

Dietrich Schönwitz (Germany)

# Liquidity policy in crisis and twelve theses for future central bank policy

## Abstract

Despite the lack of appropriate theoretical preparation, the main central banks acted immediately and coordinated – but not always in the same manner. Regarding liquidity crisis management, the article concentrates on ECB’s policy which crossed after Lehman Brothers insolvency in September 2008 the borderline of traditional liquidity management by reverse tender operations. For crisis prevention and monetary stabilization policy after crisis it contains twelve theses for further discussion.

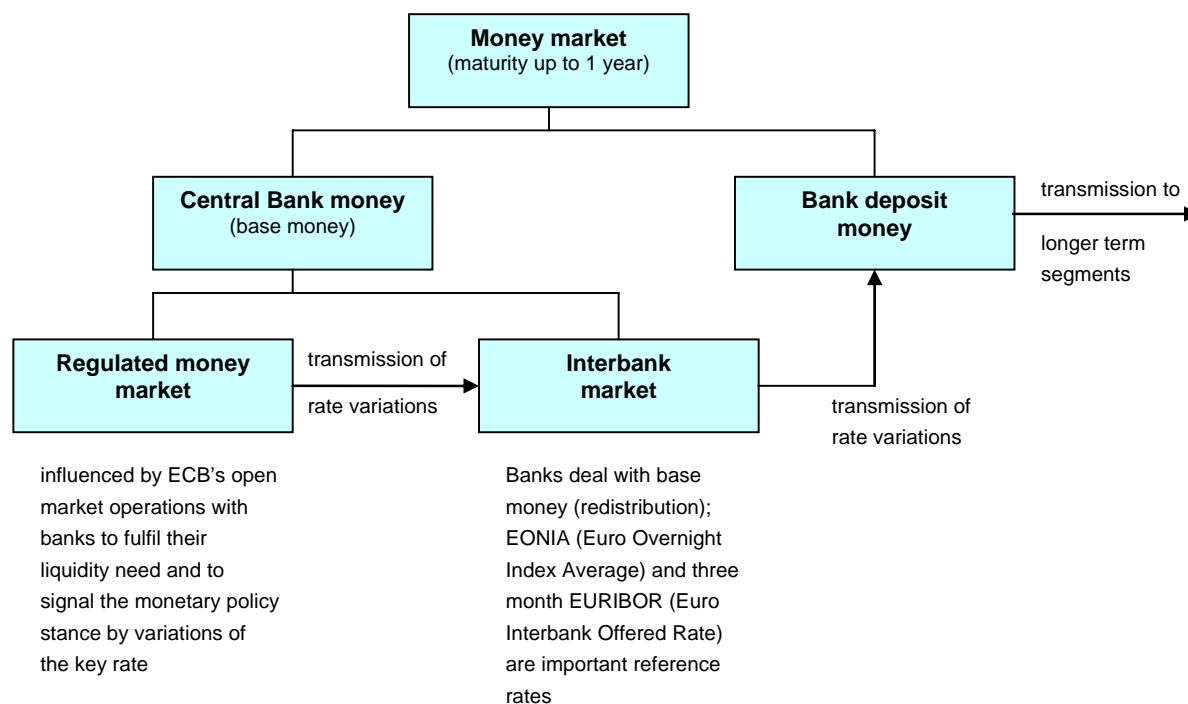
**Keywords:** asset price bubbles, financial stability, monetary policy, quantitative easing.

**JEL Classification:** E44, E52, E58.

## Introduction

The financial market turbulences, caused by the recent crisis started already in August 2007, gave rise to frictions and interest rate volatility on the money markets. Money markets are the playing field for modern central banking via transmission processes to further financial market segments (Figure 1). Nowadays, it is a common opinion that the short-term interbank interest rate is the appropriate operational target and not – as in former times – base money;

base money adjusts endogenously (Bindseil, 2004). This concept depends on a leading function of the central bank’s key interest rate for the interbank money market rate. The turbulences endangered this essential precaution for efficient monetary stabilization policy to guarantee price stability as final target prescription. About one year after the beginning of the crisis the insolvency of the US investment bank Lehman Brothers in September 2008 was a decisive stage. This gave the crisis the global dimension of a threatening financial tsunami.



