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NARROW BANKING - BANKING SYSTEM WITHOUT PRIVATE ISSUANCE OF CREDIT MONEY AS A SOLUTION FOR MORE RESISTANT BANKS AND MORE STABLE FINANCIAL SYSTEM

Jelena Radojičić

University of Niš, Faculty of Economics, Serbia ⊠ jelena.radojicic@eknfak.ni.ac.rs

Predrag Radovanović

High Business School, Leskovac, Serbia ⊠radovanovic.predrag@vpsle.edu.rs

Abstract: The global financial crisis has revived interest in the introduction of the "narrow banking", which has become a topical Review paper issue in both political and academic circles. There are attitudes that banks have maximized yields by excessive credit expansion, while the losses associated with the excessive risks undertaken in pre-crisis period fell at the expense of taxpayers. Based on the idea that modern financial systems have structural problems whose solution requires fundamental reform, a new wave of regulatory proposals is launched for solving the problems. They are generally aimed to eliminate the banks' ability to issue credit money that enjoys both implicit and explicit government guarantees. The concept of narrow banking, as one of the variants of full-reserve banking, provides ex-ante a level of bank deposits' protection which is the same as the level of central bank's money protection. Motives for the application of this concept are the following: to make banks more resistant to bank runs; to avoid creating a speculative "bubbles"; and to make the financial system more stable. The paper gives an overview of historical and new proposals of narrow banking. In addition, the concept of narrow banking is analyzed from the point of view of its basic characteristics and objectives, followed by a discussion on the problems and possible success of its implementation.

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Introduction

The modern money is credit money and a significant part of it is the bank debt, or privately issued money through the credit and deposit multiplication process in the banking system of fractional reserve banking. By issuing money in the form of a promise to pay cash on demand, banks have become vulnerable to bank runs. In order to preserve the stability of both the banking and the monetary systems, bank deposits are protected by the government security network that generates social costs due to moral hazard in banks' behavior.

Money as a bank debt is not necessarily the problem because it can be easily created but also easily cancelled. However, in a system where banking sector does not bear the consequences of the risks undertaken, market discipline weakens and banks realize the maximum benefits from money issuing, while minimizing costs. Banks can use their depositors' money to invest in riskier placements that bring them higher return rates, while any losses due to bad business decisions shall be eventually borne by taxpayers, in addition to the banks and their shareholders.

The global financial crisis began in 2007 in the US mortgage market. Excessive credit expansion and non-performing mortgage loan securitization were basically the mechanisms of formation of speculative "bubble" whose bursting led to a financial crisis of global proportions, followed by a serious economic consequences and a global recession. Following the bankruptcy of *Lehman Brothers* in September 2008, governments have taken a number of actions to prevent bank failures and restore confidence in the financial system: bank recapitalization and guarantees for, or acquisition of, "toxic" assets. In this respect, a question was raised as to what should be done to ensure that taxpayers will not have to protect financial institutions in the future, if their deposits are endangered.

In response to the effects of the global financial crisis and the role of credit "boom" in its formation, a new wave of proposals and research emerged in the area of full reserve banking. Most of the suggestions are based on 100% coverage of deposits in cash, deposits with the central bank, government bonds or similar risk-free active.

The basic idea of narrow banking is to eliminate — through separation of monetary and credit functions — the ability of banks to use government-insured deposits (i.e., money they create) as a source of funding for their lending activity.

1. Credit Money as a Potential Cause of the Financial Crisis

Throughout its history, the money took on different forms (e.g., commodity money, paper money) and changed its modus operandi. The changes in the form

of money were usually accompanied by a radical transformation in the economic sphere.

The regime of state-controlled credit money, which was established after World War II, was the pillar of global expansion over a relatively long period of time. During the seventies and early eighties, however, the regime has undergone a structural crisis that tore its key components. Many economists link the end of the postwar boom with the "Oil Shock" of 1973. Similarly, there are views that connect the slowdown of the US economy with some other important factors such as growing competition from European and Japanese manufacturers; saturation of demand in key industries (e.g. in the automotive industry); as well as the imbalance between wage increases and productivity growth. According to this understanding, the end of the boom was masked for years by the increased lending activity, which has helped to maintain the existing level of aggregate spending, despite the fact that the income level began to stagnate or even to decrease. This initial response to the economic slowdown has prepared the stage for the subsequent structural crisis (Guttmann, 2003, p. 27).

As a consequence, the pace of money creation accelerated in order to compensate for the reduction of income and consumption. The rapid creation of credit money caused a fundamental change in the dynamics of the structural crisis: the banks were providing money to finance budget deficits and lending activity to the private sector in order to prevent the reduction of aggregate demand to the point that would cause depression. Thus, instead of depression, a long-term stagnation began, accompanied by rising inflation, which is also a structural crisis, but in a somewhat milder form. This so-called stagflation crisis was far more moderate than depression, but at the cost of accelerated money creation to support the current level of consumption, which led to a gradual devaluation of money — the process of debt monetization, which socializes private risks and losses and transfers them to all users of the national currency (Guttmann, 2003, p. 28). In the initial phase of stagflation, growing debt was artificially masked by low interest rates, but as the crisis progressed, the level of debt has become such that heavily indebted borrowers had to service their debts through additional borrowing, thereby setting the stage for long-term financial crisis (Minsky 1982).

We are, in fact, witnessing a series of successively intensifying financial crisis, which take the form of recurrent credit crisis when inflation, credit and money supply are rising rapidly to the point of the cyclical peak.

