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In search of a more stable monetary and financial order

The Journal of
**Financial
Perspectives**

EY Global Financial Services Institute

March 2014 | Volume 2 - Issue 1



EY

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Executive summary

In search of a more stable monetary and financial order

by Thomas Mayer, Senior Advisor, Deutsche Bank and Senior Fellow, Center of Financial Studies, Goethe University Frankfurt am Main

A popular view is that the “light” regulation of the financial industry during the 1990s and early 2000s allowed the financial excesses and the rise in indebtedness that eventually caused the financial crisis. Those who hold this view want regulation to be tightened to prevent another crisis in the future. In 2008, the G20 demanded that no actor, no product and no market remain unregulated. Since then authorities have been active at the national and international level to fulfill this promise. This paper argues that the premise for more regulation is wrong and hence the suggested therapy misguided. It was not too little but too much official intervention in financial markets that caused the crisis. Instead of more public meddling in private markets we need a stable framework that allows these markets to function properly. In a new framework for monetary policy, credit must be given a prominent role; and in a new framework for regulation, we must properly define safe and loss-absorbing assets and use the latter to cover the costs of bank failures (instead of passing the bill to the tax payers). When the costs of failure are internalized, banks will be under pressure to become more transparent for creditors and depositors and their cost of funds and lending rates will rise. However, the public subsidization of bank lending rates will end only when banks can rely on taxpayer funded bailouts and their efforts to expand so as to become “too big and interconnected to fail” are thwarted.

In search of a more stable monetary and financial order

Thomas Mayer

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Abstract

Policymakers in governments and central banks and mainstream economists want to improve the stability of our monetary and financial system by more public intervention in, and regulation of, private financial markets. Implicit in this approach is the premise that too little intervention and regulation caused the financial crisis. This paper argues that the opposite is true: it was too much and misguided intervention that caused the crisis. Hence, to make our monetary and financial system safer we need better frameworks for monetary policy and bank regulation. In a new framework for monetary policy credit must be given a prominent role, and in a new framework for regulation we must properly define safe and loss-absorbing assets and use the latter to cover the costs of bank failures (instead of passing the bill to the taxpayers). When the costs of failure are internalized, banks will be under pressure to become more transparent for creditors and depositors and their cost of funds and lending rates will rise. But higher costs of funds for banks will only reflect the end of the public subsidy banks benefit from, as a result of the possibility of taxpayer funded bailouts.

1. Introduction

A popular view is that “light” regulation of the financial industry during the 1990s and early 2000s allowed the financial excesses and rise in indebtedness that eventually caused the financial crisis. Those who hold this view want regulation to be tightened to prevent another crisis in the future. Thus, in 2008, the G20 demanded that no actor, no product and no market remain unregulated. Since then, authorities have been active at the national and international level to fulfill this promise. However, there is good reason to believe that the premise for more regulation is wrong. In this paper, I shall argue that the popular diagnosis of the causes of the financial crisis is flawed and hence the suggested therapy misguided. In my view, it was not too little but too much official intervention in financial markets that caused the crisis. Instead of more public meddling in private markets, we need a stable framework that allows these markets to function properly.

To lay out my argument, I shall discuss the nature of fractional reserve banking and the need for government regulation and intervention within this system in the following section. In section three, I review the approach to monetary and financial sector policy in the run-up to the financial crisis. In section four, I discuss the efforts to stabilize the economies hit by the crisis, and in section five I present a few ideas for a better monetary and financial system. Section six concludes the paper.

2. The need for regulation of fractional reserve banking

Fractional reserve banking has been the standard business model of the banking industry since the Middle Ages [Huerta de Soto (2009)]. Originally, bankers took deposits in the form of metal coins and issued certificates, and later paper bank notes, against them. But instead of keeping all deposited coins in the bank, they kept only a fraction and lent out the rest, hoping that the depositors would not want to withdraw all their coins at the same time. As long as the depositors regarded the certificates or notes as good as the coins the bankers could augment the money stock to a multiple of the original value of the coins by extending credit. In our present system of artificial (fiat) money created by central banks “out of nothing”, banks borrow a small amount of central

bank money (which has the status of legal tender¹) and use this as a base to create their own book money by extending credit. In the euro area, banks are presently required to hold central bank money in the amount of only 1% of their outstanding stock of book money.

