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THE FEDERAL RESERVE REVIEW OF ITS MONETARY

POLICY FRAMEWORK

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ABSTRACT

This article offers an overview of the monetary policy framework review currently being conducted by the United States Federal Reserve (Fed). First, we examine the alternative strategies under consideration to address the likely greater incidence of episodes in which monetary policy is influenced by the existence of an effective lower bound (ELB) to which the policy rate can fall. We also discuss how the available empirical evidence drawn from the Fed's own experience makes it likely that it will retain in its toolkit the non-conventional monetary policy instruments adopted in the wake of the global financial crisis to tackle the problem of the greater incidence of the ELB: namely, quantitative easing and forward guidance. Finally, we analyse possible changes in the Fed's communications policy.

Keywords: monetary policy strategy, quantitative easing, forward guidance, communications policy.

JEL codes: E50, E52, E58.

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Introduction

In November 2018 the United States Federal Reserve (Fed) announced it would conduct, in 2019 and the first half of 2020, a far-reaching review of the monetary policy framework it currently has in place to pursue its dual mandate of price stability and maximum employment. The review –which follows in the footsteps of other central banks[1] – seeks to be exhaustive and will cover the three key elements of this framework: the flexible inflation targeting strategy[2], the instruments available for its implementation and communications policy. Conversely, neither the dual mandate, imposed by Congress, nor the Fed's own assessment that an inflation rate of 2% in the medium term is the target most consistent with that mandate, i.e. that changes in the level of this target would not be envisaged[3], are part of the review.

The main aim of the review is to ensure that monetary policy has sufficient tools to guarantee fulfilment of its statutory objectives, in an economic context significantly different from that in place before the 2008 global financial crisis. Thus, the decline in the natural interest rate observed in the United States and in many developed economies in recent decades[4] owing to the action of structural factors, such as population ageing and the slowdown in productivity, makes it more likely that

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1 The Bank of Canada, for example, conducts regular reviews of its inflation targeting framework every five years. The European Central Bank (ECB) carried out a strategy review in 2003, following five years' experience further to the introduction of the euro and the common monetary policy, and it has announced it will conduct a new review under the mandate of its next president, Christine Lagarde.
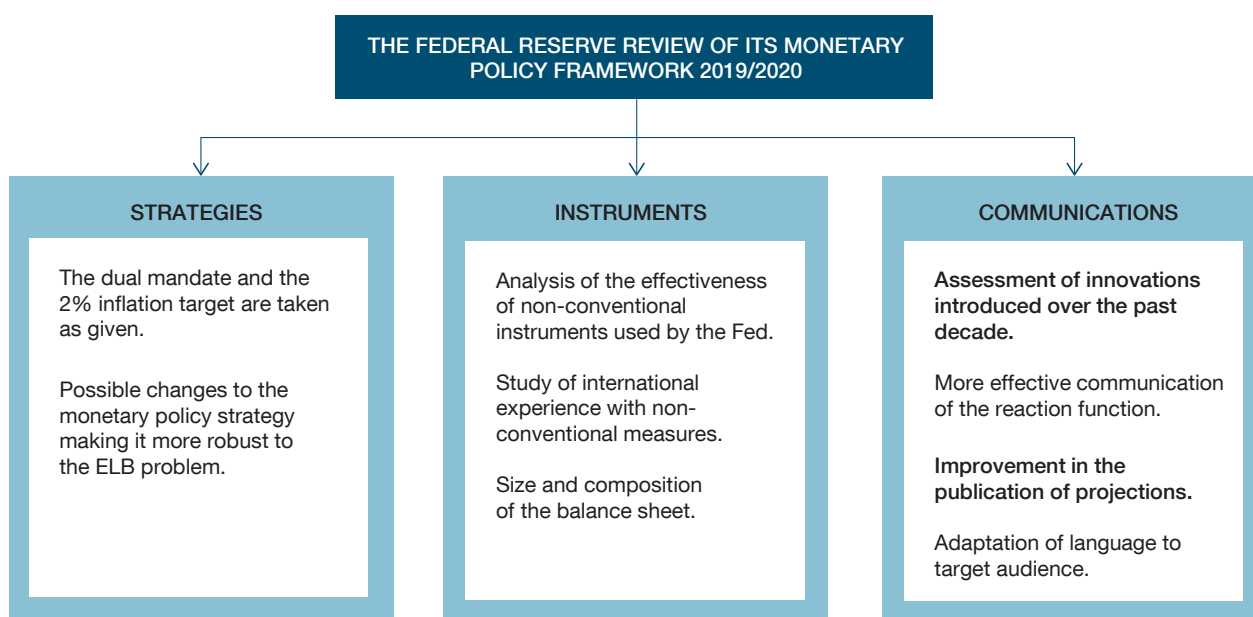
2 In January 2012, the Federal Open Market Committee (FOMC) published a strategic document clarifying its intention to be balanced in the fulfilment of its dual mandate of maximum employment and price stability, with the latter specified in the form of an inflation target of 2% per annum.