**Fig. 1. Leading function of the central bank’s key interest rate**

Such a drama was prevented by joint efforts especially of economic, financial and monetary stabilization policy. Now, at the beginning of the second quarter of 2010, the main economies are recovering with prospects of economic growth – but compared with the growth potential before the crisis a reduced growth path is still dependent on state support. Euro mone-

tary markets recovered too, but are still fragile (Kotz, 2009). In Germany, politicians expect that the recovery process will last until 2013, then having compensated the loss of economic wealth.

## 1. Lack of preparation

Sure, there were single warning voices before the crisis. For example, the Association of Mortgage Insurance Companies of America (MICA) wrote

one year before the turbulences in a letter to the US Fed: "...we are deeply concerned about the potential contagion effect from poorly underwritten or unsuitable mortgage and home equity loans" (Schönwitz, 2007). But obviously, no one of the interested public – central bank watchers included – had expected that the turmoil would last more than two years, would severely affect the real economies, spread all over the world and would endanger the solvency of European states, such as Portugal, Ireland, Greece and Spain, in second round effects on public expenditures and tax revenues.

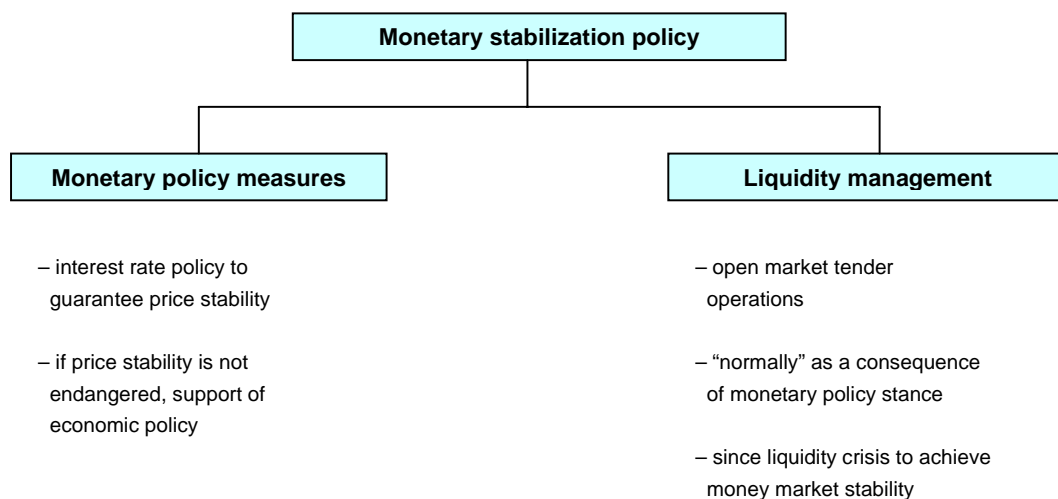
And even economic science was not prepared sufficiently. The dominant liberal mainstream adhered to the market efficiency theorem and to deregulation. This explains that an early advice from acknowledged economic academia to politics expressed the view that the financial system itself will draw proper conclusions and that further administrative regulations will cause more damage than benefit (Phelps, 2007).

Despite the lack of appropriate advice, the main central banks, especially the Fed, the Bank of England (BOE) and the ECB, acted immediately and coordinated – but not always in the same manner. The following remarks concentrate on the ECB's crisis management, which crossed after Lehman Brothers insolvency the borderline of traditional liquidity management by reverse tender open market operations. It was supplemented by extensive rescue programs of the government for the financial and the real sector of the economy (Kölbach, Macke and Schönwitz, 2009).

But crisis management is not enough. Sure, politicians, supervisors, central bankers and private bankers, all have to learn from the crisis. But part eight of this contribution concentrates on central banker's homework and contains twelve theses for monetary stabilization policy after crisis.

## 2. Strict distinction between monetary policy and liquidity policy

It is essential to emphasize that the crisis management concept of the ECB did not call the final target orientation into question. This consequent price stability stance led to an approach which was clearly different – especially until Lehman Brothers insolvency – from the strategy of the Fed and the BOE. Contrary to these central banks, the ECB did not reduce its key interest rate in the first year of the crisis. Because of inflationary expectations it even increased the rate by 25 basis points to 4.25 percent in the middle of 2008. The ECB explained this behavior in its Annual Report for 2008 with a strict distinction between measures of monetary policy and liquidity policy (ECB, 2009, 1). The monetary policy stance concentrated on price stability, while liquidity policy cared for the efficient functioning of the Euro money market. Therefore, monetary stabilization policy in this contribution is generic term for monetary policy and liquidity policy (Figure 2). Measures of monetary policy mean interest rate policy to safeguard the currency. Liquidity policy implies supply of central bank liquidity by open market operations.



