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No 280, "Understanding low inflation in the euro area from 2013 to 2019: cyclical and structural drivers".

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Abstract

This paper examines the importance of central bank communication in ensuring the effectiveness of monetary policy and in underpinning the credibility, accountability and legitimacy of independent central banks. It documents how communication has become a monetary policy tool in itself; one example of this being forward guidance, given its impact on inflation expectations, economic behaviour and inflation. The paper explains why and how consistent, clear and effective communication to expert and non-expert audiences is essential in an environment of an ever-increasing need by central banks to reach these audiences. Central banks must also meet the demand for more understandable information about policies and tools, while at the same time overcoming the challenge posed by the wider public's rational inattention. Since the European Central Bank was established, the communications landscape has changed dramatically and continues to evolve. This paper outlines how better communication, including greater engagement with the wider public, could help boost people's understanding of and trust in the Eurosystem.

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Executive summary

Effective communication helps independent central banks successfully fulfil their mandate, thereby increasing credibility and trust. Communication also enhances accountability and legitimacy by providing clarity on the central bank mandate, what it means for citizens and how it can be achieved efficiently. This Occasional Paper analyses the nature and channels of central bank monetary policy communication. Monetary policy communication has itself become a key policy tool in managing expectations and economic outcomes. In particular, forward guidance – whereby a central bank provides information on its future monetary policy intentions – has successfully provided additional monetary stimulus in times of low inflation and low nominal interest rates in the euro area. Effective communication about objectives, strategy and decisions is crucial to steering expectations so that a central bank can deliver on its mandate. However, different audiences and variations in the expectations formation process the different ways in which expectations are shaped mean that communication practices need to be tailored to those audiences to ensure that the ECB successfully reaches both the wider public and financial markets. At the same time, communication is an important channel through which central banks create trust and fulfil their accountability obligations.

Transparency and clarity are essential aspects of a central bank's monetary policy communication, inasmuch as they strengthen the impact of communication on interest rates, inflation expectations and trust. More communication does not necessarily make the message easier to understand. Monetary policy communication needs to deliver clear, consistent messages on strategy and monetary policy decisions and on how implementation tools will be used to achieve the central bank's mandate. One important question in this respect is how to convey diverse views in policy discussions without blurring the policy message or diminishing trust. While the Eurosystem's "quiet period" is designed to prevent strategic communication ahead of monetary policy meetings, the monetary policy accounts provide a more complete picture of the policy discussion after the Governing Council's meeting. They document the arguments for or against certain measures and reflections on the trade-offs associated with specific decisions. Unattributed communication is particularly harmful to trust and to the view of the Governing Council as a collegial decision-making body. Transparency in monetary policy communication extends to other topics as well, such as how decisions align with the Eurosystem's primary and secondary objectives, the precise definition of price stability, and the accessibility of data on monetary policy operations.

In recent years there has been a dramatic shift in the landscape in which central banks communicate. This poses additional challenges but also offers new ways for central banks to reach a wider audience. Communicating policy in terms that are more accessible and meaningful to people's lives can help break through rational inattention and low levels of awareness. While social media offer unprecedented opportunities for direct communication, some traditional media, such as television, remain important means for reaching the wider public. Historically, the

Eurosystem's communication policies and tools have focused on expert audiences, but there is sizeable scope to improve communication with the wider public and general-interest media. This is also crucial for building the wider public's trust in the central bank and for ensuring accountability and credibility. Simple, easy-to-understand visuals and language (using techniques such as storytelling and narratives), as well as explanations of why ECB policy matters to people, can make communication more effective. The successful experience with listening events during the strategy review would suggest that outreach events could become a structural feature of the Eurosystem's interaction with the wider public. The analysis also highlights the importance of economic and financial literacy and of educating the wider public, as well as the Eurosystem's role in this respect.

1 Effectiveness of monetary policy communication

1.1 Defining effective monetary policy communication

Effective monetary policy communication helps central banks fulfil their mandates. This Occasional Paper deals with various issues related to monetary policy communication – the process by which a central bank conveys information about its monetary policy objectives, strategies and tools, but also its monetary policy decisions and its current assessment of the economic situation and outlook. Monetary policy communication generally serves two broad but interrelated objectives, namely: i) boosting the effectiveness of monetary policy by influencing the expectations of financial markets, firms and households, and ii) helping the central bank's accountability by enhancing transparency, credibility and trust.

The principles and practices of effective communication vary over time and across audiences. Given the prominent role that expectations play in influencing price developments and expenditure decisions, monetary policy communication is critical in helping the ECB fulfil its price stability mandate. The ECB's role, like that of other central banks, has evolved over time and the consensus regarding what constitutes effective communication has changed. In the remaining part of this section, we will provide an overview of the evolution of monetary policy communication, the main communication challenges, and the key issues to consider to ensure that a monetary policy communication strategy is effective both now and in the future.

1.1.1 The evolution of monetary policy communication

In recent decades monetary policy communication has undergone a substantial shift towards ever-greater transparency. Central banks around the world have moved from secrecy to transparency and communication has become an increasingly important tool (Issing, 2019). Although a number of factors were behind this shift, we can distinguish three main catalysts: first, rampant inflation in the 1970s and the importance of expectations management in successfully reining it in; second, a related shift towards inflation targeting and central bank independence, which brought with it a need for greater accountability; and third, the recent period of unconventional monetary policy following the global financial crisis.

As mentioned, one important catalyst for increased transparency was the period of elevated inflation in the 1970s, which underscored the importance of expectations for economic outcomes. The theory of rational expectations was a key starting point. This evolution in the economics profession has profoundly altered how central banks communicate. They moved from deliberate opacity – in a bid to

surprise markets – to being more transparent, with a view to helping shape stable expectations.[1] Ever since, monetary policy communication has focused on influencing expectations. As the study of expectations has developed and the inflationary environment has changed, so has our understanding of deviations in behaviour from what would be consistent with rational expectations.

The acknowledgement that expectations are a key determinant for inflation ushered in inflation-targeting strategies and, consequently, greater independence for major central banks. Inflation targeting, which involves publicly announcing medium-term inflation targets, together with a commitment by the monetary authorities to achieve these targets, makes communication more central to the conduct of monetary policy (Mishkin and Posen, 1997). Central banks began to communicate about policy objectives, macroeconomic projections, reference ranges for certain variables – such as inflation rates – and, over time, their reaction functions. As part of this process, many central banks were made independent from their governments; this brought with it a need for accountability and transparency. This in turn gave rise to additional forms of communication, designed, among other things, to explain monetary policy to the wider public and provide an account of monetary policy decisions to elected officials, for example during parliamentary hearings.

The global financial crisis provided another catalyst for profound changes in monetary policy communication. Compared with the earlier shift, which was incremental and decades in the making, changes to monetary policy communication in the wake of the global financial crisis were implemented much more rapidly. Central banks in crisis-hit countries tended to implement new policies, were more inclined to discuss changes to their mandates and communicated more extensively (Blinder et al., 2017).

The widespread adoption of unconventional monetary policy measures called for greater explanation and, through the use of forward guidance, communication became a policy tool in itself. With policy rates near the effective lower bound (ELB) and an impaired monetary policy transmission mechanism, central banks introduced a range of novel and complex unconventional measures. Clear communication on the rationale for – and objectives of – such measures is essential, and enables economic agents to form expectations that are in line with the central bank's intentions (Coenen et al., 2017). Communication has itself become an instrument of monetary policy, with several central banks embracing forward guidance: as they reach the limits of conventional policy tools, central banks can communicate about the policy that is most likely to generate additional

[1] Some examples from this period illustrate this shift. For instance, in 1976 Paul Volcker, then President of the Federal Reserve Bank of New York, highlighted the importance of openness in the "Record of Policy Action", noting that the amount of information provided sets a standard and "represents a degree of openness entirely unknown to a central banker of an earlier generation". In Europe, at the end of 1974, the Deutsche Bundesbank publicly adopted a monetary targeting strategy and announced its numerical target in terms of annual money growth, given its advantages in terms of transparency and communication with the public. In 1979, in the Banca d'Italia's Annual Report for 1978, Governor Paolo Baffi argued that, with the advent of monetary objectives, "the actions of central banks are no longer cloaked in silence, and perhaps never will be again. Whereas in the past silence was seen as a guarantee of independence, today this is achieved by giving an explicit account of one's actions".

accommodation, for example by maintaining or increasing downward pressure on interest rates.

The global financial crisis also led to broader mandates for central banks and generated a need for more active communication. For instance, financial stability considerations took on greater prominence in the conduct of monetary policy. In some cases – including that of the ECB – central bank mandates were broadened to include macroprudential or microprudential supervision. Central banks therefore had to expand their communication to cover more topics, but also had to adapt their monetary policy communication in order, for example, to distinguish monetary policy objectives from other objectives. Overall, policy communication – the question not just of what to do, but of when and how to talk about it – took on increasing prominence also in ECB policy discussions.

With central banks assuming greater responsibilities and deploying unconventional measures, monetary policy has become more complex and has garnered more attention in public debate. Given the complexities and challenges involved in stabilising the economy, the ECB experienced an erosion of trust in its policies (Bergbauer et al., 2020a). Recent evidence for the euro area suggests that improving the public's overall knowledge about the ECB's roles and responsibilities can help build trust (see Section 3.2 and Box 5 for more details). These developments underscore the need to step up monetary policy communication and strengthen the case for communicating with a broader audience. Traditionally, most monetary policy communication efforts have been geared towards communicating effectively with financial markets, whose expectations affect prices in those markets and, as a result, financial conditions. More recently, however, a growing emphasis has been placed on communication with the wider public (de Guindos, 2019). Overall, there seems to be a consensus, including among policy practitioners, that there is ample room for improvement in central banks' communication with the public.[2]

Developments in information technology over the last few decades have accentuated this shift towards transparency. As a backdrop to these key events, advances in information and telecommunications technology – by facilitating the real-time processing of vast quantities of information – have changed the way financial markets operate. Faster and broader dissemination of economic data, statements by central bankers and observable patterns in policy actions enhance markets' ability to monitor and forecast central banks' behaviour (Woodford, 2001). Recent developments in machine learning and textual analysis have facilitated the real-time analysis of central bank communications. This has meant that word choices in communications targeting financial markets have become even more critical (Ehrmann and Talmi, 2020).

Overall, the changes to central bank communication highlight its powerful role in shaping expectations and provide numerous examples of how it can increase the effectiveness and efficiency of monetary policy. In 2012, at the height of the sovereign debt crisis in the euro area, what calmed markets the most did not involve

[2] See Ehrmann et al., forthcoming.

the actual purchase of bonds or the extension of liquidity, but rather a simple communication to markets that the ECB would do "whatever it takes" within its mandate to preserve the euro (Draghi, 2012). The market reaction to this communication was swift and sizeable.[3] The announcement boosted confidence, lessened uncertainty and contributed to economic recovery in the euro area. Communication can increase monetary policy efficiency even in non-crisis times. Demiralp and Jordà (2002) find that clearly communicating and announcing its intentions to markets increased the Federal Reserve System's ability to control rates, with little or no immediate tangible action. Overall, communication meant that the same rate change could be achieved with smaller interventions.[4]

1.1.2 Key challenges for communicating effectively

Central banks must strike a balance between providing frequent, timely information to the private sector and at the same time limiting any potential noise and errors. Morris and Shin (2002) note that this balancing act becomes even more challenging as the interactions between central banks and financial markets grow and central banks come under greater scrutiny by markets, which in turn increases the risk that agents will overreact to information. Central bank communication provides signals about private sector information and serves to coordinate beliefs in financial markets. However, as Amato et al. (2002) suggest, an over-reliance by agents on this type of information over their own can be welfare reducing.

More complex and contentious monetary policy tools and wider mandates exacerbate the challenges around communication. When monetary policy measures are complicated, uncertainty is high; in addition, when there is little consensus on a course of action, errors and leaks are more likely to occur. Vissing-Jorgensen (2020) notes that unattributed communication – or leaks – can be driven by disagreements amongst policymakers and can reduce policy flexibility, harm a central bank's credibility and damage the decision-making process. More structured communication channels (such as press releases, which are seen by many pairs of eyes before they are released) are less likely to contain errors than more spontaneous communications (such as interviews with individual policymakers). In addition, wider central bank mandates require communication on multiple policy objectives, which may blur messaging. For example, macroprudential policies could call for tighter financing conditions, while monetary policy is increasingly accommodative.

Effective communication requires differentiation between audiences. The groups with whom a central bank might want to communicate vary depending on their interest in, connection to, and previous knowledge about central banking and economics in general. In addition, evidence suggests that expectation formation

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3 On the macroeconomic effects of the Outright Monetary Transactions announcements, see Altavilla et al. (2016).

4 As observed by Bernanke (2015), monetary policy can sometimes be "98 percent talk and only two percent action".

varies considerably across groups (Coibion et al., 2018; Coibion et al., 2019b). Financial markets, households and firms can perceive and interpret the same information differently and this can affect their expectations and their behaviour, with ambiguous implications for inflation. Therefore, findings on what constitutes effective communication cannot necessarily be generalised across sectors. While the lion's share of attention has focused on financial markets, there is a pressing need to better understand how firms and consumers form expectations, and how these can affect their economic decisions.[5] Monetary policy communication thus needs to be tailored to different audiences with regard to the communication channels employed, the content that is communicated, and the language that is used – all of this while maintaining consistency (see also Chapter 3).

What constitutes effective communication also depends on the prevailing institutional and economic environment. Communicating on a single monetary policy within a heterogeneous monetary union such as the euro area – with its range of institutional structures, languages, political processes, cultures, historical experiences and macroeconomic situations – requires particular effort. In this regard, it is important to consider the most effective division of labour between the ECB and the national central banks (NCBs) of the euro area. The current environment, in which inflation has been on average well below 2% for a considerable period, presents a singular test. For decades, central banks' communications have emphasised why high rates of inflation are damaging, and why it is the objective of central banks to ensure low, stable inflation. Against this background of a prolonged period of low inflation, households and firms have become inattentive to monetary policy (Coibion et al., 2020b) and may struggle to understand why the central bank is seeking to increase prices, particularly when hit by an adverse shock like the coronavirus pandemic. This is even more challenging when the definition of price stability and the inflation target can be interpreted in different ways, and in the light of controversial public discourses about the side effects of various unconventional measures.

The past decade has seen profound changes in the way central banks communicate about monetary policy. It is therefore important to take stock of developments and to see which of those changes – often implemented rapidly in response to pressing policy needs – have been useful and which could benefit from modifications or further enhancements. This applies along a number of dimensions.

Since the global financial crisis, monetary policy has deployed an increasing number of instruments which require more, and more in-depth, explanation and increase the scope for diverging views. The range of tools used in monetary policy decision-making today is much broader than during the strategy review back in 2003. In this multi-instrument environment, policymakers not only need to communicate about the rationale for policy tightening or loosening, but also may need to indicate which tool is appropriate in various situations and how the various tools interact (Draghi, 2014; Praet, 2017). This increases the potential for disagreements on how to

[5] The ECB is making significant advances in this respect with the introduction of a new Consumer Expectations Survey (CES), which was launched in January 2020 and which collects high-frequency information on the economic and financial behaviour of euro area households. Some early results from this survey are discussed in Chapter 3.

adjust the monetary stance and raises questions as to how the central bank can provide a platform for communicating on a variety of views, while at the same time getting its main message across effectively and preventing a cacophony of voices (Blinder et al., 2008). This issue will be discussed in further detail in Chapter 2.

Central bank communication to the wider public is also crucial and remains relatively underdeveloped. Central banks are adept at communicating with financial market stakeholders, who are easy to reach, have detailed knowledge and understanding of central banking and react instantaneously. This means that monitoring how central banks' messages are received is fairly straightforward. By contrast, the wider public is less knowledgeable about central banks. They are harder to reach, less interested in technical details, and consequently are not as responsive to central bank messaging. As Haldane et al. (2020) argue, this calls for "explanation, engagement and education". Many central banks around the world have started to focus attention and resources on engaging with the wider public, though the chosen approach and the scope of their efforts – ranging from information, education and citizen's consultations, all the way to collaborating with the public – vary widely (Gardt et al., 2021). Recent evidence based on social media traffic shows that central bank communication can be successful in reaching non-experts and can foster more factual and moderate discussions (Ehrmann and Wabitsch, 2021).

Addressing these communication issues and challenges enhances central bank accountability, preserves independence and makes monetary policy more efficient. Effective monetary policy communication contributes to these objectives by raising the signal-to-noise ratio (Blinder et al., 2008), either by creating genuine news (such as announcing a credible inflation aim or target that helps anchor inflation expectations) or by reducing noise (for instance by communicating the central bank's reaction function, which lowers uncertainty as to how monetary policy is conducted). A higher signal-to-noise ratio has become even more important against a backdrop of constrained policy tools (which increases uncertainty about monetary policy) and following the deployment of unconventional monetary policy tools (which remain controversial and are less well understood). However, a higher signal-to-noise ratio means different things depending on a central bank's institutional setting, its economic environment and the audience with which it is communicating. There is no "one size fits all" communication strategy.

The remainder of this chapter analyses these issues with regard to central bank communication on objectives and strategy and on decisions and the economic outlook.

1.2 Communication on objectives and strategy

Effective communication on central bank mandates and how to achieve them can anchor inflation expectations and enhance the long-run predictability of central bank policy. The goal of communicating objectives and strategy is to clarify and increase the predictability of monetary policy decisions while anchoring the economic expectations of market participants and the wider public. A rich body of

literature suggests that timely, clear communication by central banks enhances understanding of their reaction function (Woodford, 2005; Blinder et al., 2008). Kydland and Prescott (1977) show that effective policy must entail a strategy for the future, including a commitment to an objective that conditions expectations and behaviour today. In line with this reasoning, most central banks have adopted inflation-targeting frameworks, each with their own features, to stabilise inflation expectations.

Central banks have been less successful in communicating their strategies and objectives to the wider public than to financial markets. Central banks tend to target professional audiences on a regular basis, and data about their expectations are available for analysis. There is much less understanding of how the wider public perceives monetary policy objectives. According to the available literature and surveys, firms and households are, for the most part, unaware of central bank monetary policy targets and strategies, and their expectations and perceptions of inflation are not well anchored to the central bank's aims (Coibion et al., 2019b; Galati et al., 2020).

Evidence suggests that the most effective way to reach a large part of society is to focus on communicating targets and objectives, rather than specific instruments. Recent research (D'Acunto et al., 2020) suggests that communication manages expectations more effectively when it focuses on policy targets and objectives rather than on the instruments designed to achieve those objectives. It also indicates that communication on policy targets is particularly helpful in reaching less well-educated members of the population. Therefore, target-based communication can both enhance policy effectiveness and strengthen the public's trust in central banks. Research using extensive US survey data concludes that, even though the public is unaware of the central bank's targets and objectives, their perception of the inflation target aligns more closely with the actual target once they are presented with relevant information (Coibion et al., 2019b). However, even in a controlled environment, the effect is not permanent, which suggests that in practice central banks should make a substantial effort to transmit such information on a regular basis.

Lessons from the past, from the literature and from other central banks provide a set of principles for effectively communicating on objectives and strategies. The evidence explored in this section suggests five principles: i) simplify the message as much as possible, ii) repeat the message, iii) tailor the message to the scenario and desired outcome, iv) target the message to a specific audience, and v) take the message directly to that target audience.

1.2.1 Communicating effectively on central bank objectives

Communication on targets and objectives has helped anchor inflation expectations, but there is room to improve its effectiveness. Evidence shows that communicating inflation targets has generally been successful in anchoring inflation expectations (Levin et al., 2004) and reducing volatility (Gürkaynak et al., 2010). When reviewing inflation-targeting frameworks, it is useful to assess the principles for

successfully communicating objectives. Table 1 lists some recent changes at major central banks which affected inflation and expectations to varying degrees.[6] Some key communication lessons can be gleaned from these experiences.

Table 1

Selected changes in inflation-targeting frameworks

Institution	Main changes
ECB	Adoption in 2003 of a quantitative inflation aim of below, but close to, 2% over the medium term. Adoption in 2021 of a quantitative symmetric inflation target of 2% over the medium term.
Federal Reserve System	Adoption in 2012 of an explicit inflation target of 2% in the medium term. Adoption in 2020 of an average inflation targeting framework, with the aim of achieving an average inflation level of 2% "over time". During subsequent periods when inflation is persistently below 2%, monetary policy will likely aim to achieve inflation moderately above 2% for a certain period.
Bank of Japan	Adoption of a quantitative definition of price stability in 2006 with an inflation target of between 0% and 2%. Adoption of an explicit inflation goal of 1% in the medium term in 2012, as a mid-point of the price stability range. Increase in the inflation target in 2013, from 1% to 2%. Adoption in 2016 of an overshooting commitment to attain levels of inflation above the inflation target of 2%.
Bank of England	Shifting the inflation target from 2.5%, measured with the retail price index excluding mortgage interest payments, to 2% measured with the consumer price index (CPI) in 2003.
Reserve Bank of Australia	Change of the inflation target in 2016 from a range of 2% to 3% on average over the cycle to an average over the medium-term.
Bank of Canada	Reviews of the inflation-control target every five years, with the latest in 2016 maintaining the inflation target at 2% as a mid-point of the 1% to 3% inflation range, but replacing the main core inflation measure with three new core measures.
Reserve Bank of New Zealand	Increase in the inflation target range in 2002, from 0-3% to 1-3%. Focus shifted in 2012 to the 2% inflation target, as mid-point of the 1-3% target range.
Sveriges Riksbank	Inflation target of 2% specified in 2010, without a tolerance band. Variation band of 1% to 3% reinstated in 2017, keeping the 2% inflation target but changing the target inflation measure to one that excludes the effect of changes to mortgage interest rates (CPI with a fixed interest rate).

Sources: Wadsworth (2017), Bank of Canada, Bank of England, Bank of Japan, ECB, Federal Reserve System, Reserve Bank of Australia, Reserve Bank of New Zealand and Sveriges Riksbank.
Note: The table follows the terminology used by the central banks concerned, by referring to the comparable terms adopted by them: "aim", "target" and "goal".