Fractional reserve banking is subject to two risks. First, more depositors may want to exchange book money into central bank money than banks can accommodate with the reserves of central bank money they hold. In this case, banks, or the entire banking system, may face a liquidity crisis. Second, credit that banks have extended to create book money may not be repaid. When the write-off of credits exceeds the amount of equity capital banks hold as a buffer, they, or the entire banking system, may face a solvency crisis. In the course of history, central banks were created to deal with liquidity crises, and publicly managed deposit insurance schemes were built to deal with solvency crises. Thus, in 1654, the King of Sweden took over a private bank, which had issued bank notes against deposits of copper coins and experienced a liquidity crisis. He turned it into the first central bank, later named the Swedish Riksbank, by declaring the notes issued against the copper coins to be legal tender. Centuries later, against the background of many bank failures during the Great Depression, the Roosevelt administration in 1933 created the Federal Deposit Insurance Corporation to protect depositors against the consequences of insolvency of banks. Although members of the so-called free banking school do not want to accept this [See, for instance, Selgin (1988)], history suggests that in a fractional reserve banking system official backstops through central banks and governments are needed to protect the general public from the fall-out of recurrent liquidity and solvency crises.

Today, credit and money are created in a public-private partnership. By setting interest rates on their loans of central bank money to commercial banks, central banks influence bank lending rates and, through this credit, demand by the non-financial sector. In satisfying this demand, commercial banks create book money. In times of liquidity or solvency crises, central banks and

¹ The nature of legal tender is that it must be accepted by creditors for the settlement of a debt, even though it has no intrinsic value of itself. For instance, if I owe a worker an hour's wage I do not have to give him food or another equivalent commodity, but can give him a paper note with only a nominal value that has been declared legal tender by the government.

governments stand ready to provide liquidity support and protect depositors. Given their close relation with commercial banks and the need to provide potentially large financial support in times of crises, it is no surprise that governments and central banks have a keen interest in the business practices of commercial banks and want to steer banks' behavior through regulation.

3. The policies that led to the crisis

In the course of the 1980s, a new economic paradigm emerged that combined elements of the older Keynesian and neoclassical theories with the newly developed theory of rational expectations. Central banks, which had in the early 1980s flirted with market-liberal monetarist theories developed primarily by Milton Friedman, adopted this paradigm – let us call it the New Keynesian-Neoclassical Synthesis (NNS) – in the course of the late 1980s and 1990s. According to Goodfriend and King (1997), the NNS is based on four elements: (i) inter-temporal optimization; (ii) rational expectations; (iii) imperfect competition; and (iv) costs of price adjustments (menu costs). It is easy to see that the first two elements are inspired by neoclassical theory while the last two are imported from Keynesian theory. In a later description of the NNS, Woodford (2009) pointed out that (i) intertemporal optimization combines both short- and long-term as well as microeconomic and macroeconomic elements in one approach; (ii) theoretical models are empirically calibrated; (iii) the assumption of rational expectations overcomes the Lucas critique; (iv) price and other rigidities allow short-term real effects of a change in money supply; (v) business cycles result from a variety of shocks, not limited to one real or monetary shock; and (vi) the central bank can control inflation, which is explained in an augmented Phillips curve model. For the purpose of interest rate policy in an inflation targeting approach to monetary policy, a simple rule can be derived, in which the policy rate is determined by a cyclically neutral real rate, the inflation target, the output gap and deviations of actual inflation from target inflation [Taylor (1993)].

