

## **Peter Praet: Deleveraging and monetary policy**

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It is a great pleasure to join you on the occasion of the Levy Economics Institute's Hyman P. Minsky Conference. The financial crisis erupted five years ago when the leverage cycle that had accompanied the "great moderation" abruptly reversed. Since then, the euro area and large parts of the global economy have been swept by several waves of financial shocks. And each wave has unleashed strong deleveraging forces throughout the affected economies.

Deleveraging often reflects a necessary adjustment process. And it does not necessarily warrant policy intervention. At the same time, it bears the risk of becoming abrupt and disorderly, thus threatening price stability by dislodging the provision of credit and the transmission of monetary policy signals to the real economy. In the worst case, it may lead to a full-blown financial meltdown via self-sustained adverse feedback loops of the kind envisioned by Hyman P. Minsky.

Central banks have a role in ensuring that the economy does not move towards divergent dynamics that would be inconsistent with price stability. To this end, they have a range of policy tools at their command which may be used to control deleveraging pressures.

But, of course, strong accommodative central bank intervention may create moral hazard, thus discouraging needed adjustment efforts and possibly leading to the accumulation of new imbalances.

In my remarks today, I will discuss how the ECB navigated through the crisis in view of the complex "balancing act" between disruptive deleveraging processes and moral hazard. I will argue that forceful action was needed to fend off acute downward pressures on price stability. In illustrating this point, I will often come back to the concept of the transmission mechanism, which is fundamental to a central bank's ability to maintain price stability.

I will also focus on the specificity of the approach adopted by the ECB during the crisis in order to maintain price stability. And I will relate it to the challenges faced by a single monetary policy in the multi-country context of the euro area. This may have implications for the process of deleveraging in the economy.

To contain moral hazard concerns, the ECB has consistently conveyed to market participants and the general public that it responds symmetrically to upside and downside pressures on price stability. Moreover, it adopted additional safeguards against moral hazard, such as the explicit conditionality attached to our recently announced Outright Monetary Transactions.

At the same time, we have used and will continue to use our influence to ensure that the overall institutional architecture of Economic and Monetary Union (EMU) becomes incentive-compatible, also beyond monetary policy.

### **Monetary policy during the global financial crisis**

Let me elaborate on the ECB's response in the different phases of the crisis, starting with the global phase before the crisis became combined with a sovereign debt crisis in some euro area countries.

The first phase of the financial crisis – with Lehman Brothers’ failure being the watershed – can be described as a bank run on a global scale. In contrast to a classic run, it centred on wholesale deposits rather than retail deposits. But the dynamics were the same in that they essentially reflected an evaporation of confidence in banks.

The spark that ignited this crisis was a bout of general uncertainty about the health of financial-intermediary balance sheets in the context of huge losses made by some obviously systemic banks. As financial intermediaries no longer trusted each other, they shortened the maturity of their exposures, charged higher premia or withdrew from the market altogether.

The fuel which fed the flames of the crisis, in a context in which previously much vaunted hedges had become meaningless, was a large maturity mismatch and high leverage in the financial sector. This translated perceived vulnerability into actual vulnerability.

Finally, the wind which fanned the flames came from the feedback loop associated with fire sales.

Despite its dramatic effects, devising a response to this first phase of the crisis might, at first, seem like a case study in a standard monetary economics curriculum. Bagehot’s analysis of the UK banking panic of 1866 delivered the insight that the central bank has to lend freely against good collateral at a high rate. Also, Friedman and Schwartz’s analysis of the Great Depression suggested that the central bank has to accommodate liquidity preference shocks.

However, although these insights may provide inspiration, they do not provide an off-the-shelf recipe. Bagehot did not have in mind a monetary regime of fiat money and had a clear view of which banks were sound and which were not. Friedman and Schwartz argued that the Federal Reserve should have stabilised M2, which collapsed in the early 1930s. But only stated this as a general rule without a detailed prescription. As a result, it remained unclear how to implement it, starting from a situation in which the soundness of banks was uncertain and the usual monetary instruments were different.<sup>1</sup> There was also no consensus in the economic literature on how to think about the monetary policy stance when markets are suddenly unable to perform in the manner which most theorists prefer to assume: would it be just the overnight market rate – normally controlled by the central bank – or a broader concept encompassing the whole “risk-free” yield curve, or perhaps even including other rates and asset prices?

