Benoît Cœuré: Non-standard monetary policy measures – where do we stand?

Speech by Mr Benoît Cœuré, Member of the Executive Board of the European Central Bank, at the International Monetary Seminar "Sovereign Risk, Bank Risk and Central Banking" organised by the Banque de France, Paris, 10 July 2013.

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Ladies and Gentlemen,

It is a great pleasure to be at the Banque de France today to speak at the 2013 International Monetary Seminar.

In my remarks, I would like to look back on the policy actions, and especially the non-standard measures, undertaken by the ECB over the past five years.

As in other countries, such measures were ultimately inspired by the goal of averting the risk of more severe consequences of the financial crisis on the macroeconomy and, ultimately, on price stability. The exact non-standard measures deployed to achieve this goal, however, differ across economic areas. I would like to take this opportunity today to highlight how the specific measures implemented by the ECB were designed to tackle the peculiar euro area phenomenon of "financial fragmentation" – that is, the observation of fault lines in the flow of funds between savers and borrowers specifically shaped along national borders, and accompanied by capital repatriation and sharp increases in the home bias.

Financial fragmentation has manifested itself in the form of strong divergences between sovereign yields and ensuing differences in the cost of funding across banks, depending on the country in which these banks operate. In turn, owing to the relationship aspects of bank lending, cross-country fragmentation in banks' funding costs have been reflected in a disparity of financing conditions offered to firms, with an increase in the dispersion in retail interest rates on loans, and especially small loans, to non-financial corporations. Lending rates have tended to follow the path of key ECB rates in some countries, but not in others. While the rate charged by the ECB on its main refinancing operations (the so-called MRO rate) was cut by 50 basis point between end-May 2012 and end-May 2013, the rate charged by banks on their loans to non-financial corporations went down by more than 50 basis points in Germany, 25 basis points in Spain and less than 20 basis points in Portugal.[1]

All in all, financial fragmentation has exacerbated cyclical fluctuations, leading to an inefficient allocation of capital across countries and altering in an erratic fashion the transmission of monetary policy impulses.

Under such circumstances, and within the ECB price stability mandate, some of our non-standard monetary policy measures have been geared at responding to financial fragmentation. In so doing, we have followed three general principles.

- *The first principle* is the simplest and best understood. It prescribes that any provision of excess liquidity should be specifically targeted towards the market which is most impaired by funding constraints. This principle ultimately amounts to ensuring that the provision of liquidity produces the most beneficial effect per unit of intervention. The ECB adhered to this principle, for example, when in 2008 it

[1] Rates on outstanding loans to non-financial corporations over 1 and up to 5 years. Rates went down, respectively, from 3.46% to 2.93%, 3.8% to 3.55% and 5.2% to 5.03%. Source: ECB.

decided to apply full allotment in its liquidity-providing tender operations. This policy ensures that liquidity can automatically reach the sets of banks with greater funding difficulties.

- *The second principle* derives from the observation that fragmentation has been the result of an unwarranted increase in certain risk premia – notably, liquidity or funding risk premia and redenomination risk premia. The causality goes, however, in both directions, as financial fragmentations can lead to an unwarranted rise in risk premia, and the outcome of this cumulative and potentially self-fulfilling process can be devastating. Our non-standard measures have therefore incorporated an element of insurance against those risks. For our liquidity-providing operations, the element of insurance is represented by the extension of their maturity to up to three years with the VLTROs. In the phase of the crisis when funding risks were highest, the VLTROs have not just helped to overcome current funding constraints; they have also represented a commitment to mitigate those constraints over the future, so as to reduce ex ante funding risk. A similar element of insurance is clearly present in the design of our Outright Monetary Transactions (OMT) programme, which is designed to address tail risks of currency redenomination.
- *The third principle* is the direct consequence of the second. It is well known that any provision of insurance against adverse scenarios can generate perverse incentives. The ECB has perhaps been more acutely aware of this feature of non-standard measures than other central banks because of the multi-country nature of the euro area. Consistently with the results of the academic literature, offering partial insurance has been our guiding principle to mitigate moral hazard concerns. The conditionality associated with our OMT programme, can be viewed as direct applications of this principle.

Let me elaborate on these three principles in the rest of my remarks.

Targeting liquidity at the most impaired market

It is well understood that the policy interest rate is not an efficient tool for redressing financial impairments when such impairments produce large fluctuations in the demand for central bank reserves. In these circumstances, the amount of reserves supplied by the central bank, and their opportunity cost, are the crucial variables to affect economic outcomes. If reserves are not supplied adequately, banks are forced to obtain the liquidity they need at potentially much higher costs in an impaired market. These costs would then be passed through to lending rates, leading to an unwarranted reduction in financial intermediation.

