# ESMA promotes common approach to rules supporting the use of smaller CRAs

The European Securities and Markets Authority (ESMA) has issued a Supervisory Briefing to national Sectoral Competent Authorities (SCAs), regarding the application of Articles 8(c) and (d) of the CRA Regulation (Regulation), to assist them with their supervision and enforcement of these provisions and promote supervisory convergence through adoption of a common supervisory approach.

The Supervisory Briefing, while addressed to SCAs, also streamlines compliance with Article 8(d)'s requirements for issuers and related third parties, by proposing a Standard Form for documenting the decision not to appoint a smaller CRA.

The Regulation aims to encourage competition in the credit ratings industry in the EU, with Articles 8 (c) and (d) requiring issuers or related third parties to consider appointing a smaller credit rating agency (CRA) when they intend to appoint two or more CRAs for the rating of an issuance or entity. However, implementation of these articles were hindered by a lack of clarity in a number of areas, including which issuers were captured by these requirements and how they should document the decision on use of CRAs.

In order to address these issues the Supervisory Briefing contains two parts, a Common Supervisory Approach and a Standard Form:

- the common supervisory approach aims is to assist the SCAs responsible for the supervision and enforcement of the Articles. It clearly establishes who should be prioritised for supervision and enforcement under these provisions.
- For issuers and related third parties, this common supervisory approach also provides clarity to their status under this articles;
- the Standard Form's purpose is to assist issuers and related third parties by providing clarity as to how they may meet their regulatory obligations under these provisions. It removes the need to develop in-house templates for documenting compliance under Article 8d of the CRA Regulation; and
- For SCAs, the standard form will provide standardised, consistent and comparable data as to why issuers and related third parties in their jurisdictions are not appointing smaller CRAs.

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# Speech Mario Draghi: Monetary policy and the economic recovery in the euro area

## Speech by Mario Draghi, President of the ECB, at The ECB and Its Watchers XVIII Conference, Frankfurt am Main, 6 April 2017

Over the course of the crisis, the making of monetary policy has become progressively more complex. We have operated in an environment where the limits of our traditional instruments have been tested, and where new instruments have had to be introduced. This has required adaptation, not just by those of us who decide on it, but also by the Watchers who observe it and attempt to anticipate it.

Meetings such as this today have therefore taken on a special importance, since they represent an opportunity to communicate in both directions: for us to explain to you our assessment and our reaction function, and for you to provide your feedback.

So in that spirit, I would like to make three points today.

First, that our monetary policy is working and that it has been a key factor behind the resilience of the euro area economy over recent years. Second, that the recovery is progressing and may now be gaining momentum, though risks still remain tilted to the downside. Third, that despite these improvements, inflation dynamics continue to depend on the continuation of our current monetary policy stance – a stance that is determined by the interaction between all three main policy instruments: interest rates, asset purchases and forward guidance on both.

## Monetary policy is working

For a large part of the crisis, the story of the euro area was one of abortive recoveries. The rebound that took place from 2009 to 2011 was derailed by the onset of the sovereign debt crisis. We then saw a nascent recovery beginning in mid-2013, but it also lost steam by the summer of 2014 as the external environment became more uncertain. The euro area economy, in other words, was consistently struggling to gain momentum and seemed highly vulnerable to new shocks.

This is not surprising given the severity of the crisis and the depth of the economic slump. Even today, the legacies of the financial crisis are still a drag on the recovery and the global environment remains uncertain. The balance of risks to the growth outlook remains tilted to the downside due to geo-political factors.

But things have also been clearly improving. Since mid-2014, the recovery has evolved from being fragile and uneven into a firming, broad-based upswing. Quarterly GDP growth has been consistently between 0.3% and 0.8%. Employment has grown by more than 4.5 million people. And this is despite the fact that we have encountered adverse shocks in that period, not least the slowdown in emerging market economies and renewed tensions in the euro area banking sector.

So what accounts for this improved resilience of the euro area economy? Certainly the recovery cannot be explained by "endogenous" or underlying growth forces, which were unusually weak in its early phase. Nor can several of the "exogenous" factors that have supported previous euro area recoveries provide an answer.

First, in the past euro area growth has been closely interdependent with *world trade*, with external demand playing a central role in supporting the recoveries after the dotcom crash and the Lehman bankruptcy. Since mid-2014, however, world trade has weakened considerably and last year grew at the slowest pace since the financial crisis. Yet the correlation with euro area output has more or less broken down. Growth has accelerated even as world trade has fallen back.

Second, though *fiscal policy* has stopped being a headwind – as it was during the 2011-13 period – it has not been much of a tailwind to the recovery either. With governments still undertaking a necessary process of balance sheet repair, fiscal policy between 2013 and 2015 was basically neutral and provided only a mildly positive contribution to growth last year. This contrasts with both the post-Lehman and post-dotcom recoveries where the fiscal stance was more expansionary.[1]

Third, the contribution of the supply side to the recovery has so far been limited. There have been few *structural reforms* in the last few years that would justify higher expenditure by firms and households as they revise up their future income. And this is especially true for reforms to product markets and the business environment, which typically have the strongest impact on current spending.

So based on simple growth accounting, there are only two "exogenous" factors left that can realistically explain the resilience of the recovery: the collapse in oil prices in 2014-15 and our monetary policy. And this is also what we find in our internal model-based estimates, which show that growth has been highly reliant on these two forces. All told, we estimate that half of the extra GDP growth achieved during the current recovery has been attributable to our policy, with a material contribution from oil prices as well.

This central role played by monetary policy can be further demonstrated by looking at the channels through which our policy has been working. One channel has been the divergence of monetary policy cycles across advanced economies since mid-2014, and its consequences for exchange rates, which have helped insulate euro area exporters from weakening global demand. They have in fact been able to maintain or even regain market shares as world trade has

slowed.

But still more important has been the effect of our policy package on the domestic economy. As I have outlined in detail elsewhere[2], since we adopted our credit easing package, we have seen a substantial easing in financing conditions for the euro area economy. Market financing costs have fallen, while bank lending rates for both firms and households have dropped by more than 110 basis points and are now at historical lows. This has been accompanied by rising lending volumes and improved access to finance, especially for small- and medium-sized enterprises.

And crucially, our policy has not only eased financing conditions on average, but triggered a remarkable *convergence* in borrowing costs across different euro area countries. Granular data show that in June 2014 the median lending rate for firms in vulnerable economies was 120 basis points higher than for those in stronger ones – despite overnight rates being close to zero. Today the difference is only 20 basis points. Without this, it is likely that large parts of the euro area would have been remained stuck in a self-sustained credit crunch.

## The recovery is progressing and gaining momentum

As this policy stimulus has worked its way through the economy, the atypical makeup of the recovery – relying mostly on monetary policy and oil prices – has been gradually shifting towards a stronger contribution from underlying growth forces. This is evident from the fact that, as the impetus coming from oil prices wanes, the economy is accelerating rather than slowing.

There are indeed *three features* of the recovery which give us confidence that it may be gaining its own momentum, although – given the severity of the slump we are emerging from – monetary policy still remains critical to facilitate the transition.

