CAUSES AND REGULATORY CONSEQUENCES OF THE FINANCIAL MARKETS CRISIS

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1. INTRODUCTION

In its report on the origin of the financial crisis, the "President's Working Group on Financial Markets," which was charged with investigating the financial crisis, came to the conclusion that the crisis was made possible due to a relaxation of credit issuing standards with regard to subprime mortgages and by mistakes relating to their evaluation and securitization processes.

Furthermore, weaknesses in the risk management procedures of financial institutions and state monitoring agencies contributed to a general "erosion of discipline" affecting the issuance of securities. However, when the underwriters, whose representatives include the US Treasury Department, the Federal Reserve, the stock exchange watchdog U.S. Securities Exchange Commission (SEC) and the Commodity Futures Trading Commission, attribute the cause of the financial crisis to the inadequate regulatory frameworks governing financial markets, their causal analysis falls short. Building upon previous research of Hoffmann and Schnabl, Goldschmidt and Köhler[1] this paper combines international

crisis analysis from an overinvestment view and the analysis of constitutional frameworks to deal with the problems we are currently facing.

There is broad consensus that two conditions must be fulfilled for the build-up of a speculative overinvestment bubble: First, liquidity must be available to feed such speculation; second, investors must be able to expect high – i.e. above-average – returns in a specific market.[2]

In keeping with these criteria, the first part of this article will account for the origin of the financial crisis as a consequence of stimulation via monetary policy (liquidity) and misleading institutional incentives (positive expectations). The development of monetary policy in the United States since 2000 and its contribution to creating the real-estate bubble will also be taken into consideration.

In the second part, the international conversion to accommodative monetary policy and its effects on capital markets will be analyzed. Next, the events of the financial crisis will be briefly summarizedt. Finally, the state responses to the crisis will be described and critically examined with regard to their external effects and their implications for moral hazard behavior.

The third section explores alternative principles for monetary policy in order that may help containing future speculation by modifying monetary policy strategies. In addition, another part will examine the reorganization of the monetary regime from a constitutional perspective. A brief summary follows in conclusion.

2. CAUSES OF THE SPECULATION BUBBLE IN THE UNITED STATES

The first part of this section will examine the development of monetary policy in the United States since the turn of the millennium. In this connection, the turn to accommodative monetary policy will be discussed, tracing the thesis of a paradigm change in the scholarly discourse in monetary policy. The effects of excess availability of liquidity on the US real-estate market will also be described.

2.1 US Monetary Policy since the Turn of the Millennium

After the internet bubble burst in 2000/2001, Federal Reserve policy aimed at avoiding a recession that threatened the US real economy. To achieve this, the American central bank increased liquidity availability via drastic interest cuts and reduced the fed funds rate to one per cent within a matter of months. As a result, banks acquired more liquidity from the central bank and expanded lending. This resulted in monetary expansion at a rate of 10 per cent annually (on average) from 2001 to 2004.[3]

According to “quantity theory of money”, such a development in the money supply will either have an effect on the growth of the gross domestic product or on consumer price inflation, provided money demand remains stable. Yet both growth and consumer price inflation remained moderate at about three per cent and two to three per cent, respectively. Accordingly, money demand increased at the low interest rates. The increasing money demand was accompanied by an expansion of available money. Since no increased inflation pressure was discernible, the Federal Reserve kept the interest rate low to support growth and reduce the risk of a recession.

In keeping with the so-called Jackson Hole consensus, US central bankers and leading academics[4] view speculative bubbles in financial markets as acceptable in order to stimulate economic activity. The Jackson Hole consensus was that bubbles should not be burst because they are difficult to identify as such and moreover, bursting bubbles could endanger the entire economy. When a bubble does burst, the Fed is supposed to intervene and recapitalize financial intermediaries, if applicable.[5]

This monetary policy had far-reaching consequences. Although the development of money supply did not fuel consumer price inflation, assets such as stocks and real-estate reacted to increased money supply.[6] The latter were not included in the monetary policy reaction function. Thus the Fed kept interest rates low although the money supply exploded between 2003 and 2007. It was not until mid-2004, that the effects of expansionary monetary policy were felt in rising consumer prices. Then the Fed slowly raised interest rates.[7]

The excessive liquidity expansion in the US between 2001 and 2005 was the first necessary condition for the creation of speculative bubbles.[8]

2.2 The Boom in the US Real-Estate Market

2.2.1 Positive Expectations Meet Institutional Incentives to Create a Boom

The second necessary condition for the build-up of an overinvestment bubble is positive expectations.[9] After the collapse of the internet bubble, there were no such positive expectations in the US stock market.[10]

Yet US housing prices had been rising since the mid-1990s at a more rapid rate than the general price index (the asset price development is not included in consumer price inflation). This development was regarded as “good for growth” even after the internet bubble burst.[11] The expectations in this market continued to increase primarily due to fiscal policy support and the attractive general investment conditions enjoyed by institutions. For example, it is possible in the USA to apply tax write-offs to real-estate financing expenses. Moreover, general access to attractive mortgages is subsidized by state-backed financing institutions. When the mortgages were structured and bundled into so-called Mortgage Backed Securities (MBS), which were sold as investment banking products to third-parties – usually institutional customers – state-backed institutions also underwrote the default risk, resulting in more than half of MBS issued in the USA being guaranteed by the state.[12]

Furthermore, general institutional conditions, such as the controversial Community Reinvestment Act and lax monitoring of securities issuance practices contributed to expectations of high returns on the US real-estate market. Thus both conditions for the creation of a bubble in the housing market were fulfilled.