The assumptions of rational expectations, efficiency of financial markets, and neutrality of money in the longterm allow the NNS to do without a banking sector and a capital market. Money is simply the catalyst for real economy transactions with no (long-term) effects of its own, the proverbial “veil” over the face of the real economy. Banks and capital markets serve savers and investors by connecting them to each other without playing an active role in the economy. In other words, money, banks and

capital markets lubricate the real economy to make it work better, but do not influence it as actors of their own. Hence, central banks basing their monetary policy on the NNS in an inflation targeting framework are blind to developments in banking and finance that are inconsistent with the passive role ascribed to them by theory. Moreover, since financial markets are presumed to be efficient and economic agents to have rational expectations – and therefore know better than regulators what to do – there seems to be no need for heavy regulation of the financial sector. All that seems necessary is that bankers and financial market participants observe some minimum standards of business conduct.

In the course of the 1990s, technical progress and the integration of major emerging market economies, notably China and India, into the global economy led to downward pressure on consumer prices. Like in the 19th century, during the process of industrialization, the deflationary pressures originated from the supply side and hence were positive in nature, in contrast to the demand-side induced deflation as a result of “debt deflation” during the Great Depression. However, the major central banks in the industrial countries reacted to the downward pressure on prices by lowering interest rates to achieve their positive inflation targets. They did so by mainly inflating prices of non-tradable goods. In the process, they induced a rise in asset prices and stimulated credit demand. Thanks to the ample availability of cheap credit, occasional bumps in economic activity due to the volatility in asset prices could be quickly overcome.

The combination of an activist stabilization policy for the real economy and a laissez-faire attitude toward the financial sector, which is embedded in the compromise between the New Keynesians and Neoclassics that gave birth to the NNS, created moral hazard. The more successfully that the business cycle could be smoothed by monetary policy, the less risky rising leverage in the financial sector became. If in addition monetary policy was prepared to specifically bail out leveraged investors that made wrong financial bets, the appetite for leverage and risk would surge to hitherto unknown levels. Former FOMC Chairman Alan Greenspan initiated a monetary policy approach that provided insurance to leveraged investors, who returned the favor by calling this the “Greenspan Put.” His successor, FOMC Chairman Ben Bernanke, provided the scientific foundation for the “Greenspan Put.” In a 2001 paper, he and his co-author Mark

Gertler employed a dynamic stochastic general equilibrium model with New Keynesian features and concluded “that for plausible parameter values the central bank should not respond to asset prices,” but concentrate on stabilizing the real economy through inflation targeting [Bernanke and Gertler (2001)].

4. More of the same

The combination of interventionist policies in the real economy and laissez-fair policies in the financial sector paved the way for what was probably the greatest global credit bubble in history. When the bubble began to burst in the sub-prime segment of the U.S. mortgage market authorities were quick to point out that it was the fault of insufficient regulation and control of greedy bankers. Supported by mainstream economists relying on the NNS as their model for the economy, they set out to extend the interventionist approach of the NNS from the real economy to the financial sector. Measures to better regulate the financial industry include, among others, (i) higher requirements for equity capital of banks; (ii) the need for banks to hold more liquid assets; (iii) the separation of trading activities from deposit taking and credit extension; (iv) caps on bankers’ bonus payments; (v) better consumer protection through detailed documentation of expert advice; (vi) participation of the banking sector in the costs of financial crises; (vii) a resolution regime for banks; and (viii) product regulations to increase transparency and better align the interests of issuers with those of investors. Although the work is not finished, one may conclude already that the final product will suffer from excessive complexity and inherent contradictions.

Moreover, as commercial banks experienced heavy losses on credit extended during the upswing of the credit cycle they saw their equity cushions shrink and, in some cases, disappear. Governments stepped in to recapitalize banks. With equity capital down and equity requirements raised to higher levels than before the crisis, banks cut down on credit extension to shrink their balance sheets and raise equity ratios to the ambitious levels demanded by regulators. As credit to the non-financial sector began to dry up, central banks stepped in and provided credit to the public and private sector directly (the latter to a large extent in the form of mortgage credit). The balance sheet extension of central banks was accompanied by a reduction of policy rates to record low levels and promises to keep rates at these levels for an extended period of time (or until certain economic indicators, such as unemployment rates, reached desired targets). Thus,

central banks joined regulators to create a largely centrally planned global financial system.