The first is that the recovery is being propelled by a virtuous circle between rising consumption, employment growth and labour income. As low financing costs and, initially, low oil prices have fed through into household spending, the labour market has strengthened and real disposable incomes have accelerated. Around 50% of the rise in real labour income since mid-2014 can be explained by more people in work, with most of the rest explained by lower inflation boosting real wages.

This has in turn fed further consumption growth as households have kept saving rates stable, leading to higher employment, income and spending. And as aggregate demand has strengthened, investment has also begun a cyclical recovery, which we expect to reinforce growth dynamics going forward. However, it still remains 10% below its pre-crisis peak and well below its historical trend.

Importantly, domestic demand has firmed against the backdrop of improved private sector balance sheets, which is the second key feature of the recovery. For virtually the first time since the start of monetary union, spending has been rising while indebtedness has been going down. Especially

in formerly stressed countries, debt ratios for both firms and households have fallen substantially. And pertinent for the strength of the recovery, the drivers of this deleveraging have been changing.

Bear in mind that there are two types of deleveraging: “macroeconomic” deleveraging – reducing debt ratios through nominal growth – and “balance sheet” deleveraging: paying off or writing down debt. Historically, the most drastic processes of deleveraging, including the post-war episodes and the recent post-crisis episode in the US, have relied on both mechanisms. But the contribution of nominal growth has always been decisive for success.

In the euro area, until recently, real growth and inflation were too low to foster macroeconomic deleveraging, so balance sheet repair had to take place through the more painful channel, conflicting with the objective of macroeconomic stabilisation. Rising nominal growth is now helping to reconcile those two goals. Nevertheless, further efforts are still needed to work through the legacies of the crisis, especially in parts of the euro area banking sector where non-performing loans remain high.

The third important feature of the recovery is its *broadness* across sectors and countries – which is to say, it has not only strengthened but become more homogenous across the euro area. This reflects above all the effectiveness of our measures in narrowing financing conditions across different economies.

If one looks at the percentage of all sectors in all euro area countries that have positive growth, the figure stood above 80% at the end of last year – above its historical average of 73% and the level observed during the 2009-11 recovery. Similarly, the dispersion in growth rates across both sectors and countries has also narrowed significantly and both are now at their lowest level since 1997.

The same story is visible for employment. In early 2014 the vast majority of euro area headcount growth was coming from Germany. As that year progressed the contribution from Spain began to rise, driven by the recovery in activity and previous labour market reforms. And since the second half of 2015 the employment turnaround has extended into other formerly stressed economies as well, including in particular Italy, Ireland and Portugal. Just as for GDP growth rates, the dispersion of employment growth across euro area countries is now at record low levels.

So though the risks to the growth outlook remain tilted to the downside – mainly on account of the geo-political factors I mentioned earlier – the balance seems to be shifting upwards. This is reflected in recent sentiment indicators, which suggest that the recovery may be gaining momentum. The latest euro area composite Purchasing Managers’ Index (PMI), for example, which is a reasonably consistent leading indicator for euro area GDP growth, gave the highest reading since April 2011.

This was also the assessment of the Governing Council at its last monetary policy meeting in March, where the staff projections for growth in the coming years were revised slightly upwards. And in light of the improving risk outlook, the Council affirmed that it is no longer concerned about deflation

risks, nor do we perceive a sense of urgency to take further measures to combat adverse tail risks.

## Inflation dynamics depend on continued policy support

Yet despite these signs of progress, it is clearly too soon to declare success. In important ways the outlook for price stability remains unchanged. In particular, while growth and employment *rates* have been converging upwards across the euro area, significant gaps still remain in terms of *levels*. In large parts of the euro area there are still substantial under-utilised resources, reflected in a negative output gap and high unemployment rates.

And this is of course crucial for our assessment of the path of inflation – namely, whether we see a sustained adjustment that would warrant a scaling back of our exceptional degree of monetary policy accommodation.

Let me remind you that we have established four criteria to confirm a sustained adjustment: first, that headline inflation is on a path to levels below but close to 2% over a meaningful medium-term horizon; second, that inflation will be durable and stabilise around those levels with sufficient confidence; third that inflation will be self-sustained, meaning it will maintain its trajectory even with diminishing support from monetary policy. And finally, it goes without saying that in each case the relevant metric is euro area inflation not the inflation rates of any individual country.

For the first criterion, the assessment does now seem to be improving: our latest projections foresee the path of headline inflation now much closer to the target over 2017-2019. But the inherent uncertainty in the forecasting process needs to be mitigated by cross-checking with other available information on inflation dynamics. Particularly useful here are measures of underlying inflationary pressures, since they can be monitored in real-time and tend to be more informative than headline inflation for medium-term price developments.

For us to be confident in the second criterion – that inflation is not just converging towards our aim, *but stabilising around it* – we would need to see signs of such pressures building. But there is so far scant evidence of this.

Much of the increase we have seen in headline inflation in recent months has been driven by its volatile components. Of the 1.4 percentage point rise from November last year to February this year – when inflation peaked at 2% – more than 90% was explained by energy and food price inflation. Measures of underlying inflationary dynamics, by contrast, remain subdued. One such measure, HICP excluding food and energy, has hovered around 0.9% since mid-2013 and still shows few convincing signs of an upward trend. Most alternative measures are also sluggish by historical standards and show little movement towards our aim.

An important source of subdued underlying inflation trends has been weak domestic price pressures, driven partly by subdued wage growth. Despite the

domestic nature of the recovery, annual wage growth in terms of compensation per employee reached the historical low of 1.1% in the second quarter of 2016. Wage growth has since recovered somewhat – rising to 1.4% by the end of last year – but remains well below historical averages. This is where the issue of *levels* comes in – that is, the significant degree of labour market slack.

Decomposing the forces that have weighed on wage growth[3], we find two principal drivers: first, the still-high unemployment rate and its effect on wage bargaining dynamics; and second, a below-average contribution from past inflation in wage formation, caused by the last few years of exceptionally low headline inflation. As monetary policy has successfully supported demand and stabilised inflation expectations, both of these drivers should wane going forward. Their dragging effect on wage growth, however, will take time to fade out.

Labour market slack will lessen as unemployment continues to fall, but it is unclear how quickly this will feed through into wage dynamics – especially if the experience of other advanced economies is instructive. A strengthening labour market may attract "marginally attached" workers back into the labour force, or encourage those "underemployed" to seek more hours, causing the effective supply of labour to rise in tandem with demand. Domestic wage pressures may therefore only materialise later in the economic expansion.

The influence of the second driver – low past inflation – should also dissipate given the recent recovery of headline inflation. But this may take some time since a number of factors might slow down the reaction of wages to higher inflation.

First, wage negotiations in many countries and sectors have largely been concluded for this year, meaning any impact of higher inflation via negotiated wages is likely to be delayed. Second, in countries where formal wage indexation has declined sharply during the crisis, the pass-through of headline inflation to wages may have weakened. Third, that pass-through also depends in part on labour market slack, since in an environment of high unemployment trade unions may be prepared to prioritise job security over some loss in real wages.

In short, for the time being there are grounds for being cautious when assessing the durability of the inflation outlook. For us to be confident that inflation will indeed stabilise around our aim, we would need to see clear evidence that underutilised resources are declining and feeding through more convincingly into domestic price formation.