**Fig. 2. Money market stability as operational target**

The ECB analyzed the financial crisis until Lehman Brothers insolvency not as macro gap of central bank liquidity. There existed enough aggregate liquidity, but suddenly this liquidity was not completely accessible to money market participants. The crisis in the Euro area was for about one year rather a disturbance of liquidity distribution caused by a massive loss of con-

fidence. Knowledge about involvement in defaults of residential mortgage backed securities (RMBS), which were refinanced in a revolving manner by commercial papers on the money market, was not transparent. Mistrust was spread like a contagious virus and credit lines to counterparts were reduced or cancelled as soon as possible. The Financial Stability Directorate

of the Banque de France (2008) marked this as “worst case behavior” and concluded: “Banks will, therefore, tend to hoard maximum liquidity, whatever it costs, to be able to meet any contingency, however improbable, regarding their own future liquidity needs and risk exposure”. Remsperger (2007), former member of the board of the Deutsche Bundesbank, therefore, pointed out: “Interbank lending pretty much dried up”.

Following this analysis, the Governing Council of the ECB decided to concentrate in a pragmatic, but principle oriented approach on liquidity policy and not to intend an increase of the aggregate central bank money supply by expansionary monetary policy. This stance not to reduce the key interest rate was supported by the fact that until then the financial market turbulences indicated no negative consequences for the real sectors of the economies in the Euro area.

### 3. Money market stability as operational target

Leading function of the key interest rate means to transmit expansive or contractive monetary policy decisions via key interest rate variations from the regulated money market to the interbank money market and to other financial market segments. Therefore, functioning or stable money markets are a basic concern of modern central banking. Until the beginning of the crisis and since the establishment of the ECB in 1998 and in this meaning efficient Euro money market was a given fact. The reference interest rate EONIA (Euro Overnight Index Average) followed variations of the key rate with only marginal deviations. On average, the difference between EONIA and key rate was ten basis points only. Liquidity management before the crisis, therefore, was exclusively consequence of key interest rate variations, of the monetary policy stance. This changed with high volatility of the EONIA when the turbulences started.

In addition to the interbank short-term interest rate, money market stability became a new operational task. This assignment of money market stability is one of the main lessons of the crisis for central banking. Safeguarding sustainable money market stability is on the operational level – as well as an appropriate (key) interest rate – a necessary precondition for price stability on the final target level.

In response to the arising money market frictions, the ECB supplemented its regular main and longer-term refinancing tender operations by additional reverse non-standard operations. Before Lehman Brothers insolvency it was still the aim of this liquidity management to guarantee a “benchmark oriented” supply with central bank liquidity and not – as some comments erroneously stated – a flooding of the Euro

money market with liquidity. “Benchmark oriented” means to carry out reverse liquidity injections at a given or accepted aggregate amount of central bank money which cope with the daily liquidity need of the banks. The daily liquidity need stems from minimum reserve obligations, currency in circulation, net foreign assets and government deposits with the Eurosystem. Such a liquidity policy intends to achieve balanced money market conditions and interbank interest rates near to the key rate.

### 4. Crisis management accompanied by intensive ad-hoc communication

To improve confidence the ECB accompanied the new additional non-standard operations with an in literature until now scarcely appreciated intensive ad-hoc communication (ECB, 2009, 2). This corresponds to a modern “management of expectations” concept by openness and transparency, and not to a “management by surprise” behavior, practiced by main central banks about one or two decades ago. In this former time a bestseller with the title “The Secrets of the Temple” was published (Weber, 2010). The author, William Greidner, meant the Fed and not a dubious religious organization. But be sure, the Deutsche Bundesbank practiced secrecy too in its history.

