

## Peter Praet: The European Central Bank's monetary policy response to disinflationary pressures

Speech by Mr Peter Praet, Member of the Executive Board of the European Central Bank, at the conference "The ECB and Its Watchers XVII", organised by the Center for Financial Studies, Frankfurt am Main, 7 April 2016.

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Since June 2014, the ECB has adopted a series of monetary policy measures to ward off the risk of a too prolonged period of low inflation. There is a strong rationale for *why* we have acted to lift inflation back towards our objective, which I laid out in a recent speech in Rome.<sup>1</sup>

What I would like to discuss in my remarks this morning is *how* our measures work in achieving this.

### The ECB's crisis response

It is useful to briefly recall what led us to our current monetary policy stance and the particular measures the ECB has adopted to articulate it. Since autumn 2008, the ECB has been confronted with various episodes of downside risks to price stability.

In the months following the Lehman demise, those risks arose principally from the threat that the liquidity crunch in the interbank market would lead to a disorderly deleveraging of the banking sector, which would have had serious consequences for real activity and price stability. The ECB provided liquidity elastically to the banking sector and with increasingly long durations, which restored confidence in the financial system. Our balance sheet expanded to unprecedented levels, but it was temporary and non-discretionary. As banks started actively contracting their exposures to a worsening economy, they reimbursed the loans from the ECB.

A next set of risks to price stability surrounded the sovereign debt crisis. Unwarranted fears about future of the euro area led to a dramatic widening of sovereign spreads, interrupting monetary transmission and posing severe risks for inflation dynamics. The ECB acted to preserve price stability through its Outright Monetary Transactions programme. This proved to be a powerful circuit breaker, successfully truncating the worst tail of the distribution of possible macroeconomic outcomes. But the confidence crisis nonetheless left a harmful heritage on transmission.

Banks in a vast portion of the euro area lost their willingness and capacity to keep credit flowing to the real economy. Credit conditions tightened, feeding back into weak domestic demand and threatening the economy with persistent disinflationary forces.

By summer 2014, the ECB was confronting a further set of risks to price stability linked to a too prolonged period of low inflation. The economic recovery had lost momentum, removing a key driver of the reflation scenario we had anticipated. As Mario Draghi underlined in his speech in Jackson Hole in August of that year<sup>2</sup>, this situation required a comprehensive policy response by euro area authorities of structural reform policies and policies to support aggregate demand, of which stronger monetary policy accommodation was one element.

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<sup>1</sup> See Praet, P. (2016), "The ECB's fight against low inflation: reasons and consequences", speech by at LUISS School of European Political Economy, Rome, 4 April 2016.

<sup>2</sup> Draghi, M. (2014), "Unemployment in the euro area", annual central bank symposium in Jackson Hole, 22 August 2014.

By this point our ability to provide that additional accommodation through standard measures was constrained as policy interest rates approached zero. Like other central banks<sup>3</sup>, we had learned that the likelihood of hitting zero interest rates had been severely under-estimated in our previous analysis<sup>4</sup>. We therefore achieved the expansion of our stance through three new, non-standard instruments: a series of targeted long-term refinancing operations (TLTROs); a negative deposit facility rate (DFR); and an asset purchase programme (APP) including private and public securities.

As new shocks have rattled the economy since 2014, our policy package has been rescaled by the Governing Council, notably at its meetings in January 2015, December 2015 and most recently in March 2016. At this March meeting we also rebalanced our package across instruments, placing greater emphasis on the credit easing dimension by increasing the intensity of our asset purchases and strengthening the incentives embedded in the TLTROs.

Augmenting these instruments is our forward guidance. This began in July 2013 when we provided guidance on the likely path of policy rates looking forward, although at this time the measure was intended more to insulate our money market conditions from the volatility imported from the US “taper tantrum” than to act as an active instrument of accommodation. In the event, the policy helped decoupling the risk-free curve from outside influences and made it more appropriate to the underlying conditions we were facing. Econometric analysis supports the conclusion that our forward guidance has helped stabilise money market conditions – that is, making the term structure of forward rates less responsive to macroeconomic surprises<sup>5</sup>.