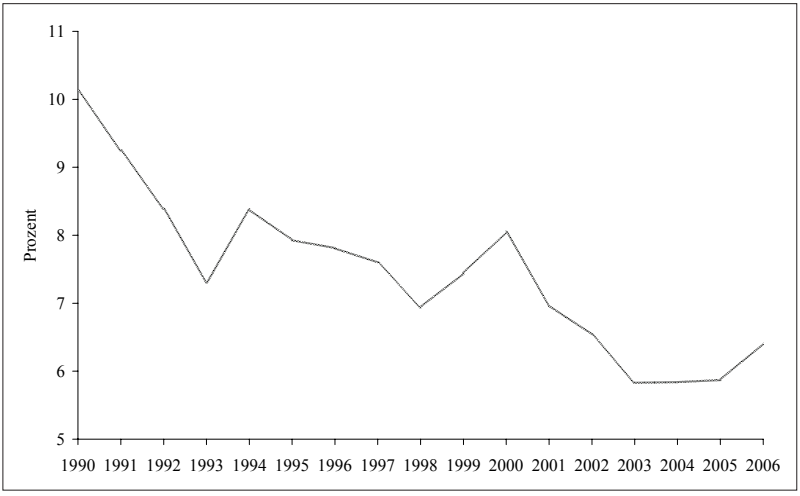
2.2.2 The Boom in the US Housing Market

Considering these favoring conditions, the demand for real-estate and credit increased dramatically. The banks sought more money from the central bank. This demand for money was satisfied at low interest rates such that the financial institutions were able to reduce interest rates on credit and mortgage markets to the historically lowest financing level of six per cent by 2005 (Graph 2), although the demand for credit was increasing.

Since the demand for real-estate is not elastic due to the low circulation frequency, the prices increased more rapidly than before. In turn, increasing housing prices had an effect on the banks' credit granting procedures. The high demand for real-estate also promoted the creation of credit by the commercial banks and increased the demand for money from the central bank. Starting in 2000, the house prices doubled within five years.

Moreover, the newly-created securities fed the upward spiral of credit issuance and US housing prices (innovations in Minsky's sense). Credit for residential buildings was pooled together into safe investments, given AAA ratings, and resold. This gave banks the opportunity to remove the default risk for their mortgage market operations from their balance sheets and transfer it to third parties. Buyers quickly lined up for AAA-rated securities.[13]

Graph 2: Average interest rate on mortgages in the USA from 1990 to 2006



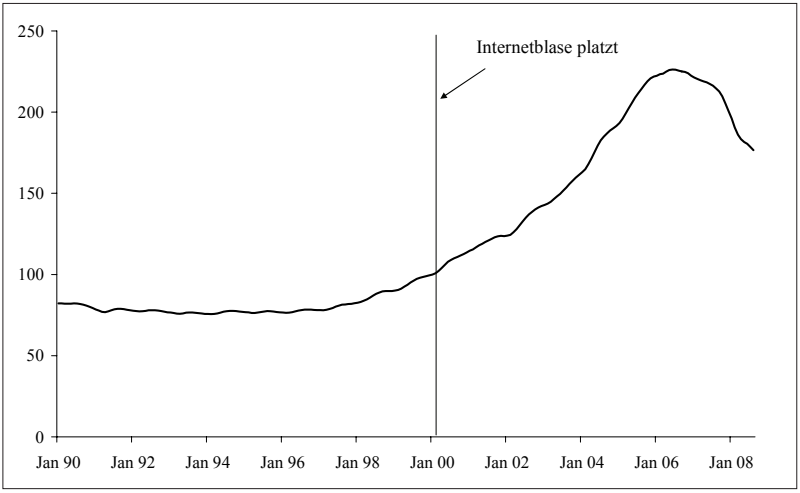
Source: Office of Federal Housing Enterprise Oversight, interest rate for a 30-year amortization period.