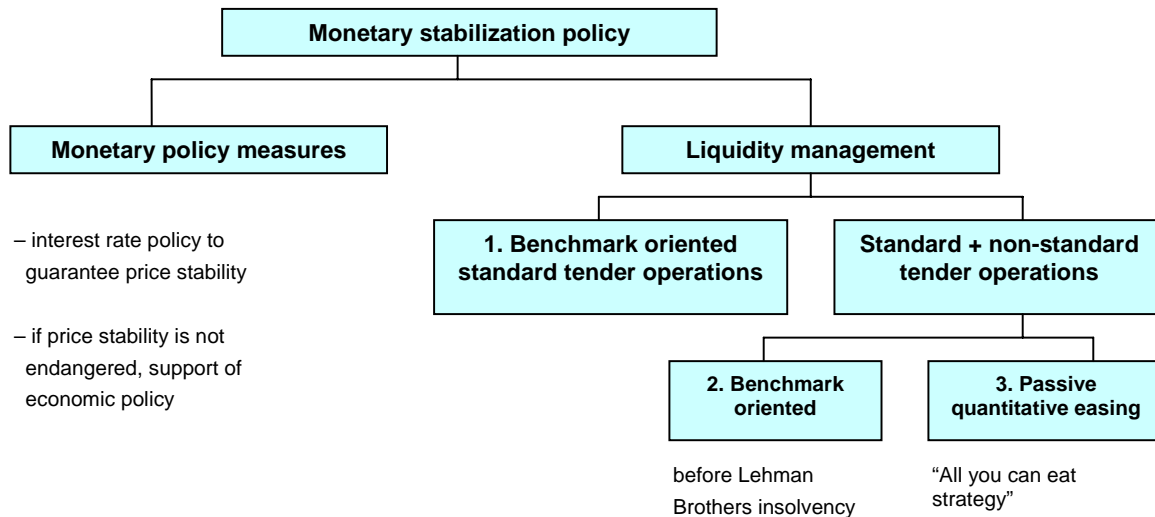
Consequently, at the beginning of the crisis on August 9<sup>th</sup>, 2007 the following statement was communicated to the public: “The ECB notes that there are tensions in the Euro money market, notwithstanding the normal supply of aggregate Euro liquidity. The ECB is closely monitoring the situation and stands ready to assure orderly conditions in the Euro money market”. The announcement of the first non-standard operation followed only two hours later.

This proves again that the sometimes articulated criticism the ECB being not communicative enough is not justified. Actually, it does not publish minutes of the Governing Council meetings. But the detailed monthly press conferences of the President in real time after the meetings explaining the policy stance referring to the economic and monetary analysis of indicators are more than a sufficient substitute for minutes published with a time lag. These conferences with question and answer sessions are still a special and innovative characteristic of the Eurosystem.

### 5. Logic of benchmark oriented non-standard operations

For the ECB the flexible introduction of benchmark oriented non-standard operations was a step by step learning process under much pressure of time (Figure 3). It was essential to cope with the increased uncertainty of the banks concerning reliable access to liquidity. This intention characterizes the additional operations as follows:

1. In the course of the crisis management the duration of single operations was extended. The first operation as fast reaction at the very beginning of the turbulences had a duration of only one day. To improve confidence the ECB later introduced tender operations with six months duration.
2. Before crisis, weekly main refinancing operations dominated the central bank liquidity supply with about 70 percent and even more of the whole volume. This importance was reduced drastically in favor of standard and non-standard longer-term operations. Their share increased to more than 65 percent of the aggregate central bank liquidity supply in the still benchmark oriented period.
3. As a further measure to reduce uncertainty the ECB began to practice “frontloading”. This means to inject at the beginning of minimum reserve periods more than the benchmark amount and to reduce the surplus later in the period by lower allotment amounts and liquidity absorbing fine tuning operations.



**Fig. 3. Benchmark oriented liquidity management and passive quantitative easing**

Also, it was new that the ECB for the first time in its history contracted swap agreements with other central banks, especially the Fed, in order to meet the demand of banks in terms of foreign liquidity.

Assessing the success of its benchmark oriented liquidity management the ECB (2008) carefully pointed out that it generally succeeded in keeping the money market interbank rates near to the key interest rate, in spite of phases of high volatility. This was valid until Lehman Brothers insolvency.

Afterwards, the crisis expanded to a worldwide financial and economic crisis with even deflationary prospects. The ECB reacted expansive with monetary policy measures as well as with liquidity policy ones. In its monetary policy it reduced the key interest rate in seven steps until an amount of one percent.

