

Central Bank Forward Guidance Handle With Care

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Summary

- Central banks use forward guidance about the future direction of their policy interest rate to enhance the effectiveness of monetary policy.
- Monetary policy works not only by influencing short-term interest rates but also by affecting expectations of future short-term rates and thus the yield curve, asset prices, economic activity and inflation. Forward guidance can usefully shape these expectations if used appropriately.
- Central banks increased their use of forward guidance during the Great Recession and the COVID-19 pandemic. Some observers have criticized its use during the pandemic, arguing it contributed to the sharp rise in inflation.
- Central banks used extraordinary forward guidance in these two episodes of severe economic downturns to provide additional monetary policy stimulus when policy interest rates were constrained by their effective lower bound (ELB). Such extraordinary forward guidance entails the central bank providing a commitment to hold the policy rate at a low level for a prolonged period.
- Extraordinary forward guidance can be effective in providing additional monetary stimulus by putting downward pressure on yields, but must be implemented in a flexible and nimble manner.
- There is a trade-off between the flexibility of the forward guidance commitment and its impact. Some central banks did better than others in managing this balance during the pandemic. Transparent communications about forward guidance can increase its credibility and improve this trade-off.
- Forward guidance should be the preferred monetary policy tool for use during a severe economic downturn; it is more flexible and has fewer legacy effects than other extended tools, such as quantitative easing.

Executive Summary

Central banks have used forward guidance about the future direction of their policy interest rate more actively in recent decades to enhance the effectiveness of their monetary policy. Monetary policy works not only by influencing current short-term interest rates but also by affecting expectations of future short-term rates and thus the yield curve, asset prices, and the evolution of economic activity. These expectations are shaped by central bank communications, and forward guidance can make an important contribution.

This essay critically assesses the increased use of forward guidance in different forms by central banks over the last 15–20 years spanning the period of the Global Financial Crisis and subsequent Great Recession to the COVID-19 pandemic. The focus of the analysis is on extraordinary or “Odyssean” forward guidance which was used by central banks in these two episodes of severe economic downturns, as an extended monetary policy tool, often in conjunction with similar tools, such as large-scale asset purchases, to provide additional monetary policy stimulus when policy interest rates were close to or at their effective lower bound (ELB). Such extraordinary forward guidance normally entails the central bank providing a state or time-dependent commitment to hold the policy rate at a very low level for a prolonged period.

From this assessment, the essay draws three important conclusions. The first is that extraordinary forward guidance can be effective in providing additional monetary stimulus by putting downward pressure on yields throughout the guidance. For smaller economies, such as Canada, the impact on yields is less, especially further out the curve. However, such forward guidance must be implemented in a flexible and nimble manner, especially when the economic outlook is highly uncertain and subject to change, in order to maintain the credibility of the central bank’s inflation target.

Second, there is a fundamental trade-off between the flexibility of a forward guidance commitment and its impact or effectiveness. The impact depends on the extent of the commitment, primarily its duration, as well as how it is specified and communicated because these attributes will influence the credibility of the guidance. Conversely, flexibility enables the central bank to alter its commitment as economic circumstances—particularly the outlook for inflation—change. Such flexibility creates uncertainty about the bank’s commitment to a specific policy path, thereby dampening its impact. Choosing a balance between the strength of the commitment and maintaining the flexibility to change the path is the fundamental challenge with the use of forward guidance and

some central banks clearly managed this balance better than others during the pandemic, resulting in different inflation outcomes.

Third, clear and transparent communications about the objective, implementation, and anticipated effects of forward guidance increase its credibility and strengthen both the impact and flexibility of the forward guidance, thus improving the trade-off between the two. The forward guidance commitment should be consistent with achieving the central bank's objective, namely price stability. For this purpose, central bank communications should use the macroeconomic projection to explain how the forward guidance commitment would help the central bank achieve its mandate.

This analysis suggests that during a severe economic downturn when the policy rate is constrained by the ELB, well-implemented forward guidance should be the preferred extended monetary policy tool because it is more flexible and has fewer legacy effects than other extended tools, such as large-scale asset purchases (LSAPs). Central banks do not, however, have an established framework to follow for such Odyssean forward guidance. Much of what has been done in the past has typically been developed "on the fly" during the two most severe economic crises in recent decades. A more deliberate and systematic approach should be taken to educate financial market participants and the public about its purpose and use. Such an approach would strengthen the credibility of the forward guidance and improve the trade-off between the impact of forward guidance and its flexible application to changing economic circumstances.

1. Introduction

Central banks have used forward guidance about the future path of their policy interest rate more actively in recent decades to enhance the effectiveness of their monetary policy.¹ Monetary policy works not only by influencing current short-term interest rates but also by affecting expectations of future short-term rates, and thus the yield curve, asset prices, and the evolution of economic activity. These expectations are shaped by central bank communications and forward guidance can make an important contribution. In addition, when the policy rate is at the effective lower bound (ELB), forward guidance has been used more intentionally as an unconventional or extended monetary policy tool to provide additional stimulus.

Different forms of forward guidance were adopted by major central banks over the course of the COVID-19 pandemic. Some observers attribute the sharp rise in inflation in 2022 to almost double-digit rates, which have not been seen in 40 or more years, to the use (or misuse) of forward guidance or of other extended monetary policy tools. They argue that the misuse of forward guidance was significant and central banks should be held accountable.² The prominent economist Lawrence Summers (2022) recently voiced his concern that the Federal Reserve had “lost its way” in its public communications. A specific concern expressed by Summers is that the US central bank feels constrained to adhere to the policies it promised, even when those policies prove unwise in light of subsequent conditions.

Some major central banks have admitted that, in hindsight, too much monetary stimulus was provided in response to the economic fallout from the pandemic, including via forward guidance.³ They have also argued, in their defense, that they followed an appropriate policy of “least regrets” risk management given the magnitude of the adverse economic shock, the uncertainty around its impact, and the prevailing dire economic

1 The Bank of Japan is widely seen as the first central bank to implement forward guidance in 1999 as part of its zero-interest rate policy. See, for example, Shirai (2013).

2 Some claim that the Australian Government’s decision not to re-appoint Reserve Bank of Australia’s former Governor Philip Lowe was a consequence of his forward guidance in 2021, in which he repeatedly stated that the policy rate was unlikely to rise until 2024.

3 Two of the European Central Bank’s (ECB) governing council members recently expressed the opinion that the ECB’s forward guidance may have locked that central bank into keeping its policy rate unchanged for too long given post-2020 inflationary pressures. See Arnold (2022). A similar criticism has been levied against the US Federal Reserve; see Summers (2022) and Lee, Boocker and Wessel (2023).

outlook.⁴ Further, they maintain that much of the inflation that occurred was largely owing to external supply and demand shocks, which eventually proved to be transitory, and that the contribution of excess monetary stimulus was less important than supply-side disruptions. This external impact was especially important in small open economies, such as Canada.⁵

The main purpose of this essay is to analyze and critically assess the increased use of forward guidance in different forms by central banks over the last 15–20 years, spanning the period of the Global Financial Crisis and subsequent Great Recession to the COVID-19 pandemic. In these two episodes of severe economic downturns, forward guidance was adopted by many central banks, often in conjunction with other extended monetary policy tools, such as large-scale asset purchases (LSAPs) (also known as quantitative easing (QE)), to provide additional monetary stimulus when policy interest rates were close to or at their effective lower bound (ELB).

We draw three important conclusions. The first is that forward guidance can be effective in providing additional monetary stimulus when the policy interest rate is at or near the ELB. Such extraordinary forward guidance has been found to put downward pressure on yields over the duration of the guidance. For smaller economies, the impact on yields is less, especially further out the yield curve. However, forward guidance at the ELB must be implemented in a flexible and nimble manner, especially when the economic outlook is highly uncertain and subject to change, in order to maintain the credibility of the central bank's inflation target. The credibility of the target and of the central bank itself is critical to the success of forward guidance as an additional monetary policy instrument. Indeed, when the policy rate is at or close to the ELB, forward guidance might be the preferred additional monetary policy tool because it is more flexible and has fewer legacy effects than other extended tools, such as LSAPs. The effects of LSAPs on central bank and consolidated public balance sheets take years to unwind. Consequently, central banks should be prepared to use forward guidance as a stand-alone extended tool.

Second, there is a fundamental trade-off between the flexibility of a forward guidance commitment and its impact or effectiveness.⁶ The size of the impact depends on the extent of the commitment, primarily its duration, as well as how it is specified and

4 See Reserve Bank of New Zealand (2022).

5 For example, Chen and Tombe (2023) find that the majority of the inflation increase in Canada was driven by external price movements, related to the global demand and supply dislocations caused by the pandemic and related policy responses.