For that, it is clear that continued support for demand remains key. And this provides the answer to the third criterion: we are not yet at a stage when inflation dynamics can be self-sustaining without monetary policy support. The recovery of inflation still depends on the very favourable financing conditions that firms and households enjoy, which in turn depends on the substantial degree of monetary policy accommodation we have in place today. Accordingly, our inflation projections still include a material contribution from monetary policy over the next two years.

For this reason the Governing Council at its last meeting confirmed the appropriateness of the current very accommodative monetary policy stance.

## The monetary policy stance is still appropriate

Yet it is important to understand that our stance is no longer determined by just one tool, policy interest rates. It is determined by the calibration of, and interaction between, the whole array of instruments we have introduced: the level of policy rates, the pace of asset purchases, and our forward guidance on both. It is the *combination* of all these tools that sets a given stance. The different elements have complementary effects on preserving the very easy financing conditions that are necessary for generating sustainable inflation convergence.

Our current interest rate policy and our forward guidance on the future path of rates affect the risk-free term structure of interest rates, which is the benchmark for the pricing of all other assets and interest rates. Our asset purchases complement these interest rate policies by directly compressing the term premium and other risk premia, both via portfolio rebalancing effects and by underlining the central bank's commitment to keep interest rates at a low level – i.e. signalling effects.

And since the Governing Council deems the current stance fully appropriate, it confirmed at its last meeting that net asset purchases will continue until the end of December 2017, or beyond, if necessary, and in any case until we see a sustained adjustment in the path of inflation consistent with our inflation aim. It also confirmed its expectation that key ECB interest rates will remain at present or lower levels for an extended period of time, and well past the horizon of our net asset purchases.

This implies that our various policy instruments are deliberately chained together in such a way that the forward guidance applied to our asset purchase programme – which is time- and state-dependent – extends also to our interest rate policy. So our forward guidance is de facto on the entire package, not on any specific component of it. And this guidance relates not just to the *conditions* under which we would withdraw stimulus – i.e. the sustained adjustment in the path of inflation – but also to the *sequence* of measures we would use to do so.

The logical basis for this sequence stems from the same reason why we exploited the margin provided by conventional interest rate policy before resorting around the same time to negative interest rates and large-scale net asset purchases.

In a multi-country monetary union such as the euro area made up of segmented national financial markets, asset purchases are inevitably more difficult to calibrate, more complex to implement, and more likely to produce side-effects than other instruments. So it is natural that we turned to them only after other, more conventional options were becoming exhausted. Similarly, lowering interest rates into negative territory in a largely bank-intermediated financial system was a step into uncharted waters.

From today's perspective, however, the negative rates, in conjunction with the other elements of our easing package, have turned out to be powerful in terms of easing financial conditions. And the potential negative side effects have so far been limited. As household deposit rates have been sticky at zero, banks' net interest rate margins have fallen somewhat. But the impact on bank profitability has been offset by the positive effects of easier financial conditions on the volume of lending, and the reduction in loan-loss provisions, as monetary policy has lifted economic prospects.

The current wording of our forward guidance reflects exactly this assessment of side effects. And from today's standpoint, I do not see cause to deviate from the indications we have been consistently providing in the introductory statement to our press conferences.

## Conclusion

So to conclude: we are confident that our policy is working and that the outlook for the economy is gradually improving. As a result, the forces that are currently weighing on domestic price pressures should continue to wane.

But even so, we have not yet seen sufficient evidence to materially alter our assessment of the inflation outlook – which remains conditional on a very substantial degree of monetary accommodation. Hence a reassessment of the current monetary policy stance is not warranted at this stage.

Before making any alterations to the components of our stance – interest rates, asset purchases and forward guidance – we still need to build sufficient confidence that inflation will indeed converge to our aim over a medium-term horizon, and will remain there even in less supportive monetary policy conditions.

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# Speech Peter Praet: Calibrating unconventional monetary policy

### Speech by Peter Praet, Member of the Executive Board of the ECB,
### at The ECB and Its Watchers XVIII Conference organised by the Center for Financial Studies at Goethe University Frankfurt, panel on the "Assessment of the expanded asset purchase

# programme” (with John Taylor and Jan Hatzius), Frankfurt am Main, 6 April 2017

The ECB’s monetary policy stance is currently driven by three main mutually reinforcing instruments: a negative deposit facility rate; an expanded asset purchase programme covering a broad range of private and public securities (APP); and an integrated system of forward guidance that governs the future path of asset purchases and short-term interest rates, as well as the sequencing of these different policy tools. Moreover, the targeted longer-term refinancing operations, the last of which was conducted in March, will continue to incentivise bank lending over the next four years.[1]

These measures have supported financial conditions, which – due to their prominent role in the transmission of policy impulses – act as a crucial intermediate variable in the pursuit of a stability-oriented monetary policy. However, while the role of financial conditions in the transmission process has remained as relevant as ever, the task of steering them in line with domestic macroeconomic policy objectives has become more challenging in view of the manifold dislocations in financial markets that have arisen since the crisis and the proximity of standard policy instruments to their lower bound. The ECB’s unconventional measures have confronted these challenges and ensured an appropriate degree of accommodation by fostering very favourable financing conditions.

Our monetary policy is working, and we see that, supported by our mutually reinforcing monetary policy measures, the euro area economic recovery is steadily firming. The cyclical recovery is gaining momentum and the expansion is broadening across sectors and countries, showing the effectiveness of the transmission of our measures throughout the entire euro area economy. Yet, the risks to the growth outlook remain tilted to the downside, even though their balance is improving. And, importantly, inflation dynamics continue to be conditional on the present, very substantial degree of monetary accommodation.

In calibrating the set of monetary policy instruments, we faced – and we still face – two issues.

The first, which I will refer to as the *measurement* issue, consists in quantifying the overall amount of monetary policy support that we are providing and parsing that support down to the individual instruments. In unconventional monetary policy times, measuring the contribution of each instrument to the stance is crucial to ensuring an appropriate composition of the policy toolkit – a challenge that is much less pronounced in conventional times when the decision space focuses on policy-controlled short-term interest rates as the one, dominant, tool to steer the stance. Measuring the marginal contributions of each instrument is very hard however.

The second issue, which I will refer to as the *benchmarking* issue, consists in determining whether the resultant, overall monetary policy support is appropriate, i.e. commensurate with our assessment of the state and expected evolution of the economy; and, if any changes are necessary, what specific

instrument in our multi-pronged policy strategy needs to be adjusted.

In today's speech, I will review these different challenges and describe the ECB's approach to addressing them.

## Measuring and benchmarking monetary policy

To operationalise the intended policy path, it is crucial to form an assessment of the prevailing stance.

