Benoît Cœuré: Central bank communication in a low interest rate environment

Speech by Mr Benoît Cœuré, Member of the Executive Board of the European Central Bank, at an event organised by Bruegel, Brussels, 31 March 2017.

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It is a great pleasure to be here today at Bruegel, a think tank that has always been at the forefront of the policy debate in Europe, and I am grateful for the opportunity to contribute to the discussion in this forum.[1]

Today, I would like to share with you a few thoughts on central bank communication in a low interest rate environment. In particular, I will discuss, drawing on the ECB's experience, the communication challenges central banks face when rates are negative and when there is uncertainty on the reaction function of policymakers. I will conclude with some remarks on the current policy debate.

Let me start on a more general note, however.

The relationship of central banks with the outside world has evolved over the years. From a starting point of near-complete secrecy, central banks have come all the way to using communication explicitly as a tool of monetary policy.[2] Especially during the financial crisis, the communication efforts of central banks around the world expanded.

There are good reasons for this. To fulfil their mandates, central banks have injected large amounts of monetary stimulus, while also making use of novel instruments. The monetary policy response has been unprecedented in both scale and scope. This has certainly added further impetus to central banks' drive for accountability and transparency – something that we at the ECB have always taken very seriously. Earlier this week, at an event organised by Transparency International, also here in Brussels, I explained in more detail how the ECB goes about fulfilling its accountability and transparency duties.[3]

Today, I will not discuss these *institutional* factors. Rather, I will focus on the *functional* dimension behind the increased importance of communication for central banks. This functional dimension derives from the relationship between the monetary authority and financial markets.

Central bank communication as a tool for monetary policy

In today's economy, the transmission of monetary impulses starts with asset prices. A transparent policy framework greatly enhances our ability to steer financial conditions and, hence, ultimately ensures the effective transmission of monetary policy in the pursuit of our price stability objective.

The relationship between central banks' policy communication and financial market conditions received even greater attention when central banks were approaching interest rate levels that were generally judged to offer limited or no further room for manoeuvre.

I will argue that in the vicinity of the effective lower bound for policy interest rates, communication becomes even more important, and while there are similarities to communication further away from the lower bound, there are also peculiar challenges.

I said before that monetary policy is transmitted mainly through asset prices. Since financial markets exist to price future cash flows, they are inherently forward-looking. This means monetary policy works largely by affecting expectations of future policy interest rates – this is true both at, and away from, the effective lower bound.

Away from the lower bound, monetary policy steers such expectations mainly by sending signals through the current level of central bank interest rates and by communicating on the central bank's assessment of the macroeconomic outlook.[4]

At the lower bound, the ability of central banks to ease the stance of monetary policy in this way is constrained. Instead, central banks must increasingly rely on influencing expectations directly. This they can do by communicating about the likely path of future policy rates – by providing forward guidance.

In other words, the lower bound puts a premium on clear communication not only because it represents unusual circumstances that require the central bank to explain itself carefully, but also because it elevates the importance of communication in the monetary policy toolbox.

Indeed, with frictionless capital markets, at the effective lower bound forward guidance would be the *only way* to ease the monetary policy stance.[5] In this setup, central bank asset purchases would be ineffective: whether assets are held on the balance sheet of the public or private sector would not affect term premia and, hence, long-term interest rates.

Of course we know that capital markets are not frictionless. This opens up an important role for central banks to intervene in asset markets via outright purchases and to act on the term premium. So, forward guidance is one tool, but not the only one, central banks can resort to in conditions where the space for changes in policy-makers' traditional instrument – the short-term policy rate – is constrained.

The ECB's forward guidance

But let me focus on the workings of forward guidance by looking at the case of the ECB. I will start with some general remarks before explaining our current forward guidance framework.[6]

For forward guidance to be credible, it ultimately has to be anchored in the central bank's mandate. Any pronouncement we make about the likely path of our policy instruments is inevitably based on current information and conveys our assessment of where the economy is most likely headed over the policy-relevant horizon. This type of forward guidance is sometimes termed "Delphic" [7], because, like the Oracle of Delphi, it basically consists of a forecast, in this case a forecast by the central bank of how the economy will likely evolve.