6 Carney (2013) also stresses this trade-off as he considers a progression of forward guidance from qualitative to time and state contingent.

communicated because these attributes will influence the credibility of the forward guidance. The credibility of forward guidance is enhanced by an explicit specification of the policy path commitment and the conditions governing the commitment, because doing so makes the central bank's intended policy path easier to understand and allows it to be held accountable for its actions. Conversely, flexibility enables the central bank to alter its commitment as economic circumstances—particularly the outlook for inflation—change. Such flexibility creates uncertainty about the bank's commitment to a specific policy path, thereby dampening the impact of its forward guidance. Choosing a balance between the strength of its stated commitment to a policy path and ensuring the flexibility to change the path given unanticipated changes in the economic environment is the fundamental challenge central banks face when utilizing forward guidance as a policy tool.

Third, because forward guidance is inherently about communications, another key conclusion drawn from recent central bank experience is the importance of clear communications about the objectives, implementation, and anticipated effects of forward guidance. If forward guidance is used as a means to provide additional monetary policy stimulus when the policy rate is close to or at the ELB, the objective should be to support domestic demand, return the economy to aggregate demand and supply balance, and achieve the central bank mandate of price stability, normally specified as an explicit inflation target, within a reasonable period.⁷ The implementation of the policy commitment should be seen as consistent with achieving this objective. For this purpose, the policy commitment should be anchored on a macroeconomic projection produced and published by the central bank, demonstrating that the commitment should help achieve its mandate. A well-explained and communicated projection would enhance the credibility of the commitment. Transparent central bank communications would strengthen both the impact and flexibility of the forward guidance, thus improving the trade-off between the two.

The essay proceeds as follows: Section 2 discusses various forms of forward guidance, while Section 3 provides brief case studies of the forward guidance experience of several central banks in larger and smaller economies. Sections 4 and 5 summarize the empirical evidence on the effects of forward guidance and the important factors influencing these

7 The US Federal Reserve and the Reserve Bank of Australia also have mandates to achieve or promote maximum sustainable employment. Although the Bank of Canada does not have an explicit maximum sustainable employment mandate, its most recent agreement in 2021 with the government recognizes that the inflation rate can only be sustainably at target if the economy is operating at its potential with all productive resources, including labour, fully employed.

effects, respectively. Section 6 provides concluding remarks that synthesize the lessons from the experience of forward guidance and the implications for its use in the future.

2. What Is Forward Guidance? A Useful Taxonomy

Forward guidance is used by central banks to provide information to the public about the projected evolution of their monetary policy tools, primarily the policy interest rate. Forward guidance is potentially effective in influencing aggregate demand because many economic decisions, such as a firm investing in plant and equipment or a family buying a house, are forward looking and therefore based on expectations of the path of monetary policy. These expectations of the evolution of monetary policy are embedded in the yield curve, as well as in asset prices.⁸

Forward guidance is usefully defined in two forms: Odyssean and Delphic.⁹ Odyssean forward guidance is an intended commitment by the central bank regarding the path of the policy interest rate (or of other monetary policy instruments). In contrast, Delphic forward guidance offers a predicted, not a committed, path for the policy interest rate (or for other instruments) that is roughly consistent with the central bank's economic outlook, thus providing some information about the central bank's reaction function.¹⁰

Because Odyssean forward guidance entails a policy commitment rather than simply a policy forecast, it should have a larger impact on the yield curve and overall monetary conditions than Delphic forward guidance. Woodford (2013) argues that information provided by the central bank about policy intentions is likely to be more impactful than a statement about its economic outlook because the central bank has more information about how it intends to conduct policy than do market participants. Thus, a clear and explicit description of the relationship between the future path of monetary policy and

8 The yield curve is the relationship between interest rates and time to maturity for bonds of a given credit quality, usually government bonds. Forward guidance affects the yield curve not only by influencing expectations of the path of future short rates, but also the uncertainty surrounding the path, as well as the sensitivity of the path to economic and financial developments. See Charbonneau and Rennison (2015) for further details.

9 This helpful distinction was first made by Campbell et al. (2012). The classical Delphic oracle made predictions, some of which were ambiguous. Policy path predictions by central banks are often intentionally vague and open-ended. In contrast, Odysseus, rather than merely predicting to stay on board in response to the Sirens' song, only later to abandon the ship as others had done, committed to staying on board by lashing himself to the mast. While Odysseus used rope as his commitment device, central banks must rely on their reputations and communications to convince observers that they will fulfill their policy commitments.

10 The central bank's reaction function can be defined as the relationship between specific changes in critical macroeconomic variables, such as inflation and the output gap, and the central bank's monetary policy response.

economic conditions would enhance the transparency and predictability of monetary policy for investors and the public. The empirical evidence generally supports the theoretical proposition that Odyssean forward guidance is effective in reducing interest rates along the yield curve.¹¹

Odyssean forward guidance has, to this point, only been used as an extended tool to provide additional monetary policy stimulus when the policy interest rate was at or close to the ELB. Because it has been used only in exceptional circumstances, such as during the Global Financial Crisis and subsequent Great Recession, as well as during the COVID-19 pandemic, when extraordinary monetary policy stimulus was warranted, it is also known as extraordinary or strong forward guidance.

Essentially, extraordinary forward guidance has taken the form of the central bank committing to hold the policy rate at the ELB for a certain period (time-dependent or contingent) or until a certain threshold for a key macroeconomic variable, such as the inflation rate or unemployment rate is reached (state-dependent or contingent). As an example of time-dependent forward guidance, in August 2011, the US Federal Open Market Committee (FOMC) communicated that it intended to keep its federal funds rate at zero until at least mid-2013. As an example of state-dependent, the Bank of Canada's Governing Council stated in June 2020 that its policy rate would remain at the ELB of 0.25 percent until the output gap (the difference between actual and potential output) was closed so that inflation was sustainably at its two percent target.

Given the mandates of most advanced economy central banks, which focus primarily on achieving price stability with an inflation target, normally two percent, and promoting maximum sustainable employment, state-dependent forward guidance would logically be consistent with those mandates. The evidence, however, suggests that time-dependent forward guidance may have a larger impact when the policy rate is at the ELB because it is easier for market participants to understand and act upon, although it does constrain the central bank's ability to adjust the guidance to changing economic circumstances.

In practice, there are various forms of Delphic forward guidance. For example, it could be explicit, which involves the publication of the projected future path of the policy interest rate (or of other monetary policy tools), or qualitative, which provides some indication of the future path of the policy interest rate. The softer, more qualitative, Delphic forward guidance reflects a variety of communications practices used by monetary policy committees and their members. For example, a time or state contingency

11 See Sutherland (2020) for more details.

could be attached to the qualitative guidance.¹² The US Federal Reserve's dot plot would be an example of a more explicit form of Delphic forward guidance since the chart represents the expectations of FOMC members regarding the path of the policy rate, whereas statements by the FOMC or its members about its expected path are generally more qualitative.

Explicit Delphic forward guidance is widely seen as a best practice for increasing monetary policy transparency, especially if the path is derived from a model-based economic projection accompanied by scenario analysis. And because the projected path is published, it increases central bank accountability, since the central bank is forced to explain movements in the policy rate path between projections. For example, the Reserve Bank of New Zealand and Sweden's Riksbank, among others, publish the policy rate path consistent with its central or base-case economic projection.

Some observers argue, however, that explicit Delphic forward guidance can be misleading because the policy rate path may be misinterpreted as a commitment by the central bank, rather than a path conditional on the economic projection. Qualitative Delphic forward guidance has also been subject to criticism because the guidance is often vague, its impact is unclear and there is no concrete mechanism to hold the central bank accountable for this guidance.

As noted earlier, the effectiveness of Odyssean forward guidance critically depends on the credibility of the policy commitment, which in turn depends on the credibility of the central bank and its monetary policy framework. Evans (2017) argues that without this credibility the distinction between Odyssean and Delphic forward guidance gets blurred. He uses as an example, the FOMC's communication in 2010 that it would keep its policy interest rate at zero until mid-2013. He questions whether the public would have maintained its belief that the FOMC would stick to its ELB policy rate if inflation and economic activity had accelerated in 2012. In short, he believes that the credibility of forward guidance also depends on the economic conditions attached to it.¹³

12 Examples of time and state -contingent qualitative forward guidance include respectively, "the bank anticipates easing its monetary policy stance over the next year" and "the bank anticipates maintaining its current accommodative stance until the inflation rate returns to the bank's two percent target." See Sablik (2022) for more discussion.

