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## **Shielding money creation from severe banking crises: How useful are proposals offered by the alternative reform plans?**

### **Abstract**

Since credit and money creation is the domain of commercial banks, a severe banking crisis may bring the process to a halt. This has occurred on several occasions in the past: during the Great Depression of the 1930s, during the Japanese two lost decades since 1990, and after the recent global banking crisis in some Eurozone countries. In all these cases the central banks' ability to revive credit and money creation was radically reduced. The severity of the recent global banking crisis and its negative impact on money creation prompted the reappearance of alternative banking reform plans among which the best known are the Chicago Plan and the narrow banking proposal. Both schemes display weaknesses which make their comprehensive implementation improbable in the full proposed form. Nonetheless, in some respects they are useful as a benchmark for assessing the recent proposals for banking structural reforms put forward by Paul Volcker, John Vickers and Erkki Liikanen.

Keywords: Chicago Plan, narrow banking, money creation

### **1.Introduction**

Since money is issued by commercial banks, its creation may be brought to a halt by a severe banking crisis, as was the case during the Great Depression in the early 1930s, during Japan's lost decades of the 1990s and 2000s, and in several developed countries after the global banking crisis that started in 2007(Sandilands 2009).

In the early 1930s, massive bank bankruptcies wiped out a third of money deposits in US banks. This caused a sharp fall in spending, which transformed an initial recession into the Great Depression (Fisher 1936). The American authorities' reaction to the disastrous consequences of the banking crisis came in the Glass-Steagall Act enacted in 1933 (Crawford 2011) which imposed full separation between commercial and investment banking and established the FDIC (Federal Deposit Insurance Corporation).

Three years later a more radical banking reform was proposed in the form of Chicago Plan (Simons 1936, Fisher 1936). Its most radical element was the abolition of fractional reserve banking which ultimately implied that money should be created not by commercial (deposit) banks but by the state. Very similar proposals of narrow banking schemes were put forward after the Second World War. In recent years these two proposals were brought back to the economic debate in reaction to the global banking crisis and the Great Recession it caused (Benes Kumhof 2012, Pennacchi 2012).

The main objective of the paper is to highlight that the alternative banking reform plans, despite their radical (in some respects) stance, provide a useful benchmark for assessing the official banking reform plans devised by Paul Volcker, John Vickers and Erkki Liikanen (Vinals et. al. 2013).

The unacknowledged merit of the Chicago plan and narrow banking proposal was the fact that their direct aim was to shield money creation – the banking industry's core function – from financial turbulence. Additionally, the Chicago Plan and narrow banking proposals

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address the core of the recent reforms: the necessity to roll back the taxpayers safety net to traditional commercial banking, as was initially intended in order to reduce banks' incentives to take excessive risks.

The rest of the paper is organized as follows.

Section 2 presents the role of commercial and central banking in the money creation process. Section 3 explains how banks' own issuing of wholesale deposits became a source of funding their rapidly growing trading and mortgage portfolios. Section 4 and 5 discusses the strengths and weaknesses of the alternative and recent banking reform plans. Section 6 concludes.

## **2. Money creation**

The source of money creation is loans extended by commercial banks. Central banks issue liquid reserves which are needed by commercial banks to enable their customers to make cashless payments and withdraw cash from their deposits.

### **2.1. Deposit money creation in commercial banks**

Money supply is the total amount of means of payments held by households and corporations (in the form of bank deposits and paper money) who use them to cover their current expenses on goods and services.

In a sense money is created by households and corporations each time when they decide to credit their money balances by their current incomes flows. Hypothetically, households and corporations could meet their demand for money only through crediting their bank accounts with their current income flows. Many households exhibit this pattern. Corporations, however, usually cannot afford to finance all their current expenses solely from their current incomes and they borrow the difference from banks. Historically, this was the role played by commercial banks: to extend working capital loans to corporations, enabling them to restock their money balances.

Deposit money is created *ex nihilo*. This is done by banks posting the amount of a loan on the assets side of their balance sheets and simultaneously recording the same amount on the liabilities side (McLeay et. al, 2014). This *ex nihilo* money creation does not invalidate the textbook credit multiplier, as a deposit outflow in one bank constitutes a deposit inflow in another bank, which can then use it to extend a new loan (Tobin 1963).