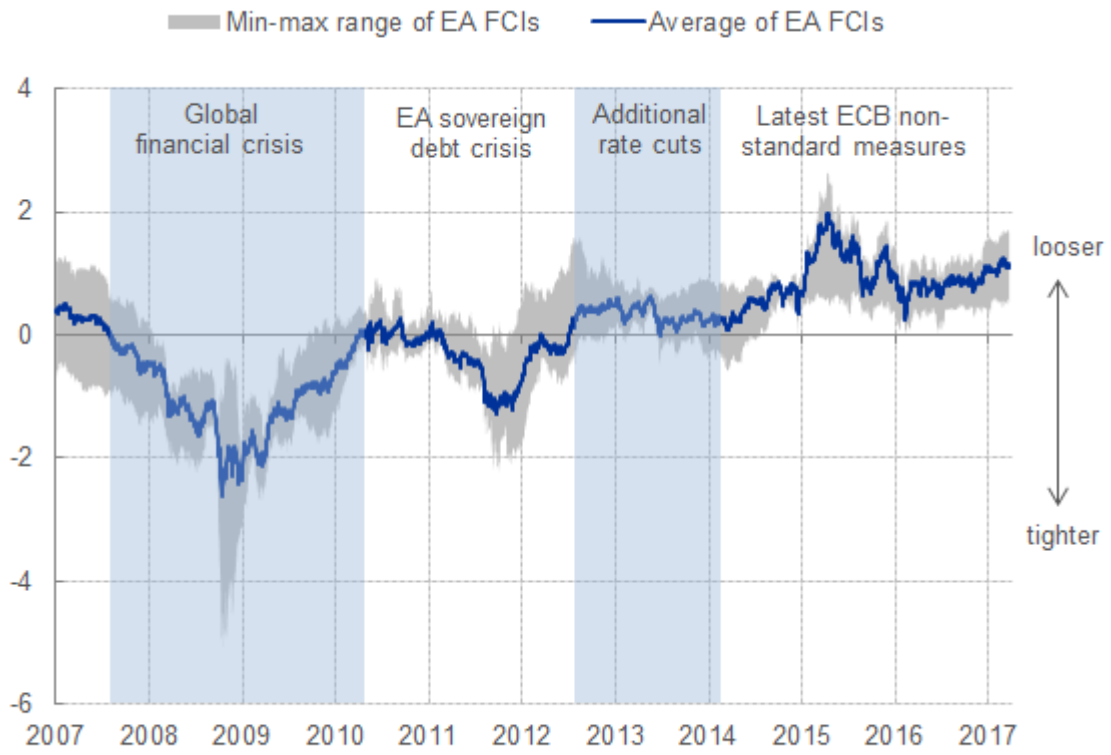
Here, economists have traditionally resorted to two types of indicators. One consists of policy rules that exploit the systematic relationship between a monetary-policy controlled short-term interest rate, in deviation from some medium-term equilibrium value, and a set of macroeconomic variables, typically including inflation and economic slack – as in the eponymous Taylor rule. Given an assumption for the medium-term equilibrium interest rate norm, these rules promise to deliver a level of the short-term rate that would be consistent with driving the economy back to a sustainable non-inflationary path starting from current macroeconomic conditions.

The other type of indicator consists of Financial Conditions Indexes (FCIs) that synthesise potentially large numbers of financial variables and weight them based on how well they forecast future (nominal or real) economic activity or how much of the common variation of the individual constituent variables they explain – a field to which Jan Hatzius has made important contributions.[2]

The simple benchmarking flavour of the Taylor rule and the broad, encompassing metric of accommodation offered by the FCIs represent a valuable disciplining tool from which one can start to reflect about the prevailing stance and the way the stance should be adjusted as new information flows in.

FCIs, in particular, can facilitate story-telling. They have also been able to broadly track the most salient, yet not all, phases of the recent crisis.[3] Overall, they show a positive trend in financial conditions since 2009, reflecting the policy response to the crisis. This was preceded however by a tightening in financial conditions in 2007 and 2008 on the back of investor panic and contagion effects that spilled over across the entire array of asset prices at the height of the crisis. The FCIs also show the subsequent reabsorption that took place in the aftermath of the forceful response by central banks and other policy actors around the globe (see their evolution in the span of time marked by the shaded area for the "global financial crisis"). Furthermore, they document the renewed tightening in euro area financing conditions that was heralded by the escalation of the sovereign debt crisis in the spring of 2010. More recently, the FCIs point to a clear footprint of the non-standard monetary policy measures the ECB adopted since mid-2014, after the rate cuts over the preceding two years had coincided with broadly unchanged financial conditions.[4] Yet their improvement from end-2011 onward stands in contradiction with the escalation of the sovereign debt crisis, a point I come back to shortly.

**Chart 1: Financial Conditions Indexes for the euro area** *(standard deviations)*




*Sources: ECB, Bloomberg, Goldman Sachs.*

*Note: the chart presents two FCIs constructed by the ECB; one by Bloomberg and one by Goldman Sachs (GS). The FCIs are constructed as weighted averages of different financial variables. For the ECB FCIs these variables include the 1-year OIS, the 10-year OIS, the NEER of the euro vis-à-vis 38 trading partners, and the Euro Stoxx Index. For the Bloomberg and Goldman Sachs FCIs, broader sets of variables are considered (see footnote 3). The weight of each financial variable in the ECB and GS indexes is based on their estimated relationship to key macroeconomic aggregates. The variables in the Bloomberg FCI are subdivided into sub-indexes, consisting of money-market, bond-, and equity-indicators, and equally weighted within and across indexes. Latest observation: 31 March 2017.*

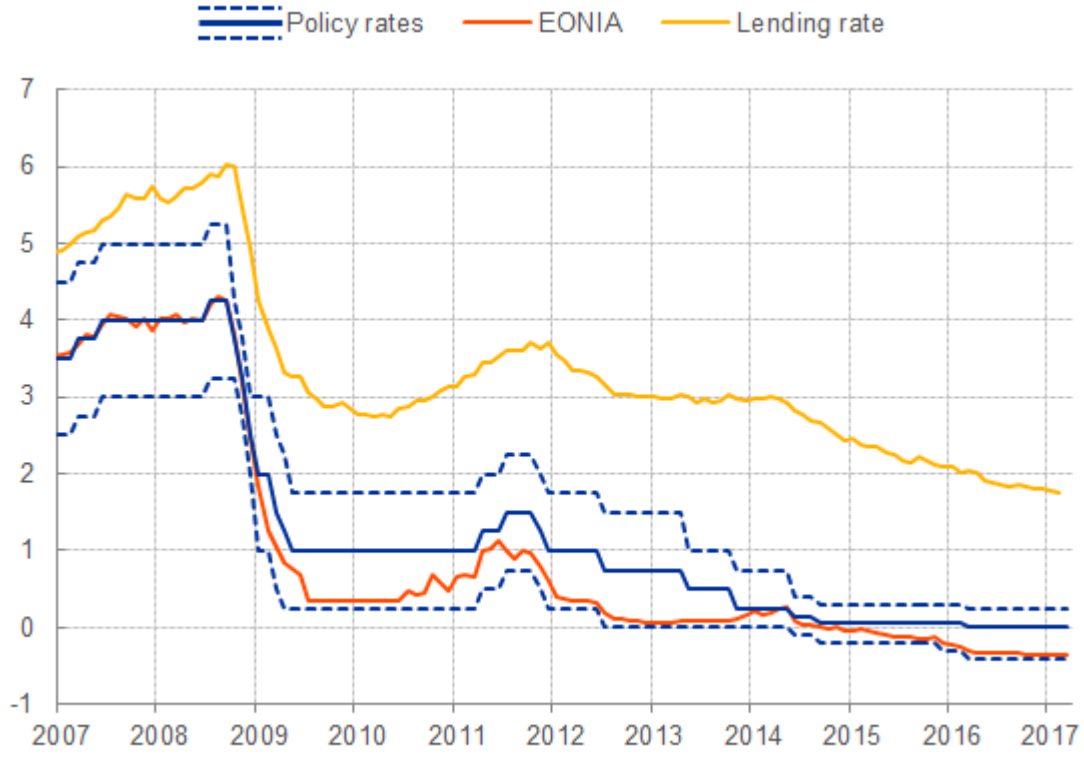
Both approaches, FCIs and policy-rules, encounter challenges regarding both the inference that they suggest concerning the quantum of monetary policy accommodation prevailing at any specific point in time (their *measurement* function) and the prescriptive value that one can extract for calibrating current and future policies (their *benchmarking* function). I believe one can say that their dual informative value is degraded particularly in the wake of major dislocations – in financial markets and in the functioning of the economy more broadly – of the sort we had to confront in the recent past.