13 Evans (2017) notes that the forward commitment is more credible if it is consistent with the market's understanding of the bank's reaction function. If the commitment represents a major departure from past practice, he cautions that the central bank needs to prepare the public ahead of time before communicating a policy commitment that is substantially novel or outside of the public's historical experience.

The focus of this essay is primarily on Odyssean forward guidance because of its widespread use as an extended policy tool during the pandemic and in the aftermath of the Global Financial Crisis when policy rates were at the ELB. Its use during this period has been controversial: some observers question its effectiveness, while others see it as too inflexible.¹⁴ While most studies of Odyssean forward guidance find that it has the effect of lowering and flattening the normally upward-sloping yield curve, the size and persistence of this impact depends on various factors, including how it is specified and implemented. Because central banks implemented such guidance differently, sometimes in conjunction with other extended tools, a stock-take of this experience would be helpful for identifying some lessons learned.

Delphic forward guidance is also considered in this essay because it predates the use of Odyssean forward guidance and is seen as a means of increasing monetary policy transparency and influencing expectations. While explicit forms of Delphic forward guidance add the most to transparency, qualitative forms of Delphic forward guidance have been more widely used across time and jurisdictions. However, episodes of qualitative forward guidance cannot be easily categorized or quantified, and consequently, their impacts are difficult to identify and assess.

14 Well-known hedge fund manager Stanley Druckenmiller recently made this point in an interview. He asserted that while he changes his mind rapidly when facts change, the Federal Reserve gets trapped in its forward guidance. See Confino (2024).

3. Case Studies of Forward Guidance

In this section of the essay, we provide brief case studies of the experiences of a sample of major central banks with respect to their use of forward guidance. In particular, we analyze examples of how forward guidance has been used by these central banks, examine the evidence on the impact of forward guidance and distill the lessons learned as to how forward guidance can best be used in the future. The various manifestations of forward guidance over time and across jurisdictions, should, in principle, allow for analyzing whether specific forms of forward guidance are more effective than other forms.

The use of forward guidance by central banks in large jurisdictions

United States

While forward guidance became much more visible when it was first used in its Odyssean form as an extended monetary tool by major central banks following the 2008–2009 global financial crisis, researchers have noted the use of Delphic forward guidance by the US Federal Reserve prior to the crisis. For example, Nelson (2021) remarks that in the 1990s, a consensus developed in US policy circles that was more receptive than in previous periods to using forward guidance to influence longer-term interest rates. Indeed, Nelson states that limited moves toward the inclusion of forward guidance in the FOMC’s post-meeting policy statements occurred in 2003 and 2004.

However, the regular incorporation of forward guidance into FOMC post-meeting statements did not begin until 2008 when the federal funds rate moved to the effective lower bound (ELB) of near zero and various episodes of Odyssean forward guidance were implemented.¹⁵ The FOMC used calendar-based Odyssean forward guidance to communicate its policy rate intentions between March 2009 and September 2012. For example, in September 2012, the FOMC stated that exceptionally low levels for the federal funds rate are likely to be warranted at least through mid-2015.¹⁶

Starting in December 2012, the FOMC switched to an outcome-based Odyssean forward guidance where the direction of the policy interest rate was conditional on the

15 Filardo and Hofmann (2014) note an episode of Odyssean forward guidance prior to 2008. Specifically, in 2003, the Federal Reserve stated its intention to maintain monetary policy accommodation for a considerable period of time. At the time, the policy rate was low but not at the zero lower bound.

16 See Koeda and Wei (2023a). Del Negro et al. (2023) also discuss the FOMC’s Odyssean forward guidance in response to the Great Financial Crisis when the FOMC lowered its target interest rate close to zero in December 2008.

evolving economic outlook for unemployment and inflation. For example, in December 2012, the FOMC stated: “This exceptional low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6.5 percent, inflation between one and two years ahead is projected to be no more than half percentage point above the Committee’s 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored.”¹⁷

After the outbreak of the COVID-19 pandemic, outcome-based Odyssean forward guidance was implemented as the ELB was approached. For example, in September 2020, the FOMC stated that its target interest rate would be maintained until inflation reached two percent and was on track to moderately exceed two percent for some time. In December 2021, the FOMC announced it would maintain its target rate for the Federal Funds rate until maximum employment was reached.¹⁸

Table 1 provides some examples of forward guidance by the US central bank over approximately the past two decades.¹⁹ Specifically, it summarizes the main message conveyed by the examples of the FOMC’s forward guidance. Examples of Delphic qualitative forward guidance can be identified prior to 2008 when it was largely qualitative and open-ended and post-2022 when it centered on expectations and a reliance on incoming macroeconomic information.

It is important to emphasize that Odyssean forward guidance was implemented during periods of extreme macroeconomic stress, related to the Great Financial Crisis in its earlier implementation and related to the COVID-19 pandemic in its later implementation. During the period of the financial crisis, the inflation rate as measured by the Consumer Price Index was well below the Federal Reserve’s target of two percent (figure 1). During the pandemic, the unemployment rate spiked (figure 1) and the inflation rate was below the two percent target at least until the second half of 2021.

17 As quoted in Koeda and Wei (2023a: 1).

18 See Sablik (2022).

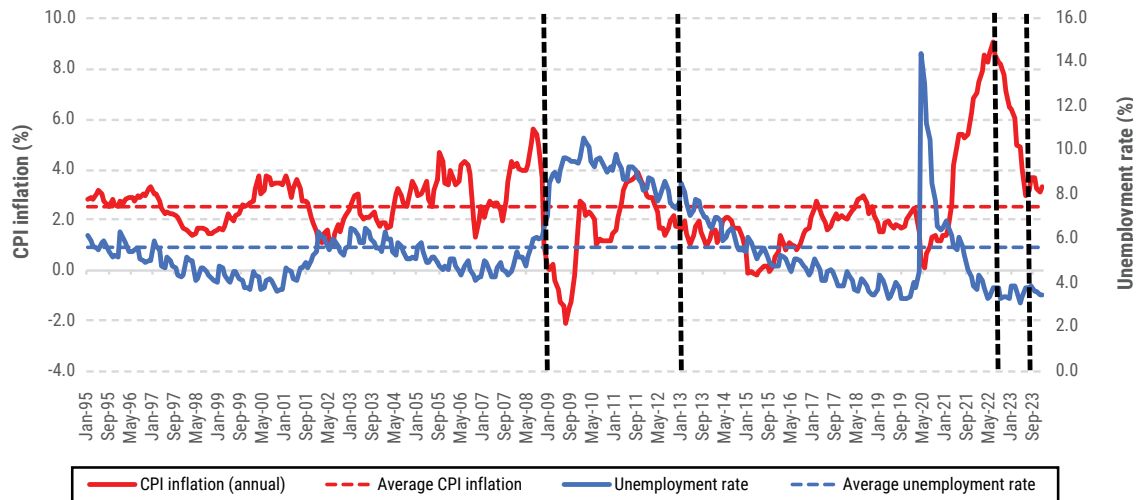
19 The examples in table 2 represent interpretations of information provided in Sablik (2022). See Ihrig and Waller (2023) and Milstein and Wessel (2024). The examples used take a narrative format as distinguished from interest rate forecasts such as the Federal Reserve’s “dot plot.” Narrative summaries identify the intentions of central banks, which Sutherland (2022) among others, argues is the most appropriate forward guidance measure to use.

Table 1: US Federal Reserve: Forward Guidance

Date	Summary Statement
Aug. 12, 2003	Policy accommodation can be maintained for a considerable period of time.
Jan. 28, 2004	With inflation low and with resource use slack, the Fed can be patient in removing its policy accommodation.
Dec. 16, 2008	Weak economic conditions are likely to warrant exceptionally low levels of the Fed funds rate for some time.
Aug. 9, 2011	Economic conditions are likely to warrant exceptionally low levels of the Fed funds rate at least through mid-2013.
Dec. 12, 2012	Exceptionally low range for the Fed funds rate will be appropriate as long as the unemployment rate remains above 6.5 percent and inflation is projected (between one and two years ahead) to be no more than one-half percentage point above two percent.
Mar. 19, 2014	Even after unemployment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the Fed funds rate well below normal long-run levels.
Sept. 16, 2020	Target (Fed funds) rate will be maintained until maximum employment and inflation has risen to two percent and is on track to moderately exceed two percent for some time.
Dec. 15, 2021	With inflation greater than two percent, the FOMC will maintain target range (for the Fed funds rate) until maximum employment is reached.
Jan. 26, 2023	The FOMC expects it will soon be appropriate to raise the target range for the federal funds rate.
June 15, 2023	The FOMC will continue to monitor the implications of incoming information for the economic outlook and would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of the FOMC's goals.

Source: Authors' summary of information reported in Sablik (2022), and Ihrig and Waller (2024).