There is nothing negative about banks creating money *ex nihilo*. The value of money does not need to be backed by gold or any other asset. To maintain the value of its currency the central bank has to adjust the rate of growth in money supply to the demand for money consistent with long-term (potential) rate of GDP growth (Friedman 1968)<sup>2</sup>.

Money is simultaneously created and destroyed when bank loans are extended and repaid (McLeay et. al. 2014). From this point of view the role of traditional commercial banks is to enable corporations to manage their liquidity, i.e. to adjust their money balances to their current expenditures. Traditional commercial banks can be thought of as agents running the payments system as they enable their customers to make payments and to take loans in order to restock their money balances.

In contrast to working-capital loans, long-term loans need to be financed by savings if the economy is to stay on its equilibrium growth path. Financing investment or mortgage loans through the creation of deposit money may cause inflationary pressure which in turn may divert real rate of interest from its natural level and feed a boom-bust cycle (Wicksell 1898, Mises 1912, Hayek 1935, Borio, Disyatat 2011).

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<sup>2</sup> Under the gold standard system price stability resulted mainly from a lucky coincidence: the supply of gold was growing more or less in line with the growth of global GDP (Cassel, 1936)

Nonetheless, despite the possibility of such overinvestment (and malinvestment) cycles, for a very long period of time the ratio of bank assets to GDP remained stable (Haldane, Alessandri 2009). This reflected the model where the dominant form of bank lending was short-term working capital loans. This, in turn, illustrates that these loans met corporations' demand for money which was growing proportionally with the GDP.

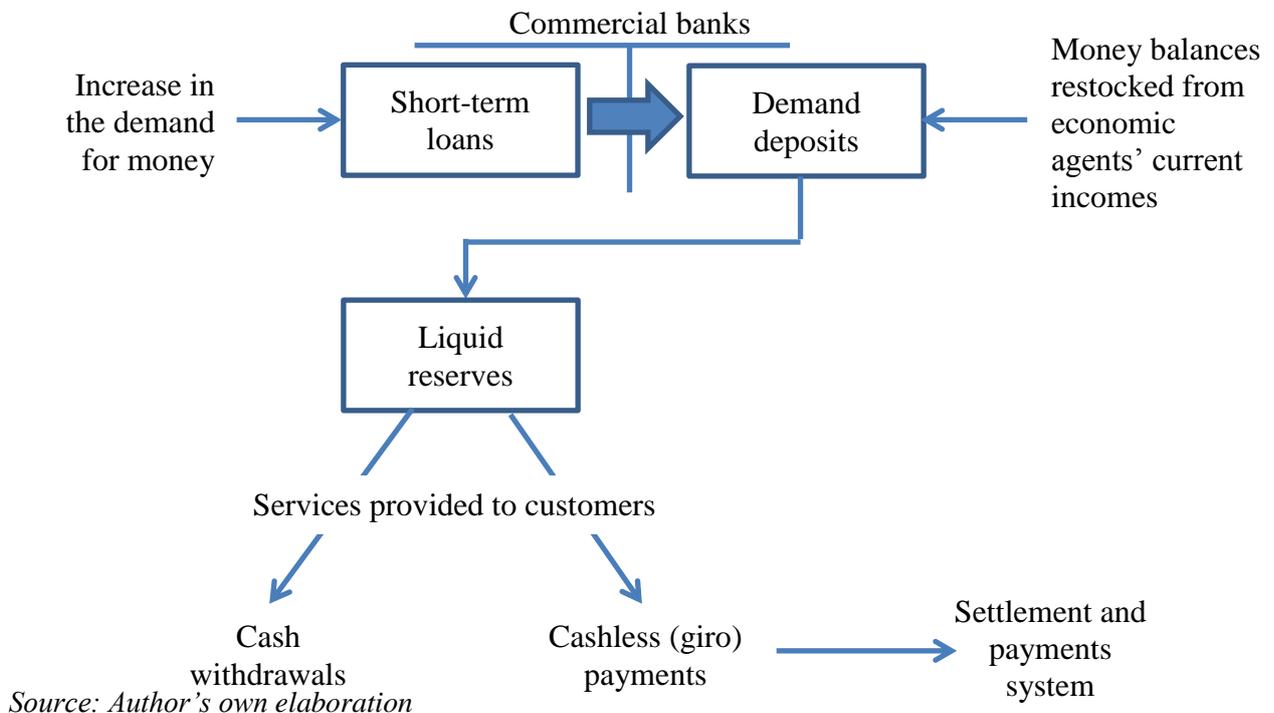
Banks' business models started to change radically in the 1980s with the emergence of large universal banks whose trading and mortgage portfolios began to grow rapidly; much faster than the GDP. The gap was covered by exponentially growing short-term wholesale funding.