Credibility and independence are key to successfully communicating a change in objectives or targets. Inflation expectations in Japan failed to fully adjust to changes in the Bank of Japan's inflation target in 2013, as agents began to believe that achieving the target was not feasible (Fukuda and Soma, 2019). De Michelis and Iacoviello (2016) conclude that the central bank would have to strengthen its credibility by communicating the permanent nature of the monetary regime shift more effectively. The Bank of England's switch to inflation targeting in 1992 was, until it became independent five years later, only partly successful in influencing inflation expectations. Beechey (2008) posited that independence, which signalled a more credible commitment by the central bank to its inflation anchor, was more important in shaping inflation expectations than any changes to the target itself.

6 For instance, the ECB's earlier adoption of an inflation aim of below, but close to, 2% anchored inflation expectations in the face of higher cost-push shocks (Rostagno et al., 2019). The adoption of an explicit inflation target of 2% by the Federal Reserve System resulted in inflation expectations being less responsive to inflation surprises (Bundick and Smith, 2018). The successive changes performed by the Reserve Bank of New Zealand were successfully transmitted to inflation expectations (Lewis and McDermott, 2016).

Important principles for communicating an inflation target include clarity, simplicity and wording that can anchor expectations under different contingencies. When the ECB clarified its strategy in 2003, it left the definition of price stability unchanged (inflation of below 2%) but introduced an inflation aim (below, but close to, 2% over the medium term) used in pursuit of price stability. Although this functioned adequately in times of upward inflationary pressure, the ceiling formulation was less beneficial in the face of disinflationary pressures (Rostagno et al., 2019). According to Orphanides (2020), the ambiguous wording diminished accountability and left room for political pressure and policy mistakes, and therefore allowed inflation expectations to drift lower. Miles et al. (2017) suggest that the wording of the inflation aim in the euro area created uncertainty and that this asymmetry may, in part, explain why inflation expectations have been lower in the euro area than in the United States and the United Kingdom. Paloviita et al. (2017 and 2020) find that the ECB's inflation aim of below, but close to, 2% was open to alternative interpretations and suggest that this might have contributed to a de-anchoring of inflation expectations.[7]

The extent to which communication concerning objectives and strategy changes is received and understood can vary between audiences. Evidence suggests that when the Federal Reserve System recently announced that it was changing its approach to average inflation targeting, financial market participants adjusted their expectations in the expected direction, resulting in a notable shift in experts' expectations of the central bank's reaction function (Bush et al., 2020). In contrast, however, Coibion et al. (2020a) find that knowledge of the change failed to reach the wider public. Even when it did, households did not understand the new objective and did not significantly change their expectations. It is possible that agents learn and adapt over time (Bodenstein et al., 2019), and the result found in the United States may not apply in general (indeed, evidence for German households suggests they would understand better than did their American counterparts – see Box 1). That said, the experience of the Federal Reserve System underscores the importance of communication and clarity across different audiences when introducing a new strategy.

1.2.2 Communicating effectively on strategy and the reaction function

Clarity with respect to the central bank's strategy and its reaction function – how it reacts in different situations – can help manage expectations, particularly in a complicated monetary policy landscape. A clear strategy and reaction function can make decisions more predictable and allow agents to anticipate the use of specific monetary policy instruments. Proximity to the ELB and complex monetary policy measures require more in-depth explanation and more explicit communication (Draghi, 2014). In such an environment, an ex ante explanation of how and when an instrument is used or withdrawn needs to be weighed against the need to

[7] A recent survey (conducted in December 2020) indicates that academic experts are rather pessimistic about the ECB reaching its inflation aim over the next three years, and noticeably more so than for the Federal Reserve System (see Ambrocio et al., 2021). However, many factors other than the definition of the inflation aim most probably contribute to this perception.

retain flexibility. Now that central banks have acquired some experience in deploying the new tools, they need to communicate their reaction function as regards those tools: specifically, how they would react if some tools were to encounter a constraint (such as the ELB on interest rates).

To facilitate policy normalisation in the coming years, central banks could provide more information on their reaction functions to describe their endogenous policy response to changes in economic variables. After years of easing measures, substantially accommodative monetary policies remain in place across several central banks; given the many unconventional tools in use, it may be a challenge to effectively communicate a central bank's exit plans. The Federal Reserve System's experience in communicating the phase-out of its asset purchase programme in 2013 – leading to the "taper tantrum" in financial markets – is one example of how central banks can struggle to deliver their intended message when unwinding unconventional instruments. According to Beck and Wieland (2017), effective communication on policy normalisation should be timely, with a clearly-specified link between the pace of normalisation and macroeconomic outcomes. In addition, these authors argue that there should be some guidance on the level of policy interest rates to be expected in the long run (in the spirit of the Federal Reserve System's "dot plot").

1.3 Communication on decisions and outlook

Even with transparent objectives and a well-understood reaction function, fluctuating economic environments and uncertainty mean that central bankers frequently have to make – and communicate about – monetary policy decisions. To manage expectations in the face of economic shocks, central banks must communicate about their future intentions, including the rationale behind them. Traditionally, communicating on monetary policy measures, including forward guidance as a policy tool, has focused on financial markets.

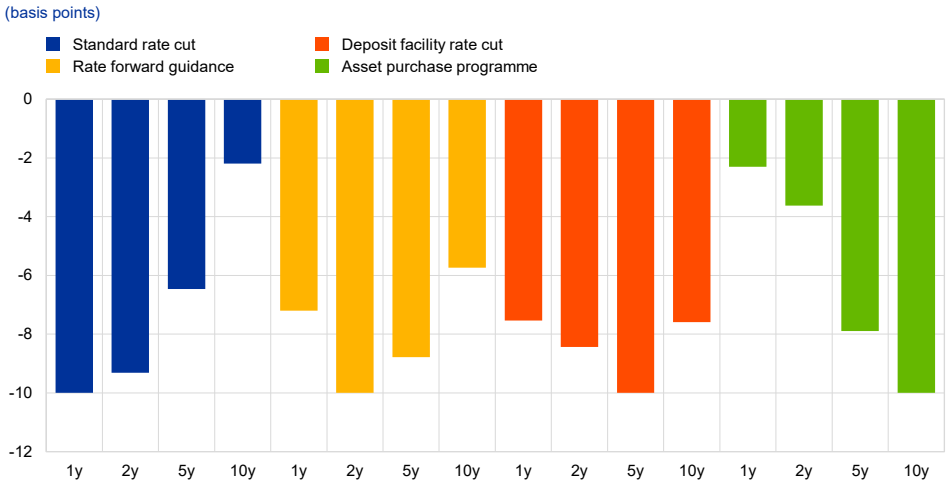
1.3.1 Communicating decisions effectively: forward guidance for financial markets, the information channel and macroeconomic forecasts

Central bank policy announcements are an important channel of communication and have a multi-dimensional impact on financial markets. Gürkaynak et al. (2005), for the United States, and Brand et al. (2010), for the euro area, find that market responses to statements can be broken down into information regarding policy rate changes and information regarding the future path of policy. The latter has a greater effect on long-term rates. Before the adoption of formal forward guidance policies, central bank communication conveyed important information regarding future rates. Recent studies, including Altavilla et al. (2019), have found that surprise communication on forward guidance affects the middle of the yield curve most heavily (with a peak effect at about two years), while surprise communication on

large-scale asset purchases has a greater impact on long-term yields and spreads (see Chart 1).

Chart 1

Impact on the yield curve of surprise communication on policy measures



Source: Internal ECB analysis.
Notes: The estimates are from a proxy structural vector autoregression identified using high-frequency information as an external instrument. The changes are normalised to a ten basis points decline of the overnight index swap rate at the maturity where the policy measure exerts the maximum impact. This is one year for the standard rate cut, two years for rate forward guidance, five years for the deposit facility rate cut, and ten years for the asset purchase programme.

Markets respond very quickly to central bank announcements and the effects can be long lasting. Studies have shown near-instantaneous reactions of asset prices to policy statements (Gürkaynak et al., 2005; Rosa and Verga, 2008). In addition, more recent studies have found that central bank statements have a persistent effect on financial markets (Miranda-Agrippino and Ricco, 2019; Swanson, 2020; Altavilla et al., 2019). While financial market responses to individual ECB statements may be minor, their cumulative role in explaining interest rates can be sizeable (Leombroni et al., 2020).

Central bank communication can have macroeconomic effects and bring about changes to risk premia. Rogers et al. (2018) and Goodhead and Kolb (2018) find that communication about future rates can have stronger macroeconomic effects than unanticipated federal funds rate changes. Cieslak and Schrimpf (2018) argue that central bank statements can affect risk premia. Kroencke et al. (2019) emphasise that the response of equities on central bank announcement days is to a large extent explained not by changes in interest rates but by changes in risk premia. Bekaert et al. (2021) find that risk-premium changes brought about by monetary policy statements transmit internationally to various asset classes.

Evidence suggests that it is not only quantitative information that matters for markets, but also the information's tone, narrative and complexity, as well as the timeframe with which it is associated (such as forward-looking information). Schmeling and Wagner (2019) study ECB statements, controlling for the policy rate and unconventional monetary policy announcements. They find that a more positive tone is associated with higher equity market returns, lower volatility risk premia and lower credit spreads. For the euro area, Parle (2021) finds that a more positive tone in

the ECB press conferences has a significantly positive effect on stock prices. For the United States, Hubert and Labondance (2020) find that the effect of a positive tone on interest rates is greater when financial uncertainty is high. Byrne et al. (2021) apply methods from the machine learning literature to quantify the temporal orientation (past/present/future) of ECB communications, including press conferences and speeches. They find that the market reaction is particularly sensitive to signals that relate to time-based information, including discussions of both future and past outcomes; this indicates the importance, in ECB communications, of placing information within an overall context. Ehrmann and Talmi (2021) find that volatility around the Bank of Canada's monetary policy statements increases when semantically dissimilar statements follow a run of semantically similar ones. Hayo et al. (2020) find that ECB press conferences with more verbally complex introductory statements are associated with greater trading volumes during the question and answer (Q&A) session. The authors conclude that the Q&A session facilitates information processing. Coenen et al. (2017) find that more verbally complex ECB statements are associated with increased stock market volatility.

As interest rates approached the ELB in advanced economies, forward guidance became an increasingly important tool for the ECB and other major central banks. The literature distinguishes between Delphic and Odyssean forward guidance. The former – an allusion to the oracle of Delphi – provides information on the central bank's economic outlook or its reaction function, but does not entail any commitment about future decisions. Odyssean forward guidance – a reference to Odysseus, the mythological Greek figure who had himself tied to the mast of his ship in his determination to resist temptation and stay the course – provides information about a change in the monetary policy strategy and a commitment to a policy path. Forward guidance can be further categorised under three headings: i) open-ended or purely qualitative guidance about the policy path; ii) date or calendar-based guidance, where policy is linked to an explicit date; and iii) state, outcome or threshold-based guidance where the policy path is conditional on specific quantitative macroeconomic outcomes. The ECB has used all three types.[8]

Evidence suggests that forward guidance can be effective, albeit to a degree that depends on the type of guidance and the conditionality attached to such guidance. In a multi-country study Ehrmann et al. (2019) find that time-contingent forward guidance over a long horizon and state-contingent forward guidance are most effective in muting the responsiveness of bond yields to macroeconomic surprises. Open-ended forward guidance has little noticeable effect, however, and time-based guidance over relatively short horizons is particularly ineffective (see Chart 2). Andrade and Ferroni (2021) separate Odyssean from Delphic forward guidance and find that the former has effects that correlate with theory. More modest effects are found by both Campbell et al. (2016) and Hansen and McMahon (2016). Goodhead (2021) finds that the shift to explicit forward guidance increased the effectiveness of ECB communication, since communication regarding future rates had a greater effect on inflation in the post-European debt crisis period (and only a limited effect before).

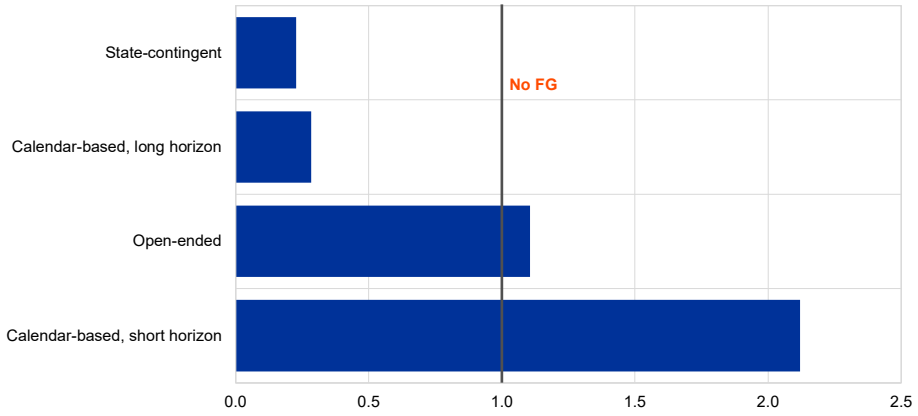
[8] For more details on the euro area experience with forward guidance, see Monetary Policy Committee Task Force on Rate Forward Guidance and Reinvestment (forthcoming).

Bernanke (2020) finds that the qualitative guidance used by the Federal Reserve System around 2009-10 did not convince market participants that rates would stay lower for longer, while more explicit forward guidance introduced in early 2011 was more effective. Similarly, Woodford (2012) shows that more explicit, longer-horizon outcome-based forward guidance is more effective in managing expectations. Bauer et al. (2019) find that Federal Open Market Committee (FOMC) announcements, especially on forward guidance, reduce uncertainty. Bundick et al. (2017) also find that communication regarding future rates (particularly during the period of explicit forward guidance by the Federal Reserve System) reduces interest rate uncertainty and term premia and ultimately eases financial conditions and increases activity and prices.

Chart 2

Effectiveness of various types of forward guidance

(index)



Source: Ehrmann et al. (2019).
Notes: This chart portrays the sensitivity of two-year government bond yields to macroeconomic news under different forward guidance types. The scale is normalised to one in the absence of forward guidance (shown as "No FG").

Changes in financial market expectations depend on perceptions of the level and duration of the ELB and on how different monetary policy instruments are linked via communication. Statements that cause agents to revise their ELB expectations downwards can lead to large changes in yields (Grisse et al., 2017). Woodford (2012) gives an interesting example in the case of Sveriges Riksbank, which released forward guidance in 2009 that unintentionally shifted the forward rate path upwards, as markets interpreted the announcement as a signal of a new ELB. Bernanke (2020) argues for "constructive ambiguity" in this respect. The impact of asset purchases depends on financial market expectations regarding how such purchases will evolve and reinvestments over time. Moreover, asset purchases may have an impact through a signalling channel, whereby purchases are seen by market participants as having implications for future short-term rates (Bauer and Rudebusch, 2014). Likewise, there can be a reverse effect from forward guidance to asset purchase expectations (Wu, 2014). The ECB also linked its future rate path to the duration of the asset purchase programme in a bid to enhance the signalling effect of purchases (Rostagno et al., 2021).

In a manner closely related to Delphic forward guidance, evidence suggests that markets learn about the state of the economy, via an information channel, from central banks' communication. Recent literature argues that central banks may reveal information regarding macroeconomic variables to markets through policy communications (Nakamura and Steinsson, 2018; Miranda-Agrippino and Ricco, 2021; Jarociński and Karadi, 2020). Hoesch et al. (2020) find that the Federal Reserve System enjoys an information advantage over private sector forecasts for inflation, but that this information advantage has decreased over time (post-2003) and may even have disappeared completely. Sutherland (2020), on the other hand, does not find evidence that the information effect plays an important role in a multi-country panel. Bauer and Swanson (2020) show evidence of a "Fed response to news" channel (as distinct from an information channel), whereby a central bank and the private sector react to publicly-available economic news released in the run-up to a meeting. Less is known about information effects for asset purchase statements. Initial studies do not detect a strong role regarding the information effects of quantitative easing announcements, potentially because such announcements principally affect long-term rates while central bank statements do not convey information concerning longer-term horizons (Bu et al., 2019; Kim et al., 2020; Goodhead, 2021).

Central bankers need to communicate carefully in order to steer expectations in the desired direction. Andrade et al. (2019) find that, for the Federal Reserve System, a certain portion of private forecasters responds "optimistically" to date-based forward guidance (consistent with an Odyssean interpretation of a bank's future accommodative stance and hence improved macroeconomic conditions), but another portion is "pessimistic" (consistent with a Delphic interpretation of upcoming worsening economic conditions and possible unintended monetary tightening as the ELB may be constrictive). Therefore, if a central bank decides to employ Odyssean forward guidance, it needs to ensure this guidance is not interpreted as being merely Delphic. Central banks must also be careful to avoid perceptions that they are making commitments they do not wish to enter into. There are complex trade-offs at play between the optimal level of commitment, given the potential drawbacks of such a strategy (reputational loss if the policy does require amendment ex post), as well as the potential benefits (additional stimulus). However, even taking the decision to offer Odyssean or Delphic forward guidance as given, there is evidence of "frictions" in the ability of central banks to communicate how and when the two differ (Campbell et al., 2012).

Signalling effects of monetary policy could be stronger in the presence of noisy information or of heightened disagreement about inflation expectations. When price-setting firms have more noisy information about the economy than the central bank, a change in interest rates is harder to distinguish as being a reaction to supply-driven or to demand-driven factors and may induce firms to change their prices in undesired ways (Melosi, 2017). Furthermore, in times when there is more noisy information, as measured by heightened disagreement about inflation expectations, the adverse signalling effect becomes stronger, whereas these signalling effects disappear when disagreement is low (Falck et al., 2021). Overall, when disagreement about inflation expectations is elevated, there is more scope for perverse price reactions to monetary policy decisions.

Various types of information will affect markets in different ways. When discussing macroeconomic forecasts, central bankers should therefore be attentive to the danger that they might introduce noise. Gilbert et al. (2017) show that macroeconomic data releases with a greater importance in a nowcasting model have a greater impact on Treasury yields. Morris and Shin (2002) argue that in the presence of strategic complementarities (benefits from moving with the group), issuing imperfect (noisy) public signals can reduce welfare and lead agents to over-respond to the public signal and under-respond to their own information.

When communicating with markets, central banks need to be aware of a potential circular impact between market prices and policy rates when designing their communication materials. Market signals may be rendered less informative when the central bank relies on them when formulating its future policy. As a central bank's communications involve both "talking" and "listening", this type of circularity has been described as an echo chamber where, if it talks too loudly, the central bank will mainly hear only itself (Shin, 2017). There can also be a "reflection problem" where a central bank announces, on the basis of market signals and other information, how monetary policy decisions will be made and market participants respond, at the same time, to monetary policy actions. This results in market signals that are endogenous and thus less informative (Morris and Shin, 2018).

1.3.2 Communicating effectively about decisions to households, firms and the wider public

Communicating with the wider public requires a specific approach, in the light of variations in the way inflation expectations are formed and perceptions of inflation. According to Binder (2017), household expectations concerning inflation can be markedly different from those of market participants and professional forecasters, and households are generally less informed. More specifically, evidence suggests that European consumers believe inflation to be higher than it actually is, i.e. consumer expectations tend to be biased upwards (see Zekaite, 2020, and Coibion et al., 2020c, among others).

The fact that households have very dispersed or high inflation expectations does not mean that these viewpoints are not informative or unimportant as regards economic outcomes. For instance, Andrade et al. (2020) show that household consumption depends on the broad inflation regime anticipated. More specifically, they find that households expecting positive inflation will consume more than households expecting that prices will remain stable. They also find that, even if average inflation expectations remain high, inflation expectations can de-anchor if a large and stable share of households expects prices to remain approximately the same (which puts a persistent drag on aggregate demand). While findings on *how* household inflation expectations correlate with spending decisions are mixed, there is considerable evidence showing that changes in expectations correlate with economic

decisions.[9] Indeed, recent evidence using a semi-structural multi-country model of the euro area suggests that changing the beliefs of financial investors is not sufficient to stimulate output and bring about a self-fulfilling positive impact on inflation. Rather, there needs to be a generalised improvement in inflation expectations beyond the financial markets (Lane, 2021).

On the whole, households and firms display rational inattention towards news about monetary policy and inflation. The responsiveness and attentiveness of households and firms to information on inflation and monetary policy, notably in low inflation environments, tend to be low (Vellekoop and Wiederholt, 2017). While experts and financial markets appear to react quickly, households react to communications with significant lags, if they react at all (Lewis et al., 2020; Lamla and Vinogradov, 2019). This can be explained by rational inattention. In countries with low and stable inflation, agents have little incentive to track inflation and tend to be less informed about it than agents living in countries with high inflation (Sims, 2010; Cavallo et al., 2017). Also, according to rational inattention theory, the perceived benefits (the information value of the message) and costs (the complexity of the message) determine the level of attention households pay to central bank communications (Binder, 2017).

Households and firms can also react in unexpected ways to policy announcements and news about inflation. Recent research shows that households and firms may associate news of higher inflation with worse economic outcomes and subsequently reduce their spending, investments and employment. This is in contrast to professional forecasters, who associate news about higher inflation with improvements in the economy (Candia et al., 2020). A recent randomised controlled experiment using a Deutsche Bundesbank online survey of households' expectations showed that, following announcements about expansionary economic measures by fiscal authorities and/or the ECB, households revised their expectations about economic growth and personal income downwards and gave more uncertain estimates (see Box 2 and Goldfayn-Frank et al., 2020). These results are in line with certain elements in the literature on the signalling effects of policy announcements (Melosi, 2017; Falck et al., 2021).

One way to overcome these challenges is for central banks to concentrate on conveying broader and simpler messages about the economy, building trust in their ability to fulfil their price stability mandate and showing how this would benefit people in their everyday lives. Angeletos and Sastry (2021) find that people are able to incorporate information about employment and broader economic developments into their decision-making more easily than information about specific instruments. Thus, communicating the economic implications of policy actions, rather than focusing exclusively on the instruments, can be beneficial. Candia et al. (2020) likewise suggest that, to have a successful impact on the behaviour of households and

[9] While Coibion et al. (2019a) find that consumers who revise their inflation expectations upwards tend to reduce their spending on durables, Duca-Radu et al. (2021) find that consumers are more willing to spend if they revise their inflation expectations upwards relative to their own perceptions of current inflation. Using historical microdata on inflation expectations and consumption from the 1950s, Binder and Brunet (2020) show that consumers shift consumption forward when real interest rates move lower.

firms, central bank communication needs to target more than just inflation expectations or interest rates, and should also focus on the desired broad economic and labour market outcomes. This suggests that there are merits to communicating with non-expert audiences using repetitive, simple and broad economic messages that focus on building confidence and trust (Christelis et. al., 2020[10]). These messages should explain the central bank's objectives (see, among others, Coibion et al., 2019b) and how these are beneficial to people's economic welfare.