3 See Powell (2019) and Clarida (2019).

4 The economic literature defines the natural or neutral interest rate as the real interest rate that would be observed in an equilibrium scenario in which nominal prices and wages were perfectly flexible. Its significance for monetary policy stems from the fact that, when the real interest rate is above its natural level, aggregate demand is insufficient and deflationary pressures are generated (the opposite occurs when the real rate stands above the natural rate). This neutral interest rate is not directly observable, but various papers have estimated a notable decline in the rate globally, using various approaches. See King and Low (2014), Holston et al. (2017), Galesi et al. (2017), Rachel y Smith (2017), Fiorentini et al. (2018) and Brand et al. (2018).

Figure 1
THE THREE PILLARS OF THE REVIEW

THE FEDERAL RESERVE REVIEW OF ITS MONETARY POLICY FRAMEWORK 2019/2020

STRATEGIES	INSTRUMENTS	COMMUNICATIONS
The dual mandate and the 2% inflation target are taken as given.	Analysis of the effectiveness of non-conventional instruments used by the Fed.	**Assessment of innovations introduced over the past decade.**
Possible changes to the monetary policy strategy making it more robust to the ELB problem.	Study of international experience with non-conventional measures.	More effective communication of the reaction function.
	Size and composition of the balance sheet.	**Improvement in the publication of projections.**
		Adaptation of language to target audience.

SOURCE: Banco de España.

episodes such as those during the crisis will recur. Indeed, the existence of an effective lower bound (ELB) to which interest rates can fall restricts, in the event of severe shocks, the stabilising capacity that the conventional monetary policy instruments can provide. Moreover, the recent flattening of the Phillips curve (i.e. the lesser sensitivity of prices to the degree of slack in the economy, something common to many of the developed economies[5]) enables – for given inflation expectations – the Fed to address its maximum employment goal without prompting sharp adjustments to the inflation rate. In a setting like the present, however, such flattening hampers communication of the inflation goal, especially when set against possible episodes involving the deanchoring of expectations.

The review is also an opportunity to assess the effectiveness of the innovations which, in respect both of the use of non-conventional monetary policy instruments and of communication, the Fed and other central banks introduced over the past decade, precisely to circumvent the limitations arising from the ELB. Finally, it should not be overlooked that, along with structural considerations, there may also be a more conjunctural concern. This is, namely, that potential recessionary shocks could put an end to the prolonged expansion of the US economy.

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5   See Galí and Gambetti (2018) and Blanchard et al. (2015).

This article looks at the scope of the monetary policy framework review the Fed is conducting, and which is summarised in Fig. 1. The second section summarises the main monetary policy strategy elements under scrutiny. The third section then expands the discussion to the non-conventional instruments adopted following the Great Recession, focusing on the quantitative easing policy. Finally, the fourth section addresses communications aspects, paying particular attention to forward guidance.

Possible changes in the monetary policy strategy

The Fed's policy interest rate is currently in the range of 1.75%-2% and the medium- and long-term projections of the FOMC members place it at around 2.5%, which would entail a natural interest rate (discounting the inflation objective) of 0.5%. In the current context the Fed lacks the space that has traditionally been needed to cut policy rates during recessions, which has been around 5 percentage points (Chart 1.1). This structural reduction in the natural interest rate is likely to give rise to an increase in the incidence of new ELB episodes such as those experienced in the wake of the Great Recession, with a frequency that some papers place at up to 40%.[6] Hence, the assessment under way will analyse – on the basis of alternatives raised in the academic literature – possible changes in the current flexible inflation targeting strategy.[7] The aim will be to make the strategy more robust to the proliferation of these episodes, given that the empirical evidence accumulated over the past decade suggests that the resort to non-conventional measures may not always suffice to overcome the difficulties generated by ELB.[8]