## 2.2. Liquid reserves and paper money creation in central banks

Commercial banks create deposit money, but they need central bank's liquid reserves to make it useful for commercial banks' customers. There are three reasons why commercial banks have to maintain liquid reserves on their current accounts held with the central bank. Firstly, they are necessary for *giro* (cashless) payments between customers' deposits in different banks. Secondly, commercial banks obtain currency (legal tender) by converting part of their liquid reserves into paper money to enable their customers to draw cash from their deposits. Finally, commercial banks are typically obliged to meet reserve requirements imposed by regulators. The way commercial banks obtain liquid reserves is either by selling foreign exchange to the central bank (in the past gold) or by borrowing these reserves from it.

The amount of liquid reserves commercial banks hold with the central bank is a small fraction of their deposits because liquid reserves are used to cover only net balances in the settlement and payment systems<sup>3</sup> Additionally, banks manage their liquidity effectively through the interbank money market.

Figure 1. Commercial and central banks role in money creation



<sup>3</sup> Nowadays even non-financial firms begin to issue deposit money, if they have settlement and payment system and access to the central bank liquid reserves through a credit line in a commercial bank (*The Economist*, 2014).

Basic textbooks descriptions state that the central bank regulates the monetary base (the volume of banks' liquid reserves and cash in circulation), which enables it to control money supply owing to money multiplier (the ratio of money supply to monetary base) stability. In reality the process of controlling money supply happens in reverse order, as commercial banks adjust the volume of their liquid reserves to the volume of retail deposits they create to meet the required reserve rate (Goodhart, 2009c).

Central banks *do* control money supply but indirectly. The process is carried out by the interest rate policy and the ultimate target is to adjust money supply to the demand for money which is consistent with the potential GDP growth (Friedman 1968).

During credit deadlocks central banks may alleviate banking crises by adopting quantitative easing policy as initially proposed by Ben Bernanke for Japan (Bernanke 1999). Under quantitative easing programs central banks do not print money (as it is frequently stated), but issue liquid reserves (on an unconventional scale) which are used to purchase assets (mainly treasury bonds) from commercial banks. Central banks might issue money only if they were buying bonds directly from governments or corporations on a large scale<sup>4</sup>.

### **3. Wholesale deposits creation in investment and universal banks**

The global banking crisis outbreak was preceded by an exponential growth in banks trading and mortgage portfolios which were largely financed by a massive issuance of short-term wholesale deposits created by banks themselves<sup>5</sup>. The common way in which banks can create short-term wholesale deposits is by using repo transactions (Shin 2012). The general principle of liquidity creation through repo transactions is fairly straightforward. However, as their role in banks' creation of wholesale deposits is not widely known, the basic principle is shown in Figure 2.

Let us assume that a bank borrows an unsecured interbank deposit to buy Treasury bonds. It can immediately sell these bonds in the spot leg of a repo transaction and repurchase them in a forward leg. Entering a repo transaction is equal to borrowing a collateralized deposit, because before the forward transaction matures, the borrower can use the cash obtained from selling bonds in the spot market.

Let us further assume that the same bank uses the cash to buy another tranche of Treasury bonds to sell them in the spot leg of another repo transaction and repurchase them in forward leg. Entering subsequent repo transactions means that the bank borrows further collateralized deposits which can be used again for similar transaction<sup>6</sup>.

While the repo market has been used by investment and universal banks for years to create funding for their trading portfolios, the scale of this activity spiked in the period before the recent global banking crisis which contributed greatly to its severity due to runs on repo markets which forced fire sales of banks assets. The most well-known example was Lehman Brothers whose collapse was initiated by the withdrawal of wholesale deposits (kept previously with Lehman in the form of repo transactions) by more than one hundred hedge funds (Adrian et. al. 2013, Kotlikoff 2012).