To sum up, policy interventions and misguided focus of the regulators created moral hazard and were key ingredients in the emergence of credit excesses that resulted in the financial crisis. However, instead of backtracking and leaving it to markets to reward success with profits and punish failure with losses and bankruptcies, authorities have set out to extend the interventionism reserved for the real economy in the past to the financial industry. With this, however, they will augment, rather than correct, their past mistake of presuming that they are central planners in possession of knowledge they cannot possibly have. Future generations of economists may find it ironic that after the failure of centrally planning the real economy in socialism a little less than three decades ago, the capitalist countries have set out to establish central planning in the financial sector. Like real economy central planning in socialism in the past, financial sector central planning in capitalism now must fail due to the inferior knowledge of the central planners.

5. A more robust financial system for the future

To make our financial system more robust and avoid another credit cycle we need significant changes in the approach to monetary policy and to regulation. The former needs to become more modest and focus on variables it can influence rather than to aim for real economy goals, such as economic growth or unemployment, over which it has little control. The latter needs to abstain from interfering in the daily business decisions of financial institutions and, instead, must concentrate on establishing key principles for the conduct of business in the financial industry.

The main reason for the rise of credit and debt to unsustainable levels was that central bankers ignored credit developments even though they exerted a strong influence over them. Hence, central banks should either get out of the way entirely or bring credit into the focus of their policy. It is not the purpose of this paper to discuss proposals to abolish central banks as they are unlikely to be implemented irrespective of their merit. Central banks have evolved over hundreds of years because they serve the interests of governments and banks and are unlikely to be disbanded under any circumstances short of a revolution of our economic and financial system. Reforms must, therefore, concentrate on giving credit the prominent role in the design of monetary policy that it deserves.

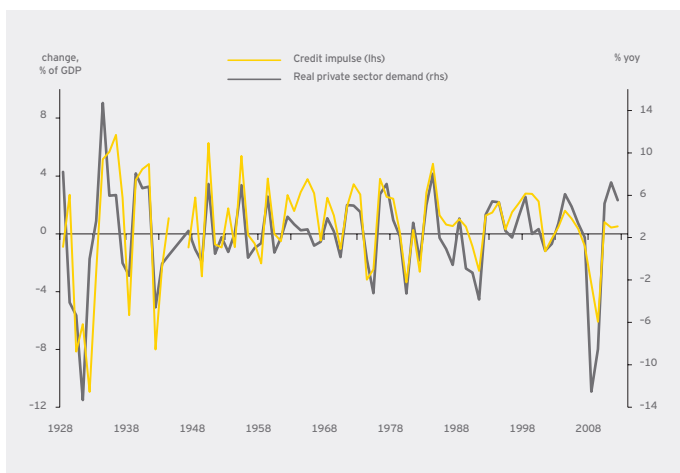


Figure 1: Credit impulse and real private spending growth in the U.S.
Source: Biggs and Mayer (2013)

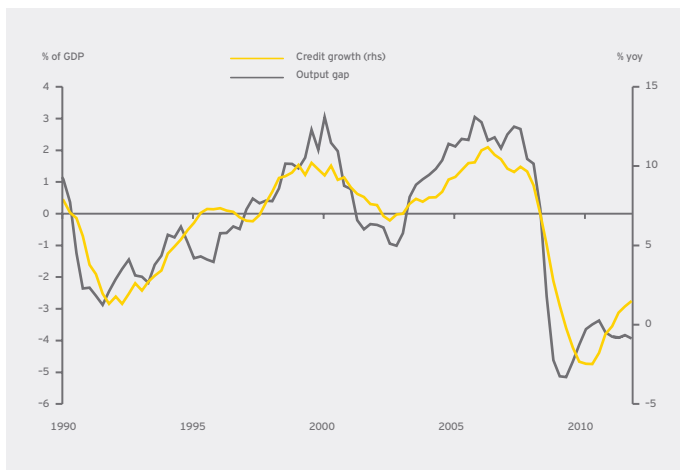


Figure 2: Credit growth and the output gap in the U.S.
Source: Biggs and Mayer (2013)