Using communication to share the broad implications of policy to anchor inflation expectations around the target might be less complex (and more likely to succeed) than trying to influence the (short-term) inflation expectations of households and firms through information on specific instruments. Several studies demonstrate that the use of simplified communication is more effective in shaping agents' inflation expectations, in that it increases the proportion of the public paying attention to central bank communication (Haldane et al., 2020). There are, however, limits to this simplification, as trust can ultimately falter if the public realises that the communicated signal does not match the reality (Haldane et al., 2020). The Eurosystem's listening events also showed that central banks need to use understandable language and relatable examples to engage with the wider public (see Box 7 for more details on these events). Finally, the literature on reading comprehension strongly suggests that shorter messages are more likely to appeal to households and firms.

Central banks need to focus not only on what information to release, but also on how to successfully reach and influence audiences and improve models of expectation formation to better reflect reality. Increasing the quantity and accessibility of central bank publications will not help if households and firms remain uninterested or are unaware of their existence (Haldane and McMahon, 2018). According to Binder (2017), the media play a crucial role in information transmission, and so it is important that traditional media transmit a clear signal. Larsen et al. (2021) find that estimated topics from the Dow Jones Newswires Archive can predict consumer inflation expectations.[11] On the other hand, Coibion et al. (2019b) doubt the ability of news media to successfully transmit monetary policy messages. With traditional media in decline, central bankers should explore the increased use of social media to transmit messages directly to the wider public. Evidence shows that many journalists are active Twitter users and can amplify central bank messages through traditional news media (Korhonen and Newby, 2019; Gorodnichenko et al., 2021), and that Twitter traffic, including that of non-experts, is responsive to the ECB's communications (Ehrmann and Wabitsch, 2021). These topics will be explored in greater detail in Chapter 3. A detailed economic assessment of the efficacy of central bank communication requires deviating from full information rational expectations and

10 The authors show that trust in central banks lowers inflation expectations as well as uncertainty about future inflation.

11 The estimation of topics from textual data follows approaches in the machine learning literature (Latent Dirichlet Allocation, or LDA). Under this approach, textual data is modelled as a mixture of different topics, where each topic is understood to be a probability distribution over words. LDA allows one to quantify the extent to which different documents focus on different topics (for example, the extent to which an "inflation" topic is favoured in newspaper articles).

instead using models of dispersed information, for example with information frictions (Angeletos and Lian, 2018) or with a trade-off as to how much information to reveal (Wiederholt, 2019). Bringing expectations formation more into line with empirical and experimental evidence also justifies potential deviations from rational expectations, for instance through specific forms of bounded rationality such as so-called "level-k thinking" (Farhi and Werning, 2019; García-Schmidt and Woodford, 2019; and Bersson et al., 2019), behavioural discounting (Gabaix, 2020), or adaptive learning (Slobodyan and Wouters, 2012).

Box 1

Average inflation targeting and households' expectations: new evidence from Germany

Average inflation targeting (AIT) is a commitment by a central bank to aim for a certain rate of inflation averaged over a certain period of time, such that the bank takes both past and future inflation into account. This strategy recently gained attention when it was adopted by the Federal Reserve System. Essentially, AIT means that, following a period of below-target inflation, central banks will commit to a period of above-target inflation to compensate and ensure their inflation aims are, on average, achieved. Coibion et al. (2020a) find that the announcement of AIT in the United States was not well understood by households and did little to affect their expectations. This Box uses data from the Bundesbank Online Panel – Households (BOP-HH) from October 2020 to investigate whether households in Germany would understand such an announcement.

Survey responses to specific monetary policy questions are used to assess households' understanding of average inflation targeting. In Wave 10 of the BOP-HH, from October 2020, 2,059 responses were received from a randomised control trial using a simple three-step procedure. In the first step, participants receive general, easy-to-read information about two monetary policy regimes: i) a regime that aims for inflation rates below, but close to, 2% over the medium term (the ECB's aim at the time of the survey), referred to as inflation targeting; and ii) AIT[12]. In the second step, all participants are asked to make a probabilistic assessment of inflation two to three years into the future under the regime that aims at inflation rates below, but close to, 2% over the medium term. In the third step, participants are randomly split into three subgroups – groups A, B and C – and are again asked to make a probabilistic assessment of inflation two to three years ahead while group-specific assumptions are in place. Group A serves as the control group (in which participants were to assume that 2021 inflation is at 1%) for the group of all respondents. Group B respondents are asked to assume that the ECB, in a change from its previous practice, is now following AIT. As a control group to group B, group C respondents are asked to assume both the ECB following the "alternative", i.e. AIT, strategy and 2021 inflation at 1%.

Under AIT, inflation expectations are higher than under inflation targeting. Chart A's left-hand panel plots the average subjective probabilities of all respondents under the assumption that the ECB is pursuing a strategy aiming at an inflation rate below, but close to, 2% over the medium term (blue bars). The bars of the second and third bin, taken together, show that more than two-thirds of the mass is assigned to inflation between 1% and 3%, on average, while the remaining third is more or

[12] The term AIT was not used in the questionnaire as the topic is not yet discussed among the wider public. Instead, participants were informed of an alternative strategy currently practised by the Federal Reserve System: steering the inflation rate at 2% on average, whereby if inflation dropped below 2% the Federal Reserve System would raise it above 2% for a period of time.

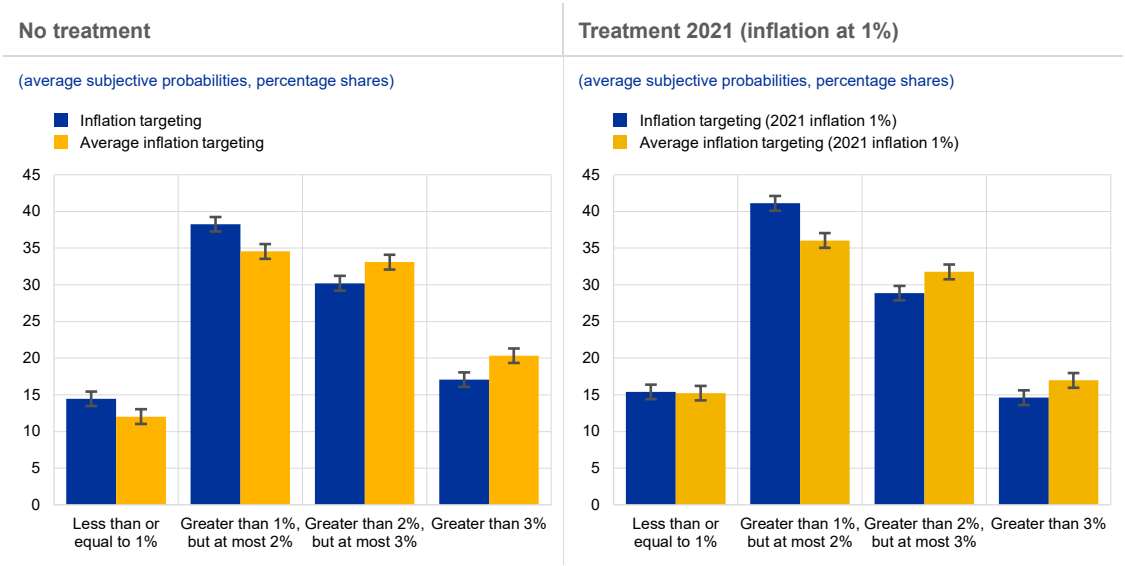
less equally shared by the outer bins. The average inflation rate is 2.01%. The yellow bars in the left-hand panel of Chart A show the average subjective probabilities under the assumption that the ECB is pursuing an alternative monetary policy strategy whereby inflation has to average 2% over a certain period of time. A visual inspection shows that the probability mass shifts to the right, with the yellow AIT bars for inflation below 1% and inflation below 2% being shorter than the blue inflation-targeting bars. However, for inflation above 2% and inflation above 3%, the yellow bars are taller than the blue bars. The average inflation rate under AIT is 2.16%. Results from Hotelling's T2 test confirm that the null hypothesis – that distributions of inflation expectations in the two regimes are equal – can be rejected at the 1% level. Compared with a regime that aims for inflation rates of below, but close to, 2% over the medium term, medium-term inflation expectations would be higher under AIT.

The differences across monetary policy regimes persist under additional assumptions. In the right-hand panel of Chart A, the blue bars show the average subjective probabilities resulting from Group B participants under the assumption that the ECB is pursuing an inflation aim of below, but close to, 2% over the medium term. In addition, participants were asked to assume that the inflation rate in the next year (that is, 2021) is at 1%. The yellow bars represent average subjective probabilistic assessments made by Group C participants, who were asked to assume that the ECB operates under the alternative strategy. They were, however, required to make the same assumption of 1% inflation in the following year.

Results show that while both probability masses shifted to the left, inflation under AIT is still believed to be higher than under inflation targeting. The average inflation rate under inflation targeting stands according to these data at 1.92%, compared with 2.01% under AIT; the null hypothesis that the distributions are equal at the 5% level can thus be rejected. This implies that inflation expectations under AIT are significantly higher than under inflation targeting. In the light of the information treatment, i.e. next year's inflation being muted, households seem to incorporate lower next-year inflation into their inflation expectations for the medium term. This is possibly because they calculate an inflation path for the next two to three years as a whole, the trajectory of which is then lower than when starting from inflation at target. The empirical finding that medium-term inflation expectations under AIT would be higher when current inflation is below the inflation target corresponds to theoretical predictions, as illustrated for instance by Hoffmann et al. (2020) and described by Reifschneider and Williams (2000), Reifschneider and Wilcox (2019) and Mertens and Williams (2019). The experiment suggests that German households understand the mechanism of AIT and that they can adjust their medium-term inflation expectations accordingly.

Chart A

Expectations about the medium-term inflation rate



Source: October 2020 Bundesbank Online Panel – Households.
Notes: Left-hand panel: The blue bars show average subjective probabilities of medium-term inflation by all respondents, assuming the ECB is pursuing an inflation-targeting regime that aims for inflation rates below, but close to, 2% over the medium term, which was the aim at the time of the survey. The yellow bars show average subjective probabilities of medium-term inflation under the assumption that the ECB is pursuing the alternative strategy (AIT). Right-hand panel: additional assumption in both regimes that 2021 inflation is at 1%. The blue bars show average subjective probabilities under a regime that aims for inflation rates below, but close to, 2% over the medium term (inflation targeting); the yellow bars correspond to the ECB pursuing an alternative strategy (AIT). A two standard-error band is also plotted.

Box 2

Policy announcements and households' expectations: survey evidence from Germany

Survey-based data can be used to assess whether monetary policy announcements have the intended impact across all audiences. This Box discusses the results of an experiment that used the BOP-HH – a monthly survey of households' expectations – to see how individuals updated their beliefs about future economic outcomes in response to major policy announcements. In a randomised placebo-controlled trial conducted in April 2020, respondents were randomly divided into four groups. A placebo group was given economically irrelevant information about a European Union action plan on human rights and democracy. Participants in the other three groups were given an abridged version of actual announcements about recent expansionary policy measures to combat the economic effects of the pandemic, issued by either the ECB or the German Federal Government. Row 1 of Table A shows the results for the ECB's announcement regarding asset purchases worth up to €750 billion. Row 2 shows the results for the German Federal Government's announcement regarding the launch of a €750 billion aid package for salaried workers, the self-employed and firms. Row 3 shows the results for the announcement by the German Minister for Economic Affairs concerning measures taken to counter the economic effects of the pandemic. The table presents the estimated treatment effects of the policy announcements with respect to a particular variable. In other words, the numbers report how survey participants changed their views on economic outcomes after receiving information on different policy actions to combat the crisis, compared with individuals who received only the placebo treatment. This setting allows us to study how various policies causally affect individuals' outlooks.

The results of the experiment reveal that monetary and fiscal policy announcements can have unintended effects and do not, as might be expected, stabilise expectations. Conventional

wisdom suggests that such announcements can be a powerful stabilisation tool as households incorporate them into their plans, but the results from the experiment do not support this. Contrary to theoretical predictions, the individuals who received information about expansionary policy measures provided significantly lower estimates of future gross domestic product (GDP) growth (Table A, Column 1). For example, those who were informed about fiscal stimulus measures (Row 2) expected GDP to grow by almost 2 percentage points less over the next year than those who were given the placebo treatment. Additionally, the experiment provides no conclusive evidence that any of the policy announcements had a significant effect on income expectations (Table A, Column 3).

Households' uncertainty also increased following receipt of information on the policy measures. Uncertainty is captured by asking individuals about the probability that GDP (or the household's future net income) will increase or decrease by a given amount. The less certain households are, the more dispersed their answers will be. We find that, for households who were told about one of the stimulus measures, there was increased uncertainty about their expected income (Column 4) and about future GDP growth (Column 2). Column 5 shows that these negative effects on households' assessment of the future lead them, in the case of the fiscal stimulus treatment (Row 2), to significantly lower their propensity to purchase large durable goods.

The announcements may have suggested a more negative economic outlook than households originally expected, thereby leading them to become more pessimistic. While it is possible that households did not fully understand the implications of the policy measures, the same effects occurred even with the most simplified of the policy announcements. It seems more likely that policy announcements reveal information about the economy being weaker than households believe it to be. In other words, households might think that if the ECB or the German Federal Government announce such a policy, the situation must be worse than they had thought. This is sometimes referred to as a "signalling" or "information" effect (see Melosi, 2017; Falck et al., 2021; Nakamura and Steinsson, 2018; Kerssenfischer, 2019). Our results are consistent with such a narrative. Coibion et al. (2020d) find similar effects in a recent survey of US households.

Table A:
Information treatment effects

	Future GDP growth, percentage (1)	Future GDP growth, variance (2)	Income growth, euro (3)	Log future income, variance (4)	Buy durables, Yes/No (5)
ECB stimulus	-1.293***	3.362*	-60.05	0.322	-3.173
	-0.578	-1.758	-49.97	-0.2	-3.015
Fiscal stimulus	-1.996***	3.934**	40.75	0.465**	-6.469**
	-0.581	-1.982	-58.14	-0.203	-3.09
Gov. support	-1.193**	4.584**	-55.91	0.363*	-2.894
	-0.539	-1.822	-56.62	-0.196	-3.204
Controls	Yes	Yes	Yes	Yes	Yes
Observations	1,203	1,203	1,215	575	1,205

Notes: Robust standard errors (in parentheses). Significance level *p<0.1, **p<0.05, ***p<0.01.

2 Transparency and clarity of central bank communication

Transparency and clarity are essential aspects of a central bank's monetary policy communication, as they strengthen the impact of communication on interest rate and inflation expectations, and on trust. As discussed in Chapter 1, this in turn helps make monetary policy decisions more effective and predictable, and boosts an independent central bank's accountability – all important factors in building trust among citizens. Section 2.1 analyses trade-offs between transparency and clarity in communication. One of these is the degree of openness about the variety of views among the ECB's Governing Council members during the decision-making process, set against the need to avoid excessive "noise", so as to be able to deliver a clear monetary policy message to expert and non-expert audiences. Section 2.2 discusses how specific elements of the ECB's monetary policy communication – such as the relevant measure of inflation, the distinction between primary and secondary objectives and intermediate variables, as well as the publication of data on market operations – could benefit from transparency and/or clarity.

2.1 Transparency, clarity and accountability

Transparency can be defined as the degree to which a central bank releases relevant information about monetary policy decisions and the principal supporting arguments. Clarity ensures that the information conveyed transmits the intended messages to the appropriate audience at the right time and produces appropriate results. Central banks have increasingly embraced transparency in recent decades (Geraats, 2002; Dincer and Eichengreen, 2014), in line with a broader trend amongst public bodies towards greater openness. Moreover, as discussed in Chapter 1 and further elaborated in Chapter 3, transparency affects the degree of trust in a central bank. Transparency and clarity concerning decision-making need to convey essential messages to achieve the desired result of effective communication. Transparency also involves revealing the reasoning behind decisions and explaining the diverging views of those making them, but it needs to avoid transmitting conflicting signals and creating uncertainty about the intended message. Overall, while the idea behind greater transparency is to enhance the "signal" that a central bank is sending to the public, it may also create "noise" and therefore not necessarily enhance the public's understanding of monetary policy. The central bank thus faces a signal-to-noise trade-off when communicating and needs to judge the suitable degree of clarity.

2.1.1 Transparency versus clarity: the optimal amount of communication

Despite the benefits of transparency, there are good reasons why central banks may not want to disclose every detail of their policy discussion and implementation. First, central banks may face legal constraints in communicating certain elements of policy discussion and implementation. Second, there might be benefits to not disclosing parts of internal deliberations if such disclosure impedes an open discussion among decision-makers (Hansen et al., 2018; Rieder, 2021). In the euro area, this aspect entails an additional facet since decision-makers are required to maintain a euro area-wide perspective and could face pressure from national audiences if they are perceived as not taking national views sufficiently into consideration. Third, by not disclosing information about market-sensitive subjects such as details of counterparties or operations, decision-makers avoid undermining financial stability, for example as regards confidence in certain financial institutions or market segments. Moreover, given their increased presence in bond markets, central banks need to be careful not to disclose information that could impede market functioning (see Section 2.2.3). Fourth, communication prior to monetary policy meetings has been shown to increase market volatility (Ehrmann and Fratzscher, 2009), which has led many central banks, including the ECB, to adopt a quiet period before each policy meeting (Box 3). Finally, notwithstanding the existence of forward guidance as a policy tool, few central banks publish their expected future policy rate paths, to avoid over-commitment in an uncertain environment (Kedan and Stuart, 2014).

When communicating with the public, central banks face a trade-off between the precision of the information conveyed and the simplicity necessary to be understood by the audience (Morris and Shin, 2007). Transparency increases when the central bank releases more, and more detailed, information. However, as more content is released, a growing portion of the audience may be unable to understand the message that the central bank wants to convey. The reasons that have been put forward to explain the audience's failure to digest larger amounts of information include cognitive biases (De Grauwe, 2011) and rational inattention among individuals (Sims, 2010). Disclosing only simple, generalised information will improve common understanding. In this case, however, many individuals who are capable of handling more sophisticated information might ask for further content. Therefore, to maximise the clarity of their communication central banks need to choose the optimal quantity of communication and tailor it to the target audience (Winkler, 2002).

Central bank communication is most effective when it maximises its signal-to-noise ratio, i.e. when it increases the genuine message given to the public while minimising any associated noise (Blinder et al., 2008). In this context, more communication is not necessarily better, as it may add more noise than signal. Central banks need to carefully design their communications and consider how to strengthen the signal on the one hand and reduce noise on the other. Blinder et al. (2008), for example, argue that prompt and clear announcements of policy decisions, as well as press conferences with Q&A sessions, are key to improving the signal-to-noise ratio, whereas simultaneous communication by multiple policymakers

who emphasise slightly different perspectives may fail to convey more information and instead blur the policy signal.

2.1.2 Transparency and clarity in decision-making

As part of monetary policy decision-making by collegial bodies, transparency can apply to the body's deliberations or to its votes. In the case of the ECB, there are clear legal limits to communicating deliberations and voting-related information, pursuant to Article 10.4 of the Statute of the European System of Central Banks (ESCB) and of the ECB[13] and to the ECB's Rules of Procedure[14]. To foster transparency regarding the deliberations of decision-making bodies, central banks may publish regular records of meetings, ranging from word-for-word transcripts to minutes, or summaries of the policy discussions, such as the ECB's monetary policy accounts. Transparency can apply not just to the deliberations but also to the general voting outcome or, additionally, to the individual voting behaviour of committee members (voting transparency).

Increasing the level of transparency around the Governing Council's deliberations and voting from current levels could entail some complex trade-offs. In academic research, the relationship between the public and the central bank is often seen through the lens of principal-agent literature, with the public being the principal and the Governing Council members the agents. In general, more information about agents' behaviour makes them more accountable and more likely to work for the common good (Holmström, 1999; Prat, 2005; Hansen et al., 2018). In this context, arguments made in meetings would need to be clearly attributed to individual committee members, otherwise deliberative transparency might not significantly affect members' behaviour. The same applies to voting transparency. Through some channels, however, increased transparency may be associated with effects that impair the quality of decisions and the outcome of monetary policy.

First, a higher degree of transparency, in terms of deliberations or voting, may curtail the openness of discussions during meetings. This is particularly relevant when committee members are aware that exploratory reflections on future policy options might unintentionally be interpreted as policy signals. Moreover, publishing detailed meeting minutes may make committee members more reluctant to discuss forward-looking or controversial arguments. Strong empirical evidence for this assumption comes from the FOMC meetings, which were found to become less interactive, more scripted and more quantitatively-oriented following an increase in deliberative transparency (Hansen et al., 2018).

Second, the academic literature identifies two different potential reactions of committee members to a higher degree of deliberative or voting transparency

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13 Consolidated version of the Treaty on the Functioning of the European Union – Protocol (No 4) on the Statute of the European System of Central Banks and of the European Central Bank (OJ C 202, 7.6.2016, p. 230).

14 Decision of the European Central Bank of 19 February 2004 adopting the Rules of Procedure of the European Central Bank (ECB/2004/2) (2004/257/EC).

(Meade and Stasavage, 2008; Ottaviani and Sørensen, 2006; Warsh, 2014). On the one hand, some studies suggest that greater transparency can amplify conformism ("herding") since – given the high degree of uncertainty involved in monetary policy decision-making – committee members may prefer to adhere to the majority view rather than stake out a divergent opinion (Scharfstein and Stein, 1990; Prat, 2005; Visser and Swank, 2007). On the other hand, the academic literature also notes that some members may prefer to attract public attention by expressing their views clearly, perhaps even with a tendency towards overstatement (Prendergast and Stole, 1996; Levy, 2004; Levy, 2007). Consequently, the effects of transparency may not be constant over time and may depend on the composition of the committee at any given moment.