To mitigate the resulting inefficiencies, a recommendation from the recent monetary literature is that central banks should supply liquidity so as to satisfy all fluctuations in the demand for it.[2]

A direct corollary of this principle when fluctuations in liquidity demand are geographically fragmented within a monetary area is to target the provision of excess liquidity towards the region where demand is highest. In an otherwise frictionless world, one simple way to implement this policy is to remunerate all reserves at the key central bank policy interest rate, and then make the supply of liquidity perfectly flexible. It could be objected that targeted liquidity provision has redistributive features that fall outside the scope of monetary policy. But redirecting liquidity to those segments where financial intermediation ceased to function is not redistributive per se. On contrary, as I argued elsewhere, the distributional neutrality of

[2] See Curdia, V. and Woodford, M. (2011), "The central-bank balance sheet as an instrument of monetary policy", *Journal of Monetary Economics*, Elsevier, vol. 58(1), January, pp. 54–79.

our monetary policy can only be ensured by reducing spatial fragmentation within the monetary union.[3]

The type of liquidity provision that I have described thus far does not represent a non-standard measure *per se*. Supplying liquidity to banks is obviously a standard activity for central banks. However, there are examples of financial distortions which can be effectively countered by non-standard measures taking the form of liquidity injections. One example is the case of an unexpected, large fall in the value of assets held by commercial banks. If, realistically, agency problems imply that the conditions of intermediary balance sheets influence the overall flow of credit, then a large fall in asset valuations can disrupt lending and amplify the consequences of the shock on the real economy through a disproportionate increase in credit spreads. *Ceteris paribus*, a given firm would face tighter or looser credit conditions depending on whether it obtains its external financing from banks whose balance sheets are more, or less affected by the fall in asset prices.

In these circumstances, liquidity injections may also be warranted.[4] In the presence of heterogeneity, it again follows that such injections should be tailored to reach the sectors or regions in the economy where firms are most affected by the financial disruption, so as to undo the distortion at source.

Some of our non-standard policies during the various stages of the crisis can be directly seen as a way to abide by the principle of targeting liquidity to the markets with the most severe financial impairments.

In the euro area, required reserves have always been remunerated at the MRO rate and excess reserves at the rate on our standing deposit facility – i.e. at a small spread below the MRO rate. Since the opportunity cost of holding excess reserves is small, our full allotment policy was effective at alleviating adverse funding conditions for those banks which were unable to satisfy their additional liquidity needs in the market. Demand for excess liquidity has been a direct symptom of banking fragmentation – that is, of the heterogeneous ability of commercial banks to receive wholesale liquidity in private markets. Our readiness to provide liquidity on demand, at a fixed interest rate and against adequate collateral, ensured that liquidity could automatically reach those banks, especially in distressed countries, with the greatest funding difficulties.

Let me emphasise that the "substitute liquidity" generated during these crisis episodes is not inflationary. It effectively amounts to a replacement once private liquidity has dried up. Risks to price stability would arise if central bank liquidity remained tight during a crisis. In this case, liquidity conditions would remain scarce, leading to a credit crunch with recessionary and deflationary risks.

Providing insurance against funding or tail risks

Let me move on to the second principle of providing insurance against tail risks.

The recent financial crisis has been a stark reminder of the potentially devastating effects of self-fulfilling crises. Self-fulfilling liquidity crises for individual banks are, of course, well

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[3] There are actually three dimensions along which fragmentation can and should be reduced: the vertical, or intertemporal dimension; the horizontal, or interpersonal dimension; and the spatial dimension. See Cœuré, B. (2013), "Monetary policy in a fragmented world", speech delivered at Oesterreichische Nationalbank 41st Economics Conference: "A Changing Role for Central Banks?" http://www.ecb.europa.eu/press/key/date/2013/html/sp130610.en.html.

[4] See Gertler, M. and Karadi, P. (2011), "A model of unconventional monetary policy", *Journal of Monetary Economics*, Elsevier, vol. 58(1), January, pp. 17–34, and Gertler, M. and Kiyotaki, N. (2010), "Financial intermediation and credit policy in business cycle analysis", in Friedman, B.M. and Woodford, M. (eds.), *Handbook of Monetary Economics*, Vol. 3, pp. 547–599.

documented. The experience of bank runs is far from unprecedented. What has been new in the recent financial crisis is the *systemic* or market-wide nature of bank runs. Interbank market freezes and deposit withdrawals from distressed countries are examples of confidence crises that have affected the whole or an important segment of the banking system at the same time.