We later complemented this interest rate guidance with a new form of forward guidance intended to link our asset purchases to our objective. Today – after those three rounds of recalibrations – we say that the APP is intended to run until the end of March 2017, or beyond, if necessary, and in any case until the Governing Council sees a sustained adjustment in the path of inflation consistent with our objective. At our last monetary policy meeting in March we also clarified the interaction between our rate and asset purchase guidance, namely that we expect the key ECB interest rates to remain at present or lower levels well past the horizon of our net asset purchases.

### **Transmission channels of the credit easing package**

Our decision to respond to emerging shocks by rescaling our existing measures – rather than adopting new ones – has hinged on our confidence that those measures are effective in lifting inflation back towards our objective. This is based on two assumptions about the monetary transmission process: first, that our policy package has led to improved financial and borrowing conditions; and second, that improved financial and borrowing conditions have led and will lead to higher real activity, reduced economic slack and upward pressure on inflation.

How justified are we in making these assumptions? In principle, the mechanisms through which our policy measures should boost the economy are clear. They are designed to work as a package, easing financial conditions through a combination of mutually reinforcing

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<sup>3</sup> Chung, H., J.-P., Laforte, D. Reifschneider and J. Williams (2011), “Have We Underestimated the Likelihood and Severity of Zero Lower Bound Events?”, Federal Reserve Bank of San Francisco Working Paper Series, January 2011.

<sup>4</sup> Coenen, G. (2003), “Zero lower bound: is it a problem in the euro area?”, ECB Working Paper Series No. 269, September 2003.

<sup>5</sup> ECB analysis looking at time-varying sensitivity of forward rates to surprises, using daily rolling regressions, finds that since the introduction of forward guidance forward rates with maturity up to 3-year have been less sensitive to macroeconomic surprises. This has been important to keep markets focused on *levels* – i.e. the degree of slack in the economy – and not on *rates of change* – i.e. the latest conjunctural indicator.

channels. This contributes to a lower cost of debt finance, a lower cost of equity and a lower exchange rate, all of which contribute to raising consumption and investment.

First, via the portfolio rebalancing channel, the measures lower yields on a wide array of financial assets, implying a broad-based easing of financial conditions. The primary instrument in this regard is the APP, which compresses the term premia which are incorporated in risk-free interest rates and thereby encourages investors to move up in the maturity and risk ladder and shift to other, non-targeted asset classes. The negative DFR in turn discourages selling agents from hoarding the additional liquidity, speeding up the process of asset reallocation and reinforcing the downside pressure on the long end of the term structure of interest rates.

Second, via the direct pass-through channel, our package eases borrowing conditions in the real economy by easing banks' refinancing conditions and supporting non-financial corporates directly. This channel is perhaps most prominent in the case of the TLTROs, which through built-in incentive mechanisms ensures that the funding cost benefit is passed on to borrowers. It also applies to our purchases of ABS and covered bonds, which encourage banks to increase their supply of loans that can be securitised, and more recently our decision to start a corporate bond purchase programme. In addition, substitution effects induced by the TLTROs can result in a reduction in the supply of bank bonds, which translates into lower yield on bank bonds for the financial sector as a whole.

In parallel, portfolio rebalancing supports this direct pass-through channel, as lower term spreads on public securities encourage a shift in the composition of banks' portfolios toward other types of exposures with a higher risk-adjusted return, especially loans. The resulting increase in credit supply lowers its cost.

Third, via the signalling channel, the policy package triggers a downward revision of market expectations for future short-term interest rates, which aids portfolio rebalancing and direct pass-through effects by further flattening the risk-free curve. In the case of the DFR, our forward guidance that rates will stay at present or lower levels for an extended period of time – and beyond our net asset purchases – tilts downwards the probability distribution of the expected path of future rates. The signalling channel also helps stabilise inflation expectations, thereby preventing an unwarranted tightening in real long-term rates with negative effects on investment and consumption.

