Peter Praet: Transmission channels of monetary policy in the current environment

Speech by Mr Peter Praet, Member of the Executive Board of the European Central Bank, at the Financial Times Festival of Finance, London, 1 July 2016.

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Ladies and Gentlemen,

Since the onset of the financial crisis in 2007/2008, the euro area, like many other economies, has been hit by a barrage of shocks with adverse macroeconomic fall-outs. The ECB, like many other major central banks, has responded to these shocks with forceful and often unprecedented monetary policy measures – and it is firmly determined to ensure price stability and financial stability in the euro area.

By now, our policy response has taken the key ECB interest rates to record lows, bringing the rate on banks' overnight deposits with the ECB to negative territory, and we expect our policy rates to remain at present or lower levels for an extended period of time. In parallel, we have adopted a range of central bank asset purchase programmes, addressing securities of different issuers – private and public. And we have rolled out a set of targeted longer-term refinancing operations for euro area banks with an in-built incentive for lenders to pass on the favourable financing conditions – including negative borrowing costs – to firms and households provided they create more credit.

This comprehensive package of measures provides strong support to the euro area recovery and guards euro area financial conditions against external shocks.

In today's speech I will discuss the mechanisms by which we expect these measures to transmit to the economy. And I will present recent evidence which indicates that this transmission is gradually strengthening, in a context of elevated risks, especially originating from the external environment.

In my remarks, I will subdivide the transmission mechanism into two parts – one linking monetary policy actions to financial market conditions and the other linking financial market conditions to spending decisions of households and firms.

Impact of our measures on financial conditions

Let me start with a discussion of how our measures are supporting financial conditions in the euro area. Here, I will put particular focus on how our negative interest rate policy, accompanied by our forward guidance, reinforces the impact of the liquidity injections provided through our asset purchases and longer-term refinancing operations, since this is an aspect of our policy that, I believe, is often misunderstood in debates on the transmission of our measures.

After a steady sequence of interest rate cuts since end-2011, the deposit facility rate (DFR) has first entered negative territory in June 2014. Further rate cuts have followed, putting the DFR to minus 40 basis points at the current juncture. At first sight, the implications of these recent rate cuts to negative levels are similar to those of equally-sized rate cuts taking place in positive territory. They induce a decline in short-term money market rates which, via financial market arbitrage, transmits along the yield curve and to a wide range of asset classes. The resultant loosening in financial conditions induces firms and households to bring forward consumption and investment decisions.

This inter-temporal substitution from future to current spending supports the cyclical recovery, although a high degree of Knightian uncertainty regarding political and economic prospects

may affect this channel. Further support for the impact of monetary policy comes from the cross-sectional incidence of monetary policy accommodation, which tends to divert funds from net savers with a lower marginal propensity to spend to net borrowers with a higher marginal propensity to spend.[1]

But two mechanisms reinforce the impact of a given cut in monetary policy interest rates when they move into negative territory. First, negative rates discourage – individually rational but economically costly – liquidity hoarding by banks. Second, they mitigate the monetary tightening bias that arises when market expectations on future interest rates are truncated by a perceived lower bound.

Via the first mechanism, negative interest rate policies strengthen the accommodative impact per unit of liquidity injected into the euro area financial system through our conventional and unconventional monetary policy. Banks on the receiving end of these liquidity injections face a choice whether to lend it on to the real economy, through direct credit provision to firms and households or asset purchases; or to hoard the liquidity and deposit it back with the central bank. The former option supports the economic recovery, the latter option retards transmission and mutes the stimulus that the central bank intends to inject into the system.

In negative territory, banks face a stronger inducement to rebalance their portfolios by redeploying excess liquidity holdings through lending to the real economy or asset purchases at maturities that allow them to escape the negative rates. While, on aggregate, the banking system will not be able to elude the cost of negative rates, the higher propensity to recycle their liquidity holdings strengthens the overall easing potential of our policies.