Having ruled out the possibility of raising the inflation target[9] (which would provide for greater room for manoeuvre, but which is considered inconsistent with the price stability mandate), discussion focuses on strategic proposals that advocate combating severe shocks which might lead to prolonged periods of below-target inflation. This can be achieved through maintaining monetary stimuli for longer than the return to the target itself would strictly warrant, therefore allowing inflation to stand temporarily at levels above targets (makeup strategies).[10]

One of the possible strategies under which that principle holds is that of price-level targeting (PLT).[11] Under this type of strategy, a target path for the level of prices would be

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6 See Kiley and Roberts (2017).

7 For a recent review of these alternative monetary policy strategies, see Banco de España (2019).

8 See, for example, Yellen (2016), Reifschneider (2016), Debortoli et al. (2019) and Eberly et al. (2019).

9 See, for example, Blanchard et al. (2010), Ball (2014) and Krugman (2014).

10 Eggertsson and Woodford (2003).

11 Svensson (1999), Gaspar et al. (2007) and Williams (2017).

Chart 1

MONETARY POLICY STRATEGIES IN A LOW INTEREST RATE ENVIRONMENT

The decline in the natural interest rate has reduced the monetary policy room for manoeuvre to stabilise the economy, in the event of severe recessionary shocks, using conventional instruments. The Fed is analysing possible changes to its current monetary policy strategy with the aim of making it more robust to the problems an effective lower bound (ELB) poses to reductions in the short-term rates it directly controls.
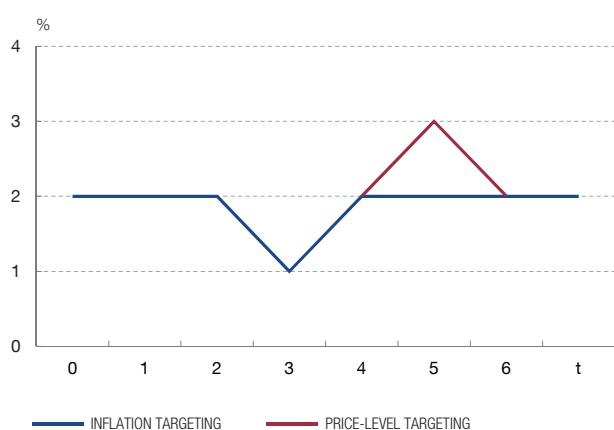
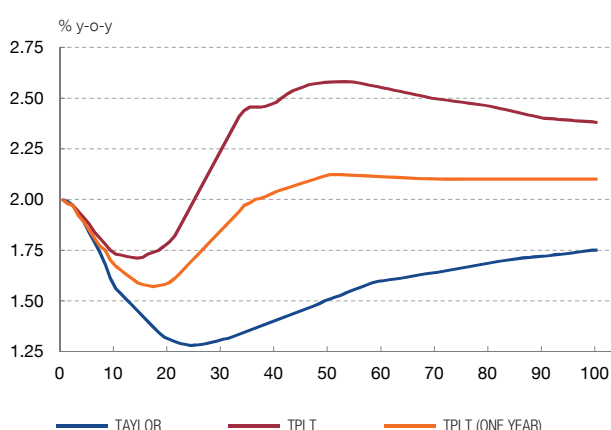1 REDUCTIONS IN THE POLICY RATE AND IN 10-YEAR INTEREST RATES IN PREVIOUS RECESSIONS
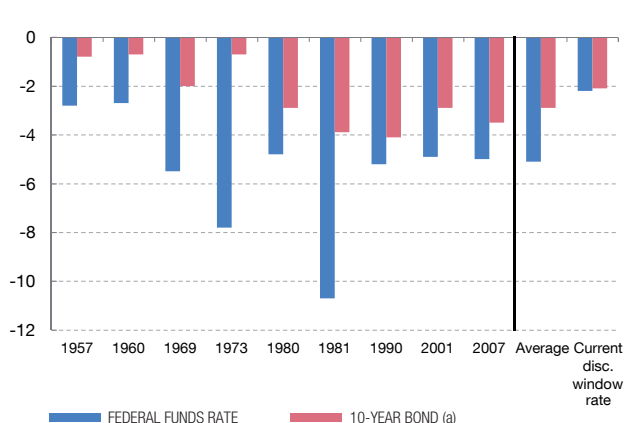
2 PRICE LEVEL PATH UNDER INFLATION TARGETING AND PRICE-LEVEL TARGETING STRATEGIES
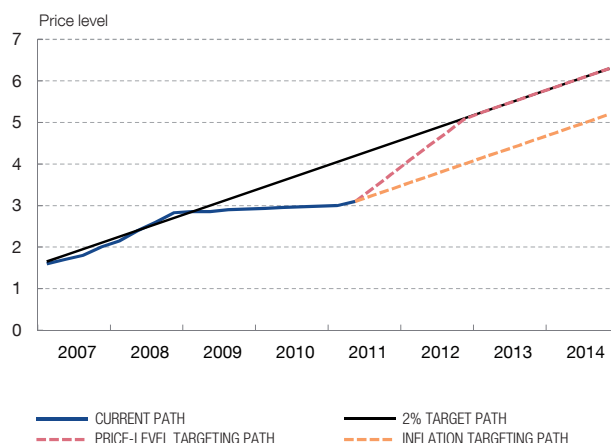
3 INFLATION DEVELOPMENTS UNDER INFLATION TARGETING AND PRICE-LEVEL TARGETING STRATEGIES