The effects of such systemic confidence crises can be much more devastating owing to externalities.[5] If all banks are distressed at the same time, they will all scramble to sell their assets to be able to meet their obligations. In so doing, asset prices will be pushed on a downward spiral, which exacerbates banks' distress and leads to further credit and asset price losses and a further deepening of the confidence crisis. The general scarcity of credit, in turn, leads to a substantial worsening of the macroeconomic outlook. The potential negative aggregate effects of such systemic liquidity crises can jeopardise price stability over the medium term.

The lender-of-last-resort function of central banks is the classic solution to the run problem for individual banks. The central bank stands ready to provide liquidity to the distressed bank at a penalty rate against adequate collateral. A credible lender-of-last-resort function can ensure that no solvent financial institution ever faces a bank run. Depositors know that even if all the other depositors withdraw their funds, the liquidity needs of a solvent bank will be met by the central bank. As a result, bank runs never happen in the first place.

A similar form of liquidity insurance against adequate collateral can also be useful in the case of runs to the whole banking system. A central bank commitment to provide liquidity insurance in the future alleviates expected future funding constraints, thus reducing funding risk and eliminating the possibility of systemic bank runs.

The progressive lengthening of the maturity of ECB liquidity-providing operations – from six months in early 2008 to twelve months in late 2009, and to three years at the end of 2011 – can be viewed as a form of commitment to guarantee the availability of ample liquidity over a future period of time.

I would argue that providing secured financing with a three-year maturity in our VLTROs at the end of 2011 and at the beginning of 2012 was a successful example of system-wide liquidity insurance for banks. The VLTROs successfully lowered interbank tensions, as shown by a steady reduction of the spread between the unsecured EURIBOR interbank rate and the OIS swap rate over the following months. Standard bank lending surveys and ad hoc surveys asking banks specifically about the effectiveness of the two VLTROs provide further evidence that the programmes have helped to make banks' credit standards less tight towards both households and non-financial corporations.[6]

All in all, by removing the prospects of future liquidity constraints on credit supply, this policy has avoided a major credit crunch. Without the launch of the two VLTROs, banks in distressed regions may have been forced into a self-reinforcing fire sale of their assets, could have defaulted on their maturing obligations, or may have discontinued and withdrawn existing credit lines to companies. The ensuing restricted credit supply could have dragged the whole euro area economy further into recession and could have even led to deflationary risks.

More specifically, the VLTROs have helped tackle financial fragmentation. Recourse to these policies has been particularly intense in countries facing stress in sovereign bond markets and where dried-up interbank funding has been replaced with ECB liquidity. The policies

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[5] See, for example, Gertler, M. and Kiyotaki, N. (2013), "Banking, Liquidity and Bank Runs in an Infinite Horizon Economy" at http://www.princeton.edu/~kiyotaki/papers/GertlerKiyotakiBankRunModel2013May22.pdf.

[6] See Darracq-Paries, M. and De Santis, R. (2013), "A non-standard monetary policy shock – the ECB's 3-year LTROs and the shift in credit supply", *Working Paper Series*, No 1508, ECB, Frankfurt am Main, January.

were therefore successful in limiting heterogeneity in terms of liquidity costs across euro area countries. Around 60% of the initial net liquidity injection of about EUR 500 billions has now been repaid. This is evidence that liquidity constraints on banks have significantly receded.

The second and probably more obvious application of the principle of providing insurance against tail risks is the Outright Monetary Transaction programme.

Although the VLTROs were successful in alleviating banks' funding risk, doubts have progressively emerged over the ability of distressed sovereigns to roll over their maturing debt. At some point these concerns have appeared to validate the theoretical possibility of a liquidity run on sovereigns – that is, the possibility that a government is forced to default, even if it is fundamentally solvent, owing to self-fulfilling reasons.[7]

The ECB's response through the OMT programme announced in the autumn of 2012 is another example of the commitment to provide liquidity insurance against a tail risk scenario. Under certain conditions, the ECB stands ready to intervene with amounts unlimited ex-ante, meaning with amounts commensurate with this objective. This commitment-like feature of the OMT has been correctly understood by the markets. Favourable developments in the sovereign markets followed the announcement of this programme without the need for it to be activated. The ECB's commitment to provide liquidity insurance has successfully calmed unwarranted fears of a roll-over crisis in distressed euro area sovereigns.