The ECB’s response to the crisis was to deepen the policy it adopted in “good” times in order to also address “bad” times. In simple terms, this policy required us to continue to decide the appropriate level for the short-term interest rate, while ensuring that the transmission mechanism works as effectively as possible. The transmission mechanism is the long chain of reactions that lead from a policy-rate change to its final impact on the real economy and inflation via the effects on the whole array of interest rates, asset prices and monetary and financial indicators more generally.

In normal times, the ECB decides on the appropriate level of the short-term interest rate and provides the necessary liquidity to make such a rate prevail in the overnight market. A forecast of the necessary amount of liquidity is based on the need for liquidity by banks at the aggregate level. And the money market fulfils the task of distributing the liquidity across individual banks in an efficient manner as the banks themselves provide intermediation.

In normal times, the change in the overnight rate is then transmitted to the whole array of interest rates via arbitrage and somewhat predictable relationships, both along the inter-temporal dimension and the intra-temporal dimension. Trust in the stability of such relationships led most of the academic literature prior to the crisis to focus on the policy rate (or equivalently on the overnight market rate) as a summary indicator of financial and

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<sup>1</sup> For a discussion, see Christiano, L., Motto, R. and Rostagno, M. (2003), “The Great Depression and the Friedman-Schwartz hypothesis”, *Journal of Money, Credit and Banking*, Vol. 35, No 6, pp. 1119–1197.

monetary conditions – although this trust often was not shared outside the academic literature.

Incidentally, I note that the idea that what matters for the transmission mechanism is the whole array of interest rates and asset prices as well as balance sheets, and not just any specific short-term interest rate has been a crucial theme in monetarist thinking. And monetarists argued that monetary aggregates provide a handy summary indicator of the changes in the various yields and asset prices.<sup>2</sup>

From the beginning of the financial crisis, the first element of the transmission mechanism – the money market – ceased to function properly. Liquidity premia soared and arbitrage transactions became thin.

With the collapse of Lehman Brothers, financial tensions affected almost all asset classes, leading to a pronounced liquidity preference shock. As a result of the ensuing self-sustained deleveraging process, interest rates and asset prices can lose contact with or change their relationship to the central bank policy instruments.

In such circumstances, a central bank needs to regain control of the transmission mechanism, meaning that it must steer financial and monetary conditions in a way that is consistent with its price stability mandate.

The ECB responded to these challenges by cutting its policy rate – the main refinancing operation (MRO) rate – and by switching to a fixed-rate full allotment regime. Under such a regime, the central bank stands ready to satisfy fully the demand for liquidity – against collateral – at the prevailing policy rate. In the absence of a functioning interbank market, that demand for liquidity is in excess of the banks' liquidity needs under normal conditions.

Note that this regime can be maintained at any policy rate level, due to the presence of a corridor in the ECB's operational framework. It simply implies that excess liquidity pushes the overnight rate down towards the rate paid on the deposit facility. It also implies that the corridor can provide for a way to detach the decision to provide liquidity from the decision to set the interest rate.

Let me illustrate this point with an example. If market interest rates and bank lending rates move in a manner inconsistent with a change in the policy rate, the central bank's ability to influence the real economy and inflation may be impaired. The central bank can try to correct this. Traditional wisdom is based on making an even larger change in the policy rate so that the impact on financial and monetary conditions is of the originally-desired size. But another solution is to anchor other rates directly to the central bank policy intentions by the provision of liquidity.

The fixed-rate full allotment regime can achieve this outcome because, in effect, it squeezes out the premium at short maturity via the intermediation role taken up by the central bank. This assumes, however, that the counterparties of the central bank are still fundamentally sound.

A similar logic can also be applied to longer maturities. The central bank can provide liquidity at longer maturity at the average policy rate that will prevail in the future over this maturity. This can be done at any level of policy rate. The existence of the deposit facility provides a floor to the overnight rate. And the central bank can extend its influence over term credit by lengthening the maturity of its lending operations.

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<sup>2</sup> See, Friedman, M. and Schwartz, A.J. (1982), *Monetary Trends in the United States and the United Kingdom: their Relation to Income, Prices, and Interest Rates*, University of Chicago Press, Chicago, pp. 1867–1975, and Meltzer, A.H. (1999), "Commentary: monetary policy at zero inflation", in *New Challenges for Monetary Policy: a Symposium Sponsored by the Federal Reserve Bank of Kansas City*, Federal Reserve Bank of Kansas City.