Figure 1: United States, CPI Inflation and Unemployment Rate, Monthly, January 1995 to December 2023



Note: The dashed vertical lines denote periods of "Odyssean" forward guidance.

Sources: OECD, 2024a; US Bureau of Labor Statistics, 2024.

Japan

Table 2 reports examples of forward guidance issued by the Bank of Japan (BoJ).²⁰ The communication dates are not as specific as those reported in table 1; however, the nature and broad chronology of the BoJ's forward guidance is conveyed by the summary statements provided. One observation about the BoJ's forward guidance over the period reviewed is that it is primarily Odyssean outcome-contingent, although examples of calendar-based Odyssean forward guidance can also be identified. Outcome-contingent forward guidance linked to the rate of inflation can be linked back to 2010 (Filardo and Hofmann, 2014).

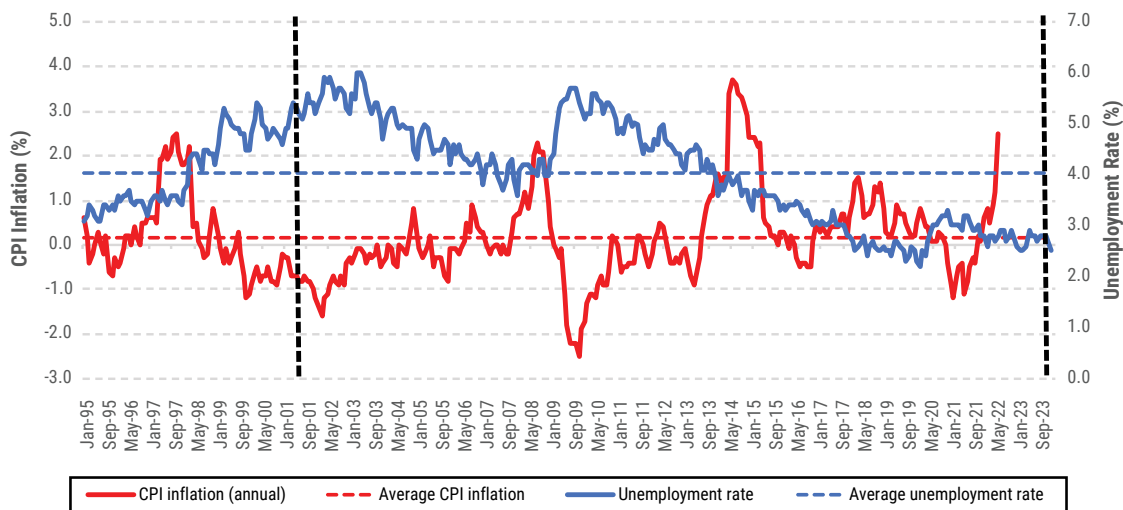
The BoJ's Odyssean forward guidance statements can be read for the most part as targeted at achieving the BoJ's price stability target. This arguably reflects the fact that inflation was below the BoJ's target for most of the experience with forward guidance, especially during the financial crisis and the early part of the COVID-19 pandemic (figure 2). Westelius (2020) and Gertler (2017) argue that the BoJ's policy commitments were too extreme and therefore not seen as credible by capital market participants and the broader public. This perspective has been invoked by some to explain why the BoJ's

²⁰ Shirai (2013) notes that the BoJ does not officially use the term forward guidance to describe its communication strategy, although it can be regarded as such.

Table 2: Bank of Japan: Forward Guidance

Date	Summary Statements
Feb. 1999	Announces that Zero Interest Rate Policy (ZIRP) would continue until deflationary pressures subsided.
Early 2001	Announces change in policy instrument from the short-term rate to the quantity of reserves and purchases of long-term government bonds. ZIRP would be maintained until core inflation became stably above zero or recorded a year-on-year increase.
2010	ZIRP will be maintained until price stability is in sight on the basis of the bank's understanding of medium-or-long-term price stability.
2013	Announces two percent price stability target to be achieved at the earliest possible time with a time horizon of about two years.
2016	Time horizon for achieving inflation target is deemphasized. Monetary base will be expanded until inflation target is achieved.
2018	Expands range around ZIRP target. Interest rates will remain low beyond 2019.
2019	Short and long-term interest rates will remain low as long as is necessary to pay close attention to the possibility that the momentum toward achieving the price stability target will be lost.
Dec. 2020	Given developments in economic activity and prices, it is appropriate for the Bank to continue with the current monetary easing and thereby firmly support the economy.
Jan. 2023	Given developments in economic activity and prices, it is appropriate for the Bank to continue with the current monetary easing and thereby firmly support the economy and realize a favourable environment for firms to raise wages.
Mar. 2024	The Bank could raise rates if trend inflation, which is still below two percent, heightens a bit more.
May 2024	The Bank anticipates that accommodative financial conditions will be maintained for the time being.
May 2024	If the outlook for prices is revised upward of if upside risks become high, it will be appropriate for the Bank to make an earlier adjustment of the policy interest rate.

Source: Authors' summary of statements in Westelius (2020).

Figure 2: Japan, CPI Inflation and Unemployment Rate, Monthly, January 1995 to November 2023

Note: The dashed vertical lines denote periods of “Odyssean” forward guidance.

Sources: OECD, 2024b, 2024c.

unconventional monetary policies had only limited success in reflation the Japanese economy as shall be discussed in more detail in a later section assessing the effects of forward guidance.²¹ In early 2024, the BoJ arguably moved away from Odyssean forward guidance in favour of a more qualitative Delphic approach (Kihara and Kajimoto, 2023).

Euro Area

The European Central Bank (ECB) was later than the US central bank to implement forward guidance. Dell’Ariccia, Rabanal and Sandri (2018) identify mid-2013 as the start of the ECB’s use of what might be considered open or Delphic forward guidance.²² Specifically, they link it to Mario Draghi’s statement that the Governing Council of the ECB expects the key ECB interest rates to remain at present or lower levels for an extended period of time.²³ Bletzinger and Wieland (2016: 4) identify the first specific use of temporal forward guidance by the ECB on July 4, 2013 when the ECB’s Governing Council communicated the following: “Looking ahead, our monetary policy stance will remain

21 On the other hand, Koeda and Wei (2023b) argue that the BOJ’s forward guidance was effective, as we shall discuss in a later section.

22 They note that this was at the same time as the ECB implemented large-scale asset purchases and a negative policy interest rate.

23 Mario Draghi was president of the ECB at that time. Draghi’s summary statement is discussed in Westelius (2020).

accommodative as long as necessary. The Governing Council expects the ECB interest rate to remain at present or lower levels for an extended period of time.”²⁴ The expectation was based on the subdued outlook for inflation extending into the medium-term and the broad-based weakness in the real economy (Praet, 2013). Shortly after that, President Draghi stressed that there was no precise deadline for this extended period of time.²⁵

In 2016, the ECB’s forward guidance on interest rates is arguably best categorized as Delphic and both time and state (inflation) dependent. For example, on March 10, 2016, the ECB stated that it expects the key ECB interest rates to remain at current or lower levels for an extended period and well past the horizon of its net asset purchases. This statement linked the future path of policy rates to the ECB’s asset purchase program which, at that time, was intended to run until the end of March 2017 or beyond, if necessary, until the ECB’s Governing Council saw a sustained adjustment in the path of inflation consistent with its inflation target (de Haan and Hoogduin, 2024).

A similar Delphic forward guidance was issued in an announcement on June 14, 2018, that the ECB expected policy rates to remain at their current levels at least through the summer of 2019 and, in any case, for as long as necessary to ensure the sustained convergence of inflation to close to two percent. There was also an Odyssean component to the guidance in as much as the ECB said that it would stop large-scale asset purchases. A virtually identical guidance was issued in September 2019 when the ECB announced that it expected its key interest rates to remain at their present levels until its inflation outlook converges to close to two percent within its projection horizon (de Haan and Hoogduin, 2024).

Throughout 2020 and most of 2021, during the economic turmoil created by the COVID-19 pandemic, the ECB pursued temporal-based Odyssean forward guidance with its expressed commitment to continue an expansionary utilization of its monetary policy channels until the end of 2023. At its March 2022 meeting, the ECB confirmed that the Bank’s net asset purchases and policy rate would be maintained during the first half of the year and that the calibration of net asset purchases for the third quarter would be data dependent and reflect its evolving assessment of the economic outlook (Orphanides, 2023).

24 de Haan and Hoogduin (2024) characterize this statement as open-ended forward guidance because it does not provide a specific time frame until which rates will remain low. Nor does it identify economic conditions that would trigger an increase in rates.

25 The forward guidance provided by the ECB’s Governing Council in the two years following its initial forward guidance communicated the Governing Council’s expectation that interest rates would remain at current or lower levels for an extended period of time (Bletzinger and Wieland, 2016).

