

## **Peter Praet: The European Central Bank and its role as lender of last resort during the crisis**

Speech by Mr Peter Praet, Member of the Executive Board of the European Central Bank, at “The Lender of Last Resort: An International Perspective”, a conference sponsored by the Committee on Capital Markets Regulation, Washington DC, 10 February 2016.

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*Accompanying charts can be found at the end of the speech or on the European Central Bank's [website](#).*

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### **Introduction**

Ladies and gentlemen,

Since tensions emerged in the interbank market in August 2007, central banks have been at the forefront – and centre – of the response to the financial crisis. Such prominence is directly linked to their ability to create liquidity for the entire financial system as well as solvent individual banks experiencing funding difficulties and to a central bank's function as lender of last resort (LOLR). This distinctive role was first identified more than two centuries ago by Henry Thornton (1802) and elaborated on 70 years later by Walter Bagehot (1873). According to their dictum, central banks should lend freely to solvent but illiquid firms against good collateral, at a high rate of interest (Tucker, 2014). While much has changed in the intervening period, these overarching principles have influenced central banks ever since.

In responding to the worst financial crisis in a century, the European Central Bank faced two challenges which we tried to address with two different approaches to our LOLR function. First, we had to deal with a system-wide liquidity shock of unprecedented magnitude which, if left unattended, would have developed into a liquidity crunch and, later, a disorderly contraction of the stock of broad money and nominal income. We addressed this formidable stress by resorting to what I will term the “monetary approach” to LOLR. In this way, we sought to deter a contraction in the stock of bank-created money and to compensate for a decline in its velocity of circulation, which could otherwise have provoked a more severe fall in spending, employment and prices than what was observed in reality.

Second, and in parallel, we kept intervening in support of particularly acute idiosyncratic liquidity strains faced by individual solvent credit institutions (or groups thereof) under the “credit approach” to LOLR, which is embedded in the Eurosystem's emergency liquidity assistance (ELA) – a responsibility of the national central banks.

In my remarks today, I would like to provide a brief overview of the ECB's standard liquidity provision framework before discussing our policy response to the crisis and the rationale behind our decisions.

### **Monetary policy operations and the lender of last resort function in the pre-crisis years**

In the euro area, the vast majority of firms and households meet their financing needs via direct bank intermediation, reflecting the fact that market financing and securitisation are less developed than in other major jurisdictions. As a result, the euro area banking system lies at the heart of the conduct of our monetary policy. In the pre-crisis period the ECB's conduct of monetary policy was founded on temporary credit operations in the form of repurchase agreements, or repos, with over 1,500 eligible monetary financial institutions (MFIs).

When implementing monetary policy via repos, the ECB's Governing Council decides on two parameters. First, the desired degree of monetary stimulus, as reflected in the short-term

interest rate that is charged under the main refinancing operations (MROs) and, second, the expected aggregate demand for liquidity in the market. By calibrating the amount of liquidity to be auctioned in the MROs so that it was just enough to meet the system's expected demand for cash balances at the intended main refinancing rate (MRO rate), the ECB could steer the market rate for overnight liquidity close to the MRO rate during the pre-crisis period. Indeed, in that era, our prime overnight market rate, the euro overnight index average (EONIA), was fluctuating closely around the MRO rate.

The MRO is complemented by the two standing facilities which form the monetary policy corridor. The corridor's floor is the deposit facility, where banks can place overnight their reserves in excess of reserve requirements and other liquidity needs and earn interest at a (pre-set) rate lower than the MRO rate. The corridor's ceiling is the marginal lending facility, where banks can receive overnight liquidity at an interest rate (also pre-set) above the MRO rate. This marginal lending facility has a dual function: it acts as a "built-in" lender of last resort for shortfalls in overnight liquidity. But, at the same time, its role in the overall policy framework is broader, as it serves as the backstop for fluctuations in overnight money market conditions. It is because of this latter function in the settings of the stance that the responsibility for marginal lending is shared, as a Eurosystem facility, among all national central banks (NCBs) of the euro area and the ECB.