One notable application of this logic was the 12-month refinancing operation enacted in December 2009. In this operation, the ECB stood ready to satisfy fully the demand for liquidity at one-year maturity. The interest rate charged on this liquidity was the average MRO rate that would prevail over the life of the operation.

This type of measure is distinct from attempts to flatten the “risk-free” yield curve via forward guidance which is often discussed in the literature. The reason is that it is aimed at squeezing out the premium faced by banks over and above the current and expected policy rate.

Let me recall that, in the euro area, about three-quarters of corporate finance comes from banks. Hence, anchoring banks’ funding conditions to the desired level can help ensure that lending rates faced by households and firms continue to reflect policy intentions. This was indeed the case during the first phase of the crisis, with lending rates declining in tandem with policy rates according to standard regularities.<sup>3</sup>

Central banks’ willingness to accommodate the increased demand for liquidity may, however, be ineffective in preventing a destructive deleveraging process, unless two additional elements are addressed.

First, there is a need to remove the stigma associated with accessing central bank liquidity. The ECB did so by providing liquidity at an attractive price via monetary policy operations in which a broad number of counterparties have access.

Second, deleveraging forces and fire sales have a direct impact on the value of collateral. To address this situation, the ECB broadened its collateral rules, thereby also enabling banks to take full advantage of central bank liquidity. At the same time, the ECB tightened its own risk-control measures to mitigate the risk it absorbed.

### **Monetary policy in the period of the sovereign debt crisis**

As we all know, the crisis did not remain restricted to the banking sector. In fact, from 2010 onwards, several euro area countries have experienced a severe sovereign debt crisis.

The driving forces of this evolution varied across countries. Some countries had already built up weak fiscal positions before the crisis, which emerged as a major vulnerability in the downturn. Others were overburdened by the fiscal costs of domestic banking crises. But irrespective of its origins, in all cases an adverse feedback loop between bank and government balance sheets emerged, which then spilled over national borders.

This adverse sovereign-bank nexus was nurtured by the large holdings of sovereign debt on bank balance sheets. When market scrutiny of public finances and investors’ risk aversion suddenly increased, sovereign yields started rising. The implied, actual or potential, losses for overly exposed banks raised the spectre of additional public support. As a consequence, the credit standings of sovereigns and banks have moved in tandem and both have found it increasingly difficult to maintain market access.

In several jurisdictions, the access of the banking sector to funding markets was heavily impaired. There was a real threat of a second wave of disruptive deleveraging. And as banks had already shed parts of their external and other non-core assets in the first wave, less room was left for banks to protect domestic credit.

The propensity for banks to pass on the ECB’s monetary policy signals to the real economy fell markedly. In other words, there were renewed risks that the monetary policy transmission channel could become severely impaired. But this time the ECB faced a new challenge: the

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<sup>3</sup> Giannone, D., Lenza, M., Pill, H. and Reichlin, L., “Non-standard monetary policy measures and monetary developments”, *Working Paper Series*, No 1290, ECB, January 2011.

dislocation had taken on a distinctly national dimension. Financial market fragmentation along national borders had become the new reality.

The ECB's response to this second phase of the crisis has been guided by the same principle as in the first phase: decide on the appropriate level of the policy rate to maintain price stability and preserve, to the extent possible, the proper working of the transmission mechanism. Moreover, the experience we accumulated during the first phase helped us in designing measures aimed at providing abundant liquidity, while avoiding stigma effects.

The ECB conducted two three-year lending operations indexed to the MRO (in December 2011 and February 2012). The operations were aimed at alleviating adverse funding conditions for banks by allowing them to satisfy their additional liquidity needs. The net liquidity injection amounted to around €520 billion – taking into account the shifting of liquidity out of other operations. One key result was that the longer-term refinancing operations (LTROs) provided banks with a more certain medium-term funding situation, in line with the longer maturity of the operations.

The months following these operations saw a broad stabilisation of financial conditions. Money and credit figures indicated that an abrupt and disorderly adjustment in the balance sheets of credit institutions had been avoided. Funding conditions for banks generally improved, and increased issuance activity and a re-opening of some segments of funding markets could be observed.

However, the root-problems of the sovereign debt crisis were only partly addressed by Member States. Hence, tensions in sovereign debt markets did not take long to resurface.

These tensions took a form that was specific to the institutional features of the euro area: markets started questioning the irreversibility of the common currency, thus pricing in redenomination risk in sovereign bond yields of vulnerable countries. The ensuing disruptive dynamics risked undermining one of the key motivations for introducing the euro, namely to provide a lasting safeguard against currency crises, such as the one experienced in Europe in the years 1992–93.