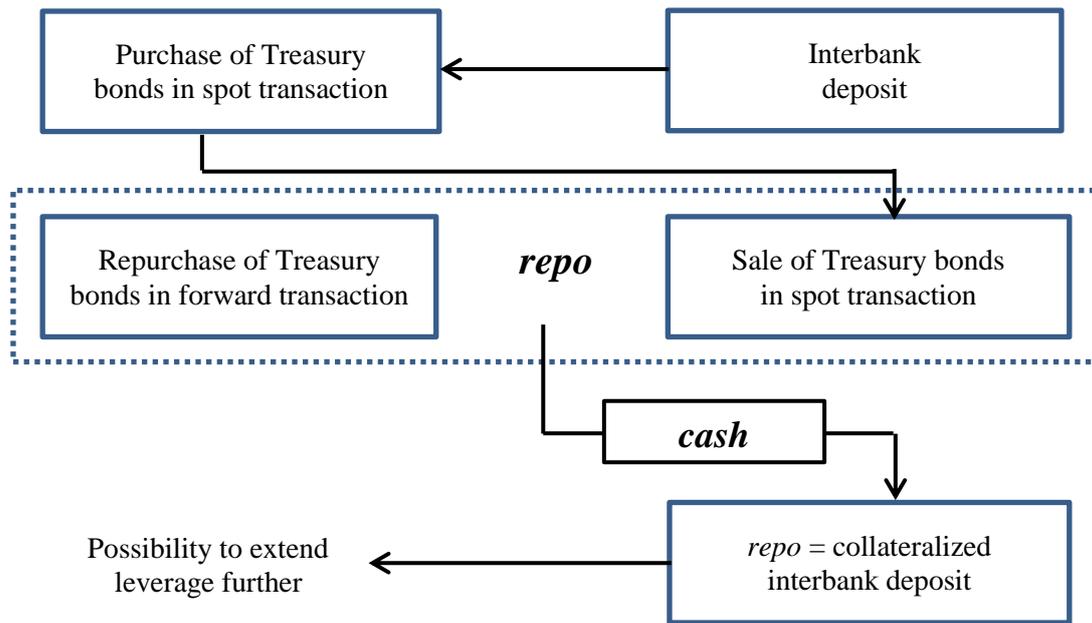
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<sup>4</sup> If central banks do not resell treasury bonds purchased from banks under QE programs and keep them permanently on their balance sheets, it will amount to *ex post* monetization of public debt (Turner 2015)

<sup>5</sup> Wholesale deposits are not a part of money supply. Nonetheless, because their issuance was financing unsustainable lending booms on mortgage markets it added indirectly to the money supply to the extent in which mortgage loans were used not for purchasing properties but also to cover borrowers current expenditures on goods and services.

<sup>6</sup> Wholesale deposits are easily convertible into central bank money (cash and liquid reserves) because large investment and universal banks are among central banks' primary dealers (Reinhart 2008).

Figure 2. Creation of wholesale deposits by using repo transactions



Source: Author's own elaboration

The new method enabling universal banks to create wholesale deposits is re-hypothecation, i.e. using the same collateral for taking subsequent loans. Re-pledging permits a creation of interbank deposits in a similar way the credit multiplier facilitates money deposit creation. To illustrate this let us assume that Bank A pledges collateral with Bank B to borrow a collateralized deposit. Bank B can then use the pledged security to re-pledge it with Bank C to borrow another collateralized deposit (Singh, Stella 2012a). It is worth highlighting that haircut plays the same role here as reserve requirement ratio in the traditional credit multiplier. The similarities to the textbook credit multiplier are the reason why Singh and Stella use the term *adjusted money multiplier* to describe how re-hypothecation enables the multiplication of wholesale deposits (Singh, Stella 2012b).

In case of trading portfolios short-term wholesale deposits are a natural source of financing as these portfolios are used for short-term speculation and trades are unwound even intraday (Copeland et. al. 2012). Nonetheless, the massive use of short-term financing augmented systemic risk as it increased the interconnectedness within the financial system.

Funding mortgage portfolios with wholesale deposits created not only the interconnectedness risk but also serious liquidity risk which was unavoidable when financing long-term and illiquid asset with very short-term liabilities.

Large universal banks themselves were simply shortsighted and pragmatic. They were massively using short-term financing for their mortgage portfolios as it was an inexpensive source of funding and they tacitly assumed that should their solvency become at risk they would be bailed out by authorities (Haldane, 2009).