Euro area credit institutions can receive central bank credit not only through Eurosystem monetary policy operations but, exceptionally, also through ELA. Cases in point are banks which have run out of collateral considered as eligible under our monetary policy framework or whose counterparty status has been suspended on the grounds of prudence. Technically, emergency liquidity assistance is activated when a Eurosystem national central bank provides central bank money and/or any other assistance that may lead to an increase in central bank money to a financial institution or a group of financial institutions outside monetary policy operations. Unlike the marginal lending facility, liquidity provision via ELA is at the discretion of the providing NCB and this is why I refer to ELA as embedding the credit approach to LOLR. The main responsibility for the provision of ELA lies at the national level, i.e. with the NCBs concerned. This means that any costs and risks arising from the provision of ELA are incurred by the relevant NCBs. Nevertheless, in order to ensure that ELA operations do not interfere with the single monetary policy, the ECB's Governing Council may object to or restrict the provision of ELA, in line with the Statute of the European System of Central Banks and of the European Central Bank and the NCB concerned and the institutions receiving ELA are subject to a special information-sharing framework.

Furthermore, ELA provision is monitored for compliance with the prohibition on monetary financing which applies to the Eurosystem – and, in fact, to all the central banks of EU Member States – and is laid down in the Treaty. More specifically, the Treaty stipulations pertaining to the prohibition of monetary financing ban any ELA transactions akin to an overdraft facility or any other type of credit facility for a Member State, and any financing of the public sector's obligations vis-à-vis third parties, or any cases in which, through ELA, the central bank de facto takes over a state task. Moreover, ELA provision is prohibited for insolvent institutions and institutions for which insolvency proceedings have been initiated according to national laws.

In the context of this institutional set-up with many safeguards, the provision of ELA has a broader scope than monetary policy operations. First, ELA is not limited to monetary policy counterparties, but is available to a broader set of credit institutions, provided they are solvent. The wider focus takes into account the fact that financial institutions outside the narrow realm of our eligible counterparties can run into temporary liquidity shortages that could challenge financial stability. Second, the set of assets accepted as collateral for ELA purposes is wider than the one required for Eurosystem monetary policy operations. Therefore, the cost of liquidity drawn under ELA is also higher than the marginal lending rate.

## **The ECB's response to the crisis**

As the crisis unfolded, our approach to the LOLR function evolved in parallel. Three main phases can be identified.

### ***The first and second phases of the crisis: system-wide liquidity strains***

The first and early phase was the immediate post-Lehman Brothers liquidity crisis. Not unlike in other advanced economies, the financial trauma that followed the demise of one of the largest global investment banks created anxiety about the magnitude of European banks' exposure to subprime products of uncertain quality. This prompted a sudden stop in the availability of money market funding for many credit institutions in the euro area and a systemic rush to cash. As interbank markets seized up, the strains were diffused with virtually no region or sector being spared.

The second phase of the crisis came as a consequence of a much more targeted and disruptive loss of confidence: the sovereign debt crisis. This was special to Europe; it brought on the development of redenomination risk and thereby threatened the integrity of our currency. Banks' exposures to selected governments came under intense market scrutiny and entire national banking systems lost access to wholesale funding.

Note that during both the first and the second phase, banks faced an urgent need to replace a source of market funding that had suddenly become unavailable – primarily an impaired access to money market borrowing in the post-Lehman phase and the impossibility to roll over maturing bank bonds during the debt crisis. In both episodes, however, the original source of stress was investors' distrust in the quality of banks' exposures – to the private and the public sectors. Our role was the same in both phases, namely to create new reserves, on demand, for cash-stripped banks with viable business models, and thus to help these banks go through an emergency liability substitution operation without being forced to make large-scale fire sales of assets that would lead to insolvency.

Concretely, for the Eurosystem this meant abandoning its conventional framework for liquidity provision. We discontinued the practice to auction a pre-set quantity of liquidity and moved instead to an unlimited allotment of funds at a fixed rate. The tenors of our longer-term refinancing operations were extended from the pre-crisis standard of three months to six months in 2008 and to three years in 2011. We also expanded the universe of eligible collateral.

In essence, we adopted a genuinely classical approach to our LOLR responsibilities.