A third trade-off that is particularly relevant for the ECB Governing Council relates to the specific structure of the euro area as a currency union. Increased transparency could put unwarranted political pressure on Governing Council members, especially in times of divergent economic developments at national level, despite the participation of members in a personal capacity (ad personam) and the ECB's euro area-wide mandate. In this respect, greater transparency could dilute the quality and openness of the discussion among Council members – which could be potentially detrimental at moments of high uncertainty, for instance during crises, when quality and openness are most needed.

Fourth, the Governing Council and the Eurosystem Committees' deliberations are subject to legal limitations enshrined in the Treaties.[15] These rules place considerable limits on the ECB's discretion in communicating deliberations and voting-related information, for example, by prohibiting disclosure of individual opinions or votes.

2.1.3 Communicating diverging views

According to the literature, central bank decision-makers may have a variety of incentives to publicly communicate views that potentially diverge from the perceived majority view of their committees. Three points emerge from this literature. First, reputational concerns may incentivise members to clarify ex post how and why their stance differs from the committee's majority opinion (Levy, 2004; Levy, 2007). Maier (2007) notes that a similar incentive may apply if decision-makers do not feel their voices are given adequate consideration during monetary policy meetings, for instance due to time constraints, a shift away from decision-making by consensus or informal seniority or hierarchical structures. Second, Siebert (2006) and Blinder (2007) argue that, in the run-up to policy decisions, central bankers may voice diverging views on the optimal monetary policy stance, simply because these differing views reflect different convictions and information sets. Third, in a variant of the previous point, Ehrmann and Fratzscher (2009) and Vissing-Jorgensen (2019)

[15] The deliberations of the Governing Council and the Committees are subject to Article 23 of the ECB Rules of Procedure, according to which "[t]he proceedings of the decision-making bodies of the ECB and of any committee or group established by them shall be confidential unless the Governing Council authorises the President to make the outcome of their deliberations public".

observe that members may communicate their individual views before policy meetings with the aim – explicit or implicit – of influencing the outcome of the deliberation process.

Governing Council members have agreed on key principles in their external communication policy in order to issue monetary policy decisions with a "single voice".[16] Moreover, the Statute of the ESCB and of the ECB safeguards the confidentiality of Governing Council meetings, although the Governing Council can decide to make the outcome of its deliberations public.[17] In line with the single voice principle, Governing Council members have also agreed to respect a quiet period prior to monetary policy meetings (see Box 3). Nevertheless, at times members have communicated individual views that were not always fully aligned with the Governing Council's majority view and were often perceived by the media as conveying national preferences.

Research has shown that, in the run-up to monetary policy meetings, individually-communicated diverging views can undermine the clarity and effectiveness of monetary policy. Individual public statements about the monetary policy stance ahead of policy meetings can trigger a "communications arms race" if these statements are designed to lock in the monetary policy decision by influencing market expectations (Vissing-Jorgensen, 2019; Vissing-Jorgensen, 2020). This type of unstructured communication can limit the range of available policy options and negatively affect the flexibility and quality of monetary policy measures.

Even after monetary policy decisions have been agreed upon and communicated, dissenting opinions by individual Governing Council members can result in a "cacophony of voices" and reduce the effectiveness of such decisions. Various studies find that dissenting opinions that are perceived as a cacophony of voices may severely diminish the ability of monetary policy to steer behaviour and foster trust: too many voices may be perceived as representing "no voice at all" (Blinder, 2007). While it may be beneficial to express diverging, or even dissenting, views as part of a debate in order to arrive at the best possible decision, publicising dissent concerning a commonly agreed decision is more likely to create uncertainty, especially in times of economic and financial stress. A multiplicity of interpretations may negatively affect the clarity of the message on the policy stance (Ehrmann and Fratzscher, 2013; Tillmann, 2020). In the case of the Eurosystem, which sets monetary policy for a heterogeneous monetary union, dissent among Governing Council members can be particularly harmful and may again be perceived as reflecting different national interests. Frequent dissent after a decision has been communicated can also undermine the public's perception of the Governing Council

[16] Trichet (2005) notes that "[t]he 'single voice' principle in monetary policy was introduced from the very beginning and has been efficiently applied in my judgement". The "single voice" principle is reflected in the *Organisational Principles for the Eurosystem and the Single Supervisory Mechanism,* which envisage creating an environment in which the Eurosystem works as a team, speaking with one voice to achieve cohesion and unity, while respecting the legal status of its members. For a discussion of these principles, see Moutot et al. (2008).

[17] Article 10.4 of the Statute of the ESCB and of the ECB provides for limits to this freedom, to the effect that governors shall not disclose positions in a way that identifies certain arguments exchanged in Governing Council meetings by specific governors. This would amount to a violation of the confidentiality of deliberations.

as a collegial decision-making body which usually makes decisions by consensus (Blinder, 2007; Ehrmann and Fratzscher, 2007). Prominent media coverage of such dissent, leading to a negative tone about ECB policy, manifestly decreases trust in the ECB for consumers of such news (Hayo and Neuenkirch, 2014).

At the same time, the variety of views expressed by Governing Council members during monetary policy meetings can provide the basis for healthy debate about the direction of monetary policy and thus form an important part of the decision-making process. A diversity of views can increase the quality of the deliberative processes before committee decisions are made (Blinder, 2007) and provide grounds for reaching consensus. There has been some discussion about how best to account for diverging views, such that they are publicly acknowledged and dissent is disciplined and structured. This in turn can build public support and understanding of why a specific decision has been made.

Unattributed communication ("leaks") can be seen as highly detrimental to a central bank's integrity and credibility and undermine its accountability and the legitimacy of its monetary policy (Vissing-Jorgenson 2020). Such informal communication often involves a breach of confidentiality rules and differs from regular communication channels as it is not attributed to a known individual or collective decision-making body. When market expectations are formed on the basis of unattributed communication of policy intentions disappointment and confusion about actual policy outcomes may result, given that such leaks may not align with the majority view of the Governing Council.

An effective quiet period can provide some protection against lock-in effects resulting from strategic communication ahead of policy meetings (see Box 3). The quiet period alone has proven insufficient to forestall strategic communication (cf. Vissing-Jorgensen, 2019) as it may simply shift the timing of statements without necessarily remedying their negative impact (Bennani et al., 2020). Leaks ahead of policy meetings may give rise to even more violations of the quiet period as Governing Council members may feel tempted to react to them.

The best way to address unattributed communication seems to be to foster a consensus-focused culture and communication style. Such a consensus-focused culture may make leaks less acceptable among colleagues. Sharing information ahead of meetings and building consensus increases trust and makes leaking riskier as it jeopardises increased transparency. To make leaking less attractive, a fair and balanced representation of differing views in the Governing Council through channels that are easily accessible to the wider public seems preferable.

A decision-making environment that allows members to discuss and design policies that can be broadly agreed upon and collectively owned is key to limiting unstructured dissent. This is particularly true in light of the Eurosystem's organisational principle of cohesion and unity. A decision-making environment of this nature can limit strategic communication prior to policy meetings and unstructured dissent after decisions have been communicated. The ECB monetary policy accounts play an important role in creating just such an environment by providing information on the full range of arguments considered during the Governing Council's deliberations.

The results of a survey of former Governing Council members indicate that a majority thinks that the representation of individual views in the monetary policy accounts is more or less at the right level and that these views should continue to be unattributed.[18]

Box 3
The quiet period

Strategic communication in the run-up to policy meetings may limit available policy options by locking in market expectations (Vissing-Jorgensen, 2019; Vissing-Jorgensen, 2020). Market reactions to public statements by monetary policymakers are three to four times stronger shortly before monetary policy decisions than at other times (Ehrmann and Fratzscher, 2009). To pre-empt "communication arms races" and avoid excessive market volatility in the run-up to monetary policy meetings, many major central banks have introduced "quiet periods" (or "blackout" periods).[19] In the case of the ECB's quiet period, Governing Council members have agreed to refrain from publicly making statements referring to the future stance of monetary policy and economic developments during the seven days preceding monetary policy meetings.

Governing Council members' public statements during the seven-day quiet period are recorded by the ECB's Directorate General Communications to create full transparency around all pertinent statements made during that period. While the names of Governing Council members who have failed to comply with the rules are revealed, breaches of the quiet period do not trigger any formal sanctions.

An analysis of quiet period communication based on the summaries compiled by the ECB between 2008 and 2020 suggests that quiet periods are only partially effective in forestalling potentially market-sensitive statements in the run-up to monetary policy meetings (Gnan and Rieder, 2021). The number of quiet period breaches and of overall communication events during quiet periods varies considerably over time and from one Governing Council member to another. Moreover, non-attributable breaches of quiet period rules, which the Directorate General Communications has been recording since 2014, are relatively numerous with respect to the total number of communication events during the quiet period. According to the ECB's summaries, anonymous informal communication with the media and market commentators by ECB or Eurosystem officials (also known as "quiet cacophony", cf. Vissing-Jorgensen, 2019) can range from the leaking of secret information – such as upcoming policy moves – to the sharing of more "benign" insider clues about personal disagreements. Vissing-Jorgensen (2020) finds that unattributed communication reduces a central bank's credibility and policy flexibility, running counter to the very idea of individual and collective accountability. The use of unattributed communication to voice dissent or leak information during the quiet period may trigger additional cacophonic statements by Governing Council members, who can either build on the leaks or react to them. The analysis by Gnan and Rieder (2021) tentatively suggests a positive correlation of unattributed leaks in the run-up to monetary policy meetings and the number of quiet period breaches over time since 2014.

18 See Ehrmann et al., forthcoming.

19 Information on the quiet periods practised by other central banks can be found on their websites, e.g. Federal Reserve System's Federal Open Market Committee (Federal Reserve Board, 2017a; 2017b) and the Bank of England's Communications Guidance for MPC Members (Bank of England, 2019).

Even if the quiet period is adhered to, strategic communication around policy meetings may still occur, given that the existence of a quiet period does not address incentives for strategic communication. To be effective, quiet period rules need to clearly state which statements are permitted and which are not. On the one hand, the existence of a quiet period that is adhered to during the seven days prior to monetary policy meetings may simply shift the timing of statements without necessarily addressing their strategic content and remedying their negative impact. Bennani et al. (2020) provide evidence for this "bunching effect". And on the other hand, strategic communication efforts may occur not only prior to, but also shortly after monetary policy decisions. Governing Council members may individually express and explain their diverging views to shape the markets' or the public's interpretation of specific measures post facto.

Box 4
The monetary policy accounts

As the first major central bank to provide "real-time" explanations of its monetary policy decisions at monthly press conferences, the ECB attaches great importance to transparency and accountability. The increased complexity and unconventional measures introduced in the wake of the global financial crisis called for enhanced efforts to convey the considerations underlying the Governing Council's decisions and provide a more complete picture of its deliberations, with arguments for or against certain measures and reflections on the trade-offs associated with specific decisions (Draghi, 2015). Moreover, the publication of minutes had been a long-standing request from the European Parliament and other constituencies, in a bid to enhance transparency as a basis for accountability.

In December 2014 the Governing Council formally decided to begin publishing the monetary policy accounts. It was agreed that the account would be a separate document, shorter than the full minutes but informative on substance. It would provide an overview of financial market and economic and monetary developments, attributed to the Executive Board members concerned, and of policy options, attributed to the Executive Board member(s) in charge of the related policy area(s). The discussion of the economic and monetary (and financial) analyses would make a limited use of soft qualifiers (e.g. widely, broadly shared, some, others, a number), using impersonal references (e.g. points made, views expressed, on the one hand/other hand). The discussion of the monetary policy stance would include a comprehensive presentation of the arguments supporting the policy conclusions and of the different views and reservations expressed. This section might use a range of qualifiers with a view to conveying common ground while providing a fair account of the variety of arguments and views. It would not differentiate between voting and non-voting members; this could however be done when reporting the decisions. For policy deliberations only four qualifiers would be used in presenting decisions: unanimity, consensus, large majority or majority. The account would be released prior to the next monetary policy meeting, following approval by the Governing Council.

Feedback from media and financial market observers on the release of the accounts has been broadly positive. The first account of the Governing Council's monetary policy discussions was published on 19 February 2015 (pertaining to the meeting held on 21-22 January 2015). While the accounts provided limited "news" compared with the information already conveyed at ECB press conferences, they contained additional detail and conveyed a sense of the discussion and arguments exchanged. This assessment is derived from (social) media monitoring at the time of publication and

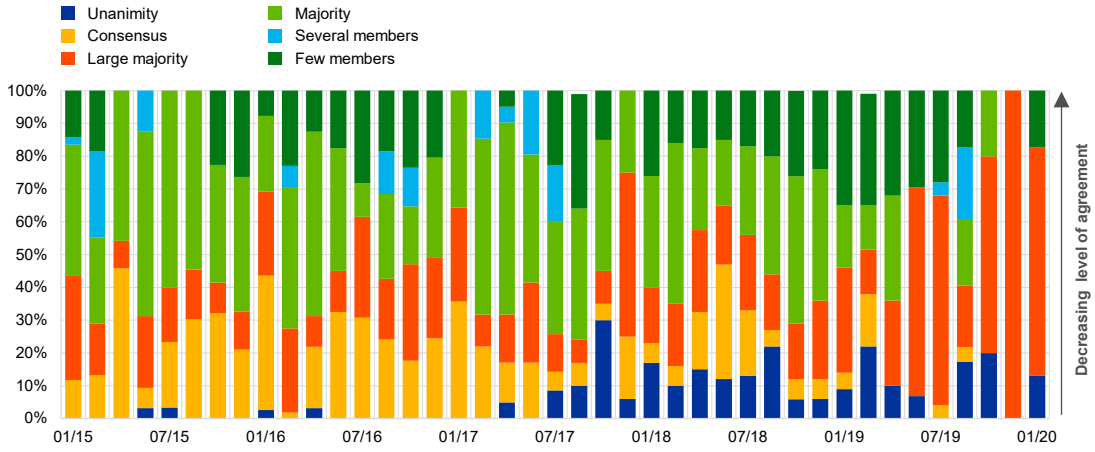
from events with ECB watchers, where the overall tone of the feedback seems to be mostly either neutral or broadly positive. The accounts are scrutinised closely by analysts, while media attention has been more limited and market volatility normally rather contained. Concerns about the possibility that the accounts could detract from the central role of the press conference or be perceived as providing inconsistent messages have proved unfounded.

On the whole, the established "consensus-oriented" approach has remained broadly intact, with the presentations by the two Executive Board members providing a framework and benchmark for discussion by members. Nevertheless, the accounts also convey diverging and dissenting views; this can be seen, for example, in the accounts issued following the decision of the September 2019 meeting. At the same time, the representation of the discussion seeks to record divergent views in such a manner so as to safeguard the space for searching common ground in subsequent monetary policy meetings. Following earlier work on the FOMC meetings by Meade et al. (2015), where a more rigid and standardised grid of qualifiers is used, the variety of qualifiers in the ECB accounts can be grouped into six main categories (Chart A), with explicit unanimity rare and expressions of consensus and of a (large) majority prevailing (Carcel et al., 2020).

Chart A

Qualifiers used in the monetary policy accounts describing ECB monetary policy deliberations and decisions

(y-axis: relative share of the various qualifiers in percentage terms; x-axis: dates of the Governing Council meetings on which the accounts are based)

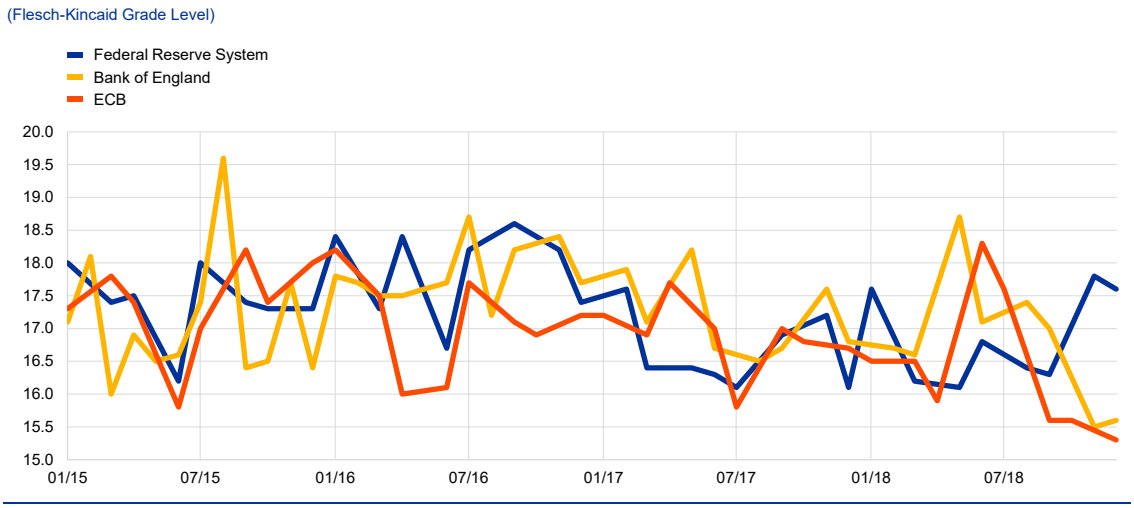


Sources: ECB staff calculations based on Meade et al. (2015) and Carcel et al. (2020).
Note: The differently coloured segments of the bars represent the relative share of the qualifiers (six main categories indicated in the legend) that were used in the relevant section of the ECB's monetary policy accounts covering the Governing Council's discussions and monetary policy decisions.

Since the accounts are derived from the more extensive minutes that document the internal deliberations of the Governing Council, which are subject to confidentiality restrictions, their express purpose is communication to market observers and the wider public. However, based on common readability metrics such as the Flesch-Kincaid Grade Level score, the language used in the accounts is highly complex and can only be understood by expert audiences, i.e. those with an average of 16 to 18 years of education (see Chart B).

Chart B

Flesch-Kincaid Grade Level score of ECB monetary policy accounts and minutes of central banks



Source: Eurosystem staff calculations based on Carcel et al. (2020).
Note: The higher the Flesch-Kincaid Grade Level score, the more difficult the language is to understand.

The description of the policy deliberations in the monetary policy accounts shares many similarities with the minutes published by the FOMC and those of the Bank of England's Monetary Policy Committee (MPC). Space devoted to policy deliberations constitutes less than half of the FOMC minutes and somewhat more for the ECB accounts. The length of these policy sections in the ECB accounts varies in tandem with the equivalent sections in the documents of the other institutions, reflecting a shared challenge in terms of explaining policy responses to global shocks. This is also reflected in similar trends in the relative frequency of words reflecting shocks and surprises relative to continuity (see Hanifi et al., 2021, for details). Nevertheless, it is interesting to note that the ECB (and, to a lesser extent, the FOMC) tend to signal future decisions by flagging increased uncertainty in the accounts/minutes of meetings several periods in advance, whereas the Bank of England uses uncertainty to help explain policy decisions ex post.

A close reading of the accounts underscores how Governing Council members clearly prioritise the primary objective of price stability, as laid down in Article 127(1) of the Treaty on the Functioning of the European Union (TFEU)[20]. The accounts' sections on "monetary policy considerations and policy options" and "monetary policy stance and policy considerations" contain frequent references to the primary objective – defined as mentions of "inflation" or "prices" – but very few mentions of terms that might fall under the secondary objectives. In only around a quarter of the accounts do these sections include the term "financial stability". "Employment" and "unemployment" also appear occasionally, for example during the initial phase of the COVID-19 crisis. Terms that are part of the transmission mechanism appear about as frequently as terms for the primary objective. Peaks in references to "inflation expectations" have often coincided with decisions to loosen monetary policy.

[20] Consolidated version of the Treaty on the Functioning of the European Union (OJ C 326, 26.10.2012, p. 47).

2.2 Transparency for different elements of monetary policymaking

In recent years, monetary policy has become more complex, making clarity of communication and accessibility of information about the central bank's objectives, target variables and instruments increasingly important. In the following section, we discuss three elements of monetary policy that are relevant for transparent and clear communication: first, communication about how specific measures relate to the primary and secondary objectives (Section 2.2.1); second, the inflation measures used to define price stability (Section 2.2.2); and third, the provision of information on monetary policy operations (Section 2.2.3).

2.2.1 Communicating about the ECB's primary and secondary objectives

Official communication by the Governing Council should clearly state how its decisions are consistent with the hierarchical ordering of the objectives of the Eurosystem as specified in the Treaties. Specifically, Article 127(1) of the TFEU states that the primary objective of the Eurosystem is to maintain price stability. It goes on to state that "without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union." Article 127(5) of the TFEU provides that the ESCB's task is to "contribute to the smooth conduct of policies pursued by the competent authorities relating to the […] stability of the financial system". The Treaties therefore establish a clear hierarchy: the ECB is not permitted to pursue its secondary objective of supporting the general economic policies in the Union if this would prejudice the objective of maintaining price stability. Moreover, with regard to the secondary objective of supporting the general economic policies in the Union, the ECB's mandate is supportive. That is, Article 127(1) does not establish a standalone, independent legal obligation for the ECB to proactively pursue the Union's objectives in these areas, nor does it allow the ECB to autonomously set policies in direct pursuit of these objectives. It can only contribute to their achievement by supporting the relevant economic policies in the Union when carrying out its own tasks.

However, emphasising the primary objective on the one hand and engaging with the public on the other presents challenges. Households are not attentive to monetary policy announcements, especially concerning detailed and complex issues or measures. In general they take notice only of a broad inflation regime but not the exact inflation rate (see Section 1.3.2).[21] The wider public's perceptions of inflation vary greatly, with many households seeing a large increase in housing and daily expenses which they associate with a negative impact on their purchasing power and the value of their savings.[22] In such an environment, households generally struggle to

[21] Andrade et al. (2020) show that the inflation regime is what matters more in terms of the general public's consumption decisions. This is not solely related to financial literacy or cognitive awareness.

[22] See "ECB Listens – Mid-term review summary report".

understand why the ECB wants to raise the inflation rate or have a positive inflation aim. One way to remedy this is to communicate the importance of price stability for fostering economic growth and employment, and the effects of monetary policy not only on prices but also on the economy at large. This could be accomplished, for example, by explaining the effects of monetary policy on wages and employment – topics that households care about. Rather than focusing on inflation and inflation expectations alone (which in some studies has ambiguous effects on consumption spending – see Section 1.3.2), such communication might also have a greater impact on household consumption, and hence on inflation. At the same time, the communication should make it clear that the rationale for the decision is to pursue the ECB's monetary policy objectives. It should not give rise to the misunderstanding that the ECB autonomously sets general economic policy.