The inflationary pressures constantly undermine the quality of paper money. For example, in the period 1971-1991, the German mark has lost more than 52% of its value; during the same period the US dollar has lost more than 70% of its 1971 value, while the British pound lost more than 84% of its 1971 value (Deane and Pringle, 1994, pp. 352-353). The permanent devaluation of paper money leads to a loss of public confidence in money and weakens all of its functions. Inflation

degrades the function of money as a reliable store of value. Since the debts are repaid in devalued money, the function of money as a standard of deferred payment is also endangered. Frequent price changes call into question the function of money as a measure of value. As a result, even the function of money as a medium of exchange is affected: there are many examples of conversion to more reliable money forms¹ and, in extreme cases, even reverting to barter.

Hence, any standard based on paper money (or, more precisely, on credit money²) carries the inflationary bias stemming from the dual nature of money: it serves as a public good — bearing in mind that its proper functioning (i.e. smooth circulation, stable value, etc.) brings great social benefits — while, on the other hand, it contains elements of private good, because issuing institutions seek to maximize their profits³.

The money is intended to serve primarily as a public good. In the postwar regime of state-controlled credit money, government supported its currency and took care of its smooth functioning. There are perceptions that the government's request that banks should issue a uniform currency enhanced the banks' ability for overissue. According to these conceptions, in the system of mutually competing, privately issued banknotes, overissue is limited because such banknotes can be immediately returned to the issuing bank. Historical data show that those banks that have been able to establish their reputation for prompt payment of gold in exchange for their banknotes, noticed that their banknotes circulated longer and exchanged at par. On the other hand, in the system of state-controlled credit money it is impossible to identify overissuing banks and return their banknotes back to them. In fact, this government enforcement (that all banknotes and checks should be traded at parity) reduced market discipline of financially less stable banks. According to this view, Gresham's law⁴ applies only in markets in which government enforced fixed exchange rates, where the "bad" money is overvalued in relation to the "good" money. Since all banknotes have to circulate at face value, those that are issued by less stable banks ("bad" money) are overvalued compared to those issued by stable banks ("good" money) (England, 1997, pp. 291-292).

¹ For example, in a number of economies affected by hyperinflation so-called "dollarization" occurred, when people started to use the US dollar instead of their national currency.

² Given the fact that modern paper money is, in fact, credit money.

³ Nowadays banks are generally established in the form of joint stock companies and consequently their objective function can be defined as profit maximization, i.e. providing sufficient yield per unit of equity capital. A higher rate of return per unit of share capital in the long run results in an increase in the market value of the bank, so an essential objective function of the bank is, indeed, increase of its market value, while maximization of rate of return per unit of equity capital represents a manifestation of the objective function of the bank. For details, see: Krstić (2003), p. 294.

⁴ *Gresham's Law* is often cited in its simplified form: "Bad money drives out good". British economist H.D. MacLeod named this law after *Thomas Gresham*, English merchant and financier who worked for King Edward IV and Queen Elizabeth I.

Financial regulation was quite rigid until 1980s, especially in the United States. Banks, however, generally managed to avoid rigid regulations through a number of financial innovations. Financial innovations have set the stage for the upcoming period of financial liberalization and securitization. The financial services industry is particularly suitable for innovation due to relatively small investments in "research and development". Financial innovations are generally based on different types of contracts in which one type of paper (e.g., money) is exchanged for other type of paper (e.g., securities). Rigid financial regulation undermines the ability of financial intermediaries to raise funds through traditional financial instruments. To survive in the new regulatory environment, financial institutions are looking for new products and services that will meet the needs of their clients and at the same time be profitable — a process that is referred to as financial engineering. There are three basic types of financial innovation: a reaction to the changing conditions on the demand side, a reaction to the changing conditions on the supply side and avoiding of regulations (Mishkin, 2004, p. 232).

For a long time the states were able to insure themselves the monopoly over money by fixing exchange rates, limiting international capital flows, limiting the holding of foreign currencies to its citizens, etc. The development of information and communication technologies has reduced the ability of states to control international flows of money, so state-sponsored currencies now compete with each other at international level. Through the process of financial engineering banks have managed to render the rigid regulatory requirements obsolete. For example, the leading transnational banks effectively avoided the jurisdiction of their central banks by doing their business in the Euro-market. As a highly privatized form of bank money, Eurocurrencies have contributed to the fact that private money aspect prevailed over its public good aspect. Therefore, it turned out that the Euro-market is prone to excessive lending. Unregulated Euro-market has made the domestic banking regulations ineffective, forcing governments around the world to financial deregulation. "For three decades we witness the Eurocurrencies market functioning as an engine for rapid multiplication of short-term capital flows to/from different currencies and countries. Connected through the Euro-market, the world's leading multinational companies (MNCs) and transnational banks (TNBs) constantly exchange information on the status of various currencies. When their collectively formed expectations on a single currency become sufficiently homogenized, these big players can easily launch a massive attack on a given currency, transforming their mutual expectations into self-fulfilling prophecy. At the end of 1960s Euromarket has evolved into a devastatingly effective network for speculative attacks against the dollar and other overvalued currencies. It is this constellation of players who operate in the Euro-market — with their orchestrated and frequent selling of dollars — that forced Nixon to abolish the convertibility of dollars into gold on 15 August 1971, which was the beginning of the end of the post-war monetary regime" (Guttmann, 2003, pp. 32-33).

Many economists hoped that the transition toward flexible exchange rates would allow central banks to focus their monetary policy on domestic problems, rather than on defense of fixed exchange rates. But in reality, market-determined flexible exchange rates have turned currencies into the subject of speculation. Trade volume in the global foreign exchange market grew to unprecedented proportions: it has become a kind of global casino in which currencies are traded in huge quantities for the sole purpose of short-term capital gains. National policies that oppose the will of the big players in the foreign exchange market are offset by their combined sales of the currency in question, so that the states lose control over exchange rates. After the loss of control over the exchange rate, it was only a matter of time before the country begins to experience the same problem in relation to interest rates, as Keynes had correctly predicted (Keynes 1936).