But our forward guidance is also intended to clarify our reaction function. The reaction function maps the economic environment into our instrument space. To put it simply, it relates what we *think* will happen to what we will *do* if it happens. To continue with the Greek mythology theme, this means there is also an "Odyssean" element to forward guidance: like Odysseus tying himself to his ship's mast in order to resist the songs of the Sirens, it conveys a *commitment* to react in specific ways to the contingencies that might arise.

An extreme form of Odyssean forward guidance, which I will not discuss today because I believe that it is not consistent with our mandate, would consist in committing to an unconditional interest path, irrespective of contingencies.

This is how far theory goes.

In practice, and applying the distinction between Delphic and Odyssean guidance to the ECB's *rate* forward guidance, when we say that we "expect interest rates to remain at present or lower levels for an extended period of time …", we convey both our assessment of how we see inflation most likely evolving over the policy-relevant horizon and how we intend to map this outlook into the level of our key policy rates.

You can now easily see that our rate forward guidance entails two key components: a *structural* component that corresponds to our reaction function – our monetary policy strategy – which is firmly anchored in our primary mandate. In today's world, where central banks make use of different instruments, our reaction function also includes the mapping of any desired monetary policy stance into instruments, such as policy rates and asset purchases. Think of it, ideally, as a finely tuned machine that we constantly feed with our assessment of the likely future path of inflation, which itself is the *variable* component, for it evolves as a result of the incoming data stream.

The same two components – a structural and a variable one – also apply to our forward guidance on the asset purchase programme (APP), which contains three main elements:

- First, clear Delphic communication on expected volumes and the purchase horizon, currently "until December 2017 …".
- Second, an Odyssean element of state contingency that clarifies the Governing Council's reaction function should it not see "a sustained adjustment in the path of inflation consistent with its inflation aim."
- And third, since last December an additional Odyssean clarification that expresses our preparedness to increase the size and/or duration of the APP under certain conditions, i.e. "if the outlook becomes less favourable, or if financial conditions become inconsistent with further progress towards a sustained adjustment in the path of inflation …".

Taken together, the ECB's current forward guidance encompasses a carefully expounded series of expectations involving both key policy rates and asset purchases.

Indeed, guidance on policy rates is linked to the APP timeline, with the Governing Council's expectation being that they will remain at present or lower levels "well past the horizon of our net asset purchases." The logic behind this guidance, in very simple terms, is that it may be beneficial to retain full control over the expected path of future short-term policy rates, while allowing a gradual decompression of the term premium if and when we see solid progress towards a sustained adjustment in the path of inflation.

At any rate, for our forward guidance, both on rates and the APP, to be credible, we need to keep our policy expectations well aligned with our evolving assessment of the balance of risks and the outlook for inflation – this is the Delphic part of our forward guidance. We would pay a high price in terms of our credibility if we failed to adapt our forward guidance once we had changed our views on the outlook.

I will come back to this point later but let me note, for now, that a too gradual adjustment of our guidance could ultimately be quite costly. Indeed, central banks and markets may have moved towards what Jeremy Stein and co-author have called a "gradualist" equilibrium.[8]

This is a situation in which central banks make gradual changes to policy tools and communication in order not to upset the market. In such an environment, any change to the central bank's policy inclination will have a major effect on asset prices. The reason is that markets have come to expect the initial central bank move – no matter how incremental – to be followed by many similar moves in the same direction.

This effect is likely to be greater in conditions where there is an exceptionally large amount of monetary stimulus in place. It makes the expectations of an announcement of a change in the monetary policy stance much more important for markets.

The ECB's experience with forward guidance: successes and challenges

With this in mind, what has been our experience with forward guidance?

It is too early to draw definitive conclusions – after all, we are still in a lower bound environment. But we do have some evidence that our forward guidance has been successful – in the following respects.

First, it has had a stabilising influence on certain market prices that reflect expectations of our policy instruments and are important in the chain of transmission. We have evidence that the sensitivity of forward rates to macroeconomic news declined at the time of our (very first) forward guidance announcement in July 2013, and that sensitivity has remained lower than historical regularities ever since. In other words, markets trust our assessment of the economy and the implied path of policy rates.

Second, by stating that domestic policies are likely to differ from those elsewhere, forward guidance has insulated euro area financial conditions from external shocks that would have resulted in an unwarranted tightening[9] and facilitated nominal exchange rate adjustments consistent with different monetary conditions, which themselves reflect different circumstances.