ECB staff analysis indicates that these mechanisms are indeed operational, especially in countries with strong economic fundamentals: according to regression estimates at the level of individual banks, the propensity for banks to translate excess liquidity holdings into lending has increased substantially since the deposit facility rate has fallen into negative territory – raising the growth rate of bank lending in these countries from around 4% to slightly below 5% – an increase by almost 20% compared to a scenario without negative rates.[2]

And the April 2016 Bank Lending Survey also saw a large share of banks indicate that the negative ECB deposit facility rate has led to declining interest rates on loans to firms and households.

Meanwhile, these improvements in pass-through have been accompanied by a pronounced decline in the dispersion in bank lending rates across euro area countries since mid-2014. As a consequence, our comprehensive package of measures has also been conducive to a more even transmission of our policy to jurisdictions that had previously not been able to reap the full benefits of the accommodative monetary policy stance.

Besides this impact on the incentives for liquidity hoarding, there is a second factor by which the negative rate environment reinforces the impulse from other policy tools. This factor relates to the way expectations about the future path of monetary policy are reflected in market interest rates. At any point in time, a wide range of future interest rate paths are conceivable and market participants assign probabilities to different parts of this distribution. The yield and forward curves observed in the market comprise all future rate constellations that investors consider conceivable, weights them by their respective probabilities, and aggregates them across market participants.

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[1] See Tobin, J. (1982), “Asset Accumulation and Economic Activity: Reflections on Contemporary Macroeconomic Theory”, University of Chicago Press.

[2] For further detail, see Praet, P. (2016), “The ECB’s monetary policy response to disinflationary pressures”, speech at the ECB Watchers Conference, Frankfurt, 7 April 2016.

In normal conditions, this aggregated expectation on future interest rates tends to largely coincide with the rate path that investors consider most likely to prevail – in statistical terms, this means it reaches levels at or close to the median of the predictive distribution of future rates.

However, the presence of a binding lower bound on monetary policy rates drives a wedge between actual market rates and the rate path that investors consider most likely. This is because the lower bound truncates the distribution of conceivable future short-term rates from below: interest rates below the perceived lower bound are, by definition, eliminated from the set of conceivable outcomes; vice versa, rates above the lower bound receive a higher relative weight and the expected value of interest rates is mechanically pushed up.

Accordingly, the truncated asymmetric distribution of expected future rates leads to a less accommodative interest rate path than that resulting if markets could efficiently price their expectations into market rates. And the resultant tightening bias, in turn, can be very costly as it tends to arise in situations of strong disinflationary pressures that persist although the central bank has already engaged in sizeable rate cuts.

A policy of negative interest rates mitigates this bias. In particular, the observation that central banks are, indeed, prepared to take interest rates to levels below zero induces a re-evaluation of technical feasibility constraints. (A salient feature of this re-evaluation is the disappearance of the qualifier "zero" in the economic debate on lower bound constraints.) Via this re-evaluation, negative rates loosen the perceived lower bound on the future distribution of short-term interest rates and, thereby, squeeze out the wedge between the rate path priced into market rates and actual market expectations.

In this way, the negative interest rate policy reinforces the effectiveness of our measures in pushing down the longer end of the yield curve.

Overall, there is increasing evidence that these effects are borne out in practice. Risk-free yield curves have consistently shifted down, thus bringing important easing at the initial stages of the transmission process. Meanwhile, this easing has exerted important spill-overs across asset classes and, particularly important for a bank-based economy like the euro area, our policy measures have compressed the levels and dispersion of bank lending rates across euro area countries as explained earlier.

While we are mindful of potential adverse implications for bank profitability, we do not see those implications outweighing the benefits for the economy at this stage. In fact, there is some evidence that the beneficial effects of our policy on the valuation of banks' securities holdings, on banks' lower funding costs, and on banks' expanding asset volumes and better credit quality – as the demand for intermediation rises in a growing economy and credit becomes less risky – are still offsetting the downsides of reduced unit intermediation margins.