The growing inability of states to control exchange rates made it significantly harder for central banks to maintain control over interest rates. If interest rates were low, the particular currency would be subjected to attack that is forcing interest rates up, thus setting the stage for the abolition of interest rates restrictions in the United States, as well as for the further deregulation of finance. Newly introduced floating rates on deposits forced the banks to avoid loans with fixed interest rates, in favor of loans with adjustable interest rates. It is this regime of floating rates that opened the door for even larger credit overextension. "This new regime of floating interest rates has given us, since 1981, much steeper inflation-adjusted interest rates, allowing lenders to charge higher risk and inflation premiums. Such high 'real' rates had a significant redistributive effects, pushing the share of wages in income, over industrial profit, toward interest income, whereby corporations squeeze labor to compensate for their growing interest burden [...] Deregulation has made private banks' money much more expensive" (Guttmann 2003, pp. 35-36).

Thus, money is slowly slipping away from government control. Control over the money is increasingly in the hands of private issuers, which are guided only by their private interests. Private money aspect prevails over its public good aspect.

The private interests of leading banks restrict even the autonomy of the central bank: some authors observed that central banks are beginning to behave more like privately owned companies, without being actually privatized (Deane and Pringle, 1994, p. 326).

Because of permanent conflict between the profit-motivated private issuers of credit money and its measure of the value function, credit money — instead of being the medium of exchange — becomes the medium for hidden redistribution of social wealth that facilitate the socialization of private sector risks and losses.

2. Creation of Credit Money by the Banks — The problem of Bank Runs and Socialization of the Banks' Losses

Unlike the banking system with full reserves in which the central bank is the debtor for all the money in circulation, in a fractional reserve banking (which characterizes modern monetary systems) most of the money represents a debt of commercial banks. Cash (coins and bills) represents claims on the central bank, so during the payment or settlement of liabilities that money only changes creditors, while the debtor remains the same. As demand deposits are accepted as a substitute for cash, they, in fact, represent money. The debtor for the "deposit money" is an individual bank, while payment with that money can mean changing of the creditors (if the debtor and the creditor have accounts with the same bank), or changing of the debtor, as well (if transactors have accounts with different banks) (Krstić, 2003, p. 239).

Banks are active subjects of money creation through the process of multiplication of central banks' money into bank loans and deposits (secondary issue of money). Banks do not create cash, but money *ex nihilo*, i.e., they increase the number of requests for a given amount of central banks' money (De Soto, 2006, pp. 167-263). Therefore, there is a risk that the bank will be flooded with depositors' requests for cash that it will not be able to fulfill. Accordingly, the credit money is made up of two parts: the part covered with paper money and the uncovered part. Clients deposited their money in the bank with the assurance that the money is in a safe place and that they can take it back whenever they want. Acceptability of deposit money depends on public confidence in the banking system, where the confidence is conditioned by the willingness of the economic system to sanction the so-called moral hazard of individual banks (Krstić, 2003, p. 233).

Under the normal circumstances — i.e., while banks are producing social benefits and while there is confidence in their security — even the banks with a large number of depositors and adequate reserves could easily satisfy demands for deposits withdrawal. However, in times of crisis the confidence is replaced with panic, and a massive deposits withdrawal could occur (Krstić, 2003, p. 263).

Reliability of the system, in which bank debt functions as money, requires the existence of appropriate government guarantees. Establishment of adequate institutional and regulatory framework — whereby deposit insurance is particularly important — weakens the effect of depositors' coordination error and reduces the likelihood of a massive deposits withdrawal in times of crisis (Diamond, Dybvig, 1983). However, deposit insurance schemes can potentially⁵ encourage risky behavior of both banks and depositors, i.e., there is the problem of moral hazard.

⁵ Some empirical studies have found that sole existence of deposit insurance system do not increases the likelihood of banking problems, unless the deposit insurance system is poorly designed in a weak institutional environment. For more details see: Demirgüç-Kunt and Kane (2002).

Due to the protection offered by the system of deposit insurance, depositors lack incentive to monitor the bank's operations, while due to a lack of market discipline imposed by depositors, banks engage in riskier investments in order to achieve higher rates of return, which leads to an increased probability of their bankruptcy. Efforts to make banks more stable (i.e., protection from bank runs) can actually weaken them. Banks can invest depositors' money in riskier placements that offer higher return rates and increase deposit rates to attract additional funds for investment (Dowd, 2009). If the risks prove to be a business success, the benefits belong to the banks; on the contrary, government deposit insurance schemes undertake the payment of the deposits. However, deposit insurance up to a certain amount per deposit provides complete coverage of about 99% of savers but only about 75% of the total amount of deposits, since the amount of a certain deposits exceeds the insured amount. If the government deposit insurance exists, the ability of banks to attract deposits is not affected by the risk taken. In the case of risk correlation in the banking system and a weak institutional framework, this can contribute to financial instability and the emergence of the financial crisis (Demirgüç-Kunt and Huizinga, 2004).

Prior to the introduction of the first explicit deposit insurance in the United States during 1933 (as a part of the Glass-Steagall Act), banking panic and serious bank failures were common in the United States (e.g. Panic of 1919, 1837, 1907, the Great Depression). During 1929-1933 about 9,000 banks collapsed (with about 4000 of them collapsed in 1933) and the public has lost confidence in the banking system. Once the FDIC (Federal Deposit Insurance Corporation) was established, the number of bank failures per year significantly dropped (see Figure 1), so starting from the 1960s, countries around the world have begun to provide deposit insurance (Demirgüc-Kunt and Kane, 2002). However, in parallel with the process of banking deregulation (Depository Institutions Deregulation and Monetary Control Act of 1980) and the so-called S&L crisis (Savings and Loan Crisis)⁶ of the 1980s and 1990s, a new wave of bank failures emerges, which is clearly seen in *Figure 1*. The federal deposit insurance — which has been extended to the sector of savings and loan institutions in 1934 — and corresponding moral hazard are considered as one of the roots of the problems (Ely, 1993).