This approach can be described by using the classical equation of exchange:  $B \cdot m \cdot V = P \cdot Y$ . This simple equation states that base money (B) times the money multiplier (m) times broad money velocity (V) – or the turnover rate of the broad money supply – is always equal to nominal income, i.e. the price level (P) times real output (Y). The central bank is concerned with preserving price stability and supporting the economy, but it can do so only very indirectly and imprecisely by controlling base money, i.e. the sum of currency and bank reserves. Therefore, in keeping with the monetary approach to LOLR, base money should be expanded sufficiently aggressively with two intermediate objectives and one ultimate objective in mind. The intermediate objectives are: compensate for the fall in the money multiplier – and the decline in broad money velocity. The ultimate objective is to prevent the possibility of a collapse in broad money leading to a downward adjustment in nominal income.

Why do the money multiplier and broad money velocity tend to fall during confidence crises? The money multiplier is a complex function of the public's preferred ratio of currency holdings to deposits and of banks' desired ratio of reserves to deposits. Increases in uncertainty during times of crisis can impact on the behaviour of banks and the money-holding sector, leading to changes in these ratios, as banks prefer to hold larger reserves with the central bank as perceptions of counterparty risk increase, and – in the most severe episodes

featuring bank runs – the public may try to convert bank deposits into currency. All of this alters the association between base money and broad money and increases the quantity of base money that the system demands in order to hold a given amount of broad money. Turning to velocity, crisis-induced uncertainty can also lead to a decrease in velocity as people prefer to hoard broad money as a precautionary measure to prepare for difficult days and reduce spending. Because velocity has a tendency to fall in tandem with the multiplier, in episodes of financial dislocation the central bank has one more reason to increase base money in order to keep nominal income from falling.

This is in essence what we did over the first two phases of the crisis. During this period (2008–12), the volume of base money was endogenously determined by banks' demand for it, which was accommodated fully by the Eurosystem, the only restriction being availability of eligible collateral. This can be seen by comparing Chart 1 and Chart 2. As the multiplier started to fall early on, the money base expanded strongly and this cushioned pressures on M3 which could have accentuated its trend deceleration (Chart 1). Even more evidently, as the debt crisis reached its climax in mid-2012, and banks started to pay down the bonds which the market was refusing to roll over using newly borrowed Eurosystem funds, the sharp expansion in base money permitted banks to keep the broad money stock from falling. Chart 2 shows a disaggregation of broad money growth by counterparts: in other words, it documents the items on banks' balance sheets which account for and offset the expansion of M3. It is clear that, starting in 2012, the possibility offered to banks to redeem maturing bonds with base money and thus pay them off with newly created deposits (dark green bars) provided critical support for M3 expansion.

The extraordinary injection of fresh liquidity into the system had a profound impact on the Eurosystem's balance sheet. With hindsight, it proved very successful in building a firewall against financial contagion and a further decimation of value. Banks could refinance themselves in the aggregate, preserving a level of intermediation which could bridge the economy through a sharp contraction and avoid a more severe degradation of confidence and macroeconomic stability.<sup>1</sup>

### ***The third phase: addressing a new round of deleveraging***

However, as the macroeconomic contraction morphed into a prolonged slump, banks in large parts of the euro area finally started to engage in a drawn-out process of downsizing their exposures and de-risking their operations. In those countries most severely hit by the debt crisis, the risk-adjusted returns on loans had declined to the point where banks had a strong incentive to redeem loans and deleverage. The crisis had evolved into its third stage: a stage characterised by a chronic malfunctioning of bank-based transmission, growing signs of a credit crunch and a rising risk that the dearth of credit and finance for households and firms would feed back into consumption and investment, thereby magnifying the chance that the economy might be trapped in a deflationary spiral.