## Financial conditions indexes

Let me make this point specifically with regard to FCIs and, for that purpose, let me comment on Chart 1. I concentrate on the period prior to July 2012, when Mario Draghi gave in London a speech which is widely credited for stemming the panic that had been raging for a whole year in the euro area

financial markets. The panic – by any measure – had already impaired firms' and households' access to credit in broad regions of the currency union to an extent that was damaging macroeconomic stability in systemic proportions. And it had induced a pronounced impairment in monetary policy transmission. This was visible for instance from bank lending rates which, despite a series of cuts in monetary-policy controlled short-term interest rates, remained stubbornly high and only started entering a pronounced and durable downward convergence path around the time in which the ECB adopted its credit easing measures in mid-2014 (see Chart 2).

**Chart 2: EONIA, key ECB interest rates, and euro area bank lending rates on loans to NFCs** *(percentages per annum)*




*Sources: ECB, ECB staff calculations.*

*Notes: Bank lending rate is calculated as the total cost of borrowing by aggregating short- and long-term rates using a 24-month moving average of new business volumes. The policy rates (ordered from highest to lowest) consist of the rate on the marginal lending facility (MLF), the rate on the main refinancing operations (MRO), and the rate on the deposit facility (DFR). Latest observation: March 2017 for the policy rates and EONIA, February 2017 for the bank lending rates.*

But, while this sequence of events and causative influences is well-documented empirically, the picture that emerges from the FCIs is somewhat different. According to the indicators shown in Chart 1, conditions seem to have been loosening – not tightening – in the 6 months prior to the time of the speech. While conditions eased further, more or less in correspondence of the event in July 2012, that further shift in the range of financial

condition indices is marginal if contrasted with its upward trend that had occurred before.

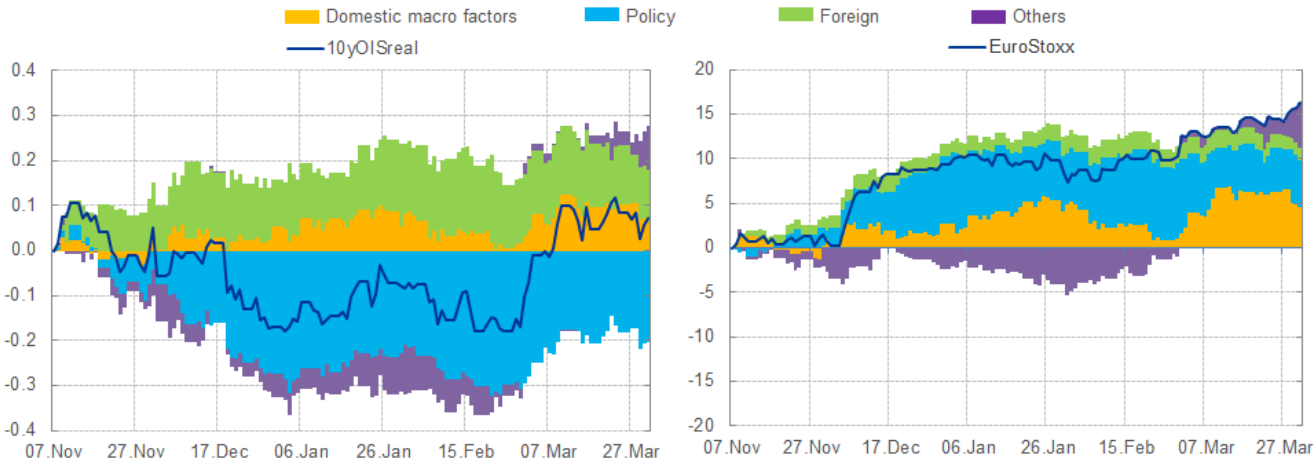
How can this be explained? The explanation mainly resides in the large weight that these indicators tend to assign to the exchange rate for averaging across financial market variables. The dramatic bout of risk aversion and pessimism about the sustainability of the euro area, which pre-dated the speech, had encouraged a massive reallocation of international portfolios away from euro area assets, and this capital flight had led to a material depreciation of our currency. Was this depreciation a net source of accommodation in the months preceding the July speech? Or wasn't it rather the reflection of an underlying and pervasive re-appraisal of break-up risk which would restrain consumption and business investment for years to come and remain a lingering factor weighing down on the recovery to this day? I tend to conclude in favour of the latter interpretation, which also shows that careful judgement needs to be exercised when interpreting FCIs, particularly at times of dramatic financial disruption.

We can generalise this message beyond episodes of heightened financial stress. By weighting different variables – such as the exchange rate, equities and interest rates – by their estimated impact on important macroeconomic aggregates, FCIs promise to offer a way to identify an "equivalence scale", on the basis of which one can weigh the importance of one financial variable against the importance of another in maintaining a certain degree of looseness/tightness. But we should be wary of over-stretching this notion to mechanical prescriptive implications, because this can inspire unwise policy conclusions. A given level of the FCI can be delivered by many different combinations of drivers and underlying forces, which make the mapping between that particular level and the broad stance of policy an elusive task.

Let me make another example that is valid in abnormal and more tranquil times alike. An increase in long term rates can be a purely exogenous rate shock, if they merely reflect the tendency of domestic yields to fluctuate in synch with international yields; or it can reflect more optimistic expectations concerning the state of the domestic economy. The stance implications of these two scenarios are vastly different.

An interesting case study emerges from the global shifts in financial market sentiment since autumn 2016. An attempt to disentangle different drivers of key financial market variables exploiting cross-asset correlations (see Chart 3) shows that global factors may have been exerting strong influence on euro area financing conditions, with tightening pressures on real interest rates (see left panel). At the same time, part of the increase in real rates over this period would be reflecting the ongoing improvement in euro area macroeconomic conditions, which also supported equities (see right panel). And the upward impacts on real interest rates would have been offset by domestic monetary policy, thus partly insulating euro area financing conditions from the tightening pressures originating from abroad. The relevance of different drivers entails an important caveat against a mechanical interpretation of changes in FCIs.