A key dimension of the ECB's monetary policy communication since the introduction of the euro has been the medium-term orientation of its monetary policy strategy (ECB Monthly Bulletin, January 1999). This acknowledges that short-term non-monetary shocks can create price volatility. Therefore, monetary policy performance should be assessed over the medium term, during which time such shocks would peter out. But the Governing Council has also acknowledged that a medium-term orientation of monetary policy allows for gradual and measured responses to shocks, in a bid to avoid unnecessary volatility in short-term interest rates or the real economy.[23] Former ECB President Jean-Claude Trichet argued that this stability-oriented framework was akin to "flexible inflation targeting" and that this flexibility entailed not only minimising unnecessary output volatility but also tolerating temporary deviations of inflation from the objective in order to maintain financial stability (Trichet, 2010). The medium-term orientation allows the Council to cater to other considerations relevant to the pursuit of price stability, such as those related to employment or financial stability. As such considerations fall within the primary objective of maintaining price stability, the ECB should, in its communication, ensure that these efforts are not conflated with the pursuit of its secondary objective.

In explaining its decisions, it is legitimate for the ECB to communicate on any or all of the links in the monetary policy transmission mechanism. This mechanism consists of multiple stages between changes in monetary policy instruments that directly affect specific financial market segments before transmitting to broader financing conditions. These then influence the demand and supply of credit, and therefore output growth, employment and wages and, ultimately, inflation. Measures intended to preserve the transmission mechanism fall under the primary objective, since they are a prerequisite to achieving price stability. This is particularly the case if certain links are under stress – like the bank lending channel in the case of banking sector stress – or subject to doubt or uncertainty, such as the Phillips curve slope. The ECB is also legally required to carefully examine all the elements of the situation and give an adequate explanation of how this analysis has influenced its choice of policy measures.

[23] See also Rostagno et al. (2019), and Section 3.2 of that publication in particular, for a detailed explanation of the role of the medium-term orientation in the ECB's monetary policy strategy.

Communicating about the intermediate variables that are part of the transmission mechanism does not imply that these variables are necessarily factored into the decision as pertaining to the secondary objective.[24] When designing its monetary policy, the ECB must ensure that the specific considerations supporting its actions can be clearly associated with its primary or secondary objectives. Similarly, calibrating instruments to stabilise financing conditions[25] must not imply that this stability is an end in itself. Moreover, some intermediate variables or target variables might be considered prerequisites for achieving the primary objective. For instance, financial stability or the absence of fragmentation are considered prerequisites for the efficient transmission of a single monetary policy within the euro area. In these cases, it is important to always make clear that the price stability objective is the ultimate goal and to clearly explain any inter-temporal trade-offs that may arise between inflation and other macroeconomic variables. This has always been clearly reflected in the ECB's monetary policy accounts (for a discussion on the monetary policy accounts, see Box 4).

2.2.2 Communicating about the inflation measure

In general, a unique target inflation measure facilitates clear communication with the public, thus fostering credibility and promoting accountability. The ECB's price stability objective refers to the general level of prices, which is measured using the harmonised index of consumer prices (HICP). By explaining its policy decision in terms of the euro area-wide inflation rate, the ECB is already facing a communication challenge, since people are more familiar with their national consumer price indices and these may at times deviate from the HICP.

To better gauge inflation pressures, central banks have always monitored a broad range of inflation measures when formulating monetary policy. The headline price index is a goal and yardstick for monetary policy, while underlying inflation measures – since they generally filter out transitory effects in headline inflation – serve as a guide when setting that policy.[26] By explaining why policymakers are (or are not) responding to deviations of headline inflation from the target, communicating about additional inflation measures can deepen the public's understanding of monetary policy decisions. This might also be confusing, however, since different measures of inflation do not necessarily develop in the same way and might even send out conflicting policy signals. In this respect, communication to the public would have to make clear that alternative inflation measures are not a substitute for the target inflation measure, and are thus not suitable for holding the central bank accountable in achieving its goal of price stability.

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24 In fact, some variables that are part of the transmission mechanism, such as employment, might fall under the secondary objective, whereas others, such as absence of fragmentation, do not.

25 See monetary policy account, meeting of 9-10 December 2020.

26 See Ehrmann et al. (2018) for a discussion of measures of underlying inflation and their ability to convey a less noisy policy signal.

The ECB and NCBs' listening events document the widely shared view that housing costs should be taken into greater account when measuring inflation (see Box 7). Currently, HICP inflation does not fully include changes in the costs of living in an owned dwelling. These costs represent a significant share of households' consumption in the euro area (about 13%, according to the national accounts). They are an important determinant of consumers' inflation perceptions and potentially contribute to the divergence of households' inflation perceptions from actual inflation.[27] The omission of owner-occupied housing costs from the HICP creates an important communication challenge. An HICP supplemented with owner-occupied housing costs, known as HICP-H, could co-exist for some time alongside the current HICP to allow monetary policymakers to take housing costs into account more explicitly in their deliberations. Publishing an HICP-H and communicating on its development, however, also comes with several challenges that require a communication strategy. For instance, transparency would call for providing a clear roadmap to accompany the announcement of the new index, specifying at each stage which index is being considered and how it features in the monetary policy discussion.

In general, when communicating with the public about the inflationary measure, the level of detail to include will depend on people's understanding of the monetary policy framework. With non-experts, communication efforts are best aimed at informing people about basic monetary policy facts such as the primary objective, the concept of inflation, the current headline inflation rate, and so on.[28] By contrast, conclusions derived from additional inflation measures could be explained to better-informed audiences to improve their understanding of the policy decision. "Layered" communication – whereby the existing expert-focused information is complemented by additional "layers" that make core messages more concise, more visual and more accessible for wider audiences – would address both needs as it allows for tailored messages (informing versus deepening understanding) to different audiences without omitting relevant information (see Chapter 3 for a comprehensive discussion of layering).

2.2.3 Communicating about monetary policy operations

The deployment of unconventional monetary policy tools requires explaining why, how and in which combination different instruments are used. Under unconventional monetary policy, the policy stance is determined by a combination of different instruments. For the strategy to be understood and in order to satisfy the legal requirement for proportionate action, it is important to explain why one mix has been chosen and not another. There are two types of communication that can achieve this. One approach stresses complementarities between instruments, which mean that a broad-based package can achieve more than a more extensive use of a single instrument. Another approach emphasises the potential side effects of each

27 Work stream on inflation measurement (2021); Zekaite (2020).

28 Coibion et al. (2019b), for instance, find no evidence that the effect of complex and detailed information from FOMC statements is more powerful than simply telling households what inflation has been or what inflation rate the central bank is targeting.

unconventional policy instrument. In this context, the instrument mix can reflect judgements about how to adopt the required stance to fulfil the primary objective without going beyond those steps that are necessary to achieve it. Such an approach – taking also side effects into consideration – is consistent with the need to respect the proportionality of the chosen measures.[29]

One important element of communication about monetary policy operations concerns the release of data regarding the precise use of instruments. With unconventional measures, the ECB is present in market segments where transmission of monetary policy is required. These segments lie outside the traditional short-term money markets. Understandably, this creates demands for transparency in order to maintain accountability with regard to operations and their goals. Market participants and the public at large need to be able to check that market operations are in line with the stated parameters and objectives, thus contributing to their credibility and increasing efficiency. The publication of rules and strategies for monetary policy operations should as far as possible bolster accountability while maintaining operational effectiveness and respecting legitimate confidentiality concerns.

In recent years the Eurosystem has progressively and significantly increased ex post transparency of monetary policy operations with regard to asset purchases and current accounts as well as the ECB and NCBs' disaggregated balance sheets. Over time, the ECB has moved from releasing data primarily on specialised wire services to publishing data on its website, making data on monetary policy operations more accessible to the wider public. In addition to the data, the ECB, through web-based publications[30], provides greater insight into the details of those operations and their rationale.The ECB publishes country-level information for public sector asset purchases on a monthly basis (bimonthly for the pandemic emergency purchase programme). For private sector purchases, it discloses sector, rating, country risk and collateral-type data semi-annually. To facilitate securities lending, the list of securities purchased is published on a weekly basis according to their International Securities Identification Number (ISIN).

Significantly greater transparency as regards asset purchases – for example by publishing very granular data – may only create noise and have a negative impact on the effectiveness of the monetary policy tool. For instance, publishing ISIN-level data on holdings or execution prices would not increase their informational content and could create more risks than benefits. For asset purchases, such disclosure could hamper programme implementation, distort market prices and play against the programmes' monetary policy objective. Disclosing detailed, disaggregated data about the securities purchased and publishing them in a centralised and comprehensive manner could allow market participants to work against the objectives of the Eurosystem, as they might draw potentially incorrect inferences about its purchasing strategy and adjust their own behaviour accordingly. Even publishing with a time lag might not sufficiently diminish these concerns.

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29 See monetary policy account, meeting of 3-4 June 2020.

30 Examples are the frequently asked questions related to its monetary policy operations, blogs, explainers, and Economic Bulletin articles and boxes.

The recent publication of new datasets on monetary policy operations is a positive step for transparency, but decisions about releasing data should factor in the safeguarding of the public interest as regards the Union's financial, monetary or economic policy. After the recent release of additional data on minimum reserve requirements, current account holdings and excess reserves at the national level, public disclosure of current account data can be considered to be adequate. The Eurosystem also publishes aggregated as well as national data on the two-tier exemption allowance system, a breakdown of exempted and non-exempted excess reserves and the unused exemption allowance. However, transparency on refinancing operations, as well as emergency liquidity assistance, should always factor in the public interest and the system's overall stability. Confidentiality is required with regard to individual counterparties and reduces the risk of a stigma that could diminish the efficiency of credit operations. Highly granular counterparty-level data could also jeopardise financial stability. The rules for access to monetary policy operations (including counterparty and collateral eligibility) are published under the relevant legal frameworks. Accepted collateral and its use are also disclosed in a transparent way.[31]

Designing the most appropriate communication regarding monetary policy operations is a dynamic process, since new instruments may be deployed as circumstances require. A new section of the ECB website provides comprehensive information on ECB liquidity lines with non-euro area central banks. Liquidity lines between central banks are important monetary policy instruments and the ECB's experience indicates that enhanced transparency strengthens their effectiveness.

[31] Eurosystem non-monetary policy activities are beyond the scope of this work stream. They are the responsibility of the individual NCBs and any actions to harmonise publication or increase transparency would need to be taken on a collaborative basis.

3 Effective communication and engagement with the wider public

This chapter details the Eurosystem's current monetary policy communications practices addressed to the wider public and offers suggestions for the future. The first subsection provides an overview of communication policies and tools which, since 1998, have developed within a rapidly-evolving communications landscape to reach their current form. Since these policies and tools have focused on expert audiences, there is a great deal of potential for further enhancing communication with the wider public and general interest media. The second subsection analyses key characteristics of the wider public in the euro area with an eye to building a better basis for more targeted and effective communication, while the third outlines the various channels through which the ECB and NCBs can reach citizens. The fourth subsection discusses the importance of economic and financial literacy, the education of the wider public and existing efforts across the Eurosystem to foster this.

3.1 Taking stock of the Eurosystem's communications

Since 1998, the Eurosystem's monetary policy communication has primarily targeted expert audiences such as financial market participants, academics, policymakers and specialised media, rather than the wider public. This emphasis has proved successful in explaining the Eurosystem's monetary policy decisions – and their underlying rationale – to market participants and other expert audiences (e.g. Barclays, 2017; see also Chapter 1). As a result, however, a large portion of the wider public had been unable to understand many of the Eurosystem's key communication products, such as speeches or the Governing Council's introductory statement to the press conference that explained monetary policy decisions. This difficulty was further compounded by the global financial crisis. Since then, the Eurosystem has expanded the number of monetary policy tools it uses and become more directly involved in crisis management measures. It has also been granted additional powers such as banking supervision, which operates through the Single Supervisory Mechanism. These changes complicate the task of communication, especially vis-à-vis the wider public.

The Eurosystem's monetary policy communication takes places within a media environment that has changed dramatically since 1998. Today's communications landscape is characterised by a 24/7 news cycle; the declining reach of traditional (print) media; more fragmented, polarised and activist audiences; the growing importance of direct communication channels such as social media; and increasing public scrutiny and demand for transparency. In a world where a wealth of information confronts a poverty of attention, central banks compete for attention to get their messages across to different audiences. In the euro area, these challenges are magnified by the incomplete nature of the EU polity. This is all the more relevant as we can no longer take for granted the idea – shared by many members of the central

banking and expert community – that central banks' raison d'être is obvious and needs no justification.

While the ECB's core monetary policy communication products have adjusted to events, their evolution has not kept pace with dramatic changes in the communications landscape. Since the last strategy review in 2003, the Eurosystem has introduced new products such as the monetary policy accounts and adapted to new technologies, for instance by making the ECB Economic Bulletin an online-only publication. It has also increased the number of channels through which it communicates. These include social media accounts on platforms such as Twitter, Instagram and LinkedIn (Korhonen and Newby, 2019), in addition to blogs and podcasts. These changes have proved successful. But they reflect an ad hoc approach that does not go far enough in a world that rewards readability, relatability and transparency. For example, key messages from the monetary policy decision press release and press conference are now published on social media. But the key monetary policy communications products themselves – the press release and the press conference – have remained largely unchanged since the Eurosystem's foundation.

For the Eurosystem, a fast-changing communications landscape brings with it both risks and opportunities. The Eurosystem's historical emphasis on indirect communication via traditional media has meant a heavy reliance on those media to translate its messages to the outside world. At the same time, the wider public's trust in the media as an institution has diminished (Edelman, 2021; Reuters Institute, 2020; Binder, 2017). Digital technology allows for direct, targeted communication with the wider public, for instance through social media channels. The Eurosystem has already made steady gains in this direction, but there is room for improvement. Coibion et al. (2019b) note that direct, targeted engagement with the wider public can bring substantial benefits, such as increasing knowledge about inflation and building trust in central banks. Making the most of such technologies can increase the effectiveness of the Eurosystem's monetary policy by boosting citizens' understanding of, and trust in, the Eurosystem itself and better anchoring their inflation expectations.

3.2 Building a basis for better communication

To design and implement more targeted and effective communication with the wider public, a better understanding of the attitudes, needs, and interests of people in the euro area, as well as their preferred channels of communication, is essential. The central goal that underpins efforts to improve communication, and the starting place for this analysis, is the extent to which the public trusts the ECB.

3.2.1 Public trust in central banks

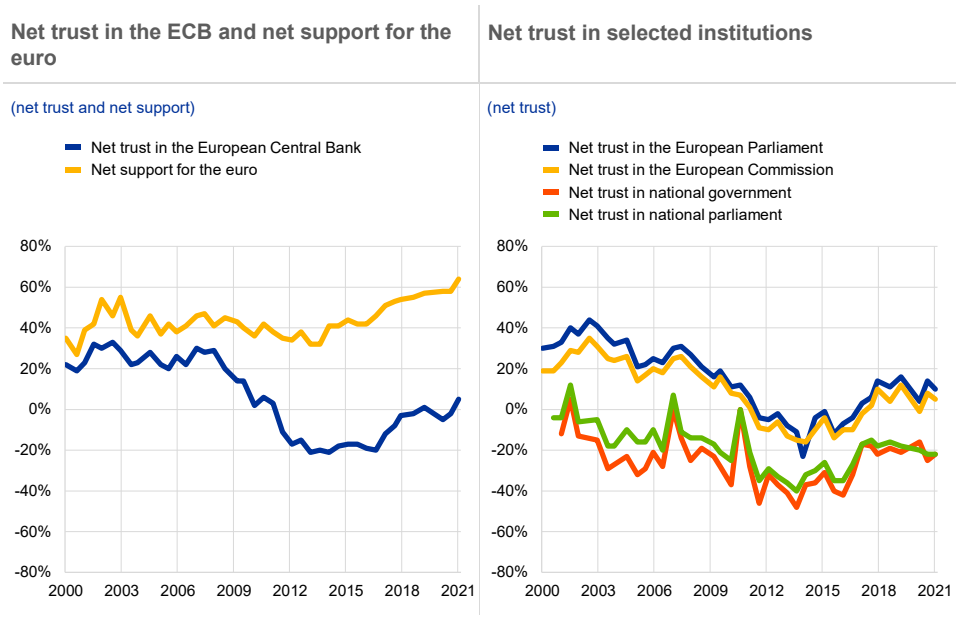
The ECB needs the trust and support of euro area citizens to successfully maintain price stability. A high degree of public trust in a central bank helps anchor inflation expectations and promotes trust in the currency (Christelis et al. 2020; Mellina

and Schmidt, 2018).[32] This in turn helps ensure the effectiveness of monetary policy. A trusted central bank is also likely to be better shielded from short-term political pressure and risks to its independence. Ehrmann and Fratzscher (2011), for instance, document that politicians' preference for growth over price stability increases when there are low levels of trust in the ECB amongst their national electorates. As Chapter 2 has noted, trust can be built through clear, transparent communication.

Trust in the ECB declined significantly during the global financial crisis and has since been slow to recover to previous levels. According to the European Commission's Eurobarometer survey, trust in the ECB experienced a marked decline that began in the autumn of 2008, and has recovered only moderately from its lowest point in 2014. By contrast, public support for the euro has remained steady, even in crisis periods (see the left-hand panel in Chart 3). A decline in trust towards institutions does seem to be a more generalised phenomenon and has been observed for other public authorities as well. Nevertheless, trust in the ECB fell more sharply than for other European institutions (see the right-hand panel in Chart 3), including the Commission, and recovered more slowly, failing to return to its pre-crisis levels.

Chart 3

Net trust in the ECB and net support for the euro; net trust in selected institutions



Source: Eurobarometer.
Notes: Net trust in a given institution is calculated by subtracting those who indicate no trust in that institution from those who indicate trust. Net support for the euro is calculated by subtracting those who do not support the euro from those who do support it. Figures are weighted. The composition of the euro area sample has changed over time. Most recent data observation: April 2021.

Since the global financial crisis, the decline in trust in the ECB may have been driven by the general deterioration in macroeconomic conditions, rather than inflation. In the period before the global financial crisis, lower levels of trust were correlated with higher inflation (Fischer and Hahn, 2008). Wälti (2012) and Bergbauer et al. (2020b) find that trust fell to particularly low levels in those countries that were

[32] Since the global financial crisis, levels of trust in the ECB and support for the euro have diverged.

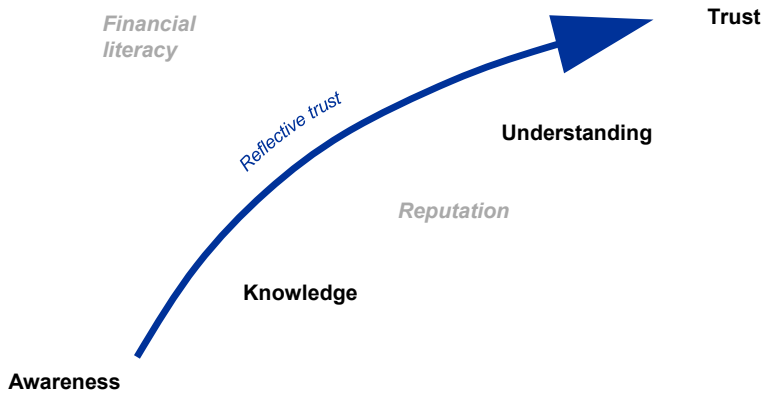
hardest hit by the sovereign debt crisis. Ehrmann et al. (2013) attribute the fall-off in trust to deteriorating macroeconomic conditions and the severity of the banking sector's problems, with which the ECB was associated. In contrast, Eurobarometer respondents who saw higher inflation as an important issue during this period had only modestly increased mistrust in the ECB and did not drive the overall decline in trust (see also Roth and Jonung, 2019; Farvaque et al., 2017).

Empirical evidence supports the notion that general economic conditions affect trust in the central bank. Bergbauer et al. (2020b) and Bursian and Fürth (2015) show that individual unemployment or a worse assessment of the national or European economic situation decreases trust in the central bank. Bergbauer et al. (2020b) conclude that citizens seem to assign greater responsibility to the ECB than to their national governments for the general economic situation and for their personal financial situation. It could also be argued that the ECB's role, as part of the "Troika", in designing and overseeing the related economic adjustment programmes may have partly contributed to a decline in trust, at least in some Member States. In others, as noted by Schnabel (2020a), the ECB's image and policies seem to have suffered from media-derived narratives that do not hold up under relatively straightforward, objective economic analysis.

Communication challenges arising from the increased complexity of unconventional monetary policy measures may also have contributed to a loss of trust. Trust levels can, in part, be seen as a measure of success for effective communication. With the advent of unconventional monetary policy measures, the benefits and side effects of new instruments became more challenging to explain and, when deployed, were often not fully understood by the wider public. The increased complexity of monetary policy has made communication more difficult at a time when recent crises, such as the coronavirus pandemic, have made Member States' economic convergence – which empirical studies show to be conducive to building trust in the ECB – a more challenging task (Schnabel, 2020b). Kaltenthaler et al. (2010) argue that a perceived lack of control, coupled with insufficient accountability, have fuelled distrust in the ECB.

The ECB cannot rely on "instinctive" or generalised institutional trust alone and should foster "reflective" trust instead. Instinctive trust occurs when an individual has a favourable opinion about the institution without knowing much about it. But surveys among euro area citizens reveal that very few are familiar with the tasks of the ECB or their NCB. Central banks should inspire and foster reflective trust by encouraging increased public knowledge and understanding of their institution, its mandate and its tasks (Angino and Secola, forthcoming). Despite the changing nature of what "trust" in a central bank actually means (see Haldane, 2017), the mechanism by which greater knowledge and awareness of the central bank leads to more understanding and, ultimately, higher levels of trust has been well documented (Ehrmann et al., 2013; Hayo and Neuenkirch, 2014; Mellina and Schmidt, 2018). The success of these efforts is also dependent on the level of financial literacy amongst the wider public (as discussed in further detail in Section 3.4). A visual depiction of building reflective trust is offered in Figure 1 below.