In general, the imperfect pledgeability of future income results into a demand for as well as a shortage of liquidity with far reaching implications for the financial system.[8] In this perspective, private risk sharing is always imperfect and may lead to financial crises induced by liquidity shortages, which can only be alleviated through provision of public liquidity.

But publicly supplied liquidity can also create distortions in the economy. This is an argument that policy makers need to take seriously, and it will be the third theme I will address this morning.

Providing partial insurance

I have argued so far that some of our non-standard measures can be interpreted as forms of insurance against certain forms of risk. I have also argued that such measures were desirable, given that those risks were about to materialise. It is well known, however, that the ex ante availability of insurance distorts incentives and can lead to imprudent behaviour. It is worth bearing in mind that the trade-off between insurance and incentives is the third important principle inspiring our non-standard measures.

I have already elaborated on this principle elsewhere, so I will be brief.[9] The classic example of the trade-off between insurance and incentives is that of car insurance. Car insurance is obviously desirable ex post. Without it, many people may stop driving for fear of being involved in an accident and having to pay for the damages in full. Insurance is however less desirable ex ante because it hurts incentives – it may encourage imprudent driving.

The standard solution to the trade-off between insurance and incentives is to provide partial insurance. Car insurance policies, for example, do not normally cover the full cost of damages. Health insurance policies also entail copayments. While partial insurance means less insurance against shocks, and hence less ex post efficiency, it improves ex ante

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[7] See Corsetti, G. and Dedola, L. (2011), "Fiscal crises, confidence and default – a bare-bones model with lessons for the euro area", unpublished manuscript.

[8] See, for example, Holmström, B. and Tirole, J. (2011): "Inside and Outside Liquidity".

[9] See Cœuré, B. (2012), "Central banking, insurance and incentives", speech delivered at the ECB conference entitled "Debt, growth and macroeconomic policies", Frankfurt, 6 December 2012, http://www.ecb.europa.eu/press/key/date/2012/html/sp121206_1.en.html

efficiency. At the ECB we had the insurance versus incentives trade-off in mind when designing our non-standard measures. Let me briefly conclude with an illustration of this point with reference to our provision of liquidity and to the OMT.

With regard to our unlimited provision of liquidity, we have applied the classic Bagehot principle of providing insurance at penalty rates and against adequate collateral. There is a thin line between bank illiquidity and bank insolvency, and the former can easily morph into the latter. By requiring collateral, the central bank ensures that it only provides credit to a fundamentally solvent institution, and the penalty rate is the means to ensure that central bank liquidity provision is indeed a last resort.

These features also apply to all our provisions of liquidity. Over the past years, the overnight rate at which non-distressed banks can obtain market funding has fallen to levels close to the rate on our deposit facility. In comparison, the rate on our refinancing operations at which we provide liquidity has effectively turned into a penalty rate –not to mention the rate charged by national central banks when they provide emergency liquidity assistance to distressed banks which is set even higher, above our marginal lending rate. ECB liquidity is also only available against collateral. Our collateral policy has evolved in the crisis but strict valuation and haircuts rules are always applied. Last but not least, our liquidity is only available to banks, subject to micro-prudential supervision. Prudential checks by national supervisors (and looking forward, by the future prudential arm of the ECB) ensure that liquidity only flows to fundamentally solvent institutions.

The OMTs also provide partial insurance. To qualify for interventions, countries must have negotiated a precautionary European Stability Mechanism programme with other euro area governments, with IMF involvement. This condition serves to ensure that governments continue to correct existing economic and fiscal weaknesses when OMTs are activated. Moreover, the objectives of the programme are clearly defined. The ECB does not aim to eliminate spreads between sovereign bond issuers. This is because sovereign yields do not have to be identical in a monetary union and market discipline has an important role to play. The ECB will solely buy bonds with shorter remaining maturities. Relying on short-term debt strengthens the disciplining power of the right to stop our interventions at any point in time. In short, OMTs strike a balance between ex ante and ex post efficiency, and they are fully compliant with the ECB mandate.

Concluding remarks

Let me conclude.

The euro area is still engulfed in a severe crisis, which is posing a formidable challenge to all European policy-makers. In designing our response to the crisis, the interplay of many different factors must be borne in mind. In my remarks I have briefly illustrated three of those factors, which have played an important role in shaping our non-standard monetary policy measures so far: targeting liquidity at the most impaired market, providing insurance against funding or tail risks, and mitigating moral hazard when providing such insurance. We will keep an open mind and stand ready to react flexibly to new developments, abiding by the same principles and staying within the boundary of our mandate.