**Chart 3: Drivers of euro area long-term real interest rates and equities (contributions in p.p.)**




*Source: ECB staff calculations based on Matheson and Stavrev (2014).*

*Notes: Shocks are identified by applying sign restrictions in an estimated vector auto regression (VAR) model of real long term bond yields, stock prices, the euro nominal effective exchange rate, and inflation expectations. It is assumed that positive "policy" shocks push up real yields, reduce stock prices, appreciate the domestic currency, and reduce inflation expectations. Positive domestic macro shocks push up the four variables. Foreign shocks move yields in the opposite direction of the exchange rate. Last observation: 28 March 2017.*

This is not the only caveat however. Of course, timeliness is a practical advantage of these types of FCIs, which are based on high-frequency financial market information that can be tracked on a daily basis. In the euro area, however, this timeliness may conflict with the relevance of measuring broader financing conditions that account for the availability and pricing of bank lending. Given the bank-based financing structure of the euro area, such indicators are essential to assessing the transmission of monetary policy. But they are only available at a significantly lower frequency and – even in normal conditions – the transmission of policy impulses to bank lending conditions is more sluggish than to the financial market variables typically included in FCIs, such as equity indexes or exchange rates. This is why FCIs can only provide a partial picture of prevailing financing conditions that needs to be complemented with further sources, including *inter alia* an in-depth analysis of monetary and credit developments as embedded in the second pillar of the ECB monetary policy strategy.

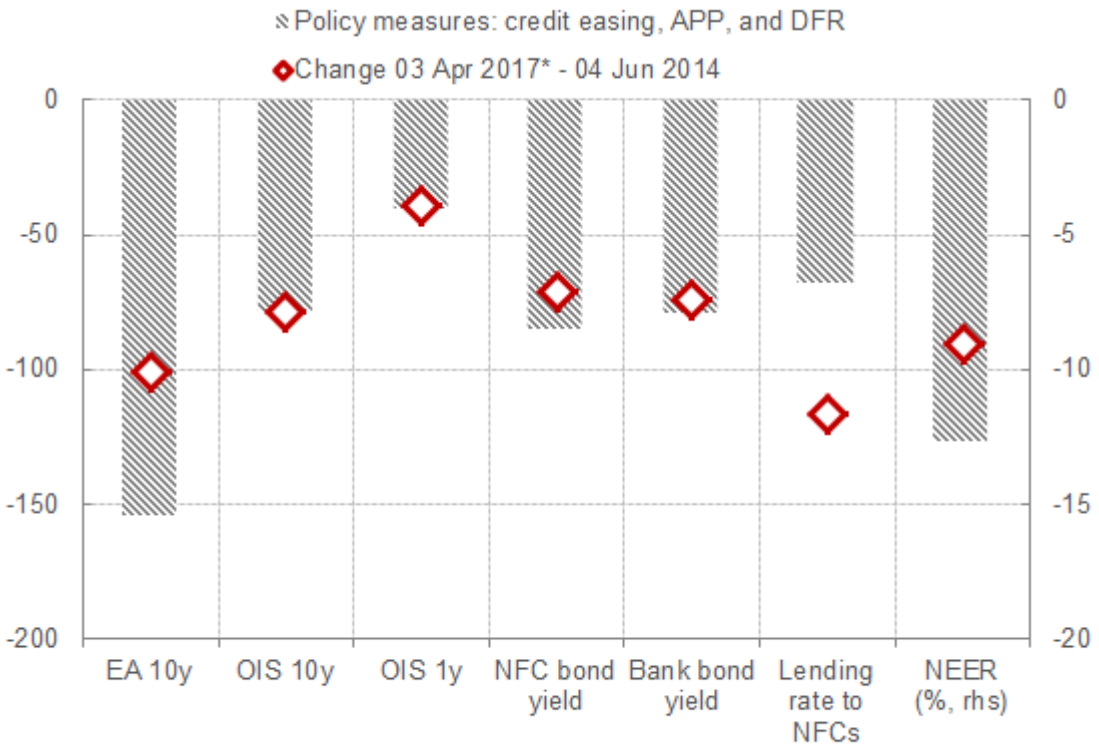
Another caveat derives from the considerable uncertainty surrounding the appropriate weighting of individual constituent variables. Conceptually, it appears attractive to base such weighting on the impact that exogenous variation in each of these variables would exert on relevant economic aggregates, such as growth or inflation. Practically, however, such impact estimates are wrought with a host of complex identification issues.

Finally, when using FCIs to track the evolution of financing conditions as an intermediate target, policy-makers have to be mindful of differences in the controllability of its individual components. In normal conditions, when monetary policy uses short-term interest rates as its dominant policy tool and builds on a broadly predictable connection between these rates and broader financing conditions, it is relatively straightforward to steer and assess its intermediate target. However, in crisis times – when the link between short-term interest rates and broader financing conditions is weakened and monetary policy increasingly relies on more direct means to affect a broader range of financial variables – it becomes significantly more complex to assess the impacts of the various monetary policy measures.

More granular model-based evidence suggests that the ECB's non-standard monetary policy measures have left a clear footprint in euro area financing conditions. In particular, they have induced a broad-based easing that spread across a variety of asset classes, including to bank lending rates (Chart 4). As a consequence, notwithstanding the pronounced influences from abroad, the ECB has been successful in managing domestic financing conditions through its monetary policy measures.

Moreover, the impact of these more recent measures has been further supported by the effectiveness of our forward guidance. One potential metric for this effectiveness is the sensitivity of forward rates to macroeconomic news: in the presence of clear guidance on the policy rate path, market expectations should be less reactive to the ongoing macroeconomic news flow and instead be anchored by central bank communication. Observing this metric over time, it becomes clear that the introduction of our measures – including the forward guidance on policy rates – has been followed by a pronounced decline in the sensitivity of forward rates at the shorter end of the term structure, which is most prominently driven by monetary policy expectations, while remaining anchored around their historical average at the longer end (Chart 5).

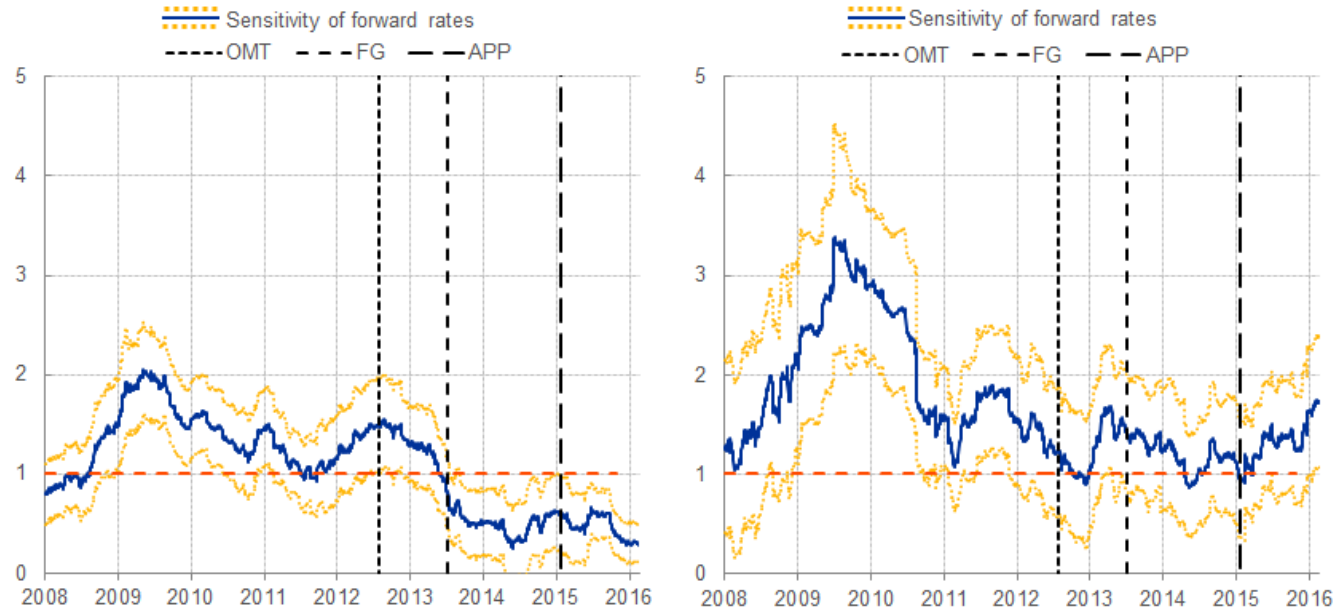
**Chart 4: Impact of ECB measures on key financing conditions (contributions in basis points and percent)**




