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The monetary policy after the crisis

Conference summary

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The recent financial crisis poses many questions related to monetary policy – its performance before the crisis, its role during the crisis and future challenges. Aware of the importance of this topic, in March 2011 the National Bank of Poland (NBP) jointly with the Société Universitaire Européenne de Recherches Financiéres (SUERF) organized a conference 'The Monetary Policy after the Crisis'. In this summary we present the key findings from the conference. The summary does not pretend to be fully comprehensive as we select those findings from conference presentations that fit well the macroeconomic story we are going to present.[1]

1. Central banking paradigm before the crisis

Claudio Borio, the conference keynote speaker, notices four propositions of the central banking pre-crisis consensus, i.e. sufficiency of price stability for macroeconomic stability, a clear separation between monetary and financial stability functions, usage of short-term interests rates as monetary policy instruments and the conviction that there is consistency between central banks looking after their own economies and appropriateness of the global monetary policy stance (Borio 2011).

Some of the above propositions seem debatable. As underlined by the President of the National Bank of Poland Marek Belka in the opening remarks, financial stability was in fact a part of the mandate of central banks almost everywhere. There are empirical studies suggesting that monetary and financial stability functions were not treated as fully separated from each other.

Jaromír Baxa, Roman Horváth and Bořek Vašíček investigate how financial instability affected central bank response function in five countries (U.S., U.K., Australia, Canada and Sweden) since

[1] For a detailed description of all conference papers and presentations see SUERF newsletter, April 2011, pp. 1–5, www.suerf.org.

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the 1980s. They assess the effects of the overall financial stress as well as the bank stress, the exchange rate stress, and the stock market stress on central banks' policy rates. The reaction of central banks to financial stress was sizeable during adverse times and tended to disappear during good times. The authors note weak financial stress effects in the second half of the 1990s and its strong effects in 2008–2009. The strongest influence on monetary policy rules can be assigned to stock market stress and bank stress, whereas exchange rate stress affects interest rate setting in more open economies (Sweden, Canada). The authors claim that standard monetary policy rules should be augmented by some measures of financial stability (Baxa, Horváth, Vašíček 2011).[2]

Geert Bekaert, Marie Hoerova and Marco Lo Duca study the relationship of monetary policy vs. uncertainty and risky behaviour in asset markets. They split the VIX index into a volatility component, associated with uncertainty, and a residual, associated with risk aversion. On the one hand, loose monetary policy reduces risk aversion and encourages risky investments; this effect seems to appear after 5 months and lasts for about 2 years. On the other hand, high uncertainty is followed by a laxer monetary policy.[3] Moreover, it is the risk aversion – not uncertainty – that affects business cycle more strongly. The authors conclude that proper policy might stop creating financial bubbles as well as it might reduce fears in financial markets during the crisis (Bekaert, Hoerova, Lo Duca 2010).

2. Monetary policy – a cause of the recent crisis?

There are two opposite views on the role of monetary policy in the build-up to the recent crisis. According to the first view, the crisis was caused by factors only to some extent related to monetary policy, including (Svensson 2010): global imbalances leading to low real interest rates and high asset prices; distorted incentives for commercial and investment banks to increase leverage to excessive levels, together with lax regulation and supervision; information problems in assessing risks and the US housing policy to support home ownership for low-income households. Another view claims that monetary policy contributed significantly to the building up of the crisis. Some empirical studies show that before the end of the 1990s the US monetary policy had been consistent with the Taylor rule specification, while later on interest rates were sizably below the level resulting from the Taylor rule. When the Taylor rule deviations are excluded, the bubble in housing price is reduced (Kahn 2010). However, it seems that a very tight monetary policy would have been required to prevent the housing (asset price) boom, with a deep recession as the result of such policy. Presumably high costs in terms of the output loss and the lack of appropriate means of identifying asset price bubbles made central banks reluctant to respond to asset prices fluctuations in the era before the financial crisis of 2008 (IMF 2010).

[2] Similarly, Vašíček (2010) finds that financial stress indicator was significant in central bank response function in the Czech Republic, Hungary and Poland.

[3] The results seem to be robust to various factors: monetary policy measures, business cycle variables, methods of identification of policy and uncertainty shocks as well as general identification schemes. The authors consider also different channels through which monetary policy affects risk aversion by replacing the business cycle variable with: repo growth, broad money aggregates, private credit growth or the first difference of credit to GDP ratio, consistently confirming the results.

In their comprehensive study Pietro Catte, Pietro Cova, Patrizio Pagano and Ignazio Visco analyse the role of economic policies in the global crisis. They show that with a different set of economic policies in various areas of the world, the global macroeconomic environment could have been substantially different. In particular, a combination of less expansionary monetary and supervisory policies in the United States, policies enhancing potential output growth in Europe and Japan and policies aimed at rebalancing towards domestic demand implemented in emerging Asian economies under enough exchange rate flexibility to maintain domestic balance, would have resulted in a lower current account deficit in the U.S. and lower increase of housing prices (Catte et al. 2010).