The transfer of payment claims deriving from mortgage and credit operations further expanded the financial leeway of mortgage financing entities and of the commercial banks involved. It created the basis for financing new credit operations. The banks anticipated this new situation by ex-

panding lines of credits to borrowers with lower credit ratings who would previously not have been considered viable borrowers. The subprime segment created in this way was intentionally served and soon accounted for a majority of new credit granted.[14]

The credit granted in this connection was later termed “Ninja loans” (No Income, No Job or Assets) and their value was entirely dependent on the increasing housing market prices. Flexible-rate loans were especially favored. These were often structured such that the interest payments due at the beginning of the term were low (so-called “teaser rates”), and only after several years did they increase to the normal market rate. As long as housing prices increased and interest payments were moderate, the relationship between the amount of credit and the value of the real-estate property improved across all mortgage loans.

Graph 3: Case-Shiller Home Price Index 1990-2008



Source: Standard & Poors 2008, Composite 10.

The course of the Case-Shiller Home Price Index, which represents the development of the home prices in the most significant US metropolitan regions, clearly illustrates the boom described above (Graph 3). At the same time, the percentage of home owners increased from 67 to 69 per cent between 2000 and 2006 (an all-time high).

Soon, the boom in the housing market began to affect the overall economy because the asset situation of homeowners was improving - as long as interest rates remained low and housing prices continued to rise. This increased the creditworthiness and consumption capacity of the American people, which ultimately stimulated the economy in general – and contributed to the misallocation within the real economy and increased the debt ratio of budgets.

3. THE WORLDWIDE MONETARY EXPANSION AND ITS EFFECTS

After 2001, monetary policy aimed at avoiding recessions and promoting growth, not only in the US economy but in all major economies. As a result, attractive refinancing opportunities were available on international capital markets, which promoted worldwide growth. Below, we examine developments in the monetary policy of East Asia (China in particular) and Europe after 2001. The implications of these policies for capital markets will then be elucidated.

3.1 East Asia

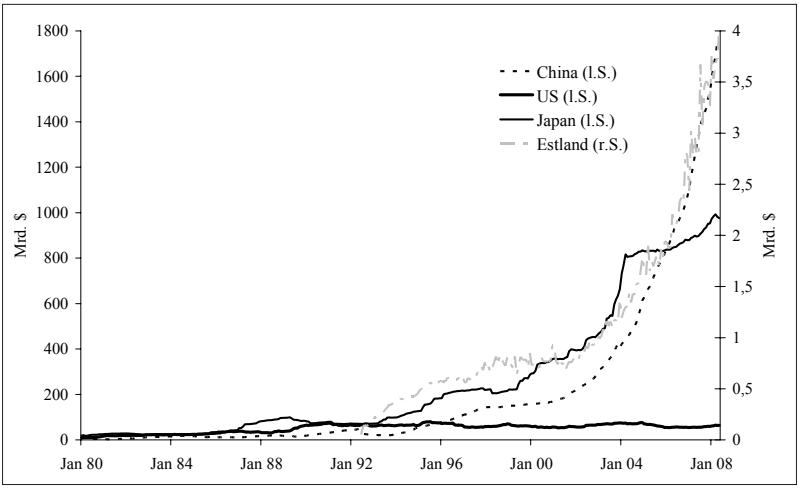
In the 1990s, many East Asian central banks (that of China, in particular) stabilized their currencies against the US dollar. This exchange rate peg appears to be beneficial for two reasons: First, the US is East Asia's main trading partner. Since East Asian economies do not have international reserve currencies, transactions were processed in US dollars. Second, a fixed exchange rate guarantees the value of reserves that have already been accumulated. For this reason, reference is often made to a world dollar standard.[15]

By pegging their exchange rates against the dollar, these economies also imported US monetary policy. On the one hand, the expansionary US monetary and fiscal policies after 2001 heated up consumption in the US. Additionally, it exposed the dollar to devaluation pressure. To maintain the stability of the exchange rate, the East Asian central banks had to intervene by purchasing additional dollars and selling their own currencies on foreign exchange markets (Graph 4). East Asia thus can be argued to have pursued a strategy of undervaluation to stimulate exports and economic growth.[16]

Since East Asia primarily invested the accumulated reserves and savings from exports in US state-backed securities, additional liquidity was available to financial institutions, which reduced the long-term interest rate in the US. The process of creating money in the US thus received additional impetus from the monetary effects of East Asia's export-induced growth strategies. Bernanke[17] regards this "savings glut" from East Asia as the main reason behind global imbalances and bubbles. Capital imports from East Asia speed up the boom in mortgage markets because the amounts of money that were initially absorbed from East Asia were once again made available on the market via the sale of US state-backed securities. The fertile ground for speculation grew (first factor identified by Minsky and Hayek).