4 INFLATION UNDER DIFFERENT STRATEGIES ASSUMING IMPERFECT CREDIBILITY (b)

SOURCE: Own data, drawing on Federal Reserve and Goldman Sachs.

a Maximum 10-year bond rate in the six months prior to the first interest rate cut minus the minimum 10-year bond rate reach before the first interest rate rise.
b Bernanke *et al.* (2019).

announced, whereby periods of inflation below (above) the rate consistent with the target path would be offset afterwards by higher (lower) inflation to return to the announced price path (Charts 1.2 and 1.3). In that way, inflation expectations, and thereby real interest rates, would adjust, thus contributing to maintaining the desired monetary policy stance.

However, a PLT strategy would pose significant communication challenges, as it would mark a far-reaching change in the Fed's framework for action. This is so

because its stabilisation properties depend crucially on the credibility of the strategy and, therefore, on agents understanding it and incorporating it into their expectations-formation processes. Accordingly, some proposals consider a less abrupt change in the current inflation targeting strategy, replacing its formulation in terms of an annual inflation rate with an average calculated for a period spanning several years (AIT)[12], which would largely enable the stabilisation properties of the PLT strategy to be reproduced. One problem not resolved by either of these two alternatives, however, is the monetary policy response to adverse supply-side shocks (an increase in energy prices or in VAT, for instance), which contract activity and cause, at the same time, a temporary increase in inflation. Under both strategies, the higher inflation must be offset with lower inflation in the future, in an adverse setting for activity, giving rise to severe problems of time consistency, since doubts could be raised over the central bank's commitment to tightening the monetary policy stance in a recessionary environment. One alternative, proposed by Bernanke[13], would involve setting an average inflation price level target only during the ELB episode and until average inflation returns to target, i.e. temporary price-level targeting (TPLT).

Quantitative analyses performed with dynamic general equilibrium models confirm the theoretical benefits of strategies that introduce the above-mentioned stabilisation properties, in particular when facing ELB periods, whose frequency and duration would be reduced, as would the associated activity and inflation-related losses[14] (see in Chart 1.4 the comparison of TPLT strategies with the loss of inflation under a conventional Taylor rule). However, the lack of experience with the former makes them vulnerable, in practice, to calibration problems, especially if agents form their expectations adaptively or if the central bank's credibility is imperfect, which might prompt an excessive increase in inflation and risks to financial stability.[15] One possible solution to mitigate the excessive increase in inflation would be to restrict the low-inflation period that would have to be offset, whereby the average inflation to be taken into consideration would be calculated over a maximum of 1-3 years, for example. As Bernanke *et al.* (2019) show, that would preclude an excessive increase in inflation, even if agents were to have adaptive expectations or the central bank's credibility were imperfect (e.g. the scenario described in Chart 1.4 restricts the years over which the inflation average is calculated, namely TPLT for one year, which helps contain the rise in inflation in the medium term).