The ECB altered its outlook for its policy rate in the third quarter of 2022 in reaction to soaring inflation and announced it was ending its net asset purchases. At its July 2022 meeting, the ECB raised its policy interest rate by 0.5 percentage points. ECB officials said that previous communications that rates would stay lower for longer were no longer “useful” as the ECB was exiting from buying sovereign bonds and maintaining negative interest rates (Arnold, 2022). This statement has been taken by some financial observers as indicating that the ECB was abandoning forward guidance (Arnold, 2022).

We do not provide the narrative detail for ECB forward guidance comparable to the summaries provided in tables 1 and 2 since Sutherland (2022), among others, notes the ECB used forward guidance less frequently than the Federal Reserve and did not begin until well after the Federal Reserve. In particular, it did not employ forward guidance in the immediate wake of the Great Financial Crisis as did the Federal Reserve and relied on open-ended forward guidance in the years following the Crisis. However, the ECB did employ Odyssean forward guidance in the midst of the COVID-19 crisis as did the Federal Reserve and the Bank of Japan.

United Kingdom

Like the ECB, the Bank of England (BoE) did not implement forward guidance until August 2013 when it introduced Odyssean forward guidance with explicit state-contingent quantitative targets. Specifically, it announced that it would not raise policy rates or reduce the stock of bonds purchased under quantitative easing at least until unemployment declined below seven percent (from the ongoing eight percent level). In addition, the BoE added the conditions that the guidance would cease if medium-term inflation was expected to increase by 0.5 percent above target or if the stance of monetary policy posed significant threats to financial stability.²⁶

The BoE modified its state-contingent forward guidance in 2014 when unemployment tumbled below seven percent much sooner than expected. Its new forward guidance linked future changes in the policy rate path to a much broader measure of economic health; that is, the capacity for the economy to grow without generating inflation. The BoE Governor at the time, Mark Carney, provided an outlook for the path of future interest-rate rises. He stated that spare capacity must decrease before the first interest rate increase and that the increase, when it came, would be gradual and contingent on economic progress (The Economist, 2014).

26 See Talbot and Dale (2013).

This simpler Odyssean state-contingent forward guidance became a template for the BoE's forward guidance communications in the future. The guidance used in 2013 with an unemployment target conditioned by inflation and financial stability considerations was seen as being too "convoluted" for financial markets to understand and respond to appropriately.²⁷

Odyssean forward guidance was employed again during the COVID-19 pandemic when the policy rate was at the ELB. In August 2020, the BoE's Monetary Policy Committee (MPC) announced that it did not intend to tighten monetary policy until there was clear evidence that significant progress was being made in eliminating spare capacity and the two percent inflation target was sustainably achieved (Bank of England, 2020).

As inflation picked up dramatically in 2021, the BoE (as was the case for the Federal Reserve, the BoJ, and the ECB) moved away from Odyssean forward guidance to a form of Delphic guidance contingent on incoming data. For example, in 2021, the BoE's Monetary Policy Committee voted to increase the Bank Rate by 0.15 percentage points to 0.25 percent (Bank of England, 2021). It referenced its minutes at the preceding November meeting where it noted it might be necessary in the coming months to increase the Bank Rate in order to return inflation to its two percent target. In its December minutes, the MPC stated that labour market conditions continued to tighten along with signs of greater persistence in domestic cost and price pressures, and that some modest tightening of monetary policy over the forecast period is likely to be necessary to meet the two percent inflation target sustainably.

In summary, the forward guidance experiences of these four central banks can be characterized as primarily Odyssean and state-contingent over the relevant periods. However, the nature of the state contingencies arguably became more qualitative over time to incorporate more flexibility as the need for the commitment and associated stimulus became less. With the onset of inflation, the nature of forward guidance became more Delphic and qualitative and emphasized the importance of being responsive to incoming economic data.

The experience of these major central banks with forward guidance highlights the importance of managing the potential trade-off between impact and flexibility in the use forward guidance. In particular, commitments to maintain low policy rates in the aftermath of the onset of the COVID-19 pandemic may have been "too rigid" to facilitate a timely reversal of the policy rate paths of major central banks given the arguably

27 BoE Deputy Governor Ben Broadbent (2022) offered this criticism in the context of how interest rate expectations behaved in reaction to the BoE's initial attempt at forward guidance.

unexpected inflation shock commencing in late 2021. The experience of the Bank of Japan in particular highlights the importance of credibility, or lack thereof, especially when Odyssean forward guidance suggests a major departure from a central bank’s “conventional” reaction function. The experience of the Bank of England also underscores how attaching complex contingencies to guidance commitments can leave market participants confused about the central bank’s policy rate path and thereby mitigate the utility of the intended guidance.

The use of forward guidance by central banks in small open economies

Central banks in smaller economies with monetary policy frameworks with an explicit inflation target have used various forms of forward guidance; most notably, several publish the path of their policy interest rate. They have also made use of Odyssean or extraordinary forward guidance as an extended monetary policy tool to provide additional monetary stimulus when the policy rate was at the ELB during major economic downturns, such as during the Great Recession and the COVID-19 global pandemic.

The three countries and central banks considered in this section—Canada, Australia, and New Zealand—have successfully implemented inflation-targeting regimes over the last 30 years and achieved a high degree of price stability while limiting volatility in other economic aggregates such as employment (figures 3–5). Interestingly, their experience using Odyssean forward guidance over this period has been different and provides some insights and useful lessons.

Canada

The Bank of Canada was one of the first central banks to use Odyssean forward guidance when it announced in April 2009 that conditional on the outlook for inflation, its policy interest rate would remain at 0.25 percent (its effective lower bound) until the end of the second quarter of 2010 (table 3). This statement was innovative for central banks not only because it represented a date-based policy commitment, but also because it was conditional on the outlook for inflation.²⁸

Woodford (2013) clearly demonstrates the immediate impact of this announcement on spot and forward overnight indexed swap (OIS) rates, which reflect market expectations of future short-term interest rates. He (2010) shows that the policy reduced

28 The credibility of this commitment was enhanced because it was accompanied by an announcement of an extension of up to 12 months of bank term funding at the 0.25 percent policy rate.

Government of Canada bond yields for maturities out to 10 years, with a diminishing impact for longer yields, and that this effect was persistent.

Because inflation in Canada rose slightly faster than projected, likely owing in part to the stimulative impact of the forward guidance, the Bank stepped away from this commitment in June of 2010, and raised the policy rate to 0.50 percent. Hence, the commitment seemed to have its intended effect of providing additional monetary stimulus and its conditions, including the timing, were largely fulfilled.

In March of 2020 at the outset of the global pandemic the Bank of Canada responded by reducing the policy rate to the ELB of 0.25 percent. Subsequently, in June 2020, it made a state-dependent commitment to hold the policy rate at the ELB until economic slack was absorbed so that the two percent inflation target was sustainably achieved (table 3). This statement was augmented, in October 2020, with an indication of the timeframe;

Table 3: Bank of Canada: Forward Guidance at ELB

Date	Summary Statements
Apr. 2009	Conditional on the outlook for inflation, the target overnight rate can be expected to remain at its current (ELB) level until the end of the second quarter of 2010 in order to achieve the inflation target.
Jun. 2010	Inflation has come in line with the Bank's projections and the Bank has decided to raise the target for the overnight rate to 0.50 percent.
Jul. 2020	The Governing Council will hold the policy interest rate at the effective lower bound until economic slack is absorbed so that the two percent inflation target is sustainably achieved.
Oct. 2020	The Governing Council will hold the policy interest rate at the effective lower bound until economic slack is absorbed so that the two percent inflation target is sustainably achieved. In our current projection, this does not happen until into 2023.
Apr. 2021	The Governing Council will hold the policy interest rate at the effective lower bound until economic slack is absorbed so that the two percent inflation target is sustainably achieved. In the Bank's April projection, this happens sometime in the second half of 2022.
Oct. 2021	The Governing Council will hold the policy interest rate at the effective lower bound until economic slack is absorbed so that the two percent inflation target is sustainably achieved. In the Bank's projection, this happens sometime in the middle quarters of 2022.
Jan. 2022	The Governing Council judges that overall slack in the economy is absorbed, thus satisfying the condition outlined in the Bank's forward guidance on its policy interest rate. The Governing Council therefore decided to end its extraordinary commitment to hold its policy rate at the effective lower bound.