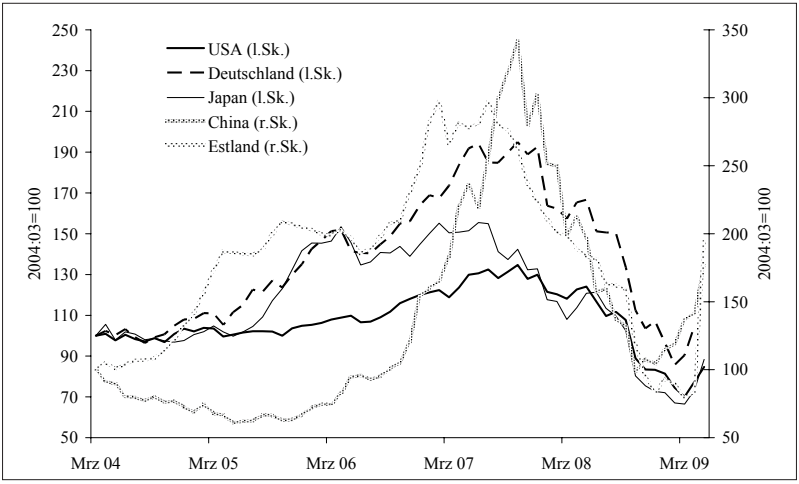
During the boom, both profited from one another. The US profited due to the attractive situation for the financial sector and East Asia was given opportunities to export industrial products. Graph 5 illustrates the boom in the countries of East Asia on the basis of stock price development in China.

Graph 4: Development of Foreign Currency Reserves



Source: IWF, IFS 2009.

Graph 5: International Stock Price Development



Source: IWF, IFS 2009 and Ecowin 2009.

The East Asian export-led growth strategy has contributed to coordination with the accommodative monetary policy of the Federal Reserve System, which finally put the onus on the European Central Bank.

3.2 Europe

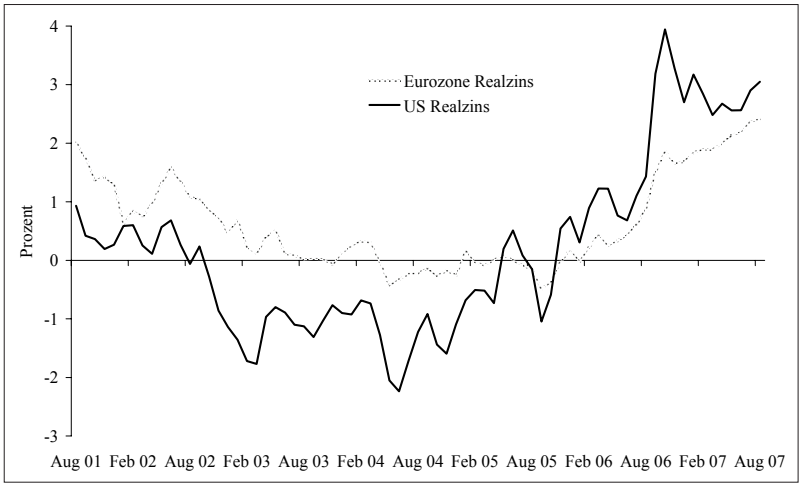
Until 1999 the German Bundesbank put the emphasis on the development of money supply to keep the quality of the currency. When the European Central Bank took on the role of making monetary policy, the money supply lost its importance. Instead, monetary policy was subsequently aimed at achieving a consumer price inflation goal of less than (but close to) two per cent. European monetary policy became more closely allied with US monetary policy, especially after the change of the ECB's concept in nary monetary policy of early spring 2003.[18]

One reason for the departure from controlling the money supply within a Friedman paradigm was the empirical observation that the level of consumer prices continued to remain stable despite the rapid growth in money supply during the 1990s. For this reason, doubt was cast on the monetary connection between growth of the money supply and price development in academic discourse.[19] De Grauwe and Polan[20] take the assertion further by claiming that growth of the money supply exerts no

influence on price development, since the demand for money is not constant. When the demand for money is increasing and/or the velocity of money is falling, the money supply can increase more quickly than under Friedman's principles. Since the money supply was no longer regarded as a good indicator of future price developments, the current development of the price index and of the GDP should be taken as an indicator of future price developments.[21]

In June 2001, the European Central Bank lowered the main refinancing rate because deflation tendencies were observable in parts of Europe. Similar to the situation in the US, real interest rates continued to be negative over an extended period (Graph 6). The money supply in the Eurozone also increased between 2002 and 2006 by about 10 per cent annually. This prepared the ground for asset price bubbles.

Graph 6: Parallel Real Interest Rate Development in the USA and Eurozone



Source: IWF, IFS 2009.

In Europe, the low interest rate additionally promoted the flow of capital into the emerging markets of Central and Eastern Europe, in particular the Baltic states and Bulgaria, which stabilized their exchange rate against the Euro and offered high returns on investments. Similar to the situation in East Asia, foreign currency reserves increased dramatically in these countries (Graph 4). In Central and Eastern Europe too,

stock and real-estate prices literally skyrocketed (Graph 5). Capital infows were reflected in large current account deficits and overinvestment in real-estate markets.[22] While East Asia and Eastern Europe were the most dynamic regions, similar developments could be observed in a number of emerging market economies. This was true in particular of countries that export raw materials, which profited from the rapidly rising price of raw materials (Russia, Brazil).