As banks were actively deleveraging, their funding conditions were normalising too, and liquidity ratios were being restored. In fact, as the debt runs of 2011 and early 2012 faded, banks were eager to accelerate reimbursement of central bank credit as the pressure to

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<sup>1</sup> Critical as they were in preventing a deeper cataclysm, liquidity operations were only one set of tools deployed within a more encompassing crisis control strategy. The Outright Monetary Transaction (OMT) initiative was another major plank of that strategy which proved key to the resolution of the debt crisis. As markets lost confidence in the capacity of certain euro area countries to refinance their public debt, it was imperative that the guardian of the currency ward off any unwarranted tail risk threatening the dissolution of the currency union. OMT was a clear commitment to eliminate the redenomination risk premia from the price of the securities issued by stressed jurisdictions on the condition that those economies undergo economic reforms and fiscal adjustment. The announcement of OMT had an extraordinary effect and proved to be a potent circuit-breaker by successfully truncating the most extreme tail of the distribution of possible macroeconomic outcomes and, as a result, financial stability was restored.

refinance a leaner balance sheet had diminished and they viewed less dependency on official borrowing as a way to project a positive image of financial health to their investor base. Along this process of retrenchment, borrowing conditions were being tightened at precisely the time when the economy needed support.

Under these conditions, the ECB had to resort to a different strategy, one which would shift focus from banks' liabilities to banks' assets. Inducing banks to arrest and reverse asset redemptions and keep credit flowing to the real economy became our policy priority. We introduced three new instruments: a series of targeted longer-term refinancing operations (TLTROs), a negative interest rate policy, and an asset purchase programme which included both private and public sector securities. The TLTROs are a sequence of eight refinancing operations offering banks long-term refinancing (of up to four years) on the condition that they use the funds to expand lending. Indeed, banks have responded to the targeting incentives embedded in the new facility by reducing lending rates and increasing their loan supply. The asset purchase programme, together with a negative rate on excess reserves, quickens the pace at which banks and other lenders are resuming providing credit to the economy at more favourable conditions. Lower term spreads on public sector securities encourage a shift in the composition of banks' portfolios towards other types of exposure with a higher risk-adjusted return, which primarily includes loans. The negative interest rate on reserves discourages liquidity hoarding and speeds up the process of asset reallocation.

With the start of the third phase of the crisis, the monetary approach to LOLR had reached its limits. Importing LOLR elements into the conduct of monetary policy had been a critical and far-sighted decision in a phase when the primary purpose was assisting banks in an orderly exercise of liability substitution. But when our priorities shifted towards the need to re-engage banks in active credit intermediation, those elements lost traction. The non-discretionary, passive generation of liquidity which is characteristic of systemic LOLR operations had to be replaced by a more active strategy of control over the size and composition of our balance sheet.

### **The credit approach**

Throughout this whole period, in each of its three phases, the credit approach to LOLR has remained in place. National central banks have continued to assist banks that are unable to take part in standard Eurosystem monetary policy operations by exercising their LOLR function under ELA. But the credit approach to LOLR that is embedded in ELA has not remained static over the crisis period.

During the early phase of the crisis, ELA support was limited to individual banks. Its original construction, which foresees that funds be provided on a discretionary basis – not automatically – and be conditional on the Governing Council's judgement that ELA extension does not interfere with the determination of the monetary policy stance, was preserved. Discretion and conditionality on the Eurosystem's non-objection are safeguards against moral hazard.

But as the crisis intensified, and a number of euro area countries became the target of debt runs and exhausted their fiscal capacity, entire national banking sectors were deprived of the natural port of call which in other circumstances would have acted as a provider of solvency support: their national fiscal authority. Very often, these countries had to have recourse to multilateral financial assistance programmes which – while replacing the local fiscal authority as the ultimate source of capital support – placed banks under an enhanced regime of supervisory scrutiny and imposed various forms of regulatory conditionality.

This situation led to two types of innovation in the governance of ELA interventions: first, the duration of assistance lengthened; second, the scope of assistance broadened from individual institutions to entire banking systems. For example, in Greece last year the combined lending of the ECB and the Bank of Greece to Greek banks reached 71% of the country's GDP. Most of this liquidity was provided via banks' recourse to ELA.

This evolution was proportional to the severity of the circumstances and has proven to be effective.

In the case of Greece, provision of ELA was certainly necessary in order to ensure the functioning of the Greek banking system and the continuation of lending to businesses and households. A discontinuation of ELA would have thrown all Greek banks into default and would have forced the country to leave the currency union, a decision the Eurosystem could not have taken without violating the Treaty. ELA provision was proportional as it was disciplined and justified by rules. We granted ELA for as long as the Governing Council judged that prospects were favourable for a positive outcome to the negotiations between the government of Greece and the European institutions. Its expansion was suspended when it appeared that these conditions were no longer confirmed (Draghi, 2015).