The main symptom of these problems was a pronounced movement towards financial market fragmentation. For example, the cuts we made in the MRO rate over the period had very heterogeneous effects on funding conditions in different countries. In some countries, retail lending rates declined, but in others they hardly moved or even increased. As a consequence, the singleness of monetary policy in the euro area was no longer guaranteed. And the countries in greatest need of a further expansionary impulse were the ones that were impacted least by cuts in the policy rates. This drags down their domestic economies and further weakens their fiscal positions.

To mitigate the dynamics of such self-sustaining fragmentation, the ECB decided to adopt Outright Monetary Transactions (OMTs). OMTs provide for interventions in government bond markets, with no ex ante limits, for countries that are subject to effective conditionality of a programme under the European Stability Mechanism (ESM).

The aim of OMTs is to directly address excessive risk premia in government bond markets that reflect in particular unwarranted perceptions of redenomination risk and are a key source of impairment in monetary policy transmission.

By imposing conditionality, OMTs aim to strike a balance between counteracting adverse tail risk and preserving incentives. Specifically, OMT conditionality ensures that countries commit themselves to a path of ambitious fiscal consolidation and structural reform, thereby preserving fiscal sustainability. This has two functions: first, it mitigates the balance sheet risk associated with outright purchases; second, it preserves the monetary policy rationale for OMTs. If countries were to reduce their adjustment efforts in response to ECB intervention, the beneficial effects of OMTs on the monetary policy transmission would be undermined by weaker fiscal and macroeconomic fundamentals. Therefore, conditionality is an inherent feature of OMTs.

## Specific challenges facing the single monetary policy for the euro area

The twin banking and sovereign debt crises, with heterogeneous manifestations across the single currency area, has put a premium on deleveraging – or at least a curb on leveraging – both in the banking sector and government sector. This contrasts with the greater emphasis on household sector deleveraging as driver of the US “balance sheet recession” in the wake of the financial crisis, to take the words of Koo.<sup>4</sup> It also contrasts with the greater emphasis on corporate sector deleveraging in the Japanese case over the past two decades.

In part reflecting these circumstances, the ECB’s approach during the crisis has also been different to that of other major central banks. The ECB’s main focus has been on collateralised lending, whereas the focus of other major central banks has been on large-scale asset purchases. This has had, in turn, implications for the pace and size of deleveraging in the euro area economy.<sup>5</sup>

In this respect, the ECB’s approach can be seen as more indirect than the approach based on large-scale asset purchases. Both approaches, by supporting the capacity of the monetary and financial sector at large to acquire assets, can support asset prices and lending, which is conducive to a smooth deleveraging process in the economy.

Asset purchases directly create scarcity in the instrument being purchased. This exerts an upward pressure on prices, and, through portfolio rebalancing effects, may also affect the prices of other assets. However, direct asset purchases involve a difficult choice for the central bank: it must take a decision on which assets to buy, necessarily interfering with relative asset prices and income distribution.

Collateralised lending involves such decision only at the level of the definition of the collateral and its eligibility conditions. This can also influence the prices of collateral, but the role of selecting which assets to buy or sell is essentially “outsourced” to the banking system, that is, to many private agents. Hence, collateralised lending leaves the price discovery process and the allocation of savings to market mechanisms.

The specificity of the ECB’s approach must be seen against the background of the bank-based financing structure of the euro area economy which I mentioned earlier – in contrast to the more market-based financing in the United States for instance. It must also be seen against the specific institutional environment in which the ECB operates – characterised by a multi-country context.

Some commentators suggest that governments should always take on leverage when there is excessive deleveraging in the private sector. But this option rapidly reaches its limits in the presence of debt sustainability concerns. And it has done so more quickly in the euro area than in other economies where the institutional framework is different.

In a context of macroeconomic imbalances across the euro area countries and financial market fragmentation, the Eurosystem balance sheet has expanded in size, with an increased concentration of liquidity provision to banking systems in countries under strain.

The asymmetric distribution of the ECB’s action across the euro area has attracted attention, also from a political viewpoint. What is insufficiently reflected in this debate is that this asymmetry is endogenous and is a result of the single monetary policy.

This asymmetric action across the euro area is also reflected in increased Target2 balances on the balance sheets of Eurosystem central banks. Such an endogenous shift in

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<sup>4</sup> Koo, R., “The world in balance sheet recession: causes, cure, and politics”, *Real-World Economics Review*, No 58, December 2011, pp. 19–37.