In a recent paper, Michael Biggs and I have argued that contrary to conventional wisdom the flow of credit is highly correlated with demand [Biggs and Mayer (2013)]. This holds across many countries and long periods of time. Mainstream economists have overlooked this relationship because (i) they were blinded by their models, in which credit plays no active role in the economy; and (ii) they erroneously focused on the relationship between credit

stocks (instead of flows) and demand flows, which seemed to support the passive role ascribed to credit by their models. We also showed that while credit flows are correlated with demand flows the growth of the credit stock is correlated with the output gap.

The respective variables are shown in Figures 1 and 2 for the U.S. Figure 1 relates the growth of real domestic demand to the change in credit flows (normalized by GDP), a measure we call “credit impulse” because of its active influence on demand. The Figure shows how big variations in the flow of credit went along with strong variations of real demand during the recent financial crisis as well as during the Great Depression of the 1930s. Figure 2 relates the output gap to the growth of the credit stock. From this Figure it can be seen that an output gap of zero, the objective of central banks following the approach of inflation targeting, was accompanied by credit growth of 7% during the last three decades. Since nominal GDP growth averaged 5% during this period, a monetary policy that succeeded in maintaining full and stable capacity utilization allowed the ratio of credit to GDP to rise without limit. Sooner or later this policy had to end in a financial crisis caused by excessive credit growth.

Against this background, we suggest to bring credit into the focus of monetary policy. In our view, central banks should aim for steady credit growth in line with a sustainable ratio of credit to GDP. The latter is, of course, subject to judgment, but judgment can be formed on the basis of historical experience (i.e., by looking at periods where the ratio of credit to GDP went along with stable developments of the real economy and the financial sector). If the ratio of credit to GDP is low at the starting point, monetary policy can aim to stabilize credit growth for a while at a rate above its long-term sustainable rate until it has reached the latter. If the ratio of credit to GDP is high at the starting point, the opposite applies. By adjusting interest rates and other tools in response to credit developments (instead of in response to developments of the real economy), monetary policy remains in the domain where its influence is most pronounced while contributing to economic stability by aiming for price and financial stability.

The new approach to monetary policy needs to be complemented by a regulatory framework that focuses on closely linking risk taking to return in the financial sector. This requires first and foremost the possibility of financial institutions

to fail without pushing the entire economy into recession or even depression. As I have argued in a recent paper, the starting point for such a regulatory framework is the definition of a really safe asset [Mayer (2013)]. An asset is really safe when it can be converted into legal tender at face value any time and under any circumstances. Only an asset with these qualities ensures that debts can be settled when they are due. In our system of artificially created (fiat) money, only central banks have the right to issue legal tender and hence only assets that can always be turned into central bank money are really safe. From this follows that in a regime where governments, like private entities, have no access to the money printing press to settle their debt, only cash and bank deposits fully covered by reserves held with the central bank are safe. Thus, when we define government bonds as safe assets, as is generally done in finance textbooks, we assume that the government can command the production of legal tender by the central bank to secure the exchange of these bonds into legal tender when needed. Hence, it is inconsistent to legally ban the access of the government to central bank credit and, at the same time, to define government bonds as safe assets.

When we have defined the safe asset for the general public it is easy to establish a hierarchy of loss-absorbing bank liabilities in a bank resolution regime. Clearly, the first loss must be covered by bank equity capital. When that is wiped out further losses are covered, in consecutive order, by junior and senior unsecured debt and, finally, by deposits not fully covered by central bank reserves (let us call them “investor deposits” in contrast to the fully covered “safe deposits”). Table 1 gives a stylized balance sheet of a bank under this regime.