3.3 The Effects on Capital Markets

It wasn't only the countries of East Asia and Europe that pursued the goal of providing inexpensive liquidity, rather Japan, Russia and most of the other G-20 states also followed. As a result of the worldwide monetary expansion, the real world interest rate remained near zero for a long time after 2001. The commercial banks responded to this development by expanding their investment, credit and financing operations.

In search for attractive investment, Asian and European commercial and investment banks took notice of the securitized payment claims due from US homebuilders. AAA-ratings promised above-average returns. Thus these products appeared to be both low-risk and lucrative. The international demand intensifed securitization even further, since the US banks found a way not only to bundle the risks, but also to resell and further distribute them, almost without limit. This increased the leverage and capacity of the banks to grant credit and banks were less dependent on central bank liquidity. The proportion of foreign capital invested in enterprises rose dramatically. In an environment of rising asset prices, companies were able to absorb more foreign capital since the asset side of their balance sheets became increasingly inflated due to the increase in asset prices.

4. THE FINANCIAL CRISIS AND STATE MEASURES TAKEN IN RESPONSE

In this section, we describe the crisis events and worldwide transmission of the financial crisis. Afterwards, we examine the responses of governments and central banks to the crisis and analyze their effectiveness.

4.1 The Crisis in the USA

In July 2004, the Federal Reserve began to increase interest rate with the European Central Bank following in December 2005. In the United States, this initiated the reversal of expectations and profitability in the real-estate market: The increasing interest rate reduced demand for real property and mortgages. Moreover, the rate increase led to defaulted payments, since many subprime borrowers could only pay the mortgages on their houses as long as interest rates were falling and home prices were rising.

Due to the payments defaulted on by subprime debtors, beginning in summer 2007 mortgage refinancers, investment banks and insurance companies like IndyMacBank, Bear Stearns, AIG and Merryl Lynch lost billions, were sold or had to apply for creditor protection. While the state-backed real-estate financing institutions Freddy Mac and Fannie Mae were saved from bankruptcy in July 2008[23] by government intervention, the failure to save Lehmann Brothers in October 2008 contributed considerably to the uncertainty affecting the financial markets. Trust in the markets eroded and all mortgage financers were pushed to the brink of insolvency.

The losses of investment banks resulted in a reduction of the willingness of private and institutional investors to assume risk. The latter then quickly withdrew considerable amounts from the capital markets or refrained from making new investments in high-risk products. The stock market collapsed (Graph 6). This reduced the banks' equity. In addition, mistrust among the banks was rife and they were generally no longer prepared to help one another secure credit. Finally, the inter-banking market dried up entirely so that it was only possible to obtain liquidity from the central bank.

The next sector to be hit was the US real economy; due to the payment problems experienced by homeowners, many houses were subject to foreclosure and compulsory auction, and these households no longer had access to income of any kind. As a result, real-estate prices fell dramatically starting in mid-2007. With the fall of real property value, Americans lost their securities backing consumer credit. Private consumption fell. In a second wave, the reduced credit availability from the banking sector, which had been hit hard by the crisis, reduced both

investment and consumption. Thus unemployment started to rise. In 2009 US GDP declined substantially.

4.2 International Transmission of the Crisis

The world economy slowed down as as the economies of East Asia, Europe and the emerging markets were also affected by the crisis. Due to their role as major providers of credit to the US, East Asia and Germany were affected by the crisis from the very beginning. European financial institutions like Northern Rock, the IKB and German Regional State Banks, as well as East Asian financial institutions lost because they had bought toxid securitized paper. In addition, falling US imports caused growth projections to worsen for export-based economies. The GDP in both Germany and Japan contracted considerably by the end of 2009. Unemployment started to rise.

The emerging market economies were affected primarily by a lower influx of capital. This exposed their currencies to devaluation pressure and, in countries that had pegged their exchange rate to the Euro or dollar in particular, to a monetary contraction that slowed growth. Most of the world's economies thus contracted more dramatically than ever before. The GDP of the Baltic countries fell by approximately 10 to 15 per cent over the course of the year. Graph 6 illustrates how asset values in Estonia and China (among others) collapsed in 2007.

4.3 State Measures in Response to the Crisis

Immediately after the outbreak of the financial crisis, central banks hastily reduced fund rates. The latitude for monetary policy operations open to the central banks was strongly limited, however, because the interest rate was already relatively low at the outbreak of the crisis in comparison to earlier boom periods. Since the minimum level of interest rate reduction was reached as early as the end of 2008, the central banks granted the commercial banks any amount of money they requested. Since then, this policy of "monetary easing" has meant that unlimited liquidity is available in the US, the Eurozone and the UK.