Note: Information gathered from Bank of Canada, Monetary Policy Announcement Press Release, various issues

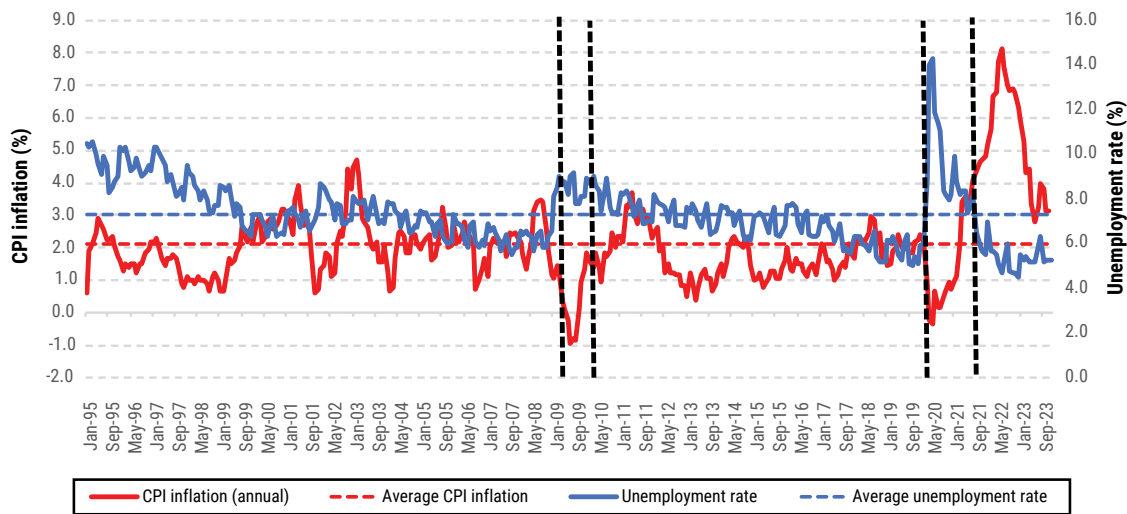
the Bank noted that in the current projection this state-dependent condition would not occur until 2023. The time dimension was likely added because it is easier for market participants and the public to understand the extent of the commitment, but at the same time, it introduced a degree of inflexibility.

Over the course of the pandemic, the Canadian economy proved more resilient than was projected by the Bank, and it updated the approximate time that the state-dependent condition would be fulfilled. In April 2021, the Bank stated that based on its current projection the state-dependent condition would be satisfied sometime in the second half of 2022. This timing was further adjusted in October 2021 to indicate that the condition would be fulfilled in the middle quarters of 2022. In fact, the economy grew much faster than projected at that time, almost in a non-linear fashion, and the state-dependent condition was deemed satisfied by January 2022. Consequently, the Bank raised its policy rate to 0.50 percent in March of that year as the first step in a steep increase in the policy rate over the rest of 2022 and in 2023.

As in 2009, the Bank of Canada once again specified its ELB rate commitment with both state-dependent and time-dependent conditions. The state-dependent condition is consistent with the Bank's inflation-targeting monetary framework; inflation will only be sustainably at the two percent target if the economic slack in the economy is absorbed. Whereas the time-dependent condition is more concrete and accessible to market participants and the public. While the state-dependent condition remained unchanged throughout the pandemic, the Bank was able to adjust the time-dependent condition in a relatively nimble and flexible manner.

However, given that the Canadian economy grew rapidly in the second half of 2021, the state-dependent condition was fulfilled one-to-two quarters sooner than projected and the economy moved into excess demand, achieving historically low rates on unemployment (figure 3). The combination of the economy being in excess demand coupled with the global supply shocks for intermediate inputs, including many commodities and computer chips, resulted in a rapid pass-through of these cost increases into final goods prices and inflation, which peaked at 8.1 percent in June of 2022 (figure 3).²⁹

29 The Bank of Canada and other central banks used LSAPs and liquidity facilities to restore financial market functioning at the beginning of the COVID-19 outbreak when financial markets suffered from a “dash for cash” (Johnson, 2023; and Gravelle, 2023). When market functioning resumed in Canada, the purpose of LSAPs pivoted towards providing additional monetary stimulus. The evidence of this additional stimulus is, however, mixed; for example, Arora et al. (2021) find LSAPs only lowered bond yields by 10–15 basis points. Yet the LSAPs had a significant impact on the consolidated public balance sheet. The BoC's purchases of CDN\$440 billion of government bonds dramatically shortened the maturity structure of outstanding public liabilities by converting long-term debt into settlement

Figure 3: Canada, CPI Inflation and Unemployment Rate, Monthly, January 1995 to December 2023

Note: The dashed vertical lines denote periods of "Odyssean" forward guidance.

Sources: OECD, 2024d, Statistics Canada, 2024.

The Bank of Canada implemented forward guidance in a reasonably clear manner with its state-dependent conditions consistent with its mandate. It used the time-dependent condition to introduce some flexibility to this guidance which allowed the Governance Council to adjust it over time as the Canadian economy recovered faster than projected. Despite this effort to be nimble, the Bank found itself behind given the rapidly emerging inflationary pressure towards the end of 2021 and into 2022. Nonetheless, the forward guidance implemented by the Bank of Canada was likely the most powerful of the additional tools that it used during the pandemic. Moreover, it had the advantage that it could be unwound fairly quickly and easily and had no legacy effects on the financial positions of the Bank or the government.

balances held by chartered banks at the Bank. As the Bank raised its policy interest rate, the interest paid by the Bank on these balances rose relative to the interest payments it was receiving on its holdings of government bonds, dramatically reducing or eliminating the net income it normally remitted to the federal government. See Aldridge et al. (2023) and Fortin (2022) for a discussion of the costs of LSAPs, namely these adverse fiscal effects as well as reducing market liquidity, distorting asset prices, and increasing financial vulnerabilities.

Australia

The Reserve Bank of Australia's (RBA) first use of extraordinary forward guidance was during the global COVID-19 pandemic, and this use was complicated by its communications and the adoption of other extended monetary policy tools. While RBA authorities argue that forward guidance was powerful in providing additional monetary policy stimulus, it was likely less effective than it could have been had it been better communicated. The other important aspect is that these complications delayed the RBA's exit from forward guidance and the beginning of its monetary policy tightening phase (table 4). This delay led to excess inflationary pressure in Australia (figure 4) and contributed to the government's decision not to renew the tenure of Governor Philip Lowe.

Like other major central banks, the RBA swiftly reduced its policy (cash) rate to 0.25 percent with the outbreak of the virus in March 2020. At that time, the RBA Board

Table 4: Reserve Bank of Australia: Forward Guidance at ELB

Date	Summary Statement
Mar. 2020	The Board reduced the cash rate to 0.25 percent and will not increase it until progress is made towards full employment and it is confident that inflation will be sustainably within the two to three percent target band. At the same time, the Board instituted 0.25 percent yield target for 3-year government bonds, a three-year term funding facility, and a government bond purchase program. Governor's speech: the cash rate likely to remain at this level for an extended period.
Sept. 2020	The yield target was shifted from the April 2023 bond to the April 2024 bond.
Nov. 2020	The Board reduced the cash rate to 0.10% (revised ELB). The Board will not increase the cash rate until inflation is sustainably within the two to three percent target range. For this to occur wage growth will have to be materially higher than it is currently. Given the outlook, the Board is not expecting to increase the cash rate for at least three years.
Feb. 2021	The Board does not expect these conditions to be met until 2024 at the earliest.
Jul. 2021	Similar language about policy rate, conditions and time frame
Nov. 2021	The Board announced the yield target on the April 2024 bond would be discontinued. Governor speech: The forward guidance could be changed
Feb. 2022	As the Board has stated previously, it will not increase the cash rate until actual inflation is sustainably within the two to three percent target range. The Board is prepared to be patient.
May 2022	Cash rate increased by 25 basis points.

Note: Information gathered from Reserve Bank of Australia, Monetary Policy Decision Media Release, various issues.

provided state-dependent forward guidance, stating that it would not raise the cash rate until progress was made towards full employment and that it was confident that inflation would remain sustainably within the two to three percent control range. Shortly thereafter the Governor in a speech added a time element by maintaining this hold would remain in place “for an extended period.”

The RBA also implemented other extended tools, including a three-year term-funding facility at 0.25 percent for banks and most notably a yield target of 0.25 percent on the three-year (April 2023) Government of Australia bond, which was taken to imply that the cash rate would be held fixed over this period at the ELB (RBA, 2023). In September 2020, the yield target was moved to the April 2024 bond to maintain at least a three-year horizon, which again was interpreted as the cash rate would remain fixed over this period.