### **Impact on financial conditions**

How do we know that these positive effects of our policy package are indeed occurring and that they are sufficiently powerful to achieve the desired outcomes? In terms of financial conditions, the evidence so far suggests that the impact of our policy has been substantial. Since June 2014, we have seen a broad-based easing in money market conditions, long-term government bond yields, corporate and bank bond yields, bank lending rates to firms and households, and the growth of money and credit.

Using a number of econometric techniques, we find that without our policy measures, financial conditions would be considerably tighter today. Events studies conducted by ECB staff give evidence about the central role of our policy package in the broader easing of financial conditions since June 2014.<sup>6</sup> A sizeable impact is estimated for long-term sovereign bonds – around 90% of the total fall in euro area yields. The spillovers to yields of other asset classes are significant, too, in the case of euro area financial and non-financial corporate bonds. While the stock market has overall underperformed in the period since June 2014, we estimate that without our measures stock prices would be notably lower.

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<sup>6</sup> For more on the methodology behind these estimations see ECB (2015), "The transmission of the ECB's recent non-standard monetary policy measures", Box 2, Economic Bulletin, Issue 7/2015.

On top of this, ECB analysis finds that our policy package has had a substantial direct effect on bank lending rates, as well as an indirect effect on lending conditions through their marked impact on long-term government bond yields.<sup>7</sup> This effect has been further reinforced by the beneficial impact of lower long-term yields on the macroeconomic outlook and hence on the macroeconomic risk embedded in lending rates. Counterfactual simulations by our staff attribute 40–60bps in the decline in bank lending rates to the indirect impact of the TLTROs and APP through this channel.<sup>8</sup>

We have also tested the effectiveness of our measures using more micro analysis, for instance by gauging how they have affected the behaviour of TLTRO borrowers relative to non-borrowers. This analysis shows that TLTRO borrowers have reduced their recourse to wholesale funding more than for other banks, allowing them to lower their funding costs. This has in turn raised bank bond prices and, in combination with spillover effects from the APP, helped suppress the cost of financing for banks across euro area countries, benefiting banks regardless of their recourse to Eurosystem’s lending operations. The role of our measures as a driver of these developments is confirmed by banks’ responses to the Bank Lending Survey (BLS).

This funding improvement can in turn be seen in bank lending conditions: analysis of the bidding of banks in TLTROs shows that there has been a close relationship between participation in these operations and lending behaviour, especially in vulnerable countries. We find that banks located in vulnerable countries that have participated in TLTROs have lowered their lending rates by more than non-participants. This has resulted both from the lower financing costs elicited by the TLTRO, which has created scope for banks to reduce lending rates, and the increased lender competition for good credit it has spurred. These patterns are again confirmed by the responses to the BLS<sup>9</sup>.

Micro evidence confirms that the negative DFR has empowered the APP, too.<sup>10</sup> ECB staff research finds that bank balance sheet reactions to holdings of excess liquidity have changed as a result of this policy: for example, banks in less vulnerable euro area countries were found to have granted more loans to the real economy than would have been the case without negative rates. In addition, banks with large holdings of excess liquidity, in particular in less-vulnerable Member States, were found to have rebalanced significantly more towards non-domestic euro area government bonds than absent the negative DFR. This behaviour is likely to have contributed to the fall a reduction in fragmentation and a more uniform transmission of monetary policy, in the past year or so.

In sum, relative to the counterfactual scenario, our policy package has had a tangible improvement in financial and borrowing conditions.

### **Impact on output and inflation**

This improvement is a sign that our measures have cleared important hurdles on their way to supporting the macroeconomy. What we have not seen yet, however, is a significant recovery in the path of either headline or core inflation. This has led some observers to

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<sup>7</sup> Altavilla C., G. Carboni, R. Motto (2015), “Asset purchase programmes and financial markets: lessons from the euro area”, ECB Working Paper No. 1864.

<sup>8</sup> These estimates are based on a counterfactual simulation of lending rates using a panel BVAR of euro area banks and the long-run effect of lower government bond yields on NFC lending rates using a panel-error correction model, also estimated at bank level.

<sup>9</sup> ECB (2015), “The transmission of the ECB’s recent non-standard monetary policy measures”, Economic Bulletin, Issue 7/2015.