Third, it has been a source of additional monetary policy accommodation at a time when the room for cuts in key policy rates has been very limited.

Let me explain this last point in more detail, referring back to our forward guidance on the APP.

The impact of asset purchases on market prices is likely to depend critically on how these purchases are communicated to the market. The fact that we chose to communicate, as part of our forward guidance, and from the very beginning, an expectation of the intended horizon of APP purchases is likely to have been a key determinant of the success of the programme. The reason is that providing guidance on the horizon helps markets to form more accurate expectations about the likely amount of purchases – conditional on the price stability outlook – thereby reducing uncertainty and hence term/risk premia.

This has been confirmed by recent research: when flanked by communication on the likely size, announcements of purchase programmes have been found to lead to a much greater decline in stock market uncertainty compared with announcements that omit a size indication.[10]

This first element of our APP guidance was reinforced by the second element – the state-contingent leg of our forward guidance. By establishing an intimate link to our price stability objective, we made clear that the expected volume could well be larger should it take longer for inflation to converge back to levels closer to 2%.

In practice, this means that by clarifying our reaction function in this way, markets were able to better anticipate our actions, thereby enhancing the effectiveness of policy by frontloading the required accommodation. This has not always been a gentle ride as I will explain in a minute but I think it is fair to say that the state-contingent leg of APP forward guidance has supported and continues to support the important price discovery function of markets.

Overall, therefore, the combination of time and state-contingent forward guidance has been highly instrumental in supporting powerful portfolio rebalancing effects and a compression of term premia, and in turn has led to a broad-based easing of financial conditions.

I think the evidence speaks for itself.

Euro area bank lending rates to firms have fallen by some 80 basis points since we started purchasing covered bonds in October 2014, a step which was succeeded shortly afterwards by purchases of asset-backed securities (ABS) and government securities. ECB analysis attributes a significant portion of this fall to the workings of our asset purchase programme.[11]

And effective forward guidance on and implementation of the APP may have also helped to reinforce forward guidance on rates – a channel famously labelled the “signalling” channel. The argument goes that large-scale bond purchases would be perceived by markets as preventing policy-makers from raising rates quickly, as this would cause losses on central banks’ balance sheet. In other words, central banks purchasing assets “put their money where their mouth is”.

At the same time, I will not deny that communication on policy intentions has been, and remains, challenging and that we cannot always be sure how our forward guidance works.

Much of the challenge arises of course from the fact that communication is not a one-way street as I alluded to before. There is an interaction between central bank communication and financial markets which creates a well-known risk that financial conditions would become de-anchored. Paul Samuelson famously compared the central banker who reads too much from movements in the bond markets to a monkey who “*discovers his reflection in the mirror and thinks that by looking at the reactions of that monkey – including its surprises – he is getting new information*”.[12]

Let me explain by giving you two concrete examples.

The first one refers to our decision of December 2015, when we announced a substantial package of policy measures, including a six-month extension of the APP, a 10 basis point cut in the deposit facility rate (DFR) and the reinvestment of the principal payments on the maturing bonds. To give you an idea of the size, the additional purchases alone, including the reinvestment, amounted to almost €700 billion of bonds that we expected to extract from the market – an appreciable amount of stimulus.

Yet, the market paid little heed and bond yields tightened measurably on the day. We observed a hawkish revision of expectations about the trajectory of ECB policy rates and increased uncertainty about our reaction function. Market intelligence following the decision suggested that the absence of clearer forward guidance on the possibility of further cuts in the DFR led to a sharp repricing in the EONIA forward market.

This suggests two things: first, the introduction of negative rates, while having a powerful easing effect on the monetary policy stance, has created uncertainty about how low we are prepared to go with our key interest rates.

Second, any perceived communication on the lower bound is a strong signal. Recall that markets on that day undertook a repricing, although the Governing Council, in each and every Introductory Statement, has kept an implicit reference to its initial rate forward guidance of July 2013, namely that it expects rates to remain at present or *lower* levels.[13]

Incidentally, this experience squares with recent findings in the literature. Researchers at the ECB have shown that if central bank communication leads to different interpretations by market participants – in this case about the willingness to cut the DFR further and the likely lower bound – they tend to look to financial market prices to find out about how their peers have interpreted the same statement.[14] This makes it more likely that they react to exogenous disturbances, which in turn increases uncertainty.