In short, the debate on the advantages and disadvantages of the possible change in strategy remains open. The question posed is whether it is possible to obtain similar results within the current flexible inflation targeting framework that has been used to

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12 Nessén and Vestin (2005).

13 See Bernanke (2017), Bernanke et al. (2019), Williams (2018) and Mertens and Williams (2019).

14 Hebden and López-Salido (2018), Banco de España (2019), Bernanke et al. (2019) and Svensson (2019).

15 See, for example, Brainard (2017) and Kashyap and Siegert (2019).

date. The decision ultimately adopted will also be affected by the considerations made regarding the implementation and communication of the Fed's monetary policy in the future. We address these aspects below.

Review of the Federal Reserve's monetary policy instruments

Following the Great Recession, many central banks adopted non-conventional measures to alleviate the constraint posed by ELB. In the case of the Fed, two main instruments were used: forward guidance about the future course of monetary policy, and large-scale asset purchase programmes (quantitative easing). Both instruments act on medium and long-term interest rates, to hold them at moderate levels, although they do so through different mechanisms. Forward guidance policies steer economic agents' expectations about the course of short-term interest rates under the central bank's direct control. Quantitative easing, by contrast, acts by reducing the risk premia on the assets acquired (and their close substitutes).

Analysis of the empirical evidence built up drawing on the Fed's experience suggests that the resort to non-conventional measures provided for a softening – though not complete avoidance – of the ELB constraint, with significant effects on long-term interest rates, inflation and growth.[16] Foreseeably, then, the ongoing review of the monetary policy framework will suggest retaining these instruments in the Fed's toolkit in order to counter severe recessionary shocks. The assessment will also look at the experience of other central banks with alternative non-conventional instruments. These include most notably negative interest rates (used in European countries, at the ECB, and in Japan) and Yield Curve Control (YCC), practised in Japan since 2016. To date, the Fed has been sceptical about innovations along these lines, in particular in relation to negative rates. This is because of the destabilising effect they might have on the investment fund industry, which plays a key role in the US financial system. For its part, the Japanese experience of direct control of long-term interest rates would appear difficult to extrapolate to more liquid and deeper markets, such as the US government debt markets, in which the implementation of this type of measure might require very high volumes of government debt purchases and sales by the central bank.

The quantitative easing policy adopted after the Great Recession also meant an unprecedented increase in the Fed's balance sheet (Chart 2) and a substantial rise in the banking system's reserves. This involved a change in the arrangements used to control interbank market interest rates: namely, from a *corridor system*, depending on frequent open market operations, to a *floor system*, which takes as a reference

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16 Bernanke (2017), Eberly et al. (2019) and Bhattarai and Neely (2016) summarise the abundant literature on this issue. Sims and Wu (2019) study, in the context of a dynamic general equilibrium model, the use of non-conventional monetary policy instruments and the interaction between them.

Chart 2
NON-CONVENTIONAL MONETARY POLICY INSTRUMENTS

In response to the global financial crisis, the Fed adopted forward guidance and quantitative easing measures with the aim of softening the ELB constraint. The Fed will, moreover, analyse the international experience with the use of alternative non-conventional instruments.