## 6. Quantitative easing – passive and active

In its liquidity management the ECB abolished the benchmark orientation, announced tender operations with twelve months duration and increased the share of longer-term operations up to about 90 percent until the beginning of 2010. It switched from variable rate tender operations with a minimum bid rate to fixed rate operations with full allotment of the bids within the range of as collateral eligible assets. The amount of eligible assets and, therefore, the

scope for bids were enlarged by a reduction of the rating requirements from “A minus” to “BBB minus”. Now the financial markets were really flooded with liquidity. As a result, the Eurosystem’s demands from liquidity management by tender operations increased from below 500 billion Euro to about 800 billion Euro in 2008, with a corresponding base money supply – and still about 700 billion Euro demands at the beginning of 2010.

In colloquial speech this strategy is called “all you can eat strategy” (Schaaf, 2009), more seriously “passive quantitative easing”; passive, because the central bank meets the liquidity demands from a “wait and see” position. The ECB then became a supply side monopolist on the Euro money market. As at the beginning of the crisis, there now existed nearly no sales on the no-collateralized interbank money market, especially with durations of three months and more. The EONIA rate even dropped below the key rate near to the deposit facility rate, which is in the longer term not a desirable effect. But the prevention of a global financial disaster and later tendencies of recovery on the money market confirm the appropriateness of these exceptional measures.

Active quantitative easing, which was carried out early and on a big scale by the Fed and the BOE, crosses the borderline of traditional liquidity man-

agement by reverse tender operations. The ECB, this is as well a difference, apparently hesitated to go this way. The Governing Council agreed to active quantitative easing on a rather low scale with a nominal amount of up to sixty billion Euro (ECB, 2010). With active quantitative easing the focus is not any more liquidity management via the money market. The central bank gives up the “wait and see” position and injects liquidity by purchase of assets on primary or secondary asset markets.

Active quantitative easing has two aspects. The first aspect: The central bank can buy assets from non banks. This primarily intends to cope directly with a credit crunch as a possible result of a financial crisis. Circumventing the banking system it improves instantly the liquidity supply to the real economy and increases the monetary aggregate M3. The second aspect: Buying assets from banks the central bank still relies on the banking system as lender, assuming that the banks will use the liquidity to maintain and expand lending to clients.

In the Euro area the central banks traditionally act via the banking system. Europe with medium sized companies as backbone of the economies is less capital market based and more bank relation based as, for example, the US economy. Therefore, it suggested itself to use the second form of active quantitative easing. The ECB announced in May 2009 that it will buy from counterparties participating in Eurosystems’ monetary policy operations covered bonds issued or guaranteed by banks of the Euro area with a minimum rating of AA. This concentration on form two is again a difference to the Fed and the BOE. Anyway, active quantitative easing intends to cope with negative effects of the financial crisis for the real economy. The central bank now definitely acts in accordance with economic and financial policy efforts.

### 7. Exit will be a test for central bank independence

Such closeness to politics can become a problem when the central bank tries to exit from its crisis management. There is no doubt that the crisis management, especially when the ECB gave up its benchmark orientation, created inflationary potential. Therefore, and in order to revive the vitality of the interbank money market, an exit strategy is necessary. The announcements from the ECB since the end of 2009 indicate that it will exit carefully and step by step – gradually finishing the non-standard operations. Since the first quarter of 2010 the ECB has not renewed non-standard operations with duration of six and twelve months and at the end of April the ECB will return to a restricted allotment volume for the three month tender operations.

It is, therefore, true that in the Euro area, an exit will be technically not difficult: First, because the ECB prepared the banking community – as before in context with crisis management – with an intensive communication policy; second, because the ECB used active quantitative easing on a low scale with only about 50 percent of the targeted nominal amount until the beginning of 2010. Therefore, crisis management was “exit friendly” (Weber, 2009, 2). But one should not underestimate political resistance. First, because with the reduction of aggregate surplus liquidity sooner or later with inflationary expectations the question of an increase of the key interest rate will arise; and second, because the aforementioned closeness to politics during the crisis may have grown to a habit. It will be for sure a controversial issue, when to start a more restrictive monetary stabilization policy with politicians who focus on acceleration of economic growth, who are interested in low interest rates because of exorbitant state debts and who tend to solve problems by simply spending more money. Therefore, it cannot be excluded that urgent demands for “ex ante” coordination will come up. In Europe, the French government has such a tradition, judging the central bankers as technicians who should be under a priority mandate of politicians.