At the same time, while the favourable impact of our policies on banks' intermediation activities and on credit quality should strengthen through time as the economic recovery firms, the funding cost relief for banks will sooner or later run out of scope – and that will happen when banks' entire liability structure will have repriced to the lower level of interest rates. This will detract from one force which – despite the difficult low-rate environment – is still contributing positively to banks' capacity to generate earnings at present and is providing an important buffer against the decline in interest rates on the asset side of the bank balance sheet – especially for banks with a large share of assets remunerated at variable rates.

A further important buffer derives from the new targeted longer-term refinancing operations (TLTRO-II), the first of which was allotted last week. Under TLTRO-II, banks can access Eurosystem funding for a maturity of up to four years at very attractive rates – potentially falling to levels as low as the deposit facility rate for banks that display a strong lending performance. Besides providing an inducement to expand lending volumes and reduce lending rates to compete for good credit, TLTRO-II will thus also allow banks to reduce recourse to more

expensive wholesale funding and replace it with attractive funding. This, in turn, will be conducive to their profitability.

Against this background, it is important to assess the impact of our policies on bank profitability not by looking at individual measures but by considering the combined effect of the full package of policy tools, including via their mutually reinforcing positive impact on macroeconomic prospects.

Nonetheless, we are monitoring developments in bank profitability and the time dimension of factors influencing lenders' costs of liabilities and returns on assets to ensure that bank-based transmission remains effective, which may become less favourable if interest rates remain low for a protracted period of time. Meanwhile, other policy actors will have to do their part to provide a viable perspective on the future path towards completing Banking Union in Europe – a point I will return to later.

Impact of changes in financial conditions on the economy

The second leg of the monetary transmission process links changes in financial conditions to the broader economy.

Typically this part is more sluggish since it takes time for firms and households to adjust their economic behaviour to changes in financial conditions. And we have indeed seen a more delayed response to our credit easing than we might have expected. That is in part because the euro area economy has been hit by several shocks since we launched those measures, in particular the slowdown in emerging markets, which have dampened the observational response of output and inflation to our policy impulses. It is also because we are still emerging from a protracted crisis that has made firms and households more hesitant to take economic risk.

We are nevertheless now seeing increasing signs that the effects of our monetary stimulus are materialising, in at least three ways. First is the impact of easier borrowing conditions on the economy, which is visible in the most interest-sensitive demand components – consumption of durables and investment.

After several years of contraction, consumption of durable goods in the euro area has been rebounding, growing at rates not seen since before the crisis. The contribution of fixed capital formation to growth, which was extremely weak in the early phases of the euro area recovery, has also been progressively rising. Indeed, in the first quarter of 2016, investment and consumption contributed almost equally to the strong GDP outturn. Collectively, this has contributed to a recovery in the euro area that is now largely driven by domestic demand.

Of course, these recent data do not yet reflect the renewed uncertainty originating from the UK referendum. Such uncertainty may weigh on economic confidence and partly reverse the recent improvements in investment and consumption, also in the euro area. Accordingly, it is essential to swiftly establish an orderly process that governs the path towards a new post-referendum steady state so as to allow households and firms to swiftly adjust their inter-temporal economic decisions to the new environment.

Alongside new borrowing, our monetary policy is also supporting consumption and investment through a second channel: the impact of lower interest payments on outstanding debt.

Much has been made of the adverse implications of the low interest rate environment on interest earnings of households. But, for euro area households, interest *payments* have also declined substantially, coming down by about 3 percentage points relative to disposable income since 2008. As interest earnings and interest payments have fallen by roughly the same amount, the disposable income of aggregate euro area households has been largely unaffected. But what we have seen is a redistribution of purchasing power among different types of households.