An important question that arises at this stage is why regulators remained unconcerned about a rapidly growing scale of wholesale short-term funding in banks operations? To a certain extent this could be explained by the prevailing view that owing to scientific advances in risk management banks would be able to continuously adjust their potential losses to their capital and well capitalized banks would not have problems with accessing liquidity (Persaud

2009). This provided a seemingly legitimate justification for the belief that as long as banks were well capitalized there was no immediate threat of runs on wholesale short-term deposit markets. More importantly, short-term lending was viewed as crucial for imposing market discipline on banks (Calomiris 1991).

Central banks also felt complacent. While interest rates had indeed been raised to contain lending booms the scale of these hikes was in general insufficient (with the exception of New Zealand and Australia). The cause can be partially attributed to confidence in price stability as a symptom of an economy remaining on the equilibrium growth path.

#### **4. Alternative banking reform plans**

In the 1930s, the consequences of severe banking crises were particularly disastrous, because at that time central banks failed to provide sufficient liquidity to prevent runs on commercial (deposit) banks and their massive bankruptcies. Consequently, in the United States bank bankruptcies wiped out a third of all money supply which turned the initial recession into the Great Depression (Fisher 1936).

The American authorities' responded by passing the Glass-Steagall Act of 1933. It imposed a full separation between investment and commercial banking as banks' involvement in financial markets had been identified as the primary cause of their losses. The Act also established the FDIC (Federal Deposit Insurance Corporation) to prevent panic deposit withdrawals. The FDIC was empowered to institute orderly resolution guidelines which enabled the failing banks to continue credit and money creation despite their entering bankruptcy procedure. As we know today, the Glass-Steagall Act turned out to have been a very effective structural reform and until its repeal by the Gram-Leach-Bliley Act 1999 the US economy enjoyed six decades without banking crises (Crawford 2011).

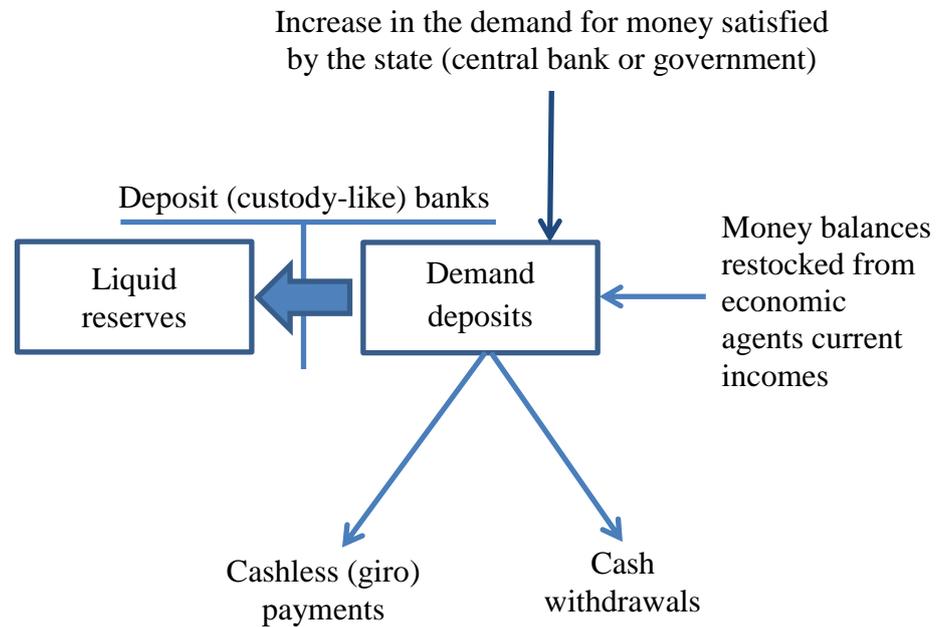
##### **4.1. The main features of the Chicago Plan and the narrow banking**

Three years after enacting the Glass-Steagall Act, a more radical Chicago Plan was put forward as a remedy to shield bank deposits from their possible destruction in the event of a banking crisis (Simons 1936, Fisher 1936). The Chicago Plan identified the fractional banking system itself as the root cause of the banking crises as before the deposit insurance scheme was introduced banks had been exposed to runs and the depositors knew that in case of a crisis they might be unable to withdraw their deposits, because banks kept most of them invested in illiquid assets (loans), and they held only a small of fraction as liquid reserves (Fisher 1936). The Chicago Plan proponents preferred not to resort to deposit insurance, because it might have involved moral hazard and excessive risk taking.