⁶ In 1989, the US government was faced with the obligation to guarantee the dubious assets of almost the entire S&L sector, whose moral hazard emerged as a result of inadequate regulatory solutions. Federal Savings and Loans Insurance Corporation (FCLIC) was abolished and its activity was taken over by a new agency, a unit of the FDIC. For more details see: Ely (1993).



Source: FDIC,

(https://www2.fdic.gov/hsob/HSOBSummaryRpt.asp?BegYear=1934&EndYear=2015 &State=1&Header=0, 15.05.2015).

The initial reaction of countries worldwide to panic that began in October 2008 was an increase of the insured amount, and even the introduction of unlimited deposit insurance, which prevented bank runs during the global financial crisis. In addition to explicit government guarantees for a certain percentage of deposits in all banks, both good and bad (Philips, 1994), the government's willingness also exists to protect all deposits in all banks in times of crisis. Especially large and systemically significant institutions received substantial government aid during the financial crisis⁷. It can be concluded that such anti-crisis strategy has significant negative implications: first, deposit insurance schemes are not always effective and can encourage risky banks'

⁷ Nineteen largest US banks (each with assets exceeding \$100 billion) as well as the largest US insurance company, *American International Group* (AIG), received \$290 billion of aid from the *TARP* program (*Troubled Asset Relief Program*). Federal regulators also allow the same banks and *GE Capital* in (large financial company owned by *General Electric*) to issue FDIC guaranteed low-interest debt securities in the amount of \$290 billion. Federal Reserve System (Fed) has also provided the tremendous amount of funds to support the liquidity of financial institutions through a series of emergency lending program. Altogether, the federal government has provided more than \$6 trillion of support to financial institutions during the financial crisis, whereby this support is measured by the peak amount of assistance under the TARP program, the Fed's emergency lending program, the FDIC issued debt guarantees as well as other programs for assets guarantees and acquisition. European nations are similarly provided more than \$4 trillion of financial aid to their financial institutions by the end of 2009 (Wilmarth, 2012, p. 3).

behavior; and second, implicit government guarantees, reflected in its willingness to rescue "too big to fail" banks, generate costs socialization of excessive risks undertaken by the banks.

One of the characteristics of fractional reserve banking is a great elasticity of the money supply - credit expansion easily comes, as well as credit contraction. Credit money can be easily created, but also easily canceled. The economic consequence of this is the emergence of a specious prosperity (boom), which is then materialized in the form of a recession. Banks, motivated by the realization of interest margins, tend to increase credit supply, especially in times of rising prices of assets (which represent collateral for banks). The credit expansion artificially reduces the market interest rate, so debt financing becomes unnecessarily attractive. It also leads to an artificial "boom" and misdirected investments (Mises, 1998). Artificial boom cannot continue indefinitely. Mises (1998, p. 40) mentions two possible scenarios: first, banks do not stop the credit expansion causing a rise in prices and a growing volume of speculation, which eventually ends with the breakdown and the collapse of the monetary and credit system; and second, banks themselves stop further credit expansion before it reaches breaking point, which will lead to a crisis. Hence, both scenarios lead to a recession. In terms of the economic downturn, limited central bank's control over the volume of money and credit prevents sufficient cash inflow to stimulate economic growth. In the system of fractional reserve banking, supply of credit money is procyclical (i.e., it amplifies fluctuations in the economic cycle).

3. The Banking System with Full Reserves - A Historical Continuum of the Idea of Monetary Reform

Financial crisis renewed interest in the restriction of banks' activities. The opinion that the cause of financial instability lies in the monetary system with fractional reserve banking has led to advocating for the introduction of a banking system that includes full reserves. Each demand deposit would be fully covered with safe and liquid assets, which would prevent private money creation by banks through the process of deposit and credit multiplication. It is aimed to separate the payment operations from the credit system, i.e. to separate monetary policy from credit policy. The idea of a full reserve banking was implemented in certain forms in the past, as a solution to the problem of financial instability. In the UK the Bank Charter Act of 1844 prevented the private creation of money by request that banknotes (banking notes) have to be fully covered with government money⁸ (Phillips, 1994). In the US, the National Currency Act of 1863 and the National Banking Act of 1864 established the

⁸ Unlike requirement that only gold is accepted as a reserve, which is part of *Ricardo's* "Plan for the Establishment of a National Bank" that was a basis for this regulation.

obligation for banknotes to be covered at 111.11% (more than a full reserve). However, the full effects of the regulations in both cases have not been fully realized because they were all on the banknotes (which were prevalent means of payment at the time) and not on bank deposits, which eventually substituted banknotes (Lainà, 2015). In the period of financial instability and bank runs of 1930s, following the Great Depression, the *Chicago Plan* emerged in the United States as the idea of 100% money popularized by a number of prominent economists at the University of Chicago (Knight, Simons, Douglas, Mints and others). The plan advocates the transition to banking with full reserves on demand deposits, with the survival of the central bank (the first version of the plan was submitted in March 1933 and the second in November 1933). The idea is to remove the mechanism of credit expansion from private banks and to reduce the volatility of economic fluctuations.⁹

From a regulatory point of view, the idea of banking with full reserves was watered down with the adoption of the Glass-Steagall Act¹⁰ of 1933, which, instead of preventing the private money creation, separated commercial from investment banking, and introduced deposit insurance scheme. Chicago plan, however, drew widespread academic interest, and many similar proposals emerged in the following years (Currie, Angell, Fisher, Hayek, Simons, Friedman) (Lainà, 2015).