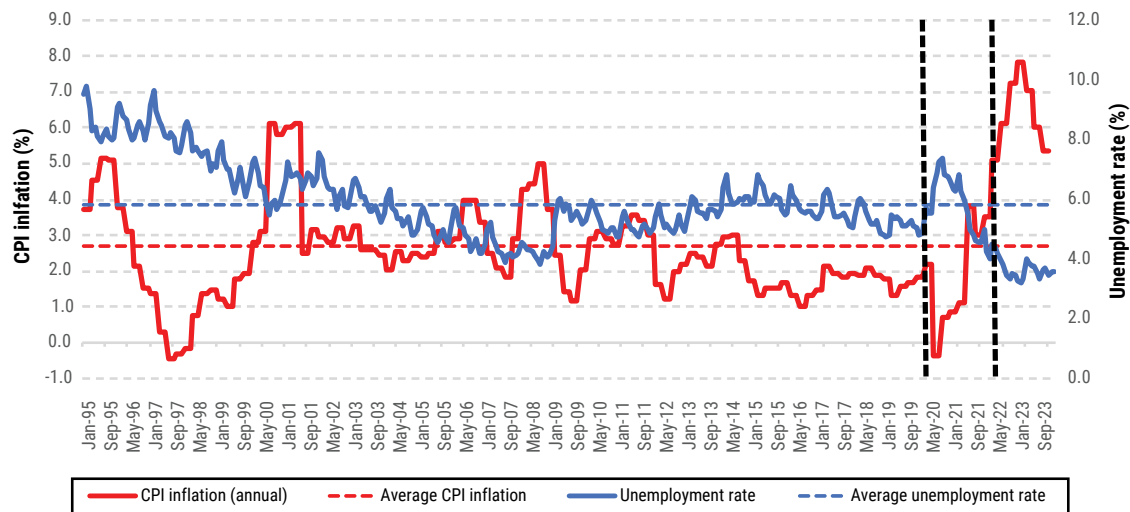
In hindsight, the yield target seemed redundant if the forward guidance on the cash rate was credible. Indeed, by simply declaring the yield target, the RBA did not have to buy any of these bonds. No other major central bank (apart from the Bank of Japan) adopted a yield target during the pandemic.

In November, the RBA lowered the cash rate further to 0.10 percent and adjusted the yield target rate accordingly. It also repeated the state-dependent condition for the forward guidance, namely that inflation was sustainably within the two to three percent target range. But it layered on top another condition, i.e., that wage growth would have to be materially higher than it was currently, albeit with no number given. Lastly, it explicitly added a time dimension, which to this point had been implied, namely that the Board was not expecting to increase the cash rate from the ELB for *at least three years* (emphasis added). In February 2021, the Board used similar language, but noted that it did not expect these conditions to be met *until 2024 at the earliest* (emphasis added).

However, as the CPI inflation rate in Australia started to increase (figure 4) and the yield target became less tenable, the Board discontinued it, causing much volatility in the bond market. RBA (2023) maintains that until this point it was difficult to change the time dimension of the forward guidance because it had to be roughly consistent with the horizon of the targeted April 2024 bond. So, in February 2022, while the Board maintained the state-dependent condition for the forward guidance, it changed the time dimension to “the Board is prepared to be patient.” Then finally as inflation rapidly increased, the Board increased the cash rate by 25 basis points in May 2022.

As a consequence of its inability to modify the time dimension of its forward guidance while the yield target was in place, the RBA found itself well behind other central

Figure 4: Australia, CPI Inflation (Quarterly) and Unemployment rate (Monthly), January 1995 to July 2023



Note: The dashed vertical lines denote periods of “Odyssean” forward guidance.

Sources: OECD, 2024e, 2024f

banks in responding to the global shocks pushing inflation higher. As a result of the lack of flexibility, the RBA’s policy commitment ended up providing excessive monetary stimulus, more than that of comparable central banks.

In addition, its state-dependent conditions for the forward guidance were vague, not completely consistent with its mandate and shifted over time. This likely worsened the tradeoff between the impact and flexibility of the forward guidance on the cash rate.

New Zealand

Of the three central banks considered in this section, the Reserve Bank of New Zealand (RBNZ) is the only one that has for some time routinely published its projection of its policy rate, the overnight cash rate (OCR), consistent with its base-case economic projection. In other words, it provides explicit Delphic forward guidance in the normal course of conducting monetary policy.

However, with the outbreak of the pandemic in March 2020, not only did the RBNZ cut the OCR rate by 75 basis points to 0.25 percent (which proved to be its effective lower bound during the pandemic³⁰ (see table 5), but it also suspended the publication of its Delphic policy rate projection. Instead, it was replaced by a simple 12-month Odyssean

³⁰ The RBNZ seriously considered implementing a negative OCR, but in the end chose not to do so.

Table 5: Reserve Bank of New Zealand: Forward Guidance at the ELB

Date	Summary Statement
Mar. 2020	Monetary Policy Committee reduced Overnight Cash Rate by 75 bps to 0.25 percent (the ELB) and committed to keeping it unchanged for 12 months. The Committee announced a large-scale asset purchase program for NZ government bonds
Nov. 2020	The Committee announced the adoption of a three-year funding for lending program for domestic banks.
May 2021	After the forward guidance commitment elapsed, the Committee re-introduced the OCR projection that projected that the OCR would remain at 0.25 percent until mid-2022 and then rise to two percent by 2024.
Oct. 2021	The Committee raised the OCR by 25 basis points to 0.50 percent.

Note: Information gathered from Reserve Bank of New Zealand, Monetary Policy Statement, various issues.

commitment to keep the OCR at 0.25 percent. In making this time-dependent commitment, the RBNZ's Monetary Policy Committee traded off future flexibility in the OCR against the provision of clear, certain guidance about the policy path.

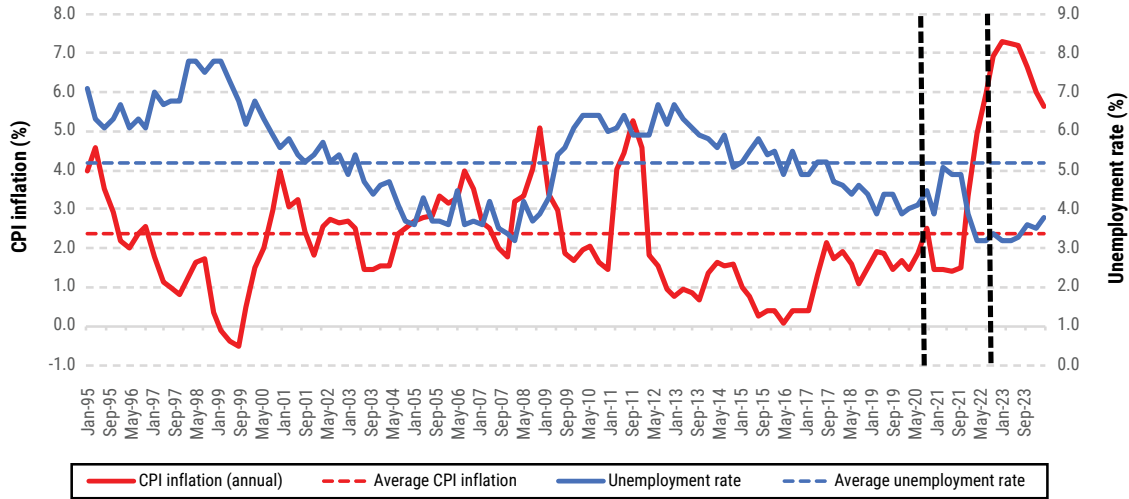
This forward guidance was accompanied in March by the announcement of a large-scale asset purchase program for New Zealand government bonds. And in November 2020, a three-year term funding-for-lending program was adopted.

As the New Zealand economy recovered and inflation started to increase (figure 5), the 12-month commitment to hold the policy rate at the ELB was allowed to lapse. In May of 2021, the Committee re-introduced the OCR projection which had the policy rate remaining at the ELB until mid-2022 and then increasing to two percent by 2024. Again, the recovery proved stronger than projected and the Committee raised the OCR by 25 points 0.50 percent in November 2021.

By not extending the extraordinary forward guidance beyond 12 months, the RBNZ had the flexibility to be one of the first major central banks to begin a tightening phase in response to the increasing inflationary pressure.

In summary, the experience of these central banks highlights the importance of clear communications to enhance the credibility and impact of extraordinary forward guidance and thus manage the trade-off between flexibility and impact. The extraordinary forward guidance used by the Bank of Canada and Reserve Bank of New Zealand was effective because it was communicated clearly and the commitment was credible. The Bank of Canada adjusted the time-dependent aspect of its guidance as the economic outlook changed.