*Sources: Bloomberg, ECB, ECB calculations.*

*Notes: The impact of credit easing is estimated on the basis of an event-study methodology, which focuses on the announcement effects of the June-September 2014 package; see the EB article "The transmission of the ECB's recent non-standard monetary policy measures" (Issue 7 / 2015). The impact of the DFR cut rests on the announcement effects of the September 2014 DFR cut. APP encompasses the effects of January 2015, December 2015, March 2016, and December 2016 measures. The January 2015 APP impact is estimated on the basis of two event-studies exercises by considering a broad set of events that, starting from September 2014, have affected market expectations about the programme; see Altavilla, Carboni, and Motto (2015) "Asset purchase programmes and financial markets: lessons from the euro area" ECB WP No 1864, and De Santis (2015), "Impact of the asset purchase programme on euro area government bond yields using market news", ECB WP No. 1939. The quantification of the impact of the December 2015 policy package on asset prices rests on a broad-based assessment comprising event studies and model-based counterfactual exercises. The impact of the March 2016 measures and the impact of the December 2016 measures are assessed via model-based counterfactual exercises. *Changes in lending rates are based on monthly data, the reference period for which is June 2014 to February 2017. Latest observation: 03 April 2017.*

**Chart 5: Time varying sensitivity of the 3-month OIS in 2-years' (LHS) and 10-years' (RHS) time** *(normalized to 1)*




*Source: ECB. Estimation is based on Altavilla C., Giannone D. and Modugno M. 2014. "The Low Frequency Effects of Macroeconomic News on Government Bond Yields." FEDS Working Paper 2014-052.*

*Note: For each maturity, the blue line indicates the sensitivity of forward rates to macroeconomic surprises. The yellow lines represent the associated confidence bands. When larger (smaller) than one, the sensitivity is higher (lower) than historical regularities. Vertical gridlines indicate the announcement dates for Outright Monetary Transactions (OMT), Forward Guidance (FG), and the Expanded Asset Purchase Programme (APP). Latest observation: February 2017.*

My overall conclusion is that FCIs offer an information basis for measuring the quantum of financial stimulus that is too fragile at times, and – more often than not – they do not provide a robust benchmark for policy. To appreciate this last point, think of the example I just made. If the dominant factor explaining the increase in long-term yields is foreign forces, the change would be akin to a tightening and should counsel some offsetting monetary policy response. If the dominant factor is the improvement in domestic macroeconomic conditions, policy forbearance would be appropriate.

Finally, the connection between monetary policy and FCIs is a two-way road where, again, financial conditions incorporate the whole set of monetary policy instruments put in place, including forward guidance. Analysts thus have to account for the contribution of the existing instrument constellation to changes in FCIs so as to avoid circularity between the signals of the indicator and the conclusions on future policy conduct.

## Monetary policy rules

Monetary policy rules, unlike FCIs, are designed to describe the systematic component of the central bank's behaviour through time, and distil – from that behaviour – a broad paradigm for prudent monetary policy conduct that is

usable for calibrating policy going forward. Their measurement scope is narrower than for the FCIs, as they concentrate on the very short-term interest rate that is the main operating target of a central bank in normal times. But their explicit normative focus and the link they establish between the policy instrument and the state of the macro-economy is potentially of great value for assessing monetary policy.

But, again, while they can certainly help lay down a shared conceptual ground for economists to start engaging in a disciplined conversation about the multiple trade-offs policy makers face and the policy choices they should make to resolve them, they are less helpful as a ready-to-use blueprint for policy design.

Why? Many central bankers, in past and more recent interventions, have emphasised the *measurement* issues that impede a mechanical use of policy rules in the tradition of John Taylor's famous benchmark. Prominent among these is the need to scale that rule to a level of the short-term interest rate that is compatible with sustainable growth and price stability in the medium term. That scaling factor, which has been referred to as the natural or the equilibrium interest rate, is extremely influential in steering the policy implications that these rules can deliver.[5] While hard to estimate, the literature gives clear indications that the natural rate may vary over time and is likely to have fallen in recent years, due to declining productivity and demographic factors, which in turn would lower the end-point to which monetary policy would converge, once the economy is back to full capacity. I will not dwell on measurement issues today, but rather concentrate on one aspect of simple monetary policy rules that has been debated less intensely and concerns their usability as *policy benchmarks* in the day-to-day re-assessment of the policy stance.

As part of their strategies and tactics to fight risks of deflation and an environment of too low inflation, in the past many central banks have reduced their traditional short interest rate operating targets to levels close to their lower bound and have complemented the easing impulse offered by these rate reductions with a host of other measures. The ECB has deployed a set of mutually reinforcing instruments, including long-term conditional funding operations for banks, negative short-term interest rates and direct outright interventions across the yield curve. Verbal indications about the expected horizon of our purchases, and about the level and direction of our policy interest rates looking into the future are also critical component of that strategy.

The non-standard ECB instruments can, to some extent, act as substitutes. For instance, APP and the TLTROs both foster a rebalancing in banks' balance sheets toward loans – even though the channels differ: APP promotes bank lending by lowering the return on banks' securities portfolios, while the TLTROs produce the same outcome by increasing the risk-adjusted return on loans.

When instruments are substitutes, one can indeed conceive of exercises in which the degree and intensity with which each of them is applied is adjusted along an "equivalence frontier" of sort, altering the mix of the policy

package without necessarily changing the overall quantum of stimulus that the entire policy package delivers. A Taylor rule could, in this case, assist in benchmarking the level of the very short-term interest rate that is the traditional target of policy. The remaining components of the policy package could thus be treated as a residual, after the setting of the short-term interest rate is determined, and be calibrated such that they attain the overall degree of accommodation indicated by the policy prescriptions originating from the Taylor rule.