Thus, the proposed solution was an institutional separation of bank lending and deposit taking. This led to the proposal to create custody-like banks accepting deposits and investing them exclusively in central bank liquid reserve or Treasury bills convertible into central bank base money. The conversion of fractional reserve banking into full (100%) reserve banking was intended to prevent bank runs, because bank customers would be able to withdraw cash from their deposits under any circumstances.

As the proposed custody-like banks would have been restricted in their operations to deposit taking and running the payment system, the remaining banking operations were to be conducted by savings banks. The Chicago Plan's implementation would mean that extending loans would cease to be a source of money creation, which would become reserved for the state authorities (e.g. central bank). This would eliminate the difference between liquid reserves and money (Fig. 3).

Figure 3. Chicago Plan: money creation by the state



*Source: Author's own elaboration*

The severity of the recent global banking crisis prompted the resurgence of the Chicago Plan (Benes, Kumhof 2012) and similar proposals of narrow banking (Pennacchi 2012). The most far-reaching change is found in the limited purpose banking scheme proposing liquidation of banks by converting them into mutual funds to eliminate systemic risk as mutual funds do not take risk on their account (Kotlikoff 2012).

Neither the Chicago Plan nor other alternative banking reform schemes provide a precise elaboration of a mechanism how the relevant authorities (the state represented by its central bank and government) could control money supply. The only specific proposal was put forward by Milton Friedman who pointed out that the source of money supply might be budget deficit money financing (Friedman 1948).

Friedman assumed that the volume of tax revenues and expenditures might be set in such a way that the budget would be in balance when the economy grew at a rate consistent with its potential. Consequently, a budget deficit would signal that economy is growing below its potential. Under such assumptions money financing of the budget deficit would mean nothing more than adjusting money supply to demand consistent with the equilibrium growth path. Similarly, a budget surplus would signify that the GDP growth is above the economy's potential. Thus, through investing budget surpluses in capital markets the government would destroy a part of money supply adjusting it to money demand consistent with potential GDP growth.

Milton Friedman's proposal is an exception in its clarity. In general, the alternative banking reform schemes do not offer specific macroeconomic recipes how the state could create and control money supply. A likely reason of this omission is the difficulty to devise a system that would be fully resistant to the government misuse of its power to issue money (Friedman 1948).

#### **4.2. Shortcomings of the alternative banking reform plans**

The alternative banking reform schemes underestimate the political economy implicated by the switch to the system under which money is created by the state. None of the schemes explain how the state could effectively allocate the newly created money as abandoning the fractional banking system would mean surrendering elasticity and efficiency it offers.

The alternative banking reform schemes tend to overstate the risks associated with short-term lending which, in fact, serves merely as a tool enabling households and corporates to adjust their money balances to their current expenditures. This overemphasis led to the proposal that even short-term loans should be extended by savings banks. However, as highlighted in section 2, short-term loans do not have to be financed with savings. If they were, an unnecessary deflationary bias on the banking system and the economy would ensue (Kregel 2012).

The Chicago Plan's implementation might lead to a scenario in which the banking system would consist of highly regulated but low profit custody-like deposit banks on the one hand and less regulated but high profit savings banks on the other. In periods of economic expansion households and firms could move their deposits from the protected deposit banks to the unprotected (less regulated) savings banks offering higher interest. Conversely, during economic downturns there might be a flight from savings to deposit banks. Hence, the narrow banking model has a strong pro-cyclical potential (Goodhart 2009a, 2009b).

Apart from the limited purpose banking proposal, neither the Chicago Plan nor the narrow banking concept take into account the modern financial system's sophistication and the complex relations between banks and other financial institutions such as shadow banks, insurance companies, private equity and hedge funds (Kotlikoff 2012).

#### **5. Recent banking reform plans**

Since the 1980s, there has been a substantial increase in banks profitability accompanied by a steep increase in the risk exposure (Haldane, Alessandri 2009)<sup>7</sup>. Behind the rise in banks profitability and their increased risk taking was the emergence of large universal banks with their precipitously growing trading and mortgage portfolios. The rapid pace of mergers was driven by financial institutions race to put different kinds of financial operations under the shield of the state safety net (Hoenig 2013). Hence, the mergers of different financial institutions (commercial banks, investment banks, insurance companies, asset management entities etc.) prompted an extension of the safety net far beyond its original purpose which was to shield the process of money creation and operating the payments system.