Irving Fisher (1935) gave an extensive study on the structure and implications of full reserve banking in his book "100% Money". According to Fisher (1935), deprivation of the bank's ability to create money would mean the end of bank runs; fewer bank failures; government debt reduction; simplification of the monetary and banking system; elimination of large inflation and deflation; and mitigation of cyclical fluctuations in economic activity. Fisher's attention was also directed towards restructuring of banking institutions. Although he did not go down deeper into the question of what is the best way to institutionally separate the functions of deposit taking and lending, he held that it would, in practice, mean a division of commercial bank into two parts: "one, a warehouse for money, the checking department, and the other, the money lending department, virtually a savings bank or investment bank" (Fisher, (1936) 2009, p.15).

⁹ Similar idea is advocated by followers of the *Austrian School* (Mises, Rothbard, Hulsman, De Soto) who believe that credit expansion cause significant disruption in the economy, which justifies a rigid monetary system that prevents monetary expansion and contraction generated by the fractional reserve system. They, in fact, promote "*free banking*" (a system without central bank that supports banks in case of problems and thus institutionalizes credit expansion) and the return of the gold standard. At the other end of the spectrum are theorists of monetary imbalance, Keynesians and the most of the monetarists — they see fractional reserve banking as a form of financial intermediation and underline importance of banks' role in the process of supplying the economy with money (Cochran et al., 1999).

¹⁰ Enactment of the law has led to the famous *House of Morgan* division to the commercial bank, *JP Morgan*, and the investment bank *Morgan Stanley*. Narrow banking is often referred to as "new Glass-Steagall" (Kay, 2009).

In the period after the Second World War, Maurice Allais strongly criticized fractional reserve banking, while more than a decade later Milton Friedman proposed replacement of the actual system with system based on 100% reserves on demand deposits. After a certain period of calm, in response to the FSLIC (Federal Savings and Loan Insurance Corporation) fiasco and bank failures of the 1980s and 1990s in the United States, the concept of narrow banking was developed, as a variant of full reserve banking (Bossone 2002). The concept is based on proposals for narrowing the banks' functions to deposit taking and their investment in risk-free, liquid, short-term assets. According to advocates of narrow banking (Litan, Pierce, Bryan) the result of separating credit and deposit functions into separate institutions would be a set of safe banks, which would carry out payment operations, while the problems of non-banking institutions would be isolated, without systemic effects. However, although the crisis episodes have occasionally rebuilt the interest in limitation of the banks' functions and monetary reform, they had no significant impact on the change of the institutional and regulatory framework.

The post-1980s was the period of financial liberalization, deregulation and securitization. The Law on the Modernization of Financial Services or the Gramm-Leach-Bliley Financial Modernization Act of 1999 eliminated all restrictive provisions of the Glass-Steagall law, allowing commercial banks in the United States open access to investment banking activities, and thus enabling their transformation into universal banks, which have traditionally dominated in Europe. Traditional banks become financial conglomerates, and regulatory activity — from 1988 and the first Basel Accord — focused on minimum capital requirements and risk management in banks. To some extent, these requirements have stimulated regulatory arbitrage and the use of offbalance sheet entities, which led to "hiding in the shadow" of the true nature of banks' activities, which has become blurred even to their management, let alone regulators. Minimum capital requirements have failed to restrain risky behavior in the years preceding the recent financial crisis, and contributed to worsening of the recession by imposing credit contraction when the credit crisis has already occurred (Kay, 2010).

In response to the global financial crisis, a new wave of proposals and research emerged in relation to full reserve banking, with the concept of narrow banking gaining attraction again.

4. The Concept and Suggestions of Narrow Banking

_The concept of narrow banking is based on the separation of the two basic functions of banks — deposit taking and lending. Generally, banks are considered to be specialized in deposit taking and payments, i.e. they participate in the payment system (transfer of deposits, which are fully covered by the safe and liquid assets, between banks) but do not perform the lending function, as shown in Table 1. In this system, banks cannot create money and perform maturity transformation of funds. The lending function is delegated to non-bank entities that collect funds for lending by issuing securities, and do not have access to the payment system and the central bank's lender of last resort function.

| Role | Central bank | Fractional reserve banking | Narrow banking | |
|--------------------|-----------------|-------------------------------|----------------|--------------------------------------|
| | | Banks | Narrow banks | Other financial intermediaries |
| Payment operations | YES | YES | YES | NO |
| Lending | NO | YES | NO | YES |
| Money creation | YES | YES | NO | NO |

Table 1 The Role of Banks in Fractional Reserve Banking Compared to Narrow Banking

Concrete proposals of the idea differ in the precise determination of banks' activities, as well as in the answers to some key implementation points of the concept. Variations exist in several aspects. The main differences are in the determination of what constitutes the safe assets of these banks, as well as whether they are allowed lending (and to what extent). According to the concept of narrow banking, banks would have to hold safe, stable and high-quality liquid assets in the amount equal to the amount of deposits they take. In addition to the central bank reserves and short-term government securities, some of the proposals also accept other (e.g. long-term) forms of assets, thus moving away from the concept of full reserve banking. The proposals that allow bank lending call for funding of these activities from commercial sources and own capital. Also, there is a difference in the proposals as to whether narrow banks should be subsidiaries or independent entities (Dixhoorn, 2013).