In addition to this monetary policy response to the financial crisis, the governments of the G20 have "initiated what are probably the largest state interventions since the 1930s,"[24] including the provision of state

guarantees for bad assets and fiscal policy stimulation programs of unprecedented scope. While state guarantees and the nationalization of commercial banks were intended to prevent looming bank collapses, the economic programs sought stabilize the economic system. From the outset of this policy, the governments hoped to reduce the risk of deflation and to moderate the effects on the real economy. As a result of this response to the crisis characterized by debt financing, state debt will reach all-time highs over the course of the next few years, especially in developed economies.[25] This further reduces the latitude for political action for the future.[26]

These policies were actually able to preserve the markets from a feared widespread collapse of banks in fall 2008. Even if it has not been possible to date to restore faith in the financial market players and with it, the interbank market, it is possible that the intervention of policymaking could affect the expectations of market participants and thereby shorten the length of the crisis. In this sense, the rapid and massive state intervention would have been the right course of action.

Doubt has already been cast on the long-term effectiveness of this policy response, however: Even if the effect of the crisis on the real economy can be moderated over the short-term by such expansive fiscal and monetary policies, this type of policymaking will serve to virtually guarantee the reoccurrence of a similar crisis.[27] How could governments and central banks credibly singnalizse, that they abstain from bail-outs and stimuli packages during the next crisis? Ultimately, governments are continuing the policies that originally contributed to the crisis[28]: Bad investments and overinvestments are maintained and newly stimulated by guarantees and economic programs. Restructuring of the economy is impeded and conduct informed by moral hazard is promoted.[29] Finally, the ECB's cheap long-run jumbo loans and its reduced security standards might jeopardize the efficacy of this response in the future.[30]

5. THE POLITICAL AND CONSITUTIONAL IMPLICATIONS OF THE FINANCIAL CRISIS

The doubt we cast on the long-term efficacy of the state responses to the crisis can also be interpreted as a qualitiative problem, that these policies are aimed at the symptoms of the financial crisis rather than at the political and institutional reasons that primarily caused it. Therefore,

we would now like to advocate a variation of the predominant concept of monetary policy and a variation of the monetary regime to contribute to the solution of this problem. We will proceed in two steps:

First, the question will be asked how the existing monopolized monetary regimes can be improved by modifying the procedures in the conduct of monetary policy – that is, by varying the "monetary policy strategy" of the central bank – such that the recurrence of excess liquidity scenarios can be best avoided. In this connection, we will summarize three suggestions to reform monetary policy.

Second, we discuss the possibilities for changing the existing monetary regime from a perspective of constitutional political economy. In contrast to the first step, we examine the effect of varying the existing monetary constitution and inquire into the institutional arrangements and polity changes that are advisable to ensure an effective monetary regime over the long-term. With its constitutional approach, constitutional economics attempts to correct neoclassical economics in which the institutional perspective has been widely neglected.[31]

5.1 The Necessity of Modifying Monetary Policy Concepts

As has been illustrated in Sections 2.1 and 3.2, a paradigm shift has occurred in monetary policy discourse over the last twenty years. The worldwide conversion of central banks to accommodative monetary policy, which is related to the above paradigm change, and its contribution to causing the financial crisis, raises the question of how the monetary policy strategy of central banks should be reformed to avoid future crises and to ensure a stable currency within a monopolistic monetary structure.

In this connection, Borio and White[32] recommend that central banks should monitor asset prices and credit developments in the future to limit the banking sector's capacity to create liquidity. Money supply developments should therefore receive more attention than during recent years. The integration of credit and asset aggregates into central banks' response function would clearly not be a return to the monetarist money supply rule, which was displaced from its leading role in the scholarly discourse due to new insights gained from research into the transmission mechanisms of monetary policy. At the same time both

scholars reject the dominant neo-Keynesian conclusion that we introduced in Section 2.1.

The President of the Bundesbank, Weber[33], also advocates this opinion and additionally calls for an end to the expansive monetary and fiscal policies within the foreseeable future, i.e. after the market has stabilized. According to his position, a reformed monetary policy should assure that interest rates should meander along the business cylcle to avoid low interest rate levels over the long-term. This would allow the central bank to better ensure that the effects of monetary policy are predictable, at least over the mid-term.

Neumann[34] carries these ideas even further. In contrast to the Greenspan-Bernanke-Mishkin view, he argues that central banks should modestly lean against asset price bubbles by contracting monetary supply once they are monitored.

All three approaches aim – at least implicitly – at a revision of the Jackson Hole consensus, since the proposed monetary policy is intended to prevent the formation of speculation bubbles.

Because of their aim, these new approaches can be recommended to regulatory bodies for implementation, since effectively incorporating these new monetary policy strategies at the institutional level is equivalent to a return to a stability-oriented and predictable monetary policy that adequately addresses the money supply issue especially on the formation on overvaluation bubbles.