3. Monetary policy during the crisis

During the financial crisis central banks modified significantly their operational frameworks, introducing additional (unconventional) measures of monetary policy. In this way central banks attempted to protect financial stability and stimulate the economy in the presence of disturbances in the monetary transmission mechanism. Unconventional monetary policy measures involved changes of the content or size of central banks' balance sheets as well as announcements about future policy to influence long term expectations. They included: lending to banking sector on special terms, interventions in credit market and outright asset purchases (Domański 2010). Generally, the aim of these operations was to reduce the cost and increase the availability of external financing to economic agents.

Charles Brendon, Matthias Paustian and Tony Yates provide theoretical justification of the use of unconventional measures of monetary policy during the crisis. They examine the monetary policy design with the sticky price business cycle model and try to capture selected features of the recent financial crisis, such as: financial origins of the economic downturn, driving interest rates to the zero lower bound and introduction of unconventional measures of monetary policy to stimulate spending. Those measures, represented in the model by the central bank purchases of securitised commercial banks' loans to firms, help relaxing the borrowing constraint and their importance is magnified by the presence of the zero lower bound or when commitment is not possible (Brendon, Paustian, Yates 2011).

Diana Hancock and Wayne Passmore analyze the effects of Federal Reserve's MBS (mortgage--backed securities) purchase program on mortgage rates. These effects are assessed by comparing the results of out-of-sample fits of regressions during the 'normal era' (July 2000 – March 2004) and the 'subprime dominance era' (April 2004 – July 2007). The authors distinguish three periods of the intervention associated with: the announcement of the program (in November 2008), the uncertainty concerning Fed intentions and the return to normal market conditions. During the first period mortgage rates were significantly reduced, during the second period the decline was smaller possibly due to some problems with communication, whereas during the third period, since 27 May 2009, normal market conditions were established. After the program was completed the steep decline of mortgage rates appeared, which has been assigned to the stock effect of the Federal Reserve's holdings. According to the authors, the Fed intervention significantly improved market conditions. They highlight the fact that it signalled a strong and credible backing for mortgage markets and financial system as a whole; however, it had little portfolio rebalancing effect (Hancock, Passmore 2010).

Urszula Szczerbowicz verifies the effectiveness of unconventional monetary policy measures adopted in the United States. She finds that liquidity facilities other than Term Auction Facility (TAF) helped reduce strains in the interbank market. Purchasing long-term Treasury debt, mortgage--backed securities as well as the Fannie Mae and the Freddie Mac debt by the Fed lowered long-term interest rates and contributed to the increase of long-term inflation expectations to their pre-crisis level. However, announcements related to other unconventional monetary policy instruments and news about fiscal stimulus or government recapitalizations did not have significant impact on the long-term inflation expectations (Szczerbowicz 2011).

Monetary policy making during the financial crisis was complicated by the disturbances in the functioning of the monetary transmission mechanism. Tomasz Łyziak, Jan Przystupa, Ewa Stanisławska and Ewa Wróbel describe such disturbances identified in the Polish economy, indicating those reflecting standard cyclical features of the transmission mechanism and those caused directly by the financial crisis. Since the beginning of the financial crisis the monetary transmission mechanism in Poland has been slower and somewhat weaker, however at the same time monetary policy has become more responsive to output and inflationary shocks. There were disturbances in the transmission from the monetary policy instrument to the money market rates, however this stage of the monetary transmission mechanism has recently showed some signs of stabilization. Yet, there disturbances still remain in the transmission from money market rates to retail rates. In particular, there has been a breakdown of the long--term relationships in the case of deposits of households and housing loans, while other retail rates exhibit more delayed adjustments. Since the beginning of the crisis, reactions of loans to small entities to the interest rate shock have become deeper, which is consistent with the findings of literature addressing the issues of credit channel and asymmetric information. The reaction of the exchange rate to the interest rate shock is less persistent, so disinflationary impact of the exchange rate appreciations can be smaller and more uncertain than in the past (Łyziak et al. 2011).

The crisis has underlined the importance of links between the confidence of public finances and the state of confidence in the interbank market as integral parts of the systemic risk and financial stability, although – as shown by Petar Chobanov, Amine Lahiani and Nikolay Nenovsky – those links are extremely unstable during the financial crisis. The authors analyse the impact of fiscal risks on overnight interest rates and their spreads vis-à-vis Eonia using high frequency data from new member states of the European Union with different monetary regimes: i.e. currency boards and quasi-fixed exchange rate (Bulgaria, Estonia, Latvia, Lithuania) or inflation targeting (Poland, Czech Republic, Hungary and Romania). It seems that since the beginning of the financial crisis fiscal risks – assumed to be well measured with the CDS spreads – have become statistically insignificant in explaining overnight interest rates in inflation targeting economies, while in the fixed exchange rate economies they have become statistically significant (Chobanov, Lahiani, Nenovsky 2011).