The first proposal and the term "narrow banking" originated from Litan (1987) during the S&L crisis of the 1980s.¹¹ According to this proposal, financial holding companies would be diversified to include two types of subsidiaries: *banks*, which take deposits and keep only safe assets (such as cash, government bonds and high-quality commercial papers) and *credit subsidiaries* that perform the role of lending and are funded by equity capital, commercial papers and other obligations.

¹¹Previously, economists and Nobel Prize winners Milton Friedman, James Tobin and Maurice Allais supported the idea of narrow banking. Also, during the 1980s, L. William Seidman (the former head of the FDIC) proposed the "two-window banking", in which depositors could choose between "secured" and "unsecured" window when depositing their funds (Philips, Roselli, 2011).

Pierce (1991) distinguishes between two types of companies: *companies for monetary services*, which keep current accounts and provide payment services (whereby they can pay interest on deposits, but have to invest in safe assets, such as short-term, highly liquid and high-quality securities), and *financial services companies*, which perform the remaining activities, including insurance. The first kind of the companies is banks, which enjoy unlimited federal deposit insurance. Bryan (1991) proposes "*core banking*" and defines bank as a subsidiary of a financial company, thereby allowing it to provide some lending services (such as granting mortgage loans and lending to small businesses). Kobayakawa and Nakamura (2000) also find that narrow bank should be allowed lending for the sake of its maximum efficiency, whereby only short-term investments are allowed.

According to Kay (2009), the largest source of systemic risk in the global financial crisis was hidden within the individual institutions themselves. Therefore, the most urgent, and in many respects the simplest, mechanism of regulatory reform is raising the wall between different banking activities. Banks should be divided into service banks (or money banks) and investment entities. Narrow banking focuses on the following activities: payment system (national and international) and deposit taking (from individuals and small and mediumsize enterprises). Banks may (but need not) engage in lending (especially in consumer and mortgage loans), but without a monopoly over these activities, provided that they are funded from commercial sources and own capital (Kay, 2009, p. 52). The separation must be closely monitored to ensure that the investment entities cannot gain access to the payment system, as well as that the maturity of their liabilities is at least equal to maturity of their assets. Banks will have to provide secure enough assets to cover all demand deposits, while the investment entities will have to remove current accounts from their balancesheets. Determination, however, of what constitutes "safe assets" should be in the hands of the regulator, not the rating agencies (as the crisis has shown that privatization of these activities was not the best solution) (Kay, 2010).

In the narrow banking, deposit insurance would be limited to banks (Kay, 2010; Dixhoorn, 2013). Investment entities do not enjoy government guarantees in any way, but their bankruptcy would have no adverse effect on the payment system and economic activity. There is also an opinion that the implementation of narrow banking would make deposit insurance completely unnecessary (Spong, 1996).

Deposit insurance, or the implicit government guarantee of all deposits in large banks ("Too Big to Fail" policy), represents an ex-post medicine that protects demand deposits (i.e., money created by the banks); it is based on the assumption that the costs of system instability (not just of banking, but also of the monetary system), as a result of lack of government intervention during the crisis, would by far and large exceed the costs of rescuing individual institutions. The idea of narrow banking, however, radically reverses this point of view: bank deposits must have ex-ante the same level of government protection as the central bank's money, virtually without direct costs, thereby reducing the scope of government safety net (Philips and Roselli, 2011). Boot and Greembaum (1992) define narrow banking as a form of direct regulation that prescribes specific types of activities, as opposed to the previous regulation, which changes the structure of institutions' incentives through a variety of indirect rules (minimum capital and liquidity requirements, provisions for credit losses, rules for market entry/exit, accounting requirements, etc.).

The implications of narrow banking can be summarized briefly as follows (Philips, Roselli, 2011):

- Narrow bank is a kind of a public service;
- The impact of monetary policy on lending to the private sector is likely to decrease;
- Capital requirements for banks will be lower;
- The need for government deposit insurance would be diminished, because the banks' solvency would rarely be compromised;
- The role of the central bank as a lender of last resort will be called into question (there is also a view that it will completely disappear, because of high security and liquidity of banks' assets);
- The regulation of these banks will be quite simple, but supervision will play a significant role in order to preserve the "wall" between narrow banks and other entities (especially between branches of the same holding company). Hence, the total regulatory burden will be lower;
- Other entities will not be subject to mandatory supervision, but to market discipline.

Application of the concept of narrow banking should greatly reduce the likelihood of bank runs and make the financial system more stable. Thereby, the aim is not to completely prevent bank failures (because it would have many adverse consequences), but to limit the consequences of their failures by creating a more resilient financial system (Kay, 2010).

5. Problematic Points and the Reach of the Narrow Banking Concept

Although many authors have looked into the question of practical implementation of their ideas, some questions are not given clear answers. Some of them are: what is the reach of the narrow banking concept in preserving financial stability and what is the price of its implementation?

The prominent opponent of narrow banking, Ely (1991), provides a broad rationale for his sharp criticism of the concept. He believes that the narrow banking is solution for the consequences, and not for the cause of the problem

of banks' vulnerability to bank runs. Narrow banking is trying to force economic actors to behave contrary to their economic incentives. Sole regulatory elimination of the possibility that institutions that keep insured deposits could take excessive risks will not eliminate the economic incentive that lies at the basis of risk-taking behavior. Ely (1991, pp. 45-49) believes that narrowing of banks will not eliminate the pressure of depositors to keep their funds in the form of bank's "hazardous liabilities" (demand deposits that are, through the process of maturity transformation, invested in less liquid investments), as well as demand for long-term borrowing. The pressure would just be diverted to other institutions, which will face the same risks as the present banks.