Money in a safe deposit is, like cash, in fact a liability of the central bank. Banks only act as “safe-keepers” of funds held in safe deposits. Hence, only the central bank – and not commercial banks – can create safe deposits. An initial endowment of safe deposits can be created by the central bank through purchases of low-risk assets, notably government bonds, from commercial banks. In the transition from the present to the new regime purchases of government bonds by the central bank would help commercial banks reduce their holdings of government bonds to levels consistent with the nature of these bonds as risky assets, i.e., assets with a non-zero probability of default.

Assets	Liabilities
Central bank reserves	Safe deposits
Ring-fenced assets	Covered bonds
Other assets	Investor-deposits* Senior debt* Junior debt* Equity*

* Participating in losses in ascending order

Table 1: Stylized bank balance sheet
Source: Mayer (2013)

Assets	Liabilities
Government bonds Good will	Deposits of commercial bank reserves to cover safe deposits
Other assets	Other liabilities, reserves and capital

Table 2: Central bank balance sheet
Source: Mayer (2013)

Safe deposits can be increased further when commercial banks borrow reserves from the central bank to create safe deposits. Since commercial banks borrow reserves to deposit them immediately with the central bank, they need not post collateral to obtain the loans. But the creation of safe deposits through borrowing of reserves comes at a cost, given by the difference between the central bank’s lending and deposit rates for central bank money. Banks would, of course, pass these costs on to their customers demanding safe deposits. Thus, by varying the difference between its lending and deposit rate the central bank can influence the demand for safe deposits. It can narrow the spread and make safe deposits cheap during an economic upswing when the general public is willing to take risks and puts a low price on safety. And it can widen the spread and make safe deposits expensive during a downswing when the general public puts a high price on safety. By influencing the mix between investor and safe deposits through interest rate policy the central bank can also affect the credit and money multipliers and thereby, dampen the credit cycle.

Finally, safe deposits could be increased to satisfy the demand for money in a growing economy by simply paying a dividend to depositors. The book entry on the asset side of the central

bank's balance sheet for safe deposits created this way would be Good Will, reflecting the trust of the general public in the value of central bank money as a means of exchange and store of value. Table 2 shows the stylized balance sheet of the central bank under this regime.

The new regime requires a much higher degree of disclosure of riskiness of banks' assets than the present regime, where virtually all bank creditors assume that in the case of bank failures, they are protected by the government or the central bank. In the new regime all bank creditors except the holders of safe deposits have to absorb losses when assets have to be written off. Hence, the funding costs of banks will rise, and with them the cost of credit for non-banks. However, the increase in credit rates is necessary to end the externalization of the costs to the general public of bank failures due to reckless lending. When these costs are internalized, credit will be allocated more efficiently and credit bubbles will become less likely. Internalization of the costs of bank failures will prevent excessive complexity of bank balance sheets, and eliminate banks' desire to become "too big and too interconnected to fail."

6. Conclusion

Policymakers in governments and central banks and mainstream economists want to improve the stability of our monetary and financial system by more public intervention in, and regulation of, private financial markets. Implicit in this approach is the premise that too little intervention and regulation caused the financial crisis. In this paper, I have argued that the opposite is true: it was too much and misguided intervention that caused the crisis. Hence, to make our monetary and financial system safer we need better frameworks for monetary policy and bank regulation. In a new framework for monetary policy, credit must be given a prominent role; and in a new framework for regulation we must properly define safe and loss-absorbing assets and use the latter to cover the costs of bank failures (instead of passing the bill to the taxpayers). When the costs of failure are internalized, banks will be under pressure to become more transparent for creditors and depositors, and their cost of funds and lending rates will rise. But higher costs of funds for banks will only reflect the end of the public subsidy that banks benefit from as a result of the possibility of taxpayer funded bailouts.

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ISSN 2049-8640