At face value, this would call for self-standing forward guidance on the lower bound. But as I explained in my remarks in Yale last year, there is great uncertainty about the estimates of the so-called “economic” lower bound, the level at which further reductions in rates would be more likely to lead to a tightening rather than an easing of the stance.[15]

Would it be credible for central banks to provide guidance on such sketchy, and probably time-varying, estimates? My answer would be no, at least not until we can say with much more confidence where the lower bound might be.

But in respect of what we do know, communication should be as clear as possible, in particular when uncertainty about non-standard measures is considerable.

This brings me to my next observation: the market's reception of our decision last December to extend the intended horizon of APP purchases to December 2017, but to reduce the monthly purchases from €80 billion to €60 billion.

It was feared that a reduction in the pace of purchases – despite the longer purchase horizon – could cause instabilities in financial markets, similar to those during the so-called "taper tantrum" episode in the US in 2013.

These risks were ingrained in market surveys which suggested that the market was almost unanimous in believing that the ECB would continue purchases at €80 billion per month, also beyond March 2017.

With the benefit of hindsight, these fears proved unfounded. The December 2016 policy announcement was met with broad approval by market participants, thereby safeguarding the continued support for the recovery in the euro area through very accommodative financing conditions.

I see two potential trains of thought that could square the benign market response with the signals from surveys and the Fed's experience: the success of the December 2016 decision in preserving the favourable market conditions could be attributed to the additional "easing bias" attached to the APP that I mentioned earlier; the other line of thinking would be that the available market surveys painted a biased and misleading picture of true investor expectations.

Which line of thinking is likely to be closer to reality?

In my view, both are equally relevant. The decision to communicate that we stand ready to increase the size and/or duration of the programme under certain conditions assured investors that there was no change in our reaction function. Rather, the reduction in the pace of purchases was a mere reflection of the diminished deflationary tail risks – a Delphic signal embedded in clearer Odyssean forward guidance, if you wish.

But the additional easing bias, however important it may be, is unlikely to explain the whole story. One reason is that some market participants voice concerns about our *ability* to increase the monthly pace of purchases given the scarcity of bonds available in the market and the constraints on our purchase programme. Others doubt our *willingness* to step up purchases once more.

Both concerns seem to cast doubt on the credibility of this part of our forward guidance – wrongly, in my view, considering our proven track record of decisive action in the face of adverse shocks that threaten to jeopardise the achievement of our price stability objective.

But if we take these doubts seriously, it means that markets might have discounted more strongly the possibility of a more abrupt end to the APP post-March 2017 than what available surveys might have suggested – a view that would seem to corroborate, at least at face value, the argument put forward by Hyun Shin.[16]

He argues that we should not think of the market as a homogenous entity with its own coherent set of beliefs and expectations. Rather, the marketplace is diverse, and prices at any given point in time aggregate many different – indeed opposing – opinions. Investors with the most strident views – that is, with the highest degree of conviction – may have the largest influence on pricing in the short term. It is because these market participants are willing to make the strongest commitment, both in terms of the size of the positions they take, and in terms of leverage.[17]

You can see what I'm getting at. Perhaps the overall benign market response to our December 2016 announcement may have frustrated those who expected an outright tapering decision, perhaps because they doubted our willingness or ability to continue purchasing.

This suggests that expectations gleaned from market surveys may be imperfect reflections of "true" market expectations. Of course, it may also be that we have not been clear enough in our communication – that investors misunderstood our forward guidance or our reaction function, which is different from doubts about our willingness to act. To some extent, when there are too many disparate voices, such risks of miscommunication – the danger of cacophony, as Alan Blinder[18] once put it – can be mitigated by putting discipline on communication by monetary policy committees – the Governing Council in the case of the ECB. In fact, the case for disciplined communication is even stronger at the lower bound.

All this is not to say that we should ignore what investors think and expect. Market intelligence is an important input into the analysis of financial market developments. It rather means that the successful sequence of policymaking – in particular in the presence of unconventional policy measures – is (i) to be clear about our reaction function, including how the expected monetary policy stance would be mapped into different policy instruments, (ii) to disclose frequently our assessment of the state of the economy and its likely evolution, and (iii) to act accordingly.