<sup>10</sup> S. Demiralp, J. Eisenschmidt and T. Vlassopoulos, (2016), “The impact of negative interest rates on bank balance sheets: Evidence from the euro area”, ECB mimeo.

question whether the second leg of the transmission – from financial conditions to real activity and inflation – is still intact.

Of course, the fact that this easing has occurred concurrently with the economy receiving new shocks poses a fundamental identification problem. Or put another way, we have to be careful to avoid assessing monetary policy by “looking out the window”.<sup>11</sup> This describes the process of eyeing where certain key variables are today compared with the beginning of the policy, and then concluding that the policy has succeeded or failed. But this is not how rigorous economic analysis is conducted. Given that the economy is never static, one always needs to assess a counterfactual scenario; what would have transpired without the policy action.

In that context counterfactual analysis has also helped us to measure the impact of our measures along another dimension: their macroeconomic propagation.

Our impact assessment on GDP and inflation spans a large and diverse suite of models, reflecting alternative modelling traditions, and capturing different transmission channels, in particular in relation to the impact of asset purchases. Some models mainly draw on empirical time-series methodologies, while others draw on (semi-)structural macro models, with an important role for financial frictions, and on macro-finance term structure models.

Intuitively, the various model assessments share the idea that the relevant variable in modelling the impact of the APP is the expected future path of central bank asset holdings (i.e. the evolution of the “stock” of assets) under the programme. In some models, the full path of the central bank portfolio enters the decision problem of economic agents upon announcement of the programme. This is consistent with empirical evidence from event studies which supports the view that financial markets respond on impact to the announcement of asset purchases, and even prior to the announcement when expectations of a programme build up.

At the same time, for robustness considerations some models have entertained the alternative assumption that asset purchase programmes affect the behaviour of economic agents only gradually. Such effects are compatible with a situation in which financial markets learn over time the implications of the central bank’s asset purchases, or in which such purchases trigger changes in local liquidity conditions. A related distinction across those model assessments is how this expected future path of asset purchases is mapped into the macroeconomy. Many of these models include directly the quantity of central bank asset purchases, and embed mechanisms that allow the transmission of purchases to the economy and inflation. The remainder of the models indirectly back out the effect of asset purchases on the economy on the basis of a two-step approach.

The results from this comprehensive exercise suggest that, relative to the counterfactual scenario, our measures (excluding the March 2016 decisions) have provided significant support to output and inflation. In the absence of our policy package inflation would have been negative in 2015. In 2016 it would have been at least half a percentage point lower than we forecast currently and around half a percentage point lower in 2017. The impact of the policy measures on euro area GDP is also sizeable (again excluding the March 2016 decisions). According to the staff assessment, our policy is contributing to raise euro area GDP by around 1.5% in the period 2015–18.

In sum, while this staff assessment must be qualified, the results of our counterfactual simulations show that the expected return of inflation to levels closer to our objective relies to a significant extent on continued monetary accommodation. If inflation has remained weak, it is not because policy has been ineffective, but rather because new shocks have hit the economy in the meantime. The scaling-up of our policy measures has hence been the

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<sup>11</sup> Blinder, A. (1998), *Central Banking in Theory and Practice*, Cambridge: MIT Press.

appropriate response in the face of intensifying headwinds; indeed, had it not been for these measures, the economic environment would likely be considerably more troubling today.

If further adverse shocks were to materialise, our measures could be recalibrated once more commensurate with the strength of the headwind, also taking into account possible side-effects.

## **Conclusion**

Let me conclude.

The monetary policy package the ECB has adopted since June 2014 has been effective. It has led to a substantial easing of financial conditions, and this has in turn led to an improvement in both output and inflation relative to counterfactual scenarios. Arguments that our policy has not worked because inflation has remained subdued are misguided, since they do not take into account the series of shocks we have faced between mid-2014 and today.

That being said, we have consistently maintained since summer 2014 that a strong and sustainable recovery the crisis requires a comprehensive response that involves all economic policies. A return to higher structural growth and employment cannot depend on monetary policy.