### ***Institutional challenges***

The incomplete institutional construct of the euro area, especially the lack of an integrated banking system, has at times severely complicated the management of the crisis. Fortunately, a great deal of progress has been made in this area in recent years, but it is imperative that the banking union be completed, as well as the integration of the euro area banking sector.

With the Single Supervisory Mechanism (SSM) now fully operational, we have a system of supervision that is less liable to capture or forbearance. And the Bank Recovery and Resolution Directive (BRRD) provides a harmonised and predictable framework for private sector risk-sharing across the EU.

Financial stability considerations are a key driver behind the new regulatory landscape. Indeed, there are many instances where the framework acknowledges the need to strive for exceptional solutions in order to achieve the overall goal of preserving the stability of the entire financial system, which is a precondition – from the ECB’s perspective – for accomplishing its primary objective of price stability. For example, there is a financial stability exception from the general rule that a bank which needs extraordinary public financial support is deemed to be failing or likely to fail and thus has to be either resolved or liquidated. The EU resolution framework explicitly clarifies that the need for emergency liquidity assistance from a central bank, per se, does not necessarily trigger the resolution of a bank, and it acknowledges the role of central banks in providing liquidity to the financial system in times of stress.<sup>2</sup>

Euro area governments are also on the way to establishing a European public backstop for the Single Resolution Mechanism. But significant further steps are still required to complete banking union, including the establishment of a common deposit guarantee scheme.

A complete banking union would have beneficial macroeconomic effects, but it would also have positive implications for the central bank’s function as lender of last resort.

### **Conclusion**

Please allow me to conclude.

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<sup>2</sup> See recitals 2 and 41 and Article 32(4)(d) of the BRRD. More specifically, access to liquidity facilities including ELA by central banks does not constitute “state aid”, which is prohibited by our state aid framework, if the following cumulative conditions are met: the credit institution is temporarily illiquid but solvent at the moment of the liquidity provision, which occurs in exceptional circumstances and is not part of a larger aid package; the facility is fully secured by collateral to which appropriate haircuts are applied, in function of its quality and market value; the central bank charges a penal interest rate to the beneficiary; the measure is taken at the central bank’s own initiative, and in particular is not backed by any counter-guarantee of the state.

The severity and nature of the financial crisis resulted in an extraordinary response by central banks; one which was very much in the spirit of Thornton and Bagehot.

In a complex and incomplete institutional environment, the Eurosystem has been able to adapt its set of interventions by using all the flexibility allowed by our instruments in a principled way to address both systemic and idiosyncratic liquidity problems. We will continue to do so. And we will be supported to a greater extent than in the past by a more complete and consistent institutional framework.

## References

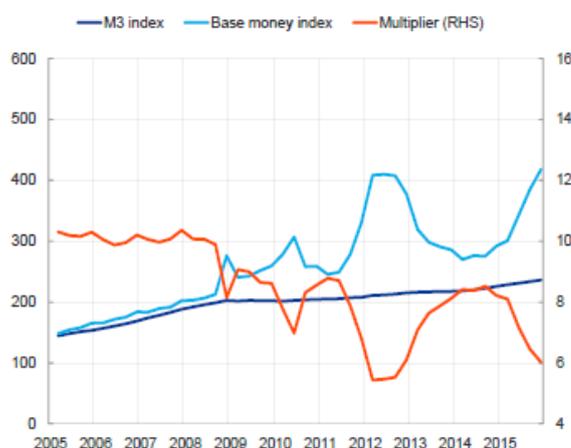
Bagehot, W., *Lombard Street: a description of the money market*, London: H. S. King, 1873.

Draghi, M., Speech at the Università Cattolica del Sacro Cuore, Milan, 5 November 2015.

Thornton, H., *An enquiry into the nature and effects of the paper credit of Great Britain (1802)*.

Tucker, P., “The lender of last resort and modern central banking: principles and reconstruction”, contribution to *Re-thinking the lender of last resort*, BIS Papers, No 79, 2014.

**Chart 1: M3 and base money (Index, Jan 1999=100)**



**Chart 2: M3 Counterparts: contributions to M3 growth (annual percentage changes)**