The mergers spawned the so called universal banks (in fact financial conglomerates) and thus produced a situation in which non-monetary financial activities – investment banking, insurance and real estate – were put under the umbrella of the safety net financed by taxpayers. Furthermore, what made motivation for mergers even stronger was financial institutions' quest to obtain the (informal but real) status of too-big-to-fail companies enjoying an implicit subsidy in the form of reduced funding costs (FDIC 2014).

Both subsidies – the one conveyed by the official safety net and the other implicitly derived from the too-big-to-fail status - incentivized banks to take excessive risk at the cost of increasing the volume of taxpayers money at stake. For traditional commercial banks involved in short-term lending, the risk of extreme events (tail risks) is relatively small. In contrast, universal banks operations in investment banking lead to a much larger tail risk due to occasional deep falls of prices as a consequence of black swans randomly visiting financial

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<sup>7</sup>The sharp rise in volatility of banks' rate of returns – after the emergence of large universal banks - puts into question the argument that diversification of their activities was beneficial for their stability.

markets (Taleb et. al. 2012, De Grauwe 2009). The tail risk was further magnified following the extension of the safety net to mortgage portfolios, as it increased the probability of boom-bust cycles (Turner 2013). In 2007 and 2008, all these risks materialized. The financial markets' crunch induced the damaging feedback loop between runs on wholesale funding markets and fire sales of banks' securities portfolios which resulted in their hefty balance sheet losses.

### **5.1. The main features of Volcker's, Vickers' and Liikanen's reform plans**

As the recent banking crisis unfolded, it became clear that a decisive banking reform was necessary. Among the core issues which made this task challenging was the fact that since the 1980s large banks have become (1) too involved in financial markets operations, which induced large balance sheet losses, (2) too interconnected, which entailed the systemic risk of domino bankruptcies, (3) too big to be allowed to fail, which made taxpayers money the obvious source of funding bailouts, (4) too complex to be properly managed and orderly resolved, (5) too much involved in short-term funding of long-term mortgage loans which elevated banks' maturity mismatches to extreme levels, and (6) too wealthy and politically influential to allow the imposition of effective regulations on them (Zingales 2012, Jabko, Massoc 2012, Johnson, Kwak 2010, Lall 2010).

The response to these problems came in the form of structural bank reforms put forward by Paul Volcker, John Vickers and Erkki Liikanen (Gambacorta, Rixtel 2013, Mitchell J. 2014). These proposals were intended to make large financial conglomerates less complex and interconnected to enable their orderly resolutions with a view to reducing the likelihood of severe banking crises. The general idea emanating from these three proposals was to impose a structural separation between commercial and investment banking with differences in the form and scope of such separation.

The Volcker Rule – which became an integral part of the overall banking reform in the US (Dodd-Frank Act) - imposes a full separation between a bank holding company and its entities involved in proprietary trading or investing in hedge funds and private equity. It permits a number of investment banking activities to remain within the bank holding company. Such an approach stems from the assumption that market-making, hedging and underwriting are part of relationship banking in contrast to proprietary trading which epitomizes the culture of investment banking that eroded the commercial banks traditional standards because of its focus entirely on selling financial products (Volcker 2012).

John Vickers and Erkki Liikanen propose ring fencing as the form of structural separation between commercial and investment banking within bank holdings. The main difference is that whereas Vickers' proposal advocates ring-fencing commercial banks from all basic investment banking activities and placing them in other entities of a holding, Liikanen postulates to separate only trading entities which deal with proprietary trading and market-making through creating special subsidiaries. This variation between the British and the continental model of ring-fencing has roots in different banking traditions (Goodhart 2013). The United Kingdom had a long tradition of keeping commercial and investment banks separate and the recent emergence of large universal holdings was historically a new phenomenon. On the other hand, in continental Europe separating off only those entities which are involved in proprietary trading and market making resulted from a long tradition of having universal banks. The other reason was that during the recent crisis banks in continental Europe incurred substantially smaller losses than in the UK and the US.