1 FEDERAL RESERVE ASSETS AND AVERAGE FEDERAL FUNDS RATE
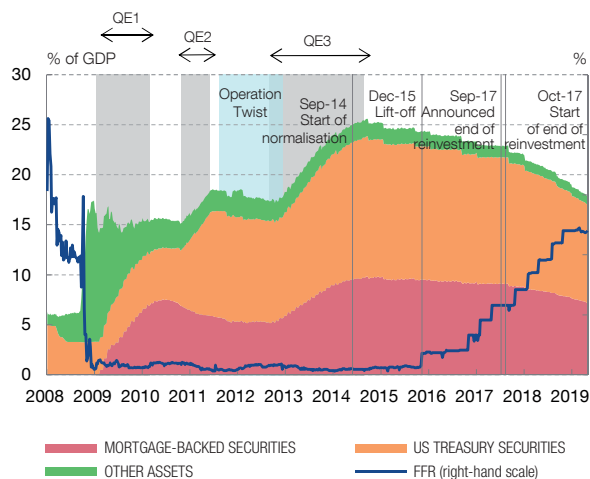
2 FEDERAL RESERVE LIABILITIES AND PROJECTIONS
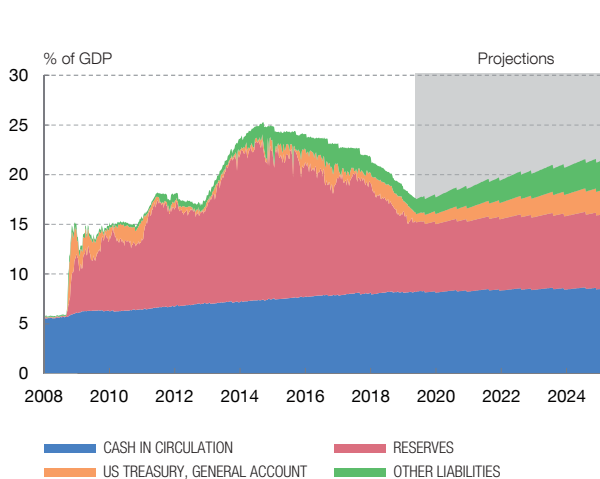
SOURCE: Own calculations based on the Federal Reserve, Federal Reserve Bank of New York and Congressional Budget Office.

the interest rate remunerating banks' reserve holdings.[17] In this respect, the assessment addresses the optimal size and composition of the Fed's balance sheet in the medium and long term. The balance sheet should in any case be bigger than before the crisis to accommodate the trend growth of liabilities other than reserves, such as cash in circulation[18], and a higher demand for reserves owing to the regulatory changes in recent years, which require financial institutions to pay greater attention to the management of liquidity risks. Moreover, the Fed announced in early 2019 that it will continue operating the current *floor* system, based on an abundant volume of reserves[19], which has provided for an effective transmission of monetary policy signals. As to balance sheet composition, the Fed has shown a clear preference for maintaining a portfolio mainly comprised of domestic government debt securities, although there are various different opinions[20] about its composition by maturity.

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17 See, for example, Arce et al. (2019).

18 Federal Reserve Monetary Policy Report, February 2019.

19 See the "Statement regarding monetary policy implementation and balance sheet normalization" by the Federal Reserve, 30 January 2019. To accommodate the fluctuations in banks' demand for liquidity, which prompted a rise in repo rates in September, without harming the current floor system of monetary policy implementation, the FOMC decided in mid-October to purchase US Treasury bills, at least until June 2020 (for an initial volume of $60 billion per month), and to conduct overnight and term repo operations, at least until January 2020, to maintain a sufficient volume of reserves in the system.

20 See the minutes of the Federal Open Market Committee (FOMC) of 30 April and 1 May 2019.

Table 1

KEY DEVELOPMENTS IN FEDERAL RESERVE COMMUNICATIONS POLICY, 2007-2019

Date	Action
Nov-2007	Publication of the first quarterly projections report (SEP) as an annex to the minutes of the FOMC meeting. The range and central tendency of the FOMC members' individual projections for the three coming years for GDP, inflation and unemployment are included.
Feb-2009	Long-term projections are added to the SEP.
Apr-2011	Start of quarterly press conferences; SEP publication coincides with the press conferences.
Nov-2011	Quantification of the balance of risks and of the level of uncertainty surrounding the projections.
Jan-2012	First annual statement on long-term monetary policy objectives and strategy. The FOMC specifies the inflation target numerically at 2%. The FOMC members' individual projections on the interest rate path (dot plot) are added to the SEP.
Sep-2014	Statement on Federal funds interest rate and bank balance sheet normalisation principles and plans.
Sep-2015	The median of the individual projections is added to the SEP.
Dec-2015	Supplementary note on the implementation of the first rate rise since the crisis.
Jan-2016	The FOMC clarifies that the inflation target is "symmetrical".
Apr-2017	Publication of fan charts, which show the forecasting error around the median.
Sep-2017	Annex to the normalisation plans and principles.
Jan-2019	Holding of press conferences after every FOMC meeting, instead of once quarterly. Additional statement confirming that the Fed will continue operating its current abundant reserves regime.
Mar-2019	Statement on the normalisation of the bank balance sheet in step with the abundant reserves regime.