Figure 1
Mechanisms to build reflective trust



Source: ECB staff.

Building understanding can be an important contribution towards establishing trust in central banks (Haldane and McMahon, 2018). Subjective and objective knowledge about the ECB's mandate and tasks significantly strengthens trust in the institution (van der Cruijsen and Eijffinger, 2010; Kaltenthaler et al. 2010, Ehrmann et al., 2013; Hayo and Neuenkirch, 2014; Mellina and Schmidt, 2018). Similar results are observed with respect to euro area NCBs. For instance, Irish citizens with knowledge of the Central Bank of Ireland are more than three times likelier to trust the bank than those with no knowledge of it.[33] Similarly, German citizens' trust in the Deutsche Bundesbank is higher for those with a strong knowledge or interest in monetary policy.[34] Increased public awareness and general understanding of the ECB's mandate and tasks, as well as an understanding of how its actions benefit euro area citizens, may help to build trust in the ECB and the Eurosystem. This also holds true for the public's understanding of other policymakers and public and/or political institutions such as parliaments – with the European Parliament and national parliaments serving as prime examples – and of the wider political class as a whole.

3.2.2 Euro area citizens' knowledge of the ECB and the NCBs

Survey data about the ECB and the 19 NCBs reveal that, while euro area citizens have heard of the ECB and NCBs, they don't know exactly what they do. In addition, very few are familiar with monetary policy issues. The ECB's 2019 Knowledge and Attitudes (K&A) Survey[35] polled citizens across all 19 euro area

33 Central Bank of Ireland (RED C Survey, January 2020).

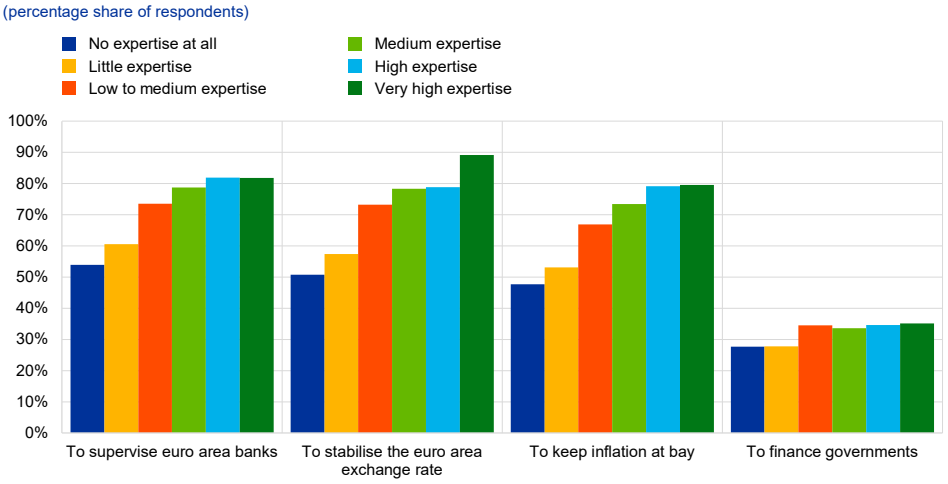
34 Deutsche Bundesbank (Forsa Survey, April 2020).

35 The K&A Survey provides insights into what people in the euro area know about the ECB and where they get this information. The survey covers the 19 euro area Member States, with a representative sample of the population in each. It started in 2015. The wave cited here took place in December 2019, with 15,536 participants across all 19 euro area Member States.

countries. The Survey found that, when asked to select the ECB's tasks and objectives from a list of possible choices, 69% of respondents ticked "supervising euro area banks". Although 63% of respondents also chose "keeping inflation at bay", a considerable number also selected tasks that are outside the ECB's mandate. These include stabilising the euro exchange rate (67%) and financing governments (31%). When controlling for economic knowledge, respondents with higher levels of economic and financial expertise were more likely to indicate that a task listed was associated with the ECB (see Chart 4).

Chart 4

Knowledge of the ECB's tasks and objectives (selected items) broken down by the respondent's degree of economic/financial expertise



Source: ECB K&A Survey, December 2019.
Notes: The degree of economic and financial expertise is an indicator derived from a battery of questions related to respondents' educational background and the nature of their work (if linked to economic and financial matters), investment behaviours, etc.

The Eurosystem's online Consumer Expectations Survey (CES) from May 2020, as described in Box 5, confirms and supplements the K&A Survey's findings. The CES, which covers six euro area countries (Belgium, Germany, Spain, France, Italy and the Netherlands), reveals that the wider public's understanding of the ECB's main objectives and responsibilities is still relatively limited. Fewer than one-third of respondents were classified as having relatively high knowledge scores, with younger consumers and those with low levels of education scoring particularly poorly. The CES also confirms that higher levels of knowledge (and trust) are generally associated with lower overall inflation expectations.

National-level surveys[36] concerning the ECB and NCBs' tasks confirm that citizens' assumptions and expectations about central banks vary. For instance, while most French and German respondents consider banking supervision and/or preserving financial stability to be among the ECB's main tasks, they also include stability of the euro exchange rate and granting loans to governments on the list.

[36] Surveys relating to public perceptions about central banks, like those of Deutsche Bundesbank (Forsa Survey, April 2020); Banque de France (CSA Survey December 2020-January 2021, Internal Panel, 2021); Central Bank of Ireland (RED C Survey, January 2020); De Nederlandsche Bank (Kantar Survey, October 2019); Národná banka Slovenska Internal Survey, May 2020).

Banking supervision or regulation is also attributed to the NCBs in the survey countries (Germany, Ireland, France and Slovakia). Dutch citizens think that the central bank should play a key role in supervising banks and ensure a safe and secure financial system. For German respondents, safeguarding price stability is also seen as one of the most important tasks of both the Deutsche Bundesbank and the ECB. In Ireland, a substantial percentage of people expect the central bank to influence rising insurance premiums and house prices. Overall, surveys show that citizens in different euro area countries have varying expectations of central banks.

According to these surveys, central banks are often seen as bureaucratic and increasingly out of touch. Some NCBs are perceived as lacking independence; being dependent on the ECB or the national government of the country concerned. In a Deutsche Bundesbank survey, even the ECB itself was seen as being dependent on the various national governments.[37] In citizens' panels with focus groups such as those conducted by Banque de France, in which participants are informed about the role of central banks, they were surprised to hear how monetary policy affects their daily life and satisfied to learn about their central bank's roles, powers and independence (Banque de France, 2021). However, to continue to be interested and concerned about monetary policy, they wanted to feel involved in policy debates.

3.2.3 How people hear about the ECB and the NCBs

A better understanding of how people hear about the central bank is essential to optimising the ways in which the ECB and NCBs connect with the wider public. Evidence suggests that different information channels can influence how people perceive past and future inflation (Conrad et al., 2020). Traditional media remain the dominant channels through which people hear about the ECB and NCBs, with television ranking higher than print media and radio. In the K&A Survey, these channels kept the same ranking between 2015 and 2019, with a slight decline over time (see Chart 5). Television is the most popular source in every age group, particularly among people aged 65 years and over. In 2019 the internet experienced the biggest increase and currently ranks fourth among media types. Social media is the least common channel mentioned across all age groups. Television holds the top rank in individual countries as well, except for Luxembourg, where newspapers come first. The strong increase in the use of the internet as a source of information is particularly noticeable in Spain, Italy, Lithuania, the Netherlands, Austria, Portugal, Slovenia, Slovakia and Finland. Social media rank lowest in all countries.[38] Results from the CES show that 57% of respondents receive information about the ECB through indirect media sources such as television and newspapers, while 11% receive their information directly from ECB sources, for example its website and social media channels (see Box 5).

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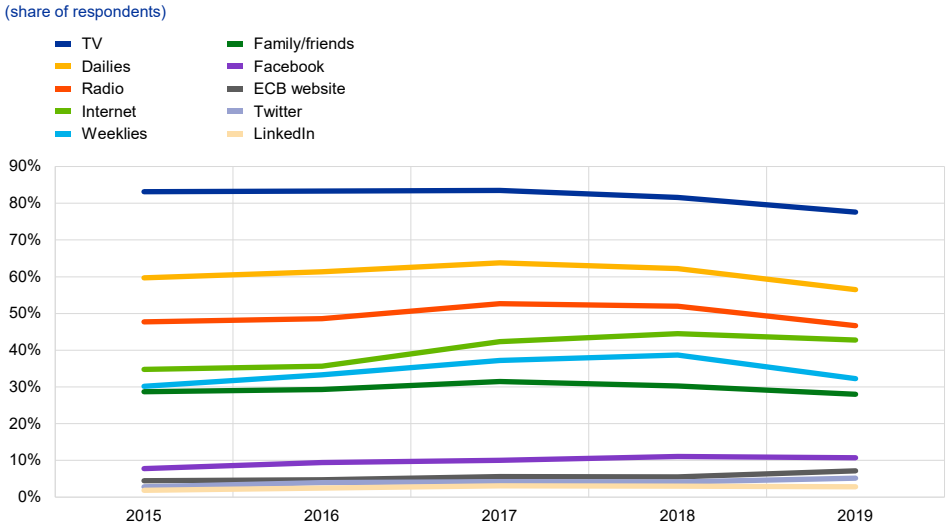
37 Deutsche Bundesbank (Forsa Survey, April 2020).

38 That said, the Reuters Institute Digital News Report 2020, which covers 40 countries across the globe, shows that in recent years online news has overtaken television as the most frequently used source of news in many of the countries covered in its survey. At the same time, it notes that printed newspapers are in decline and the use of social media, after experiencing a sharp rise, has levelled off.

Chart 5

Sources of information about the ECB and NCBs



Source: K&A Survey, 2015-2019.
Note: Respondents were asked the following question: "Where have you heard of the ECB or the [name of National Central Bank]?".

3.2.4 General orientations for improving communication

The lack of public awareness and knowledge about the ECB and Eurosystem's tasks, combined with the different needs of various audiences, call for clearer and more targeted communication. Communication activities are spread across the ECB and NCBs. However, while the ECB and the NCBs communicate their objectives and tasks to the public in various forms, evidence shows this communication does not reach most members of the public. Results from the CES show differences in knowledge across groups. For instance, Box 5 shows that younger people have less knowledge of the ECB, which may indicate a need for more targeted messaging to this group, online and via social media.

The complexity of central bank communication could contribute to low public attentiveness and receptiveness to it. As Haldane (2017) puts it, "95% of all the words central banks utter are inaccessible to around 95% of the population".[39] Chart 6 indicates the length of monetary policy statements, and the difficulty of the language used in them, at the ECB and the Federal Reserve System. It reveals that readers need between 12 and 16 years of formal education (i.e. at least a high school diploma, and possibly a master's degree) to understand them. It also shows that the Eurosystem's monetary policy communication has become more complicated over time. This can be partly attributed to the policy response to the pandemic. But it underscores the challenge the Eurosystem faces in explaining its monetary policy decisions to wider audiences.

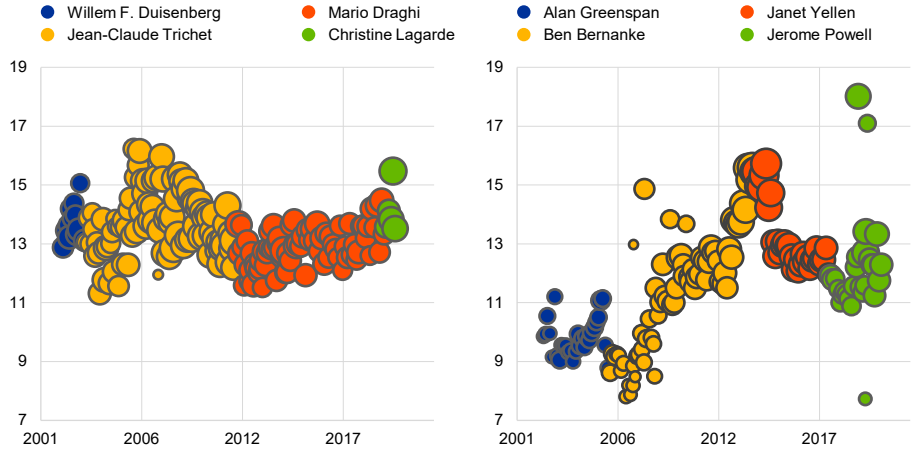
[39] Andy Haldane, then Chief Economist at the Bank of England, speaking at the ECB Central Bank Communications Conference, 2017.

Speeches by Executive Board and Governing Council members can play an important role in making information on monetary policy more accessible. Speeches can focus on specific topics such as the challenges facing the ECB and the Eurosystem, but they can also highlight how the ECB's primary objective of maintaining price stability is relevant to citizens' daily lives. By their very nature, and provided the timing, topic and audience are appropriately chosen, speeches can powerfully, proactively and flexibly address the narratives of the day – underscoring or downplaying them as required. One famous instance of this was former ECB President Mario Draghi's speech in July 2012, in which he stated that "within our mandate, the ECB is ready to do whatever it takes to preserve the euro" (Draghi, 2012).

Chart 6

Length of ECB/FOMC monetary policy statements and difficulty of language employed

(Flesch-Kincaid Grade Level; number of words; left-hand panel: ECB; right-hand panel: FOMC)



Source: Updated data (February 2021) from analysis in Coenen et al. (2017).
Notes: The figure depicts the length of the ECB's introductory statements and the FOMC monetary policy statements, measured by the number of words (indicated by circle size). The difficulty of the language employed is measured using the Flesch-Kincaid Grade Level score (which indicates how many years of formal training are required to understand the text, based on the length of its sentences and words).

As a general orientation of how to capture the public's attention more effectively, communication could focus on how the ECB's monetary policy benefits all of the people it serves. It could be delivered in forms that minimise the costs of processing this information.

The ECB and the NCBs could communicate more effectively on why their monetary policy matters for people and how it benefits both their daily lives and the economy. If there are competing demands for their attention, and price stability is not of great concern for them, the wider public could rationally choose not to pay attention to monetary policy communication – as noted in Chapter 1. The literature on rational inattention concerning monetary policy communication suggests that the public is more likely to pay attention to central bank messages if they believe that doing so will benefit them and that it is not very costly to do so (Binder, 2017). Results from NCB surveys (Banque de France and the Central Bank of Ireland, among others), taken together with the results from the various listening events during the strategy review, confirm that people are not very interested in knowing what a central

bank does, or its policy details. Instead, they want to know how these policies affect their daily lives. Moreover, they would like to hear about subjects that affect them directly, relating to their interests and their situation. These include interest rates – mortgage rates in particular – but also financial products, the cost of living, the unemployment rate, housing costs and the environment.

Responding to the wider public's communications needs means the Eurosystem has to strike a careful balance. It needs to effectively explain to the public what is and is not part of its mandate. Failing to do so could generate false expectations about what the ECB is able to achieve within the limits of its mandate, which ultimately could lead to frustration and a loss of public trust. At the same time, Eurosystem communication could benefit from additional efforts to clarify the connection between ECB policy and its effects and the issues that people care about most, such as improved economic conditions, jobs, the fight against climate change or technological innovations in payments. Although the Eurosystem is only one voice among others in this regard, making that link allows it to engage in a conversation with hard-to-reach audiences, overcome rational inattention and foster a connection that otherwise would not exist.

Effective communication means simpler, "layered" and relatable language (e.g. storytelling, narratives) with more visuals and interactive content. Central bank communication is complex (Coenen et al., 2017). To be more accessible to a wider audience, its language can be made simpler. More accessible communication and storytelling combined with visuals may aid in this. In an online experiment with a representative sample of the UK population, Bholat et al. (2019) find that the deployment of more understandable language increases public comprehension more than the inclusion of visuals.

- **Layered communication.** A recent trend in central bank communication is information published in a "layered" format (see Box 6). This format combines text and visuals to cater to different audiences. For example, the first layer provides an easily accessible overview of the main messages for readers who are glancing quickly through the content, while the second layer caters to those seeking more detailed information. The ECB applies layering to several of its publications, an approach that could also be extended to certain monetary policy communication products.

- **Storytelling.** Communication that builds on storytelling and examines what, why and how the ECB communicates from the audience's point of view may make it easier for people to take an interest in the first place and, ultimately, to better understand central bank information. To be more effective, the audience should be able to relate to the story (Bholat et al., 2019). The "stories" that central banks tell about their role and actions should be based on the aspects of policy decisions that the public can directly experience in their everyday lives.

- **Visuals.** Communicating with visuals aids comprehension. This has a major advantage over text from the audience's perspective. Research shows that the human brain processes images 60,000 times faster than text, and that 90% of the information transmitted to the brain is visual (Wyble et al., 2011). The ECB

website provides “explainers”, some of which explore relevant topics and terms with simple text, videos and infographics. The Central Bank of Ireland offers an “Animated Explainer Series” and the Banque de France offers similar material on a variety of topics. The Deutsche Bundesbank has been successful with short videos, some of them animated, which can be viewed on the its website and YouTube channel. A video on cash circulation, for example, has been viewed more than 300,000 times since its publication.

The “speaker” and the venue matter as much as the message. To be closer to the public, central bankers need to show a human face.[40] People tend to trust a person from their local community significantly more than official speakers or journalists.[41] The Eurosystem already engages with the wider public through a greater number of speakers beyond the circle of Eurosystem policymakers. For instance, employees act as central bank “ambassadors” in the “Back-to-School programmes” offered by the ECB and some NCBs. They also serve as amplifiers of key messages (with the Bank of Finland, for example, encouraging its employees to use social media); this adds a personal touch to the message delivered.

Stronger regional outreach would be beneficial. Survey results indicate that there are significant differences in knowledge across countries (see Box 5), suggesting that the ECB’s roles and responsibilities need to be more uniformly, and well, understood across the different euro area Member States. Being closer to euro area citizens also means engaging in honest two-way dialogue, talking but also listening and learning about the issues and concerns of citizens and the organisations representing them. This needs to be a long-term process. Survey results show that citizens would like central bankers to make appearances on television.[42]

Overall, central bank communication towards the wider public is more effective when it is precise and simple. However, there can be trade-offs between increased communication, simplification and the need to convey central bank messages correctly. The ECB and NCBs do not need to swamp the wider public with multiple types of often technical information. There is little call for simplifying complex topics for which the wider public has shown little interest in the first place, compared with the specialised analysis and information which is often sought by expert audiences (see Section 2.2.3 on the use of specific instruments). In addition, simplification may eliminate important information and nuances that provide for a more accurate, albeit more complex, account of monetary policy and, importantly, of the scope and limits of ECB action. Thus, simplification could potentially give the public a false sense of certainty and understanding of the central bank’s power. This in turn could set the wider public – and those market participants that might resort to such simplified communication – down one particular path, further risking the central bank's credibility if that path does not lead in the desired or expected direction (Istrefi, 2019).

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40 Surveys demonstrate that people mainly use television for their news consumption. However, an internal ECB analysis found that television interviews by ECB Executive Board members between January and November 2020 accounted for only 31% of their total interviews given during that period.

41 See Edelman Trust Barometer 2021.

42 Banque de France (Internal Panel, 2021).

Box 5

Public knowledge about monetary policy, trust and inflation expectations: insights from the CES

The CES can shed light on consumers' knowledge of monetary policy and how such knowledge is acquired, which can shape the level of trust in the central bank and enable more effective communication. This Box summarises some insights about these issues from six euro area countries (Belgium, Germany, Spain, France, Italy and the Netherlands) based on pilot data gathered since the beginning of 2020. Some data were collected in May 2020, a time of considerable public debate on the economic fallout from the first wave of the pandemic in Europe and the associated fiscal and monetary policy responses. It is therefore a particularly interesting period in which to gauge the public's knowledge of the ECB.

Survey results highlight the public's still relatively limited understanding of the ECB's main objectives and responsibilities. Consumers were asked to assess the accuracy of seven statements regarding the ECB. Those who correctly identified at least five were classified as having relatively high ECB knowledge (see Table A for details). According to this definition, 28.1% of CES respondents were classified as having relatively high knowledge of the ECB (first column of Table A). Less than half (46.9%) correctly identified the ECB's mandate to maintain price stability. Consumers are, however, better informed about who is in charge at the ECB than about its mandate, with 55.1% of respondents correctly identifying the current ECB President.[43]

Table A

Public awareness about the ECB

(percentage)

	High ECB Knowledge	Correct: ECB Mandate	Correct: ECB President
Percentage	28.1	46.9	55.1

Source: Weighted May 2020 CES data.
Notes: Respondents were asked to assess the correctness of seven statements about the objectives and responsibilities of the ECB. The statements were that the ECB was responsible for: (1) achieving an unemployment rate of at most 5% in the euro area; (2) setting the income tax rate in the respondent's country; (3) Achieving an inflation rate that is close to but below 2% in the euro area; (4) Achieving an economic growth rate of at least 3% in the euro area; (5) Keeping interest rates constant across time; (6) supervising large European banks; (7) deciding on the government budget and spending in the respondent's country. Statements (3) and (6) are correct, while statements (1), (2), (4), (5) and (7) are inaccurate characterisations of the ECB's responsibilities and objectives. Consumers who assess at least five of the seven statements correctly are classified as having relatively high ECB knowledge. A correct response to the ECB mandate means correctly identifying the ECB's objective of keeping the inflation rate close to, but below, 2%.

Survey evidence suggests that both direct and indirect channels of communication can boost knowledge significantly. Respondents were asked whether and how they had obtained information on the ECB in the past month.[44] Results from May 2020 indicate that 72.7% of respondents had obtained some information on the ECB in the past month (27.3% had obtained no information at all in that period, see column 2 of Table B). In February 2021, a month in which public debate about the monetary policy responses to the pandemic shock had subsided, the share declined to 56%. Most consumers (57%) get their information about the ECB solely via indirect information sources (TV, radio, newspapers, non-ECB websites), while a considerably smaller portion (11%) also use direct

43 Respondents were asked to choose who they think is the current ECB president, from six randomly-presented options (Christine Lagarde, Mario Draghi, Jean-Claude Junker, Kristalina Georgieva, Ursula von der Leyen, their local NCB Governor or "don't know").