Investment entities in narrow banking will start to perform the maturity transformation and could become vulnerable to a rapid funds withdrawal, should parts of their liabilities begin to function as money. If we bear in mind the poor effects of the implementation of full reserves on banknotes in the past, it can be assumed that the adoption of the same concept for demand deposits would be followed by similar problems and effects, as it will lead to the emergence of new means of payment which will play the role of money and eventually replace bank deposits, in much the same way they replaced banknotes (Lainà, 2015). In this case, narrow banking will not solve the problem of bank runs; it will be succeeded by other entities, but now in terms of reduced scope of safety net. In such circumstances, an incentive can still exists to save institutions that are "too big to fail" if the potential adverse effects of their failure are systematically significant (Dixhoorn, 2013).

As short-term sources of financing are subject to bank runs and lead to instability, some authors propose solutions for their limitation in institutions engaged in lending. There are proposals that these entities should be banned from use of debt and debt securities, i.e. that lending can be financed only by equity capital (Musgrave, 2014). Cochrane (2014, pp. 198-199) sees the use of Pigovian taxes¹² as a more effective way to demotivate short-term borrowing by these entities in the system of narrow banking.

It is questionable whether there are sufficient secure and liquid assets (with corresponding maturities) compared to the amount of deposits that should be covered by reserves. If the volume of such instruments is limited, there will be pressures to deteriorate the bank assets quality. The simultaneous sale of all "safe" assets can also reduce the ultimate impact on financial stability preservation in times of crisis (Dixhoorn, 2013).

¹² Taxes that adjust the effects of negative externalities are referred to as Pigovian taxes, after economist Arthur Pigou, who first advocated for their introduction. Pigovian taxes adjust incentives due to the presence of externalities, thus keeping resource allocation closer to the social optimum. Cochrane proposes, for example, 5 cents of tax for every dollar of short-term debt issued by a bank or other financial intermediary.

According to Bossone (2002), narrow banking undermines the key advantages of banks stemming from the synergy of simultaneous deposits creation and lending. Banks can perform liquidity and maturity transformations of financial resources and may grant loans with, on average, longer maturities in relation to liabilities, so they generate superliquidity to depositors on the basis of illiquid resources. Also, the positive effects of banks on economic development will disappear, because the banks will not create money or credit; this can reduce the amount of loans available to the economy and raise their prices (Bossone, 2002). Adverse effects can be significant in developing countries, where the banking system is an engine of economic growth and development. Proponents of narrow banking believe that loans availability may be limited to some extent (but not significantly), because those who are granting them will bear the consequences of the risks undertaken (and not taxpayers eventually). This means that the cost of financing loans and investments slightly increase, but it would only be a reflection of the government subsidies removal (Musgrave, 2014).

The concept of narrow banking drags banking away from the process of integration of banking products and distribution channels, which is strongly supported by technologization of banking. Deposit taking and lending activities are often interconnected in a unique banking product (i.e. current account with overdraft), and their separation would increase operating costs and reduce the banks' efficiency. On the other hand, limiting the range of banks' investment activities would lead to reduced revenues. All this can decrease the interest rates on deposits and thus cause the outflow of funds toward the non-banking institutions (Ely, 1991). Hence, the question arises of whether narrow banking will be sustainable in terms of profitability. According to Spong (1996), revenues of a narrow bank include interest on securities and transaction fees, and should cover operational costs; therefore, due to the minimum capital requirements, narrow banks could realize a satisfactory return on equity despite business with low margins.

The financial health of banks is determined by demand: if the public wants safe banks then it will get them, but it will also have to pay by admitting relatively lower deposit rates and relatively higher loan rates (Dowd, 1993, 16). The fact that fractional reserve banking continues to exist, despite its fragility, suggests that there is a greater demand for such a system in which the interest is paid on deposits, than for safer alternatives where the money is kept in the form of savings. Spong (1996), however, believes that the banks, once liberated from the regulatory burden, will be able to offer yield to their depositors that is competitive with other low-risk investment alternatives.

In connection with the practical application of narrow banking, we should also consider the "transitional" costs and problems related to the establishment — or redesign — of the new institutional structure (organizational reconfiguration of

institutions, the reassignment of employees, customers' information costs, etc.). Although these costs would be simply reduced by requesting that deposit-taking institutions keep 100% reserves on demand deposits, narrow banking advocates believe that it would not raise a high enough firewall between the monetary and non-monetary financial activities (Bossone, 2002).

Finally, given the fact that the financial system is global, unilaterally adopted narrow banking may lead to the fact that banks in one country are at a disadvantage compared to foreign banks that have not yet undergone the process of transition to narrow banking. To achieve all of its objectives, the reform should be implemented in an international context. Thereby, the problem arises of achieving international consensus and coordination for the implementation of such a radical reform.

Many unsolved dilemmas that accompany narrow banking (and related concepts¹³), contributed to the fact that the debate on the appropriate regulatory strategy, driven by the global financial crisis, has not resulted in a new approach, but in some improvements of the existing institutional and regulatory framework. Regulatory activity in the banking industry since 1988 relies on the Basel Accords, and a new phase in this approach is the introduction of fundamentally new elements of the Basel III, which represents a global regulatory framework for more stable banks and banking systems (BCBS, 2010). Regulatory rules are revised toward better capitalization of banks and mitigation of pro-cyclicality of banking operations, and macroprudential measures are incorporated to address the issue of systemic risk and the interconnectedness of systemically important institutions.