In doing so, central banks can lead the markets and minimise the risk of being led by them. And by fostering the markets' understanding of our reaction function, we reduce market volatility and support both the effectiveness and predictability of monetary policy actions.[19]

Conclusions and outlook

With these experiences and challenges in mind, allow me a few thoughts on the current state of our forward guidance – and with this I will conclude.

As you know, earlier this month the Governing Council decided to leave its forward guidance unchanged. Thus, we have maintained both "easing biases" – the one on purchases and the one on key interest rates, i.e. meaning that rates could go lower.

The euro area economy has undoubtedly made a great deal of progress. The recovery has been steadily broadening, firming, and may even have gained some further momentum since the beginning of this year. In fact, we may now see the full potential of our policy measures unfolding.

That of course raises the question as to whether the time has come to communicate a change in our policy expectations.

As I said earlier, our forward guidance framework consists of two key components: a structural and a variable one. Changing the structural part is not an option as it would leave markets in a state of uncertainty, with risks of excess volatility and even of a de-stabilisation of financial conditions.

But the variable component of our guidance demands that we: (i) regularly re-assess the medium-term price stability outlook, (ii) run this assessment through our reaction function, and (iii) decide whether or not our policy expectations on the horizon and pace of our asset purchase programmes, on the level of our policy rates ("present or lower") and on their expected endurance ("well past …") need adjustment.

Should we conclude that an adjustment is needed, we should not hesitate to adapt our communication. After all, abandoning the intimate link between our policy expectations and our assessment of the progress towards a sustained adjustment in the path of inflation would risk creating the false impression that we had changed our reaction function – a dangerous path towards time-inconsistency.

Of course, should we decide to change our policy expectations on the back of an improving economic landscape, this does not mean that we would not *lower* interest rates or *increase* the pace of purchases in any state of the world. It just means that – given the current outlook – it seems increasingly less likely that we will have to do so.

In a similar way, any decision to change our policy expectations does not prejudice further policy steps. There are no automatic implications for our policy tools. It is natural that a potential change in expectations first has to withstand the test of time.

Ultimately, also the choice of sequencing of policy instruments will be the outcome of our regular assessment of the medium-term price stability outlook, reflecting the state-dependent nature of our expectations of the horizon over which our policy instruments are likely to be maintained.

And here, let me be clear.

The latest incoming data have shifted the balance of risks for growth towards neutral territory in my view. But at the same time, measures of underlying inflation in the euro area remain subdued and our projected path of inflation still remains highly conditional on our policy stance. In line with our forward guidance on the APP, this clearly suggests that current expectations on the intended horizon of our purchases, as encapsulated in our Introductory Statement, and on the sequencing of policy instruments, remain valid today.

Thank you for your attention.

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[1] I would like to thank S. Andreopoulos for his contributions to this speech. I remain solely responsible for the opinions contained herein.

[2] See Blinder et al. (2008).

[3] See Cœuré (2017).

[4] See Gürkaynak *et al.* (2005) and, for the ECB, Brand *et al.* (2010).

[5] See Eggertsson and Woodford (2003) and Woodford (2012) in particular.

[6] For earlier contributions, see Coeuré (2013) and Praet (2013).

[7] See Campbell *et al.* (2012).

[8] See Stein (2014) and Stein and Sunderam (2016).

[9] See, e.g., Filardo and Hofmann (2014), p. 45.

[10] See Coenen *et al.* (2017).

[11] See, e.g., Altavilla *et al.* (2015), Blattner and Joyce (2016) and ECB (2017).

[12] See Fuhrer (1994).

[13] Specifically, on occasions of no change, the Introductory Statement said that "[…] in line with our forward guidance, we decided to keep the key ECB interest rates unchanged."

[14] Gaballo (2016).

[15] See Cœuré (2016). The speech concluded that the current level of the DFR is "still far away from the physical lower bound", triggering cash substitution, and safely above the economic lower bound.

[16] See Shin (2013).

[17] See also Stein (2014).

[18] Blinder (2004).

[19] See e.g. Blattner *et al.* (2008) and Blinder *et al.* (2008).