44 Specifically, respondents were asked if they had obtained any information in April 2020. Out of six multiple choices, i.e. newspapers and magazines, TV and radio, the ECB's website and publications, the ECB's social media accounts, non-ECB websites and social media, and other sources, respondents were asked to select which information source they had used in the previous month.

communication channels such as the ECB website or social media channels (see columns 3 and 4 of Table B). The right-hand panel of Chart A shows that indirect communication channels are much more widely used than direct ones in all six euro area countries surveyed. In addition, on the basis of these first CES results there is no evidence to support the view that indirect channels are associated with more noisy information or less knowledge acquisition than direct channels.[45]

Table B

ECB knowledge and information sources

Euro area averages and demographic breakdown

(percentage of respondents)

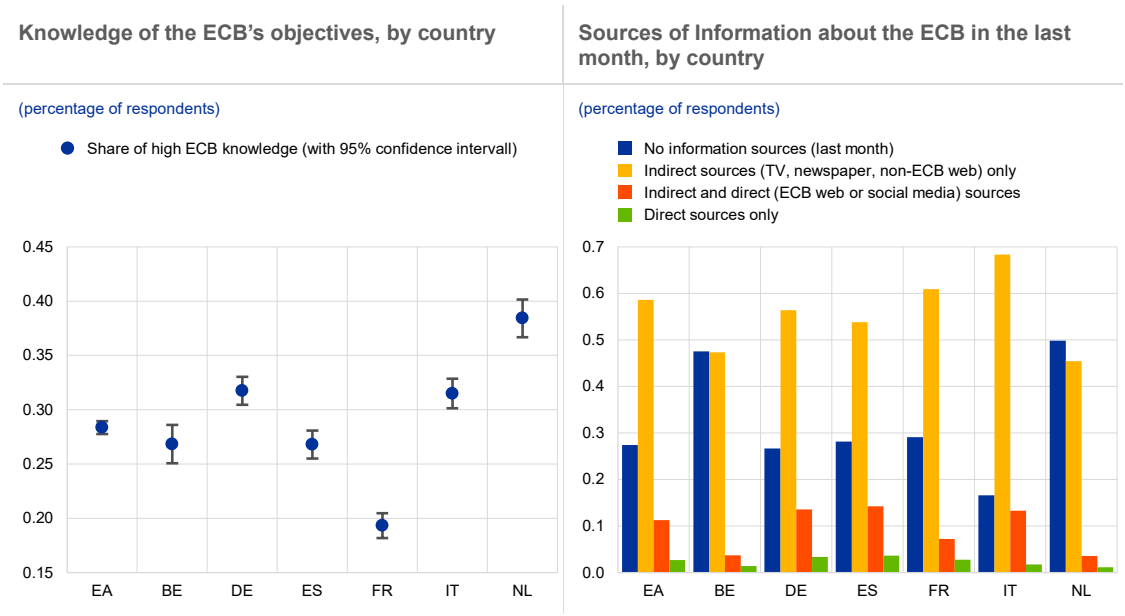
	High ECB knowledge	No Information	Indirect sources only	Indirect and direct sources	Direct sources only
Euro area Average	28%	27%	57%	11%	3%
Age					
18-34 years	20%	33%	46%	13%	5%
35-49 years	28%	30%	54%	11%	3%
50-64 years	33%	26%	62%	9%	2%
65+ years	34%	18%	68%	12%	1%
Gender					
Women	20%	34%	53%	10%	3%
Men	37%	20%	64%	13%	3%
Education					
Primary	17%	35%	50%	11%	3%
Secondary	26%	31%	55%	10%	3%
Tertiary	33%	23%	60%	12%	3%
Financial Literacy					
Low	24%	29%	54%	12%	3%
High	48%	19%	69%	9%	2%
Income Quartile					
I	17%	40%	47%	8%	3%
II	24%	29%	55%	11%	3%
III	29%	24%	60%	12%	3%
IV	43%	16%	67%	14%	3%

Source: Weighted May 2020 CES data.
Notes: High ECB knowledge corresponds to five or more correct responses. Demographic characteristics are obtained from the background module of the CES when respondents enter the survey. Financial literacy is assessed using a standard set of four multiple choice (right/wrong/don't know) questions about individuals' financial knowledge. In total, four concepts are tested: (1) compound interest for savings accounts, (2) real interest rates, (3) risk diversification, (4) interest compounding for loans. Low financial literacy indicates fewer than or the same number of correct responses as the median participant. Indirect information sources refer to newspapers and magazines, TV and radio, websites and social media accounts not run by the ECB, or other sources. Direct channels refer to information obtained through the ECB's websites and publications or its social media accounts (e.g. Twitter and LinkedIn).

[45] Future work and waves of the CES will aim to elicit further insights on the role of information channels in shaping knowledge acquisition in the euro area and on how the level of knowledge might influence the choice of information channels.

Chart A

ECB knowledge and information sources



Sources: The chart uses weighted CES data from May 2020.
Notes: The left-hand panel displays the share of respondents with high ECB knowledge scores (5 to 7), i.e. above the median. ECB knowledge is based on a question from May 2020 and is computed as the total number of correct responses out of the seven statements described in Table A. Confidence bands for finite population statistics are computed using the assumption of random sampling also for the non-probabilistic respondents in Belgium and the Netherlands. Confidence intervals are computed using critical values from the normal distribution, and robust standard errors are derived from a first-order Taylor linearisation. The right-hand panel indicates the information sources that respondents had used to receive information about the ECB in the past month. In May 2020, respondents were asked about these information sources in a multiple-choice question: *In the past month, have you seen or heard information about the European Central Bank (ECB) from any of the following sources?* For each item a binary response (yes/no) was possible, with randomised order of the response items.

Knowledge about the ECB is very unevenly distributed across the euro area population. Younger consumers, female consumers and those with lower levels of educational attainment are generally less knowledgeable than consumers who are older or who have an advanced university degree (see Table B). For example, only 20% of 18 to 34-year-olds and 17% of consumers with a primary degree have a high knowledge score. Such divergence in the degree of knowledge about the ECB points to the potential relevance of more targeted communication strategies that could better address and explain its role to these groups. Knowledge about the ECB also varies significantly across euro area countries, pointing to a need for better targeted and more coordinated communication strategies at national level. The share of consumers with a relatively high knowledge score is lowest in France (19%), but it rises to 38% in the Netherlands, which has the highest overall level of ECB knowledge among the six countries included in the CES pilot waves (see Chart A, left-hand panel).

Survey results point to enhanced trust associated with better overall public knowledge about the ECB's roles and responsibilities, which may help anchor inflation expectations. Consumers' overall level of trust in the ECB is positively associated with their level of knowledge about its roles and responsibilities (see Chart B, left-hand panel).[46] This correlation clearly does not imply a causal link between knowledge about and trust in the ECB, since consumers who are more trusting could also be more inclined to acquire knowledge by, for example, visiting the ECB's website. Moreover, other unobserved consumer attributes – such as their overall level of social awareness and

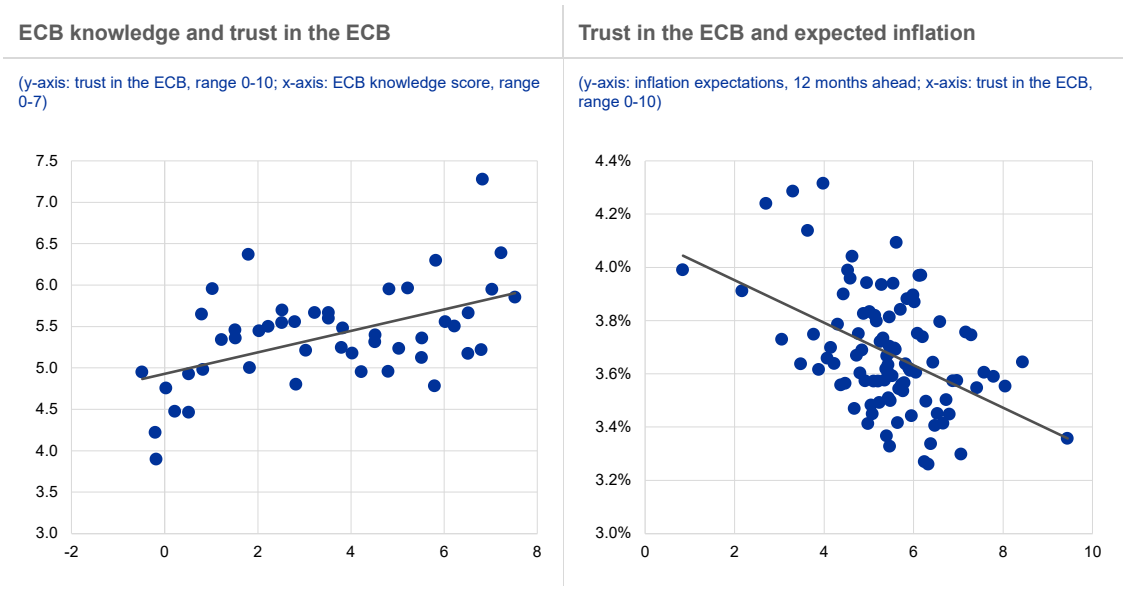
[46] In the CES, trust is measured using an 11-point scale from 0 (No trust at all) to 10 (Trust completely).

social engagement – may also drive this positive association between knowledge and trust. Controlling for demographic characteristics, exposure to both direct and indirect sources of information was found to be positively associated with trust, with consumers who are exposed to direct sources of information being, on balance, more trusting compared with those exposed to indirect sources only.

In the CES results, higher trust is generally associated with lower overall inflation expectations (see Chart B, right-hand panel). Household inflation expectations are typically well above both official inflation statistics and the ECB's stated inflation aim (which was below, but close to, 2.0% over the medium term at the time of the survey). These divergences are particularly evident for less well-educated consumers or those with lower financial literacy scores, as well as for the lowest income quartiles of the income distribution. Christelis et al. (2020) find that a higher level of trust in the ECB is associated with higher inflation expectations when the latter are below the ECB's inflation target, and vice versa, meaning that greater trust seems to better anchor consumers' inflation expectations. Further research is needed to understand better the underlying reasons for the persistent divergences between consumers' inflation expectations and official inflation measures, and how central bank communication could potentially influence the public's expectations. The above research and the initial results from the CES suggest that central banks may contribute to better anchoring household inflation expectations through institutional credibility and public trust by investing in improving public knowledge about the ECB's main role and responsibilities.

Chart B

ECB knowledge, trust in the ECB and inflation expectations



Source: Weighted CES data.
Notes: The left-hand panel uses May 2020 data and takes country-level differences into account. ECB knowledge is based on a question from May 2020 and is computed as the total number of correct responses to the seven statements described in Table A. Negative values are a result of the netting out of country-specific effects. The right-hand panel accounts for individual and survey-month fixed effects using April 2020 to February 2021 data. Inflation expectations for 12 months ahead of the interview date are obtained from an open-ended question and have been winsorised at the second and 98th percentile to account for outliers.

Box 6

Layered communication: examples from the Bank of England and the Bank of Finland

The Bank of England offers an interesting example of how to communicate monetary policy in an innovative way. The MPC decided to extend its meetings from one-and-a-half days to roughly one week. This allows for all policy decision-related material to be jointly presented in a single day. The material presented at the time of the press conference includes the announcement of the policy decision, the Monetary Policy Report (if one is published at the time) and the minutes summarising the MPC discussion. The goal was to concentrate all the material relating to the meeting in a single moment in time to maximise its communication impact.

The Bank of England complements content directed at expert audiences with more accessible communication that appeals more to the wider public. The three documents released have relatively technical content that is not accessible to general audiences. But they are accompanied by a streamlined monetary policy summary that uses simpler language and a profusion of infographics. Communication is supplemented by the use of social media. Additionally, the Bank has been testing a narrative approach in which the decisions and related analysis are presented as stories the wider public can relate to and could directly experience in everyday life; see Bholat et al. (2019).

The ECB's approach differs in that the concentration of communication material is less pronounced: the press release and introductory statement are released on the day of the decision, while the Economic Bulletin is released two weeks later and the monetary policy account after four weeks – with a reduced emphasis on reaching less sophisticated audiences. This stands in contrast to the ECB's approach with other publications, such as its Financial Stability Review, where the use of layered content has been well received by users (see Section 3.3.4).

The Bank of Finland's use of layered communication for its Economic Bulletin is similar to that of the Bank of England. The Bank of Finland's Bulletin is released four to six times a year on a dedicated publications website (www.bofbulletin.fi). Each Bulletin is a compilation of between five and 12 articles that focus on euro area monetary policy, the outlook for the Finnish economy or the stability of the financial system. The content is layered, i.e. different user categories are served with a single publication. For readers who are just glancing through, there are accessible summaries and visual content. For information-seekers, there are landing pages on each topic and downloadable charts. Longer articles are provided for expert audiences.

The Bank of Finland Bulletin benefits from additional efforts to make its content more accessible. Each Bulletin contains an editorial by the Governor or Vice Governor as well as an accessible summary. The website also includes blog posts designed to provide additional information on topical matters and engage in a dialogue with stakeholders. These efforts, together with accessible summaries, are intended to make central bank policies more understandable to a wider audience. The goals of the publications website are to promote knowledge of the economy and to enable staff to engage in dialogue with different audiences. The latter goal is supported by the wide use of social media in connection with the release of the Bulletin. Each issue is supplemented with infographics and a short video suitable for social media.

3.3 Getting through to the wider public: which channels are best?

3.3.1 The road ahead

Traditional means of communication, such as television and newspapers, remain the most important sources of information for European citizens, but there is an increasing shift towards consuming news online. Social media channels are playing an increasingly important role as a primary source of information for certain segments of the population, especially the younger age cohorts. According to a global study by the Reuters Institute (2020), Facebook and other social media platforms are now used on average by around one-third (31%) for local news and information, with young people in the main preferring to access information via social media.[47] Looking ahead, to ensure that its messages continue to reach wider audiences, the Eurosystem should adapt its communication efforts to these shifts in the communication landscape, while acknowledging that some traditional forms of media remain influential.

3.3.2 Communication with specialist and non-specialist media

The Eurosystem has well-established channels for communicating monetary policy to specialised media using press conferences, press releases, speeches, publications and research. These media outlets feature frequent in-depth interviews with key policymakers, which are effective in reaching financial markets and an interested, more highly-educated public. According to an internal analysis of interviews of ECB Executive Board members between January and November 2020, 33% of interviews were given to financial and business media, 27% were conducted with established national newspapers and magazines, while 20% aired on nationwide general-interest television and 11% on radio stations.

General-interest outlets reach larger audiences and could allow central banks to reach the wider public more effectively. For example, tabloid newspapers tend to have a wider circulation than broadsheets and are consumed by different audiences. Television continues to play a prominent role in informing citizens. For instance, depending on the country, daily news formats as a whole can reach several million people.[48] Unfortunately, television channels often do not cover monetary policy news, unless major policy decisions are announced. With few exceptions, monetary policymakers rarely find a forum on television. In this respect, Blinder's (2018) assessment that "Twitter and streaming videos, trendy as they are, remain pretty imperfect substitutes for network television coverage" remains valid.

47 Reuters Institute, Digital News Report 2020.

48 In Germany, for instance, the evening news shows of the three main television channels ARD, ZDF and RTL have on average about 20 million viewers combined.

To increase its impact, monetary policy communication should be better tailored to general-interest media. Eurosystem communication should be more understandable, relatable and relevant. To appeal to general-interest media outlets, communication should primarily focus on simple key messages about monetary policy and the economy, rather than on high-frequency information of interest only to experts. At the same time, its delivery and presentation should be adapted towards a simpler and more visual style. To be better able to place their messages, central banks – and central bankers – should approach general-interest media more actively. Moreover, from the ECB's perspective, sufficient coverage of all euro area Member States is important. While specialised media tend to have direct contact with the ECB in Frankfurt, more general-interest media are based in the various euro area countries, a factor that would need to be taken into account to achieve a more balanced approach.

3.3.3 Towards greater engagement with the wider public

Despite the continued relevance of established media, there has been a profound shift in the communication landscape. The readership and reach of newspapers and magazines, as well as the viewership of major television stations, have declined as people increasingly consume news and entertainment via online streaming services. Younger audiences in particular are increasingly turning to the internet and social media to obtain their information and entertainment (see Section 3.2). In recent years this fragmentation of the media landscape, together with the simultaneous disintermediation of information flows, has enabled central banks to communicate directly with the wider public through a variety of social media channels. An analysis by Coibion et al. (2019b) confirms that direct communication is stickier than information relayed indirectly by media and can thus have a greater impact. But direct communication can also pose new risks, given an online public that is significantly more interconnected, activist and polarised.

The ECB and the NCBs make use of the various social media channels in their communication (Korhonen and Newby, 2019), as shown in Table 2. Counting the followers of the Eurosystem's Twitter accounts is one way of gauging the interest of the wider public. But the numbers are still modest, especially as a percentage of the population as a whole. This suggests that monetary policy themes are not particularly high on the list of the wider public's topics of interest – or at least the subset of the population that uses Twitter. The ECB, for example, has some 635,000 followers as of July 2021. The Deutsche Bundesbank has over 31,000, and the Banque de France just under 40,000. The Federal Reserve System, for its part, has just over 765,000. For the ECB and NCBs, the numbers of followers on other social media platforms, such as LinkedIn, are generally lower than for Twitter; an area, therefore, where there is room for improvement. The fragmentation of the online space along language lines tends to set a natural limit to growth in the absolute numbers of followers.

Table 2

Central banks' social media channels and followers

(thousands)

Central bank	Twitter	Facebook[49]	Instagram	YouTube	LinkedIn
European Central Bank	635.6k	NA	30.3k	54.2k	315.4k
Nationale Bank van België / Banque Nationale de Belgique	4.5k	0.8k	0.7k[50]	0.4k	24.7k
Deutsche Bundesbank	31.2k	7.9k	7.1k	6.8k	20.4k
Eesti Pank	1.6k	4.9k	NA	0.2k	0.3k
Central Bank of Ireland	14.6k	0.2k	NA	1k	55.5k
Bank of Greece	NA	3.7k[51]	NA	NA	10.8k
Banco de España	18.5k	NA	NA	NA*	65.4k
Banque de France	38.8k	11.1k	5.8k	10.8k	135k
Banca d'Italia	16.8k	NA	NA	9.4k	88.3k
Central Bank of Cyprus	NA	NA	NA	NA	4k
Latvijas Banka	9.1k	3.7k	0.2k	0.5k	3.3k
Lietuvos bankas	1.8k	23.1k	0.6k[52]	1.1k	17.3k
Banque centrale du Luxembourg	NA	0.6k	NA	0.1k	7.8k
Central Bank of Malta	1.5k	1.1k	0.3k	0.1k	4.8k
De Nederlandsche Bank	19.8k	2.7k	0.5k	0.9k	46.4k
Oesterreichische Nationalbank	4.6k	NA	4.1k	0.6k	6.2k
Banco de Portugal	10.5k	0.2	5.4k	2.6k	96.3k
Banka Slovenije	1.2k	0.5k	NA	0.03k	4.6k
Národná banka Slovenska	1.3k	7.5	2.4k	0.4k	5.9k
Suomen Pankki - Finlands Bank	11.2k	0.6k	1.3k	0.7k	16.6k
Federal Reserve System	765.1k	33.7k	NA	69.1k	73.3k
Bank of Japan	31.5k	1.4k	NA	2k	NA
Bank of England	337.3k	37.1k	4.9k[53]	23.8k	184.1k
Bank of Canada	190.2k	13.2k[54]	0.9k[55]	8k	87.6k
Reserve Bank of Australia	51.6k	8.4k	2.7k	4.9k	93.4k
Reserve Bank of New Zealand	11.3k	3.1k	1.5k	3.8k	25k
Swiss National Bank	8.4k[56]	NA	NA	4.7k	9.1k
Sveriges Riksbank	13.4k	8.1k	NA	1k	18.5k

Notes: Figures as of 20 July 2021. "*" denotes that the account exists, but the number of followers is not published.

49 For Facebook, all figures refer to the number of users who "follow" the page (i.e. not "likes").

50 Refers to the Instagram channel of the Nationale Bank van België / Banque Nationale de Belgique Museum.

51 Refers to the Facebook page of the Bank of Greece Museum.

52 Refers to the Instagram channel of the Lietuvos bankas Money Museum.

53 Refers to the Instagram channel of the Bank of England Museum.

54 Refers to the Facebook page of the Bank of Canada Museum.

55 Refers to the Instagram channel of the Bank of Canada Museum.

56 Refers to the English-language Twitter account of the Swiss National Bank.

When communicating on different channels across the Eurosystem, the singleness of the underlying message has to be maintained: the importance of ensuring price stability. But certain aspects of key messages need to be adapted to individual channels, since each may require a different tone or content to be effective. Instagram is a good example. It is the prime vehicle for visual storytelling and communication, and is popular among young people who respond better to a certain style of language (including the use of emojis). It also engages proportionately more women than other platforms – a target group that the central banking community has thus far reached to only a limited extent. When choosing the channel through which to communicate key messages, clear awareness of the target audience needs to be considered (e.g. traditional media for older people, social media for younger people).

Looking ahead, more analysis is needed as to which channels would best serve to reach different stakeholders. A more strategic use of social media could help direct readers to Eurosystem websites, publications and policy-relevant content. Survey data can help in this regard. For instance, in a survey on the Deutsche Bundesbank's Instagram channel, 93% of participants said they wanted to see more content on the channel and were primarily interested in monetary policy and banking supervision topics.

In general, content-related interaction with the users of social media platforms is important and can generate greater engagement with the community. One example has been the use of Twitter Q&As by ECB Executive Board members. Greater interaction with users, though not without risks, could improve reach on all platforms.

3.3.4 Innovative use of existing communication channels

3.3.4.1 Websites

Most central bank publications are still technical and targeted solely at professional audiences, but this is changing. Although the ECB published over 20,000 pages of publications in 2019 alone, many of those pages were in the form of highly-specialised reports that were understandable only to experts. Layered communication could enable the Eurosystem to repurpose the texts and charts in their publications to reach different audiences. The ECB Financial Stability Review is a good example of a layered publication where a technical analysis is supplemented by simplified key messages and infographics (see also Box 6). A more attractive, visual and digestible presentation of key findings and messages can help readers better – and more quickly – understand the information provided. To reach the wider public, the goal should be to tell interesting and relevant stories about the economy and monetary policy, and why they matter for people. The precise format and presentation – for instance, infographics, explainers, short blog posts, detailed articles or full reports – should be approached with this goal in mind.