The adoption of a comprehensive Dodd-Frank Act in the US in mid-2010 (the Dodd-Frank Wall Street Reform and Consumer Protection Act — HR 4173) marked the end of a trend of deregulation of financial markets in the United States. The new legislation makes it more difficult to rescue systemically important institutions, but it does not completely close the door to

¹³ Besides Kay's (2010) proposal of narrow banking, other similar proposals emerged as a result of reviewing the efficiency of the current banking regulatory regime to prevent future financial crises. Kotlikoff (2010) suggested its variant of full reserve banking — *Limited Purpose Banking*. He argues that focusing only on insured deposits is not enough for solving the problems of financial instability, because other debts of institutions that are "too big to fail" are implicitly guaranteed. Therefore, the entire financial sector should be changed through the establishment of three types of funds in the post-reform period: *money market funds*, which would perform payment services; *insurance funds*; and *investment funds*, which would take over the function of bank credit. IMF economists, Kumfhof and Benes (2012), advocated a revised Chicago plan that separates monetary and credit functions of banks and ensures complete elimination of the bank runs. *Positive money* and *New Economics Foundation* (NEF) (Jackson and Dyson, 2012) is the proposal of a monetary reform, which limits the role of banks in the economy to money brokers, which would merely transfer existing money between business entities, without creation and withdrawal of money through the financial intermediation between lenders and borrowers.

the future government protection of their creditors (Wilmarth, 2012). One of the key changes in the regulatory package is the so-called Volcker's rule. The rule limits (but does not completely prohibit) the engagement of banks, which take government-insured deposits, in high-risk investments such as owning, sponsoring or investing in hedge funds or venture capital funds and trading for their own account (the Dodd-Frank Wall Street Reform and Consumer Protection Act (HR 4173), Sec 619). The adopted version of Volcker's rule is quite milder than originally proposed idea — returning to the provision of the Glass-Steagall's Law that strictly separated commercial and investment banks (1933 to 1999) — that was one step closer to solutions such as narrow banking (Wilmarth, 2012).

Some advocates of narrow banking (e.g. Wilmarth, 2012; Kay, 2010) point out that the Basel III, Dodd-Frank's Law, and similar legislation in other countries rely on the same mechanisms (minimum capital requirements and prudential supervision) that have proved unsuccessful in prevention of the repetitive crisis episodes. Stressing the need for structural changes and severe constraints on financial institutions' activities, they express doubts about the effectiveness of the adopted regulatory solutions in the prevention of future financial crises. However, although the regulations that limit banks' activities represent a kind of turning point in the way the banking system is regulated, implementation of the concept such as narrow banking is unlikely in the near future. The numerous studies of this concept, however, contributed to better understanding of the alternative financial reforms.

Conclusion

The narrow banking system implies that the demand deposits are covered by high-quality liquid assets, in order to ensure the soundness of payment operations and limit the negative effects financial institutions' failures. This system, except for the separation of monetary and credit functions, generally retains the elements of the existing financial system, which makes the transition to narrow banking easier compared to other proposals of the banking system with full reserves. Also, unlike other proposals of full-reserve banking that define allowed reserves in terms of only one type of assets, narrow banking retains a certain degree of flexibility in determining what constitutes safe assets. This might make the implementation of the concept more versatile, depending on the specific circumstances of different countries.

Regulatory reforms initiated by the global financial crisis do not call into question the current concept of fractional reserve banking, as well as the existence of the safety net. There is a consensus that it is possible to fix the existing system and that proposals, such as narrow banking, are unnecessary radical. In reforming the global financial system, Basel III is of crucial importance, as a set of regulatory measures that made a shift to proactive approach in crisis prevention and macroprudential regulation, with a strong international focus. A wide range of measures is adopted with the aim of strengthening the regulatory and supervisory functions of the government (stricter capital and liquidity requirements, more intrusive supervision, improved procedures for closing of failed banks, etc.) that — along with increasing transparency, enhanced deposit insurance system and limitation of excessively risky activities by banks (like Volcker's rule) — can make the financial system more shock-resistant. The upcoming years will show whether "the patient's health would be restored through good medicine, not euthanasia" (Bossone, 2002, p. 25), or the more complex versions of the Basel rules would represent "the triumph of hope over experience" (Kay 2010, p. 219).

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USKO BANKARSTVO - BANKARSKI SISTEM BEZ PRIVATNE EMISIJE KREDITNOG NOVCA KAO REŠENJE ZA OTPORNIJE BANKE I STABILNIJI FINANSIJSKI SISTEM

Apstrakt: Globalna finansijska kriza obnovila je interesovanje za uvođenje uskog bankarstva (engl. Narrow Banking), koje je postalo aktuelna tema, kako u političkim, tako i u akademskim krugovima. Postoje stavovi da su banke maksimizirale prinose putem preterane kreditne ekspanzije, dok su gubici povezani sa preuzimanjem prevelikih rizika u prekriznom periodu pali na teret poreskih obveznika. Na osnovu ideje da savremeni finansijski sistemi imaju strukturalne probleme čije rešavanje zahteva fundamentalnu reformu, pokrenut je novi talas predloga za regulatorno rešavanje problema. U njihovoj osnovi je uklanjanje mogućnosti da banke emituju kreditni novac, koji uživa implicitne i eksplicitne državne garancije. Koncept uskog bankarstva, kao jedna od varijanti bankarstva sa punim rezervama, pruža ex-ante isti nivo zaštite bankarskim depozitima, kao i novcu koji emituje centralna banka. Motivi za primenu ovog koncepta leže u tome da banke postanu otpornije na juriše deponenata, da se izbegne stvaranje spekulativnih "balona" a finansijski sistem učini stabilnijim. U radu je dat pregled istorijskih i novih predloga uskog bankarstva. Pored toga, koncept uskog bankarstva analiziran je iz aspekta osnovnih karakteristika i ciljeva, uz kritički osvrt na probleme i uspešnost moguće implementacije.

Ključne reči: kreditni novac, moralni hazard, finansijska kriza, usko bankarstvo, finansijska stabilnost.