While this redistribution is an unintended side-effect of monetary policy, it is not neutral for the cyclical environment. Specifically, resources have moved from net savers with a low marginal propensity to consume to net borrowers with a high marginal propensity to consume, creating an overall positive impact on aggregate consumption. This boost to disposable income has not so far been offset by increases in household saving rates in the euro area.

Also for euro area firms, the impact of lower interest payments has been significant on aggregate. Since 2008, net interest payments have come down by about 7 percentage points to just 2% of gross operating surplus today.[3]

This provides substantial support to firms' profitability which is positive for future investment. Improved profitability expectations, coupled with low discount rates, have also supported a strong decline in corporate debt-to-equity ratios – measured by market metrics – driven by valuation effects in equity markets. This 'asset price' deleveraging should in principle feed through into a lower cost of equity for firms, giving further impetus to investment.

Monetary policy has also contributed to the recovery in a third way. As domestic demand in the euro area has rallied, the contribution of external demand to output has declined in tandem with the major slowdown in international trade. But the decline has been more muted than we would have predicted on the basis of historical records. Indeed, over the past 20 years, the growth rate of international trade has been lower than in 2015 only twice: in the aftermath of the dotcom bubble burst in the early 2000s, and again after the collapse of Lehman Brothers in 2009. Both episodes saw a contemporaneous sharp slowdown in euro area growth to a rate close to or below zero.

In 2015, however, the unexpected sharp drop in trade was *not* associated with a slowdown in the euro area economy. In fact, year-on-year growth even picked up throughout 2015, despite the slump in world imports, as euro area exporters, after a long spell of losses, were able to regain market shares in world demand. The divergence between the monetary policy path of the euro area and that of other major economies was one factor explaining this atypical resilience of euro area exports.

Still, the fact that these improvements have taken place in tandem with the economy receiving new shocks – such as the steep fall in oil prices in 2014 and 2015 – poses an identification problem. Put simply, how do we know that the recovery would not have happened anyway? Addressing such questions requires models which can provide indications of how the macroeconomy would have fared in the absence of monetary policy support. We have undertaken such an exercise across the Eurosystem, and the analysis tells a clear story.

Using a large and varied suite of models, Eurosystem staff find 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 Eurosystem staff assessment, our policy is contributing to raise euro area GDP by around 1.5% in the period 2015–18.

Conclusion

Let me summarise. The ongoing recovery has shown signs of strengthening, also on the back of an accelerating pass-through of our monetary policy measures to the broader economy. This accelerating pass-through shows that monetary policy is working. And the ECB is

[3] This decline reflects a pronounced reduction in the level of interest payments and a more moderate increase in gross operating surplus, which had collapsed in the recession following the 2007/2008 financial crisis.

determined to continue playing its pivotal role in consolidating the upswing in the economic cycle.

At the same time, the euro area continues to be exposed to a number of uncertainties. Some are external, including the still-fragile global recovery and the impact of the UK referendum. But some are also internal. Most important is the lack of clarity for firms and households over the future institutional architecture of EMU, which remains incomplete in core areas, especially banking union. Key to removing that uncertainty is a clear roadmap for completing monetary union, which lays out both the end-point for the reform process and the sequence of steps that will lead to it.

Without a clear roadmap, there is a risk that this combination of economic and institutional uncertainty will hold back the recovery in the euro area. And it has the potential to undermine the effectiveness of monetary policy as firms and households become less willing to engage in inter-temporal substitution by exploiting the favourable interest rate environment to frontload consumption and investment decisions. It weakens the capacity of the banking sector to act as a bridge between present and future spending decisions by intermediating between savers and borrowers – an issue that requires close monitoring.

Against this background, monetary policy cannot be the only remedy to our current economic challenges. Instead, a broader set of actors needs to step into the breach, adopting a common approach to support the economic recovery in a context of persistent headwinds and to create durable and resilient improvement in economic performance going forward. This requires a concerted effort in the fiscal and structural policy domain to support the ongoing cyclical upswing; and a common strategy to complete and improve the institutional set-up of monetary union.