Beyond these recommendations to reform monetary policy, the state should also be advised to reform the economic constitution due to the interdependency of the monetary and the economic order.[35] In this connection, Wohlgemuth, Straubhaar and Zweynert[36] have noted that attention should also be devoted to the principle of liability as the guiding ideal for the reform of the monetary and economic system.[37]

Other interdependent areas of the economic order should also be subject to corrective measures; however we cannot explore this further here. These primarily include institutional incentives to stimulate consumption and investment, regulations that limit moral hazard, as well as instruments to discipline public spending.[38]

5.2 Reforming the Monetary Constitution

The question which alternative rules can be recommended to improve the monetary constitution represents a problem of choice among constitutional constraints. But how does constitutional economics evaluates the quality of alternative constitutional rules?

The variation of the monetary constitution can be regarded as advantageous for society from a constitutional political perspective, if it can receive voluntary and informed consent from all affected individuals. Consent therefore constitutes a *sine qua non* condition for a legitimately recommendation of the monetary constition.

The second, downstream criterion for evaluating the extent to which an alternative constitutional rule or particular regulatory changes can be legitimately recommended concerns the functional characteristics it unfolds on the subconstitutional level. Of course, only action patterns (in the sense of Hayek's "pattern prediction"[39]) that underlie an alternative monetary system or alternative regulations in the existing system can be predicted here. From a constitutional political perspective, the question is thus raised as to which monetary system best meets the common constitutional interests that money users have in their currency in comparison to the existing or alternative monetary system proposals. A decision is then reached based on a functional test, in conjunction with the legitimacy criterion of voluntary consent regarding the extent to which a particular monetary structure can be legitimately recommended.

Since an overall examination of such a discussion cannot be provided within the scope of this article, we have limited ourselves to a short summary of the results of such an evaluation.

Monetary regime proposals can be divided into two categories, based on their institutional structure and the type of conduct that can be expected for each: On the one hand, systems that require discretionary control and on the other, systems that pursue rule based control. From the perspective of constitutional economics, rule-based monetary regimes are preferable to discretionary regimes, with regard to the extent that they can be legitimately recommended.

The necessary institutional arrangements range from a commodity reserve currency[40], which was recently discussed by the Chinese central bank,[41] to the idea of an independent central bank structure,[42] through to a currency competition model.[43]

Within the scope of research into competitive monetary systems, which has received renewed attention since the outbreak of the financial crisis, two lines of development can be identified that can each be traced back to the time when the gold standard collapsed: One is largely an Austrian development that advocates returning to a free banking system with a 100 per cent minimum reserve backed by gold,[44] while the other is a more heterogeneous/Anglo-Saxon development that calls for multiple forms of a free banking system – with at least the partial participation of the central bank – with various institutional arrangements.[45] The proposal by Leonhard Miksch can also be classified in this line of development; Miksch introduced what amounts to a precursor of a free banking system into the Freiburg School's monetary system discourse.[46]

Both camps are divided with respect to the legitimacy principle on one hand, and with regard to the specific institutional recommendations on the other.

A further investigation is required regarding the institutional structure of such a system, and regarding its integration into the entire economic system. There are good reasons to support the idea that a competitive currency system that includes active participation of the central bank and regulations to standardize the circulation of money would be a viable alternative to a monopolized monetary structure, based on the expected results.[47] This is not the place to conduct a more specific consideration of this idea, however.

6. SUMMARY

One cause of the financial crisis among others can be seen in the mismanagement of monetary policy since 2000. The accommodative monetary policy pursued worldwide distorted the refinancing incentives of the commercial banks, leading to the global financial markets becoming inundated by a flood of investment. The commercial banks responded to the historically advantageous refinancing conditions offered by the central banks by expanding their investment, credit and financing opera-

tions, which in turn increased the level of debt considerably. The general institutional conditions promoted not only passing on structured credit and mortgage products to third parties, but also promoted granting credit to customers with low creditworthiness. The questionable evaluation of these risks and the high demand for investment products increased the accumulation of securitized credit risks. A globally-fuelled speculation bubble was created in the US housing market. After the bubble burst in Summer 2007 and the effects associated with it spread to the markets and companies involved, all major economies that were already suffering from the ill effects of the global economic slowdown (via the trade channel) were befallen by the financial crisis we are familiar with.

Once it burst, the bubble was followed by drastic interest rate cuts by the central banks and far-reaching interventions to stabilize the financial markets. To date, the response to these measures has been able to avert a feared contagion of bank collapses. The long-term efficacy of this response, however, must be doubted since a long-term solution would require a restructuring of the rules and institutions that govern the monetary and economic systems.

