broad sense. The Crisis has shaken the trust in the capacity

of governments and central banks to secure essential public goods. A simplistic economic paradigm, with its ensuing reflection in the regulatory framework (*light touch regulation*), the belief in price stability as automatic purveyor of financial stability, are at the roots of the deep malaise. Bitcoin and other crypto-currencies mirror this mistrust; they are an attempt to create parallel money markets, to provide a medium of exchange which is not under the control of central authority (central banks), and which would fit non-hierarchical structures in society. Their social and economic significance runs consequently quite deeply.

Is money creation given an altered life by crypto-currencies? The latter are still an insignificant portion of the amount of money that serves as medium of exchange and store of value. And the propensity of cash to leave banks and circulate through non-bank circuits (not least owing to very low deposit rates) does not seem to have grown to a relevant extent. In addition, it is not clear that crypto-currencies are as trustworthy as some claim them to be. Some of them have also been associated with online drug sales and hackers asking for ransom[17]; and they witness extreme volatility, which is not a commendable feature for a store of value. In the end, what matters for money to be accepted and used on a big scale is the comparative trust one puts in the issuer and its capacity to deliver what it claims to do.

Central banks, in spite of the huge psychological, social and economic fallout from the Great Recession, have been – as Mohamed El Erian put it – "the only game in town", and the rescuer of last resort, as they are supposed to be. And this is likely to stay so for a long time. This said, however, finance has to change its behavior and central banks and governments have a long way to go in order to redeem their reputation when it comes to the regulation and supervision of banks and non-banks alike. For business (finance) conduct has become a big systemic risk.

Fintech, however, with the block-chain as a formidable technological (financial) innovation, can help banks and central banks to make payment systems more robust. Fintech, in general, is a formidable challenge for the financial industry, for banking. And central banks need to consider carefully the proliferation of non-banks, of companies that provide financial services which were, traditionally, in commercial banks' yard.

6. Financial system overhaul proposals

Some reform proposals are aimed at tightening regulation and supervision, without touching the core architecture of the banking/financial system – recourse is made to higher capital and liquidity requirements, restraining certain operations, increased transparency, capping bankers' income, etc. The massive reduction in leverage (the possibility of using borrowed funds) is such a proposal[18].

It is worth mentioning here the distortion brought about by the Miller-Modigliani theorem and related theses, which posit that the capital structure (issuing debt instead of equity) is irrelevant; this kind of thinking had a twisted effect on the conduct of banks, which have increased their

[17] See "Move over, Bitcoin: it's time for Ether", *The New York Times International Edition*, 21 June 2-17, p. 8.

[18] Anat Admati and Martin Hellwig recommend a big increase of capital and a cap on leverage to replace Basel III requirements, which continue to rely on the risk-weighted assets. This shows the distrust of the internal models used by banks, as well as of their conduct, their propensity for "making up" data, for resorting to illegitimate methods (*Bankers' New Clothes. What's Wrong with Banking and What to Do about It?*, Princeton, Princeton University Press, 2013).

leverage (indebtedness) in a bid to improve their return on equity. With higher risk-taking, the system as a whole is increasingly jeopardized. Assertions that banks know how to manage their own risks become less credible considering the implicit subsidy they enjoyed over time (which also translates into *moral hazard*), the manner of determining the risk-adjusted value of assets (with underlying models being questionable), as well as the business conduct of many banks – in blatant disregard of what is lawful and ethical and of central banks' prudential norms. Mike Carney, the current Governor of the Bank of England and Chair of the Financial Stability Board, pointed several times to a big issue of "banking culture", of banks' behavior – an idea reiterated by top IMF and BIS officials. The market rigging that not a few large banks resorted to and many toxic products that clients were cheated into buying substantiate this profound ethical problem. This business conduct led to the emergence of a banking/financial system that was a quasi-perpetual source of systemic risks. The taxation system, which makes interest expenses tax deductible, has also added to the distortion that is linked with the Miller-Modigliani theorem.

The Dodd-Frank Act in the US and the reforms launched in Europe (in the EU) seek to regulate banking activity more strictly, shadow banking included. But there are numerous loopholes and banking lobby goes to great lengths to "sweeten" the legislation in line with the industry's own interests. In Europe, an attempt has been underway to separate retail from investment banking, yet universal banks are still standing. It is noteworthy that the Liikanen Report speaks about the separation of activities, but does it with much caution, understandably so by considering the source of banks' income – mostly from trading.

There are also reform proposals aimed at changing the design of the system, at changing business models. Eyes are set on the "structure" of the banking system, which still enhances the use of derivatives, speculation; to this end there are opinions which support the introduction of a financial transaction tax (Tobin tax)[19]. In the EU, some Member States (France and Germany, among others) advocate the taxation of short-term financial transactions.

Other views are quite radical and call even for the demise of the fractional-reserve system; they have in mind the ideas which were proposed, in the wake of the Great Depression, by Irving Fisher, Frank Knight (to whom we owe the distinction between *risk* and *uncertainty*), Henry Simons and Paul Douglas through *The Chicago Plan*. This plan was revisited by Jaromir Benes and Michael Kumhof (from the IMF) and is alluded to by Mervyn King (*op. cit.*). Essentially, it is about breaking the link between base money and credit in the sense that banks which attract deposits should not extend credit by multiplying the funds taken in (or, as it is groundlessly claimed, that money is created out of nothing). The authors of the Plan and those who embrace this idea would break the banking system in two parts: deposit banks, which should not extend credit (and should be 100 percent backed through their assets), and lending banks, funded via private capital and long-term loans or via borrowings from the central bank. Thus, the whole money supply would be base money.