Issing (2002), former chief economist of the ECB, highlighted possible negative consequences of such intentions. He saw the danger of “macroeconomic mismanagement” and warned to mix specific roles, mandates and responsibilities of different political areas. Exit at the end and after the crisis will be a test for real central bank independence, which is a basic principle of the Eurosystem. Ex ante coordination, according to another skeptic’s voice some years before the crisis, “...can easily become an euphemism for pressuring the central bank” (Alesina, 2003).

### 8. Twelve theses for monetary stabilization policy after crisis

It is common knowledge that economic cycles and crises are a challenge for academia to improve theoretical and applied insights (Weber, 2009, 1). The following twelve theses may be a contribution to such a process:

1. **Central banks accomplished good crisis management, but are not innocent:** An overgenerous liquidity supply – supported by “benign neglected” huge capital inflows to the US – contributed, among other factors, to the past excessive credit expansion and crisis development (Sachverständigenrat, 2007; Schönwitz, 2007). Therefore, solutions must not only concentrate on private “banker bashing”, respectively improvement of regulation and supervision. Actually, it is necessary to reflect basic assumptions, methods and strategic focus of central bank policy.

2. **Mopping up the mess after the bursting of a bubble by a policy of easy money is not always a proven remedy:** Future policy should be more “asset inflation conscious” and pre-emptive. It consequently should, as William McChesney Martin, chairman of the Fed from 1951 to 1970, was cited, take away the punchbowl just as the party got going (Plender, 2010).
3. **Central banking with an elaborate communication policy supports the acceptance of far-reaching measures:** During the crisis, communication policy of the ECB developed to an outstanding tool. ECB’s ad hoc communication improved confidence, thereby enhancing the acceptance and efficiency of crisis management. Such a communication policy is also an aspect of accountability and transparency, which an independent central bank has to deliver to the public and the state authorities.
4. **Referring to the dynamic of the American house price bubble it is not very convincing to say that it is impossible to identify not fundamentally justified asset price increases early enough (de Grauwe, 2007):** Actually, it is an important task for future research to pave the way for a policy of leaning against the wind of an incoming asset price bubble. This could mean to start a restrictive monetary policy before consumer price index expectations signal necessity to act. This is easier for a communicative and independent central bank than for a central bank under political command.
5. **Restrictive monetary policy must not only rely on key interest rate variation as this could damage the real economy:** Empirical research shows (IMF, 2009) that asset price cycles are often preceded by significant increases of credit supply. Such a type of “credit boom bubble” (Mishkin, 2009) could be tackled by a prophylactic increase in minimum reserve requirements. This would be a discretionary provision, especially when “irrational exuberance” (Greenspan, 2007) occurs, and a revival of the sometimes as old fashioned criticized minimum reserve policy, which was conducted by the Deutsche Bundesbank in former times (Görgens, Ruckriegel and Seitz, 2004). Remuneration of minimum reserves supports the acceptance of this tool.
6. **After crisis the banks will have a higher risk consciousness – whether out of own reasoning or because of regulatory measures:** Therefore, it should be considered, if it is appropriate to return to a standard liquidity management with clear dominance of weekly main refinancing operations as before crisis. In this context, central banks’ desire for a flexible liquidity management must be weighed against private bank’s improved need for financial security and back up. Keeping the frontloading strategy could be a supplementary contribution.
7. **Contrary to the theoretical assumption of money market efficiency the crisis has shown that financial stability – like a public good – cannot be guaranteed privately (Kotz, 2009):** In addition to the money market interbank interest rate and (maybe) the minimum reserves as operational targets future central banking has to look at money market stability with a leading function of the key interest rate, respectively – because of interdependences – financial stability. It is urgently necessary to put this target on the operational level in concrete terms. The discussion is at the very beginning in this context. But it is obvious that the consequences of this debate will exceed traditional monetary stabilization policy concerns and include regulatory aspects, financial supervision and macro-prudential early warning mechanisms. Especially the macro-prudential dimension must be improved. In this context, three challenges occur – not at least because the macro perspective must avoid not to recognize the wood because of the many trees: First, to identify an operational set of early warning indicators – e.g., in the early warning literature on financial instability through banking crises housing prices rank at the top of possible indicators (Reinhart, Rogoff, 2009); second, to select systemic relevant banks from the about 6000 banks in the Euro area; and third, to improve international cooperation and institutional precautions. Weber (2009, 3) mentions, on European level, the implementation of a European Systemic Risk Board (ESRB) as interface between politicians, central bankers and banking supervisors fulfilling advisory early warning functions. To improve international cooperation it could be considered to have representatives from international organizations included, e.g., from the Financial Stability Board (FSB) or the IMF.
8. **Monetary policy “without money” as in pure inflation targeting is no sufficient solution:** The crisis made it clear that not only consumer price inflation but also asset price inflation is a monetary phenomenon. The “two pillar concept” of the ECB considers this fact. It consists not only of an up to about two years short-term oriented analysis of economic indicators (asset prices included), but also of a longer-term oriented analysis of monetary indicators in its second column. This approach with a prominent role of money was criticized especially by representatives of strict inflation targeting