A conceivable way would be to integrate asset price developments into the central banks' criteria for setting interest rates, as discussed in Section 5.1. Although the path back to controlling money supply is not advisable, it is worthwhile to reconsider Milton Friedman's criticism of his own profession, which he proposed to his colleagues on the occasion of the 80th annual meeting of the American Economic Association: "The first and most important lesson that history teaches about what monetary policy can do – and it is a lesson of the most profound importance – is that monetary policy can prevent money itself from being a major source of economic disturbance."[48] For this reason, further investigations that discuss alternative monetary regimes from a constitutional political perspective should follow. Instrumental arrangements that have been discussed within the ordoliberal discourse on the monetary system – in an updated and well-thought-out form – may offer a pardigmatic alternative within discourse around the further development of the European Monetary Union.

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1| Schnabl / Hoffmann (2008), Hoffmann/Schnabl (2009),,Goldschmidt/Köhler (2008) and Köhler (2010).
2| Hayek (1929) and Minsky (1986) also identify similar principles for the genesis of financial market crises. Although both approaches are properly categorized as theories of monetary overinvestment, they differ with regard to the course the crisis is expected to take. Moreover, Hayek and Minsky come to opposite conclusions regarding the implications for policy see also Schnyder (2002).
3| Specifically, the monetary reserves which include the banks' credit aggregates.
4| Cf. Blinder/Reis (2005), Mishkin (2007).
5| Ibid., p.67.
6| Cf. Aladid / Detken (2007), Borio (2008).
7| Cf. Hoffmann / Schnabl (2009).
8| Cf. Hayek (1929), Minsky (1986).
9| Cf. Hayek (1929), Minsky (1986).
10| Cf. Case / Shiller (2003).
11| Cf. McCarthy/Peach (2005).
12| Cf. Jaffee (2008).
13| Securitized credit and mortgage risks are evaluated by private enterprises.
14| Cf. Osman (2007).
15| Cf. McKinnon / Schnabl (2004), McKinnon / Schnabl (2009).
16| See Bretton Woods II System in Dooley et al. (2004).
17| Cf. Bernanke (2005).

18| *Cf. Neumann (2009).*
19| *Cf. Estrella / Mishkin (1997).*
20| *Cf. De Grauwe / Polan (2005).*
21| *Cf. Gerlach / Svensson (2002), Stock/Watson (2002).*
22| *Cf. Hoffmann/Schnabl (2008).*
23| *Cf. Jaffee (2009).*
24| *See Neue Zürcher Zeitung of September 22, 2008, p. 9.*
25| *Cf. IMF (2009).*
26| *Cf. Hoffmann / Schnabl (2009).*
27| *Cf. Straubhaar et al. (2009), Schnabl/Hoffmann (2008).*
28| *Cf. Wohlgemuth (2008).*
29| *Cf. Hoffmann / Schnabl (2009).*
30| *Cf. Neumann (2009).*
31| *Cf. Vanberg (1998).*
32| *Cf. Borio (2008) and White (2008).*
33| *Cf. Weber (2008).*
34| *Cf. Neumann (2009).*
35| *Eucken (1952/2004), p. 257.*
36| *Cf. Wohlgemuth et al. (2008).*
37| *Also Eucken (1952/2004), p. 279.*
38| *In this connection, accounting regulations that have a procyclical effect, methods of evaluating securitized credit risks, as well as the competition monitoring system for structured products should be mentioned, among others.*
39| *Hayek (1968 / 2003), p. 135. See also Vanberg (2008), p. 311.*
40| *Cf. Eucken (1952), Hayek (1943 / 1976), Buchanan (1962 / 1990).*
41| *Cf. Zhou (2009). In Part III of his talk, Zhou explicitly advocates that money be backed by real assets, in opposition to cursory interpretations that reduce the suggestion of the Governor of the People's Bank of China (central bank) to J. M. Keynes' idea of introducing the "bancor": "The allocation of the SDR can be shifted from a purely calculation-based system to a system backed by real assets, such as reserve pool, to further boost market confidence in its value".*
42| *Cf. Miksch (1949a), Bernholz (1989), Buchanan (2004).*
43| *Cf. Miksch 1949b, Hayek (1976), Hayek (1977), Buchanan (1990/1999), Buchanan (2004), Gerding/Starbatty (1980).*
44| *Cf. Rothbard (1962), Huerta de Soto (2006).*
45| *Cf. Meulen (1934), Smith (1936), Hayek (1976), Buchanan (1990), White (1983), Yeager (2009).*
46| *Cf. Goldschmidt / Köhler (2010). Leonhard Miksch (1901-1950) was a student of Eucken and academic advisor to Ludwig Erhard; he played a pivotal role in the success of the 1948 currency reform (see Goldschmidt/Köhler (2008)). Shortly thereafter he developed his idea of a "Metric Monopoly," which was the first conception of a competitive monetary system in ordoliberalism. As early as the time of German hyperinflation in 1923, Walter Eucken developed the idea that in order to recover, "the power to determine the size of the money supply [must] be taken away from the state" (Eucken (1923)).*
47| *Cf. Hayek (1976), Buchanan (1990), Yeager (2009).*
48| *Cf. Friedman (1968).*