7. Finance reform proposals and what would happen to credit

None of the proposals to reform the banking system denies the need for and the usefulness of credit. The issue at stake concerns *credit dynamics* and, in this context, *what is done with money*.

[19] In June 2015, John Kay was invited to deliver a speech at the BIS Annual Research Conference (ahead of the Annual General Meeting), in which he outlined the key themes of his book (*op. cit.*).

The use of money, which may cause excessive instability, is worth looking into. Along this line of reasoning one comes across the financial cycle concept, which – according to BIS experts – may reveal substantial misallocation of resources (Jaime Caruana[20], Claudio Borio). Therefore, credit dynamics and the use of money are of much interest.

When resources are grossly misallocated, with ensuing major imbalances, the stage is set for a big crisis. A lesson of the recent crisis is that it makes sense to contemplate credit restriction measures (macro-prudential measures) while not ignoring market failures in resource allocation (for instance, the "boom" in non-tradables).

But who is to supply credit? Even by assuming, in fantasy scenario, that base money alone (i.e. money created by central banks) were to mediate transactions (narrow banks, as deposit banks, would no longer create "inside money"), it would still end up in crises if investment failed on a large scale. What is envisaged here is not a natural cyclical motion of the economy, but rather a severe recession. If recourse were made to strict narrow banking (no credit done on banks' part), credit would migrate towards other financial institutions; this is already noticeable with shadow banking development. Systemic risks would show up and would intensify in other areas of the financial system; panic and runs would take place on those particular segments of the financial system. All the more so if one considers the expansion of shadow banking and the very large volume of transactions which are conducted through it, the amounts that set the markets in motion, as well as financial asset prices.

Moreover, it is natural to wonder whether, or to what extent the government is entitled, in a market economy, to control credit allocation. In so doing, not only that it may not foster good allocation, but it could undermine the very logic of market functioning, the free choices of firms and households alike. That a central bank may resort to macro-prudential measures to limit credit expansion, and possibly to influence certain trends, is a different story.

One question would be whether regulation can shape the system so that speculation made by banks can be diminished. That this is the case can be seen from the focus of regulators on the functioning of shadow banking, of capital markets with a huge turnover[21]. Could a financial transaction tax cut down on the volume of speculation? The answer is not clear.

In Romania, very high reserve requirements put a dent on the fractional system. Banks resorted to credit externalization but, to the extent money from abroad (EU funds, portfolio investment, remittances, etc.) enters the Romanian banking system as base money, these funds also replenish the obligatory reserves which are held at the central bank. In the Romanian banking system too, part of the money that comes from abroad and plays the role of additional base money is caught in the "liquidity trap"; excess liquidity is manifest in the system, as reflected in the level of money market interest rates.

[20] Jaime Caruana, "Stepping out of the shadow of the crisis: three transitions for the world economy", speech at the Annual General Meeting, BIS, Basel, 29 June 2014.

[21] ESMA (The European Securities Markets Authority) is the European authority which regulates capital markets; it focuses increasingly on systemic risks which emerge on capital markets. ESMA, alongside EBA (The European Banking Authority) and EIOPA (The European Insurance and Occupational Pensions Authority), is part of the new architecture of the European system that regulates financial markets. ESRB (The European Systemic Risk Board) is the systemic risks focused watchdog for financial markets overall.

Financial markets in Romania are less developed, but this state of affairs is not necessarily negative; the thesis that economic development calls for deep financial markets should be fine-tuned – not least in light of the lessons of the Great Recession. Because what finance does, what money is used for matters enormously. It is a good thing for capital markets to develop in Romania, but they should finance, primarily, the economy alongside banks, or as an alternative to bank financing (when banks are reluctant to extend credit); if the stock market merely serves as a playing field, it does not benefit the economy too much.

Concluding remarks

Monetary policy, in the future, will probably be a mix of monetary aggregates control (via the use of macro-prudential measures – which are a euphemism for capital movement control) and more pragmatic inflation targeting[22]. Banking, financial markets in general, will evolve along lines that are mentioned below:

– a clearer segregation between banking functions (retail vs. investment);

– tighter regulation and supervision, with limits on leverage and higher reserves;

– customers might have to pay for deposits (the other way round than is the case now): an effect of very low interest rates and savings on the rise (fear of sitting on a cash pile will make up for the lack of remuneration of deposits);

– regulation of shadow banking, given that it plays an increasing role and may compound systemic risks;

– capital markets will be regulated more tightly (not least due to quasi-banking type activities);

– fintech will also have to be regulated.

Crises cannot be eliminated; however, they can be contained in terms of magnitude, and systemic risks can be mitigated, although not completely done away with. There is need for an effective regulation of the financial system (and separation of retail banking from investment banking – restoration of a Glass-Steagall type legislation makes sense), including shadow banking, stronger capitalization of financial entities, capping leverage, etc. The purpose of macroprudential tools is to cool down dangerous credit expansion.

Unless we manage to stave off a new major crisis in the near future, a very radical reform of monetary/financial systems cannot be ruled out, similar in spirit to the proposals aimed at separating lending banks from deposit banks (with full coverage of deposits by liquid assets), in a "narrow banking" vein, and at ensuring a very strict regulation of banks and non-banks that provide credit.

[22] See also Axel Weber, "Rethinking inflation targeting" (Voxeu, 8 June 2015); "Challenges for Monetary Policy in the EU", Homer Jones Memorial Lecture at the Federal Reserve Bank of Saint Louis, 13 April 2011.