as being too optional and superfluous. But it reflects the complexity of economic reality. With its analysis of asset prices and credit aggregates as counterparts of monetary developments this approach offers early warning possibilities – which can be elaborated – to identify pre-emptively malfunctions on financial markets and credit boom developments.

9. **Final target measurement – and not quantitative definition – should be reconsidered:**

Until now the Harmonized Index of Consumer prices (HICP) for the Euro area does not include costs for buying or building houses. To contribute to the stability of financial markets it may be appropriate not only to analyze asset prices, but also to include their valuation into the final target measurement. It is the intention of measurement by a consumer price index to identify, if and how much the consumption budget of private households – durable goods included – is directly affected by price developments. This intention justifies to include residential housing prices and to exclude shares and bonds.

10. **Politicians should not expect too much from monetary stabilization policy:**

But it is not a good proposal to make changes to the quantitative definition of price stability in the Euro area in order to support south European countries with a policy of easy money. Central bank credibility as precondition for efficient monetary stabilization policy requires that inflation does not become a “moving target” (Münchau, 2010). Inflation is a dynamic phenomenon and, therefore, it is in no case a proper solution – and especially not a remedy to solve structural problems of economies. German chancellor Helmut Kohl originally hoped that European Monetary Union would be the trigger for a political union (Brittan, 2010). This did not happen and this “flaw in its governance” (de Grauwe, 2006) is an important reason for structural discrepancies in the Euro area. Actually, to achieve a more balanced development of the member nations in addition to crisis management for Greece now the political union “...finally knocks at the door claiming its rights” (Padoa-Schioppa, 2010).

11. **Monetary stabilization policy after crisis will be more complex:** Including money market respectively financial stability as operational target

this “new” monetary stabilization policy needs – even more than before – scope for discretionary decisions within the bounds of the “two pillar concept” and price stability as final target prescription. Issing (2004) emphasized already the necessity of such a scope, remarking “... that central banks cannot be simply replaced by computers running model simulations”. Therefore, mechanistic decision rules and reaction functions for central banking – as, for example, the Taylor Rule – may represent an earlier stage of monetary policy application.

12. **After the financial crisis is before the crisis:**

A recent publication of Reinhart and Rogoff (2009) on financial crises, subtitled “Eight Centuries of Financial Folly”, confirms this forecast from a historical point of view: “The lesson of history, then, is that even as institutions and policy makers improve, there will be always a temptation to stretch the limits. Just as an individual can go bankrupt no matter how rich she starts out, a financial system can collapse under the pressure of greed, politics, and profits no matter how well regulated it seems to be”. Or, as an anonymous member of the banking community pointed out somewhat ironically: “There will be always intelligent people who find some back door to outwit the regulator” (Schönwitz, 2007). It is not the task of politics to abolish freedom by overregulation, but to prevent the same failures as source for a coming crisis. Historical experience may be a valuable contribution to crisis prevention: Reinhart and Rogoff discovered that in the course of centuries financial crises have one common theme: “...excessive debt accumulation, whether it be by the government, banks, corporations, or consumers...”. This diagnosis is to a certain degree a revival of thesis 1: Much and cheap (central bank) liquidity supports – among other factors (!) – risk-taking, debt-making and the evolvment of (asset) price inflation. And it confirms the importance of central bank independence.

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