<sup>5</sup> See Cour-Thimann, P. and Winkler, B. (2012), “The ECB’s non-standard monetary policy measures: the role of institutional factors and financial structure”, *Oxford Review of Economic Policy*, forthcoming in December.

composition has acted as an internal adjustment mechanism, whereby the fallout of funding pressures in the banking system has been directed into the Eurosystem and away from the real economy.<sup>6</sup> This has buffered the adjustment of the real economy and kept trade and financial flows flowing across euro area countries, thereby preventing disorderly deleveraging. It has provided time for governments individually and collectively to address the adjustment needs and undertake the appropriate reforms. But this time needs to be used effectively.

The ECB's non-standard measures have been ensuring that solvent banks are not liquidity-constrained so that they continue lending to the real economy without a disorderly deleveraging process. However, there are limits to what monetary policy can and should credibly do: monetary authorities cannot be expected to solve problems which lie well outside their current official remit.

### **The delicate balancing act**

More generally, a central bank should be aware that it is constantly required to exercise a delicate balancing act. On one hand, it may need to provide backstops to remove tail risks that could otherwise result in severe downward pressure on price stability. On the other hand, by mitigating a crisis which largely reflects shortcomings in other policy areas and excesses in the financial sector, the central bank may alter incentives for different actors to correct imbalances.

If domestic policy-makers and other economic actors delay necessary reforms because they can count on the central bank to provide support whenever market conditions deteriorate, monetary policy may become insufficiently effective, as well as biased towards the short term. In the words of Hervé Hannoun, the Deputy General Manager of the Bank for International Settlements, a central bank has to constantly guard not only against the risk of “fiscal dominance” but also “financial dominance”.

I would like to give one example. A central bank can commit itself to engaging in extraordinary monetary policy interventions and to swiftly reversing them as conditions improve. But would this commitment be sufficient to align the incentives of all the actors involved? In the economic jargon, is this promise “time consistent”? Or will other economic agents expect the policy-maker to deviate from its stated intention and adjust their actions accordingly?

Economic literature stresses two elements that add credibility to such commitments: strong institutional frameworks setting out clearly defined objectives; and the adoption of “rule-type behaviour” that consistently and predictably determines the response of policy-makers to specific circumstances. These elements allow a policy-maker to steer the expectations of other actors in line with its long-term intentions, thereby mitigating the time inconsistency problem.

As regards monetary policy, the institutional framework set up for EMU – central bank independence and price stability objective being the key elements – has proved to be strong and effective.

The crisis has shown, in my view, that the “rule-type behaviour” has to be provided by a symmetric reaction of central banks to financial forces. In particular, a strong reaction to financial distress in the downturn has to be matched by a strong reaction to financial imbalances during the building-up phase.

What is the best way to do this? I believe that a more symmetric reaction to financial forces can be best ensured by according a prominent role to the analysis of money and credit

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<sup>6</sup> See, for instance, Cour-Thimann, P. (2012), “Target balances and the crisis in the euro area”, forthcoming.

developments in monetary policy decisions, especially if this is complemented by appropriate macro-prudential measures.

But it should be recognised that monetary policy is only one element of the overall institutional framework.

The current sovereign crisis is largely the outcome of severe shortcomings in the institutional architecture of EMU, which was not capable of fostering prudent fiscal, structural and financial policies. But policy-makers have reacted to these shortcomings and have set in motion ambitious reforms to strengthen economic governance in Europe.

Earlier today, my colleague Vítor Constâncio discussed the rationale of this reform agenda in great detail. I will therefore not elaborate on this. But I would like to echo his assessment. The repair of the institutional architecture of EMU will contribute to addressing the underlying causes of the crisis, thereby also supporting the smooth functioning of EMU in the future.

## **Conclusions**

Let me conclude.

The crisis brought about several waves of financial turmoil that threatened to spiral out of control. In line with its price stability mandate, the ECB intervened in each of these episodes so as to tackle the specific threats to the monetary policy transmission that arose with each incarnation of the crisis.

The policy actions of the ECB, and of all other major central banks, have been able to repeatedly ward off self-sustaining feedback loops characterised by disorderly deleveraging.

The challenge ahead for central banks consists, in my view, of combining such a backstop role during a crisis with a credible commitment to adopting symmetric behaviour in the run-up phase of financial imbalances.