## **5.2.Shortcomings of the recent structural reform plans**

A structural deficiency of the recent official banking reform plans is that they permit a number of exceptions which casts doubts on their effectiveness in eliminating interconnectedness and ensuing resolvability (Vinals et. al. 2013). Additionally, the definite ring-fencing imply entire separation of governance, risk and balance sheet management. This in practice would mean a break-up of large banks which is not a part of official agenda.

Another weakness is that all reforms still plans still lack credible resolution mechanism for large international financial holdings. Achieving this goal entail more simplifying their structures which is not envisaged in the recent reform plans (Kay 2012). The lack of resolution mechanisms credibility is illustrated by the fact that their formal existence did not eliminate the implicit state guarantee conveyed by the too-big-to-fail status.

If recent reforms were effective, large banks would lose their ability to enjoy a subsidy derived from the possibility of borrowing at a lower cost than other banks. A large body of empirical research suggests that large universal banks continue to enjoy such an implicit subsidy after implementing the official reform schemes (Schich et. al. 2014, IMF 2014). This illustrates that investors do not perceive resolution of large global banks as likely after the Lehman Brothers bank bankruptcy, whose consequences were dire. A decision to initiate an orderly resolution procedure of a global institution with hundreds of branches and subsidiaries in many different countries might evoke such high levels of uncertainty that an initially orderly resolution would morph into a disorderly one. A self-fulfilling prophecy would materialize which would necessitate a large scale government bailout (Johnson 2013).

As was said before, the alternative banking reform plans are perceived as radical. However, the question that must be asked at this point is whether any banking reform can effectively alter the incentive system within the banking industry without being radical enough. The validity of such a question has been confirmed by seminal empirical research on the Volcker rule imposition. It confirmed its effectiveness in preventing banks from engaging in proprietary trading. Yet, banks continued to aim their risk/expected revenue targets by increasing their risk taking in other operations (Keppo, Korte 2014). This speaks up for breaking up banks into smaller units or imposing strict ring-fencing within bank holdings as otherwise universal banks may still meet their risk targets by circumventing regulations.

## **6.Concluding remarks**

In the wake of the Great Recession, triggered by the global banking crisis of 2007, several central banks became trapped in the zero lower bound. Federal Reserve Bank, Bank of England and European Central Bank were unable to reinvigorate bank lending despite cutting their interest rates to a zero level and providing large amounts of liquidity to the banking system.

Prior to that crisis, credit deadlocks were believed to be highly improbable in developed countries owing to the progress in measuring and managing risk. It was assumed that banks would be effectively adjust their risk (potential losses) to the volume of their capital (determining their loss absorption capacity), which would in turn eliminate the risk of bankruptcies. In practice this assumption was proven incorrect, because large banks were sidestepping regulations and taking incomputable tail risk (De Grauwe 2009).

The experience of the global banking crisis and the credit deadlock it caused speak for a radical banking reform which would effectively shield credit and money creation from severe banking crises. The way to achieve it which was postulated in Chicago Plan and in different narrow banking proposals was unnecessary radical as was illustrated by the six decades without banking crisis in the U.S. after imposing Glass-Steagal Act. Nonetheless, the

underestimated benefit of the Chicago Plan and narrow banking proposal is that they aim directly at shielding credit and money creation due to its unique importance for the real economy. Disappointingly, the contemporary official banking reforms define financial stability in very broad terms not taking sufficiently into consideration that it was a prolonged halt in money creation which was the most damaging outcome of the recent global banking crisis in several developed countries<sup>8</sup>.

The recent banking structural reforms focus on broadly conceived financial stability may distract public opinion from realizing that shielding the safety of credit and money creation from severe banking crises might be achieved mainly through solving the problem of too-big-too fail financial institutions which would make banks truly resolvable (as illustrated by decades of efficient orderly resolutions of American small and medium-sized banks by the FDIC) and much more responsive to market discipline (Hoenig 2013, 2012). The shortcomings of the recent banking reforms increase the risk that credit deadlocks may again deprive central banks of their ability to adjust money supply to the need of stabilizing economic growth.

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<sup>8</sup> An example is the ECB’s definition: “Financial stability can be defined as a condition in which the financial system (...) is capable of withstanding shocks and the unravelling of financial imbalances. This mitigates the likelihood of disruptions in the financial intermediation process that are severe enough to significantly impair the allocation of savings to profitable investment opportunities” (ECB 2012, p. 5)

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