Two papers presented during the conference focused on monetary policy during the crisis in a fixed exchange rate regime – the first one concerns the Danish economy, while the second one – the euro zone. Jens Thomsen, the conference keynote speaker, shows that the interventions of the Danmarks Nationalbank in the foreign exchange market turned out to be insufficient during the crisis. A sizeable increase of monetary policy interest rates was needed

to stabilize the krone. Thomsen points out that it was not a convenient or popular move, particularly while other central banks were reducing their rates to stabilize the financial sector. He notices that the interest rate sensitivity of capital flows declines during crises. Thomsen argues that high level of reserves during the crisis is important to signal commitment to the fixed exchange rate regime, but at the same time difficult to obtain and costly to hold, due to turbulences in commercial paper market and wider spreads to euro area. He states that the implementation of monetary policy must be flexible to handle extraordinary liquidity situation in money markets. When banks depend on short-term foreign funding, especially in a fixed exchange rate regime, the central bank must operate with a large foreign exchange reserve. Thomsen concludes that particularly during crises there is a cost to Denmark of being outside the euro area (Thomsen 2011).

Cristina Badarau and Grégory Levieuge analyze the optimal policy-mix of monetary policy and budgetary regime in a heterogeneous monetary union. They use two-country DSGE model calibrated with the euro area data, where the bank capital channel is used to model financial heterogeneity. They show that, whatever the fiscal policy is, a centralized monetary policy is preferable. Moreover, non-cooperative budgetary regimes help to mitigate the asymmetries in a monetary transmission process within a union. The authors state that the cooperative budgetary regime is costly and it may be better only due to stabilization of public spending. Therefore, they conclude that in face of financial shock European economies would not have benefited from a common fiscal policy (Badarau, Levieuge 2011).

4. Monetary policy in the future – lessons from the crisis

The literature concerning monetary policy draws various lessons from the global crisis. First of all, the crisis has shown that price stability is not enough to achieve financial stability. Although monetary policy and financial stability policy are distinct and imperfectly aligned,[4] there are interactions between them. Monetary policy affects asset prices and balance sheets and can thereby affect financial stability. Keeping interest rates low (e.g. with respect to the Taylor rule) over an extended period of time can cause an increase in banks' risk taking with its consequences for financial stability. Financial stability policy directly affects financial conditions, which affect the monetary transmission mechanism. As shown during the crisis, financial conditions may have a very strong and deteriorating impact on the transmission mechanism, making standard interest rate policy less effective. Therefore it is suggested that financial conditions and financial indicators should be considered in the standard models of the monetary transmission mechanism used in central banks and in macroeconomic forecasts.[5] Although they should not become independent targets for monetary policy, the coordination of monetary and macroprudential policies is needed.

[4] Empirical literature suggests that the relationship between monetary policy, asset prices and the real economy, if exists, is weak (e.g. Boivin, Kiley, Mishkin 2010) and has statistically significant effects only on the real activity (Monnin, Tehri 2010). Changes in asset prices seem to appear mainly under the influence of structural changes in the economy or animal spirits which influence human behaviour.

[5] Some economists argue that as a consequence, lengthening of monetary policy horizons might be necessary. In this concept monetary policy reacts in an adequate manner both to downturns and expansions and applies a higher interest rate in the event of an increase in risks in the financial markets, even in the absence of inflationary risks or macroeconomic risks within the usual time horizon for monetary policy (Weber 2009).

Macroprudential tools support monetary policy indirectly, by supporting financial stability, which constitutes their principal aim. To some extent, by affecting selected variables in the monetary transmission mechanism (e.g. availability and cost of financing faced by borrowers), well-coordinated use of macroprudential tools could substitute interest rate movements (Cecchetti 2009). It could be especially important while addressing financial shocks. Using adequate macroprudential tools would reduce the need for aggressive monetary policy reactions and should, in principle, be less disruptive to the whole economy than using policy rates (Kannan, Rabanal, Scott 2009). It is however debatable how to design such macroprudential tools to make them effective (Bank of England 2009).

Conference conclusions are broadly in line with the observations described above. According to Claudio Borio, the financial crisis has shaken the foundations of the central banking world. As far as the post-crisis model of central banking is considered, it is now generally agreed that low and stable inflation does not guarantee financial and macroeconomic stability. There is also a consensus that regulation and supervision of financial institutions needs to go beyond a microprudential perspective and adopt a macroprudential orientation with central banks playing the key role. Moreover, interest rates are not always sufficient instruments of monetary policy: reductions in interest rates have not been sufficient to avert the enormous costs of the crisis and to reignite a solid recovery (Borio 2011). Jens Thomsen notes that in a fixed exchange rate regime the interventions of central bank in the foreign exchange market have also been insufficient (Thomsen 2011). Marek Belka, the President of the National Bank of Poland, highlights benefits from integrating central banks' objectives of price stability and financial stability. Regulatory and supervisory instruments aiming at achieving financial stability can reinforce monetary policy, making it more efficient and less costly. It is especially important in the early phase of the business cycle, when imbalances start building up. However, as noted by Claudio Borio, there is no agreement on whether or how far monetary policy regimes should be adjusted to lean against the build-up of financial imbalances. There are also different views concerning the proper role of monetary policy after the crisis, whether it should operate through interest rates or balance sheets (Borio 2011).

Papers presented

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