SOURCES: Own data, drawing on Cecchetti and Schoenholtz (2019), and Federal Reserve Board.

Review of the Federal Reserve's communications policy

In recent decades, the Fed's communications policy has undergone far-reaching changes that have distanced it from the opaqueness of earlier times. The rapid downturn in the economic situation following the global financial crisis soon made it clear that the effectiveness of the monetary policy response hinged crucially on households' and firms' long-term inflation expectations remaining anchored at target-compatible levels. The effective communication of the FOMC members' assessment of the economic outlook, of the desired monetary policy stance and of how this stance would vary with changing circumstances (the reaction function) is crucial for dispelling possible doubts about the central bank's commitment to its medium-term objectives.

Against this background, the Fed has in recent years made numerous innovative changes to its communications policy (Table 1). Back in 2007 it published for the first time the range and central tendency of the FOMC members' quarterly inflation and unemployment projections (SEP). This information has been expanded in successive steps: in 2009, long-term projections for growth, inflation and unemployment were added; in 2011, the balance of risks and the level of uncertainty surrounding the projections were quantified, with this information further refined in 2017 with the publication of fan charts; and in 2012, the individual projections of the Committee members on the interest rate path (known as *dot plot* or, simply, *dots*) were added.

These projections are watched very closely by analysts, seeking significant information on the future monetary policy stance. However, the fact that market expectations habitually differ significantly from the median of the projections shows that it is not possible to interpret the latter as an FOMC consensus indicator and that there is room for improvement in the communication of the Committee's reaction function.[21] Lastly, other far-reaching innovations in communication include: the holding since 2011 of press conferences after FOMC meetings; the publication since 2012 of an annual declaration of long-term monetary policy objectives and strategy; and the clarification in 2016 that the Fed would react equally to positive and negative deviations from the 2% inflation target, thereby emphasising its symmetrical nature.[22]

The Fed's experience using forward guidance, which it took up again in the crisis after having introduced it for the first time in 2003, also shows the importance of flexible communication. Initially, guidance was merely qualitative, along the lines of "The Fed will keep the federal funds rate exceptionally low for some time". However, when it was perceived in 2011 that the lack of specificity of this policy limited its effectiveness, the FOMC began to make the period over which rates would remain close to zero explicit (what is known as time-dependent guidance). Subsequently, in late 2012, possible changes in policy interest rates were linked to how economic circumstances were (state-dependent guidance), with guidance as to how rates would hold close to zero while the unemployment rate was "above 6.5%", and provided that inflation behaved soundly. Thereafter, guidance moved in step with the pick-up in the US economy, resuming more qualitative formulations in 2014. In January 2019, economic conditions and the uncertainty over the economic outlook advised not including specific forward guidance in statements made after FOMC meetings, stressing simply that future decisions would depend on economic data.[23] In contrast, the Fed has continued offering guidance on its balance sheet normalisation plans and has stated its intention to carry on operating under an excess reserves regime.

The ongoing review will, in the communications area, allow for analysis of the effectiveness of the innovations made in recent years. Many of them, as in the case of other central banks, were geared to increasing transparency and minimising the uncertainty associated with monetary policy, thus contributing to lessening inflation volatility. The search for greater clarity should not be at odds with a more flexible use of communication. The recent experience with forward guidance illustrates that

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21   One possible solution would be for the FOMC to publish a consensus projection of the interest rate path, as, for instance, the Riksbank does; however, the greater size of the Committee hampers this task. Cecchetti and Schoenholtz (2019) consider the possibility of jointly publishing the macroeconomic and individual interest rate projections of the FOMC members, observing anonymity, which would help markets to better infer the reaction function.

22   See Evans (2017) and Yellen (2017).

23   See, for example, Clarida (2018).

communication that is adapted to changing circumstances is preferable to excessively rigid formulas. The review should also serve other purposes: first, to identify areas for improvement, making communication more amenable to the public in general; and further, to clarify those aspects that have proven more difficult to understand, such as the nature of the FOMC members' interest rate projections and how to have these projections provide for a better understanding of the central bank's reaction function.[24]

28.10.2019.

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24 See the minutes of the FOMC meeting of 29-30 January 2019, Powell (2019) and Cecchetti and Schoenholtz (2019).

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