But, for the most part, our policy instruments act as strong complements. For instance, the downward pressure that APP exerts on term premia is strengthened by the negative interest rate policy and the rate forward guidance that offers an expected horizon for continuing that policy in the near term. Negative remuneration on banks' excess reserves induces lenders and other investors holding cash reserves to diversify away from liquidity into longer-dated assets. By demonstrating that short-term interest rates can be driven to levels below zero, the central bank can signal absence of non-negativity restrictions constraining the path of future short term rates looking forward. This bends the whole predictive distribution of future short-term interest rates down, which is another way of saying that the expectations channel of monetary policy and the forward guidance on policy rates are reinforced. Conversely, APP empowers the forward guidance on policy rates, as the credibility of indications about the setting of the policy rates in the future are almost certainly enhanced by provision of asset purchases today. These purchases are a concrete demonstration of a desire to provide additional stimulus. Clearly, forward guidance on policy rates and APP are connected by a solid two-way interaction. That is: asset purchases strengthen the signalling effect of rate forward guidance, while rate forward guidance and the negative deposit facility rate reinforce the impact of purchases.

These strong complementarities among instruments mean two things. First, each instrument within the policy parcel has a net value that would be diminished if used independently of – and in isolation from – any of the other instruments. Second, the determination of the intentional horizon for applying each of them can only be the result of an integrated decision process whereby these intimate interactions are duly internalised.

I will now expand on the first aspect and try to bridge it to the problem that, in my view, undermines the policy benchmarking function of simple policy rules in unconventional monetary policy times like the present. At the end of my remarks, I will come back to the second aspect and link it to the current debate on timing and sequencing of monetary policy normalisation.

At present, the intimate complementarity between asset purchases and the rate forward guidance makes monetary policy highly *history dependent*.[6] The macroeconomic outcomes that we observe today are as much the results of actions that we are taking at present, as the on-going lagged impact of the expectations that our past actions and communication have generated. This is valid always and everywhere, because the signalling content of monetary policy decisions is a predominant attribute of transmission. But it becomes a particularly crucial aspect of policy in the wake of the major disruptions of

the past years, which have set in motion forces that still restrain the economy and will probably take more time to dissipate. The severity and persistence of the shocks that have tended to destabilise the economy in the past few years have forced a particularly bold, persistent and steady-handed approach to monetary policy. A large part of what we do today is a follow-through on a course of action that was carefully charted and communicated in the past. Likewise, a great deal of the macroeconomic outcomes that we observe today is due to those plans, and the subsequent actions that have been enacted to carry them out.

In this light, it becomes easier to appreciate how simple policy rules of the type John Taylor has studied, *if used outside a general equilibrium framework*, can lead policy astray. The reason is that, by design, they ignore the complementarities among instruments and they offer prescriptions on one instrument as if it could be moved in isolation. And, if employed outside an articulated "optimal control" framework, they are "memory-less", i.e. they forget about past states of the world which may still be relevant for determining present-day conditions and monetary policy actions.

To be more concrete, if used outside a model, these rules tend to prescribe a firming of policy as soon as the economy starts improving. But, in the presence of non-standard measures, this improvement arises *precisely* because of the set of policy initiatives that the central bank has put in place in the past, *including* its rate forward guidance. A typical Taylor rule does not keep track of the accumulated deviations of the target variables that arise from the limitations encountered by standard monetary policy at the lower bound.[7] A deviation from the path of policy that is consistent with our past communication is not only costly in terms of policy credibility in general. It would also scale back an important source of stimulus that is behind the performance of the economy that we observe today.

How can we retain the most attractive attributes of a Taylor rule – the fact that it encapsulates a paradigm of robust and stability-inducing monetary policy conduct – and, at the same time, address its limitations?

Many of the problems that plague Taylor rules can find solutions within a general equilibrium framework where all the feed-forward and feed-back channels of interactions among policy instruments, financial prices and the economy can be internalised in a consistent manner. In fact, virtually all structural models – whether of a stochastic general equilibrium structure with a strong forward-looking set-up, or of a more hybrid nature with a focus on time-series coherence – are "closed" with a Taylor rule of one or another specification. Within those models in which a Taylor rule "represents" monetary policy, the typical exercise that can answer the normative issue is the following: how would inflation over the medium term horizon react if we were to adjust our policy instruments, one at a time or all of them contemporaneously? This is the philosophy behind our third criterion for declaring a "sustained adjustment in the path of inflation", which is a pre-condition for starting to normalise our purchases and, indirectly, for starting to normalise our policy rates – through the sequencing we expect to follow toward a more normal configuration of policy.

Conducting this type of exercise today, we see that the combination of instruments that are currently in place, including forward indications about the horizon over which these instruments will still be used, is sufficiently supportive to put inflation on a rising path that will bring it to levels close to 2% over a time frame that is compatible with our definition of medium term. But, and this is our third criterion for a sustained adjustment, if we were to firm policy by scaling back the stimulus provided, that inflation path would likely stall and relapse. The projected path of inflation remains conditional on very easy financing conditions, for which monetary policy plays a key role.

## Conclusions

In conclusion, let me return to the sequencing issue. Communication about the intentional horizon of net asset purchases and expected future path of the policy rates is a key component of the policy strategy that started in 2014. The reason is simple and, once more, has to do with instrument complementarity. Above and beyond any signalling content they may have on the intention of the central bank to provide accommodation, asset purchases add stimulus principally by squeezing the term premia priced into longer-dated securities. However, absent reassurance that policy rates will remain anchored around their lower bound for the entire life of the net purchases, the impact of asset purchases may be partly neutralised. The downward impact of purchases on long-term interest rates via compression of term premia will be offset by the upward pressure that will stem from the steeper path of the expected short term interest rates. Moreover, absent reassurance on the rate path, the term premium itself may increase if the future course of the policy rates becomes more uncertain, despite the contrary effect of the purchases. If investors start perceiving that the path of the policy rate is subject to upward uncertainty, the compensation for interest rate risk – i.e. the term premium – will have to increase. Again, long-term interest rates will be pushed higher and asset purchases will become less effective.

These strong complementarities between instruments are behind the way the expected plans for the evolution of APP and the policy rates have been lined up in time in the Governing Council’s intentions. In our expectation, the policy interest rate will remain at present or lower levels for an extended period of time and well past the horizon of our net asset purchases. This forward guidance implies a sequencing between the interest rate policy and the quantitative policy that can most efficiently internalise and exploit the intimate complementarities between these two key components of our current stance.

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# breastfeeding cub


A giant panda feeds her cub in Qinling Mountains, Shaanxi Province. [Photo/CCTV]

A giant panda has been filmed for the first time breastfeeding her cub in the wild, according to CCTV.

The rare footage was captured by local journalists in Foping county in Northwest China's Shaanxi Province, CCTV said.

The mother and cub were first sighted resting on the upper branches of a big fir tree.

The cub, about two years old, then appeared to be hungry and wanted to feed, and her mother climbed down from the tree and suckled her cub lying on a slope.

The footage was filmed in Qinling Mountains which is home to China's largest giant panda population living in the wild.

There were about 345 giant pandas living in Qinling Mountains according to China's Fourth National Survey on Giant Pandas conducted two years ago. Area of the animals' habitat had increased from 347,000 hectares to 360,000 hectares over the past decade.