3.3.4.2 Reaching out

More direct and personal communication with the wider public can be achieved through events for specific target groups. Examples include the Deutsche Bundesbank's Euro20+ events, where students of all disciplines discuss central bank topics in workshops with the members of the Deutsche Bundesbank Executive Board, and central banks' open house days, where several thousand visitors can learn about their workings. Another way to connect with wider audiences is through presentations or town hall meetings. It seems particularly important that central bank officials leave the area in which they are located and take a country or even euro area-wide approach. One example here is the "Meet the Bank of Italy" initiative. This was designed to dispel doubts and popular misconceptions among the wider public and to answer questions in an open, simple and direct manner on issues related to the tasks and functions of the Banca d'Italia and the Eurosystem.[57] Similar events could also be organised by central bank officials for the euro area as a whole, as in the case of the ECB's listening events (see Box 7 below).

It is not only direct contact with the wider public that is important; regular exchanges with companies of all sizes are also crucial. One example here is the ECB's Corporate Telephone Survey, which provides for regular contact and dialogue with leading companies in the euro area. These interactions contribute to the ECB's economic analysis, as they are a source of information on companies' outlook in terms of economic activity and prices (Elding et al., 2021). Another example is the experience of the Bank of England's regional agencies, which are in contact with some 9,000 companies. Tuckett et al. (2020) conclude that the intelligence gathered from these conversations is uniquely useful for both analysing and communicating monetary policy, as insights gleaned from these encounters help the Bank shape its policy into a narrative that the public can understand and to which it can commit. The NCBs are best placed to take a leading role as national Eurosystem ambassadors. They speak the local language and are attuned to their respective national debates and preferences.

National and European politicians could also act as powerful channels through which the ECB's message can be conveyed and amplified to reach wider audiences. Constructive exchanges, both in structured and informal formats, in line with the variety of institutional settings across the euro area, could also help build understanding and trust (see Box 8 below).

Box 7

Listening events related to the ECB/Eurosystem strategy review

As part of the ECB's strategy review, European citizens and civil society organisations (CSOs) were invited to share their views on price stability, economic issues, global

[57] The first cycle of 60 meetings was held in 2018-19 in 17 cities. The meetings were built around four main themes: financial stability and consumer protection related to banking and financial services; innovation in payment systems, FinTech and crypto assets; statistics for economic analysis; and monetary policy and price stability. During each event, a panel of Bank of Italy and external experts and journalists interacted with members of the public.

challenges and public outreach with the ECB and the Eurosystem NCBs. This Box focuses on listening events with CSOs organised by the ECB and the NCBs and held between October 2020 and March 2021. It discusses the key findings and asks whether listening events could become a structural feature of Eurosystem communication.

The ECB and NCB listening events were an opportunity to gather a wide range of perspectives and engage with public stakeholders in a structured manner. The CSOs invited to the events were involved in promoting the environment, sustainability, social welfare, business, religion, culture and transparency. Some events had a specific focus on students in order to collect their views on the strategy review.

The events sparked discussions on four main topics: price stability, economic issues, global challenges and communications. Participants pointed out that although unduly high inflation was not a primary concern, there was a perception that prices, such as for groceries or housing, have increased disproportionately. Many participants urged that the measurement of euro area inflation should take housing costs more into account, including homeowners' costs. While participants emphasised the merits of price stability as the ECB's mandate, they had differing views on how it should be defined. Some sought a clearer definition, but also others showing that they did not understand the ECB's mandate very well. Other participants felt that the ECB's price stability goal lacked credibility because of repeated undershooting in recent years. Many expressed support for past and current monetary policy measures. There was also criticism, however, as some participants saw these measures as ineffective and had concerns about perceived side effects such as asset-price bubbles and the creation of unsustainable debt. Several participants added that the ECB should not overuse monetary policy to solve problems that could be better addressed by fiscal policy.

Many participants were concerned about the general economic situation in the euro area and cited the fragility of the economic model, mounting global challenges and – against the backdrop of the pandemic – increased uncertainty. Their concerns included weaker future economic growth, higher levels of national debt and rising unemployment. Participants also saw trends such as digitalisation, demographic change, deglobalisation and climate change as having the potential to transform the economy. The pandemic was seen as a catalyst in some respects, especially regarding digitalisation.

The topic of climate change formed an important part of the discussion on whether the scope of the ECB's mandate should be broadened. Concrete proposals differed, depending on people's opinions as to the appropriate role of a central bank. Some urged the ECB to commit to only buying green assets, while others considered that the risks of climate change should be better reflected in banking supervision guidelines. In general, there was no consensus for a further expansion of the ECB's tasks and tools, and many cautioned against the ECB taking on too many responsibilities. Some participants interpreted central bank independence as an obligation to keep to a narrow price-stability mandate and refrain from becoming involved in issues perceived to fall within the purview of other policymakers.

The listening events demonstrated that central banks need to explain their role better and use clear language and relatable examples to engage with the wider public. While participants appreciated the ECB and Eurosystem's communication efforts to date, they highlighted that for large portions of the public – who do not have adequate levels of financial literacy – simpler communication was required for messages to be understood. They added that central banks needed to explain their role better. Suggestions for improvement included using social media and holding regular events with

various stakeholders. The work stream on monetary policy communications also organised an informal listening event for journalists in which reporters underlined the need for the ECB to improve its communication with the public. They noted that more accessible language, fewer speeches, a more uniform message from Governing Council members, and background briefings would better relay the ECB's key messages and help journalists and, through them, the public, digest complex communication.

Overall, the ECB and NCB listening events were well received and helped the Eurosystem engage more fully with the wider public, reach new audiences and establish new relationships that can lay the foundation for future listening and engagement. There was a clear expectation among participants that the ECB and NCBs should continue to listen to and engage with civil society on a regular basis. The Eurosystem's experience with listening to date suggests that it could help provide a direct, regular and structured channel through which the Governing Council can tune into, and respond to, the views and concerns of European citizens and wider civil society.

Box 8

ECB and NCB communication with policymakers on central banking activities

Effective communication with policymakers is important for all central banks, especially in times of crisis. For an independent central bank, explaining its policies to citizens' elected representatives and listening to their views is a prerequisite for accountability. Effective communication with policymakers outside the monetary policy sphere, for example with fiscal authorities, also allows for a better mutual understanding of interactions with other policy areas. And lastly, other policymakers can act as multipliers, channelling views to a wider audience than the one that usually follows central banking issues.

The ECB and the NCBs in the Eurosystem operate under special political, economic and institutional circumstances. The ECB performs its tasks in the interest of the monetary union as a whole and is part of the multi-level institutional structure of the EU. Under the Treaty, the ECB is primarily accountable to the European Parliament. Acting in parallel, Eurosystem NCBs have an important role to play in explaining the ECB's decisions to national policymakers and are accountable at national level for their non-monetary policy tasks.

The scale and complexity of the measures adopted by the ECB in response to recent crises have led to heightened attention from and increased scrutiny by the public and its elected representatives in the European Parliament, and enhanced communication between central bankers and politicians. Over the years, the ECB has developed a strong and comprehensive accountability framework with respect to the Parliament that goes beyond the Treaty requirements (Fraccaroli et al., 2018). The ECB President's participation in the quarterly public hearings of the European Parliament's Committee on Economic and Monetary Affairs are the cornerstone of this framework and a key public communication event at EU level.

The ECB's accountability to the European Parliament is supplemented with regular reports to the Council of the EU and the European Council, representing Member State governments. These fora are key actors in the institutional setting of the European monetary union, given the continued national responsibility for fiscal policies. Such interactions are instrumental in enhancing

the flow of information, especially during crises, promoting mutual understanding of each other's policy views and in crafting coordinated policy responses to the new challenges.

In addition to interacting with national governments in EU fora, ECB representatives occasionally exchange views with national parliamentary committees. In addition, members of the ECB's Executive Board regularly take part in the European Parliamentary Week and the Interparliamentary Conference on Stability, Economic Coordination and Governance in the European Union, both of which bring together national and European parliamentarians. These exchanges are supplemented with informal visits by parliamentary delegations to the ECB.

NCBs also have an important role in explaining the ECB's decisions to national policymakers. While messages ought to be consistent across the euro area, given the ECB's area-wide mandate, NCBs play a pivotal role in tailoring messages to Member States' economic conditions and national debates, in their local languages. Moreover, NCBs have an intimate knowledge of how Member States' citizens assess the economic situation from a national perspective. As a result, they are well-placed to foster a better understanding of ECB policies and the underlying reasoning among national officials and the citizens they serve. In addition, messages from and exchanges by and with the NCBs can provide valuable insights into national policy issues and debates in a context where economic policies in the euro area remain decentralised. Finally, NCBs might also carry out tasks that are not part of the functions of the ESCB and for which they remain accountable to national authorities.

A survey of central banks in the Eurosystem shows that NCBs engage in a range of formal and informal exchanges with national parliaments and are subject to similar legal requirements for parliamentary scrutiny of central bank activities.[58] Thus, most Eurosystem members are legally required to submit annual reports to parliament. In many euro area countries, parliaments have the power to summon central bank representatives (see Chart A for an overview of legal requirements). While most NCBs appear to provide written or oral statements to parliaments on topical issues on a regular basis, formal hearings at the executive level seem less frequent. Central banks appear to engage mostly on monetary policy and financial stability issues on such occasions (see the right-hand panel in Chart B). Transparency around these exchanges is often ensured through live-broadcasting or web streaming of formal hearings (see left-hand panel in Chart B for an overview of closed-door versus public hearings in 2019 and 2020). The overall number of parliamentary testimonies and hearings reported by NCBs declined from 2019 to 2020; in contrast, the number of ad hoc exchanges increased, which may reflect heightened interest in central banks' views and economic analyses by parliamentarians during the crisis.

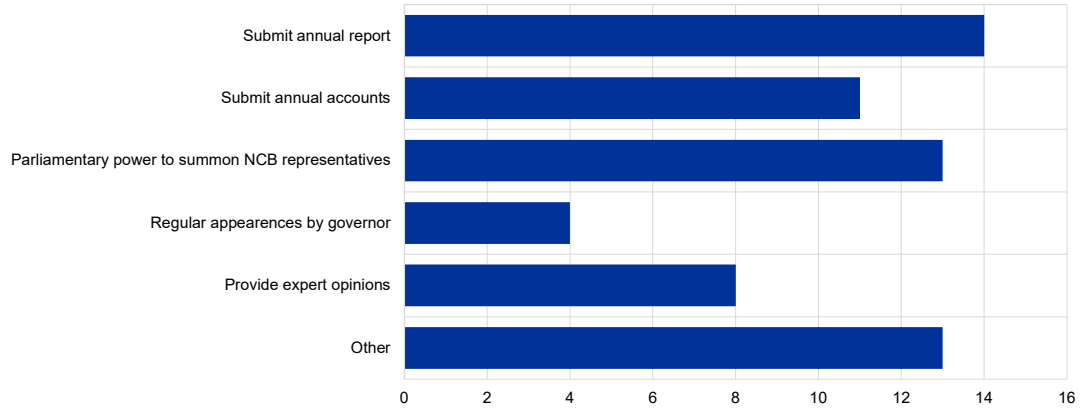
NCBs' interactions with national governments and other national policymakers appear less formalised than their parliamentary relations. While some NCBs reported that they held regular exchanges with government representatives, others indicated that they tended to hold more ad hoc meetings on topical issues.

[58] The survey was conducted for the work stream on monetary policy communications and circulated to NCBs through members of the work stream in December 2020, with responses received the following month.

Chart A

Legal requirements for NCB interaction with national parliaments

(number of NCBs that mentioned a specific requirement)

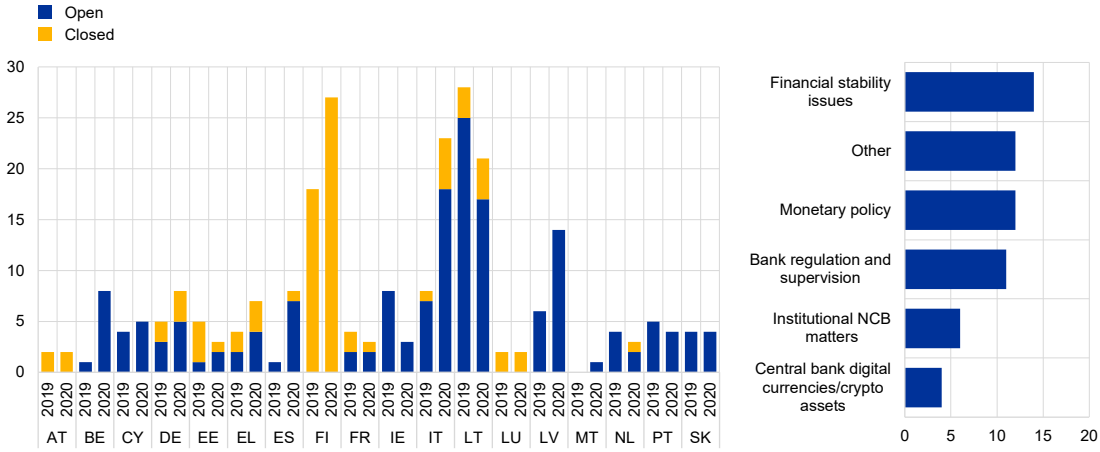


Source: Internal survey of 19 Eurosystem NCBs as part of the work stream on monetary policy communications, for which 18 responses were received.

Chart B

Frequency and topics of NCB interaction with national parliaments in 2019 and 2020

(left-hand panel: number of hearings; right-hand panel: number of NCBs mentioning the topic as a domain of interaction)



Source: Internal survey of 19 Eurosystem NCBs in the context of the work stream on monetary policy communications, for which 18 responses were received.

3.4 Financial literacy and education

3.4.1 Knowledge gaps

Effective communication rests on the strong connection between the sender of a message and its recipient. While effective central bank communication requires timely and targeted messages by the sender, recipients need to be equipped with a sufficient level of background knowledge to absorb those messages. The ECB's CES finds a high correlation between knowledge about the ECB and consumers' overall

level of financial literacy (see Box 5 for an in-depth discussion on the CES). Monetary policy communication reaches its limits when it tries to speak to parts of the population that lack basic economic and financial knowledge.

Ample survey evidence suggests that the wider public exhibits important knowledge gaps in terms of core economic and financial concepts. The Organisation for Economic Co-operation and Development (OECD) and its International Network on Financial Education (INFE) recently coordinated a survey on adult financial literacy in 26 countries, 12 of which were OECD member countries. The survey covered various aspects of basic financial knowledge, behaviour and attitudes. It found that individuals across all 26 countries scored, on average, only 12.7 out of a potential 21-point total financial literacy score (OECD/INFE, 2020).[59] The average across participating OECD member countries was only marginally higher (13.0). On people's ability to understand core aspects of monetary policy, the findings across all 26 countries are particularly worrisome – only 59.9% of respondents understood the concept of inflation, just 58.9% grasped the idea of risk diversification and only 26.3% correctly understood the concepts of simple and compound interest. There are also cross-country differences in financial literacy. These can be attributed to various factors, including a combination of the country's level of economic development and its educational attainment and quality levels, age differences, and financial experience such as stock market participation, the importance of the private pension pillar, etc. (Cupák et al., 2021; D'Alessio et al., 2020).

Financial education, which is provided by all major central banks, has the potential to bridge these gaps in financial knowledge – particularly through "teachable moments". Empirical analysis confirms that financial education is generally effective in reducing this gap. Greater effects can be observed if education is more intense, that is, when it is repeated and when it occurs at the right teachable moment – the moment when recipients are open to learning something new (Kaiser and Menkhoff, 2017). The right, and most effective, teachable moments for financial education could be when young adults are planning to purchase a house; when elderly people are thinking about how to increase their pensions (for example through reverse mortgages); or when someone receives a large inheritance. More generally, wider economic events – for instance, financial crises – can also serve as teachable moments because people tend to pay more attention to financial and economic issues during these episodes. To reach people at the right teachable moment, it could be helpful to involve employers, banks or financial consultants.

Scarce resources mean that financial education measures should focus on the most promising target groups:

- **Young people:** Recent evidence from the United States and Austria emphasises the central role of young people, given that they have relatively low levels of financial literacy, are less financially organised (despite the modern financial

[59] The participating countries included eight euro area countries (Germany, Estonia, France, Italy, Malta, Austria, Portugal and Slovenia) and six other EU Member States (Bulgaria, Czech Republic, Croatia, Hungary, Poland and Romania). See the OECD/INFE 2020 International Survey of Adult Financial Literacy.

technologies at their disposal), and tend to exhibit more risky and less forward-looking financial behaviour (Lusardi et al., 2017; Fessler et al., 2020). Since they are the consumers, debtors and investors of the future, special efforts are warranted. Financial education measures at the lower secondary school level, preferably as a fixed part of the school curriculum, would help educate this age cohort.

- **Women:** The OECD and INFE find that "women's financial weaknesses are due to higher constraints that women face with respect to men in accessing economic and financial opportunities" (OECD/INFE, 2013). Women's longer life expectancies, together with high divorce rates and non-continuous work histories, may lead to them being affected by poverty in old age (Greimel-Fuhrmann and Silgoner, 2018). Measures targeted at women also need to take into account the special time constraints affecting mothers.

- **The financially excluded:** The ever-increasing use of digital technology to manage personal finances means that large segments of the population could be left behind. These include people who do not have a bank account or have no digital devices, especially elderly people and migrants. Reaching those with no financial education is a particular challenge.[60]

3.4.2 Importance of financial literacy for monetary policy and financial stability

Lack of knowledge of core concepts such as inflation or interest rates matters for monetary policy communication. It implies that people will have difficulty understanding the ECB's mandate, the instruments the central bank uses to reach its goals, and its decisions. For example, Rumler and Valderrama (2020) show that households with relatively higher levels of inflation literacy tend to have lower, and hence more accurate, short-term and long-term inflation expectations (see related discussion in Chapter 1). It is likely that an individual's level of financial literacy is also influenced by their cognitive abilities (D'Acunto et al., 2019). If inflation expectations matter for monetary policy, so too does financial literacy.

Financial literacy also matters in terms of financial stability and financial inclusion. It encompasses the population's knowledge of financial concepts, inflation, investment risk, financial numeracy, the ability to make informed judgements and effective decisions about how to use and manage money, as well as an awareness of financial products and services. Financial education can enable individuals to make better, more informed decisions and allow them to choose financial products that are well-suited to their needs and risk profiles. It can also enable them to challenge financial service providers to develop products that truly respond to their needs. This should have positive effects on both investment levels and economic growth.[61] The

[60] The Global Partnership for Financial Inclusion is a leading international forum discussing financial inclusion issues.

[61] "The importance of financial education", OECD Policy Brief, July 2006.

EBA Report on Financial Education 2019/20 sees “financial education as a complement to financial conduct regulation and supervision of the financial system” (European Banking Authority, 2020). There is also a correlation between financial literacy and consumer protection. While consumer protection has a primarily reactive function – that is, individuals and small and medium-sized enterprises tend not to ask for help until they have actually experienced problems – financial education serves as a precautionary line of defence. The higher the level of financial literacy, the more consumers are able to make smart and sound decisions on lending, borrowing and investing.

Monetary authorities in several countries have a formal or informal mandate to promote financial education and literacy as well as consumer protection. For example, the mission statement of the Oesterreichische Nationalbank explicitly emphasises the importance of financial literacy: “We actively promote economic and financial literacy in Austria.” The Banque de France’s mission statement mentions the provision of “practical services to people in severe financial difficulty”, which includes resolving household over-indebtedness and providing access to basic banking services. The Central Bank of Ireland’s mission includes “working to ensure that the financial system operates in the best interests of consumers and the wider economy”. The Bank has a Consumer Protection Directorate that works towards this end. Even in the absence of a formal mandate, financial literacy feeds into a variety of elements that directly influence a bank’s ability to safeguard price stability and financial stability. Many NCBs have indeed been actively engaged in promoting financial literacy.

3.4.3 Efforts to enhance financial literacy and education

NCBs are already making active efforts to educate the wider public, but these have not focused on monetary policy topics. During the first quarter of 2019 the Eurosystem/ESCB Communications Committee surveyed Eurosystem members in an effort to analyse the relationship between NCBs and the education system in their respective Member States. Overall, the NCBs had completed a total of 167 education-related initiatives of varying characteristics. But only around 20% of those efforts focused on monetary policy, with most concentrating on individuals’ personal finance management.

In a large majority of cases digital platforms were used to channel NCBs’ educational efforts. This strategic focus has implications for these efforts and their target groups. First, digital platforms are more readily accessible to younger segments of the population. Second, face-to-face contact or printed material may be more accessible than digital channels to older segments. Among the various types of initiative, the results also reveal that speeches – delivered either at events hosted by NCBs themselves or at an external venue – have not to date played a prominent role in promoting financial education.

The Eurosystem has implemented a number of educational and awareness initiatives, including the Generation €uro Students’ Award, museums and visitors’ centres. The Generation €uro Students’ Award is directly connected with the

dissemination of knowledge about monetary policy among young people. The museum concept – for example in the Netherlands, France, Belgium, Italy, Germany and Greece – has evolved into a truly educational tool in the form of an open visitors' centre that offers workshops and other educational measures. These visitors' centres convey targeted content to their audiences. There is room to further explore how they might be integrated into a broader strategy, in combination with other outreach initiatives such as school visits, webinars and efforts to engage younger audiences by means of more fun, interactive formats.

Most educational initiatives target the initial stages of schooling and are notably less pronounced in later phases. A smaller, albeit significant, share of training initiatives targets an adult/professional audience, particularly professional cash handlers (cashiers, etc.). This leaves segments of the elderly population largely ignored at a time when the arrival of online banking services makes this group particularly vulnerable. The main conclusion reached by this survey is that there is considerable room for improvement.

Looking ahead, advancing digitalisation also in core central bank functions offers key new opportunities for financial education. New payment patterns by Europeans, as outlined in the ECB's 2020 "Study on the payment attitudes of consumers in the euro area", call for a new approach to financial education at a time when digital communication channels offer innovative educational opportunities. In this context, the potential introduction of a digital euro could provide an additional teachable moment in which hard-to-reach audiences become more open to learning key financial concepts.

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