Figure 5: New Zealand, CPI Inflation and Unemployment Rate, Quarterly, January 1995 to July 2023



Note: The dashed vertical lines denote periods of “Odyssean” forward guidance.
 Sources: OECD, 2024g, 2024h

All of the central banks reviewed used other extended tools, such as LSAPs, to provide additional monetary policy stimulus. In some cases, it was used to “reinforce” the forward guidance. Given these are central banks in small open economies that are well-integrated into global financial markets, the impact of these tools is not evident, and their net benefit is even less clear given the adverse legacy effects of these tools.

4. Effects of Forward Guidance

There is an active debate in the literature surrounding the effectiveness of forward guidance. The controversy reflects, in part, econometric challenges in identifying the impact of forward guidance on the term structure of interest rates specifically and on broader macroeconomic variables such as inflation, output and employment. As well, forward guidance has often been accompanied by other unconventional monetary policy initiatives, in particular central bank purchases of government debt, thereby complicating the identification of the singular effect of forward guidance.³¹ However, there is sufficient consensus across the leading empirical studies to allow several conclusions to be drawn with some confidence.

More studies of the impact of forward guidance have focused on the experiences of the Federal Reserve and the Bank of Japan. Swanson (2021) examined FOMC announcements from July 1991 to June 2019 to identify the separate effects of changes to the federal funds rate, forward guidance, and quantitative easing (QE) or LSAPs. He found that each had significant and distinct effects on financial markets. Forward guidance had the largest impact on shorter-term Treasury yields, while QE was more effective at moving longer-term bond yields. Campbell et al. (2016) conclude that for the period from 2009 Q1 to 2014 Q4, a rules-based monetary policy would have delivered better outcomes in the years immediately following the 2008–2009 financial crisis than FOMC forward guidance. However, starting towards the end of 2011, the FOMC's forward guidance appears to have boosted real economic activity and moved inflation closer to target (Campbell et al., 2016).

In a more recent econometric study, Koeda and Wei (2023a) find that outcome-based Odyssean forward guidance over the periods from 2009 Q2 to 2013 Q4 and 2020 Q1 to 2021 Q4 significantly reduced the US unemployment rate below what it would otherwise have been, but the impact over the latter period was smaller than that during the earlier period.³² Their overall conclusion is that outcome-based guidance by the Federal Reserve had significant monetary easing effect on the real economy in the ELB periods of the Great Recession and the COVID-19 pandemic.

31 It is beyond the scope of this essay to discuss the issues concerning the empirical identification of the impact of forward guidance. Sutherland (2022) provides a comprehensive review of the econometric issues.

32 Koeda and Wei (2023a) suggest that market participants had more fully anticipated the forward guidance of the latter period, so that the impact of guidance per se on short-term rates was more muted in the latter period.

Sutherland (2022) examined the link between forward guidance and market interest rates for a sample of advanced economy central banks. His baseline result is that, following a change in forward guidance, forecasters revise their one-year forecasts of the central bank policy rate by about five basis points (or 0.05 percent) increase (decrease) on average following each hawkish (dovish) forward guidance change.³³ His results are based on the entire sample of forward guidance episodes, including both Delphic and Odyssean forward guidance. Although the number of Odyssean episodes is much smaller, his estimated impact of such guidance is larger. This finding is suggestive, although not statistically significant owing to the small sample size. Of the national central banks in his sample, the US was one of four countries where forward guidance had the largest effect on interest rate expectations.³⁴ Consistent with these two findings, Del Negro et al. (2023) study the impact of calendar-based Odyssean forward guidance by the US Federal Reserve over the period August 2011 to mid-2015 and find that the forward guidance at the ELB lowered expectations of the future short-term interest rate by 15 basis points, triple that of Sutherland's finding. This finding also suggests the calendar-based Odyssean forward guidance may have a larger impact than that of state-contingent forward guidance.³⁵

Findings for the Bank of Japan are more ambiguous than those for the FOMC's forward guidance. Dell'Arricia, Rabanal and Sandri (2018) conclude that forward guidance by the BoJ to keep rates low until inflation resumed was largely ineffective because of the entrenched deflationary pressures in Japan for most of the period that the BoJ used forward guidance. Ueda (2012) also concludes that the BoJ's forward guidance failed to reverse the deflationary trend that Japan experienced ever since the early 1990s. Gertler (2017) agrees that the BoJ's aggressive use of forward guidance had only very limited success in reflation Japan's economy. Filardo and Hofmann (2014) focus on the BoJ's forward guidance in October 2010 in the context of the BoJ's program of Comprehensive Monetary Easing and on the forward guidance of 2013. They conclude that in the first

33 These changes in forward guidance changes are captured by dummy variables in Sutherland (2022).

34 The other three countries are Canada, New Zealand, and Sweden. Sutherland (2022) argues that this result is a consequence of these four countries starting to use forward guidance in the late 1990s to early 2000s, which was when forward guidance was particularly influential. By contrast, the BoE and the ECB did not start using forward guidance until 2013, by which point those central banks were already at the effective lower bound for the policy interest rate.

35 Kryvtsov and Peterson (2021) conduct experiments on central bank communications and find that forward guidance announcements have less effect on individual forecasts if they do not clarify the timing of future policy changes, suggesting that calendar-based forward guidance may have a larger impact.

case the effect on future interest rates was very small, while in the second case it was almost nil, although the 10-year bond rate did decrease.³⁶ Ferrentino and Vota (2020) discuss the effectiveness of the BoJ's monetary policies, particularly its forward guidance, to address the economic crisis caused by the COVID-19 pandemic. They conclude that forward guidance was not very effective. Conversely, Koeda and Wei (2023b) examine the impact of the BOJ's outcome-based forward guidance and yield curve control and come to a different conclusion. Specifically, they find that forward guidance and yield curve control were each effective in raising output above what it would otherwise have been from 2016 through 2022 Q1. Forward guidance accounted for most of the policy impact in the earlier stages but remained influential throughout.

Dell'Arricia, Rabanal and Sandri (2018) note that evidence about the effects of forward guidance in the UK is very limited. Filardo and Hofmann (2014) found that forward rate guidance announcements by the BoE in 2013 and 2014 did not lead to a reduction in expected future interest rates or in government bond yields. However, forward guidance seems to have reduced the volatility of expected future interest rates and likely contributed to keeping expected rates from rising despite sustained economic growth in 2014.

Hubert and Labondance (2016) estimate the ECB's forward guidance effect on one to two-year interest rates to be about two to three basis points respectively, and the effect on three to five-year rates to be about four to five basis points respectively. This estimated impact is consistent with results reported by Sutherland (2022). Andrade and Ferroni (2021) discuss how ECB forward guidance sends two types of signals: news about the macroeconomic state to which it will react given its usual policy rule, and news about future deviations from its policy rule given a future macroeconomic state.³⁷ They draw on the ECB's Governing Council communications including a policy statement followed by a press conference. They look at intraday variations in interest rate swap contracts observed in a tight time window around the release of the policy statement and the press conference. They find that the bulk of the variations in these contracts can be summarized by two factors: a "target" factor that reflects surprises about the current policy rate, and a "path" factor that conveys news about the path of future interest rates that are

36 Filardo and Hofmann (2014) acknowledge the difficulty in identifying the impact of forward guidance, since forward guidance during the two periods overlapped with the BoJ's securities buying programs.

37 They call the first signal Delphic and the second Odyssean, although their use of these terms is not identical to our earlier definitions. The first effect refers to how forward guidance can affect the behaviour of market participants by providing indirect information about the central bank's assessment of current economic conditions. The second effect refers to how market participants are affected by guidance about the future path of monetary policy.

independent of the news affecting the current rate. An unexpected lower path of future interest rates lowers expected future interest rates for horizons as far ahead as 10 years.

In summary, available empirical studies provide insight into how forward guidance affected the stance of monetary policy and ultimately economic outcomes. The primary channel seems to be via the impact on expected future short-term interest rates and thus on short-to-medium bond yields' term structure of interest rates.³⁸ In other words, forward guidance, if credible, should influence the market's expected future path of the policy rate and thus lead to changes in short-term market interest rates along the path and to movements in longer-term market interest rates, which are averages of short-term rates plus a term premium. In theory, changes in interest rates, particularly medium to longer-term rates, should, in turn, affect economic activity primarily by influencing demand for longer-lived assets such as housing, automobiles, and machinery and equipment.

The available evidence for the forward guidance experience of the central banks reviewed in this section suggests that forward guidance has generally had the intended effect on bond yields. In particular, since Odyssean forward guidance has been implemented largely during periods when policy rates were at or close to the ELB, the goal of such forward guidance was to lower longer-term interest rates by stabilizing expectations of short-term rates at a relatively low level. It appears that forward guidance generally had this effect, although perhaps not as strong as expected. The evidence is less clear that the effect of extraordinary forward guidance on interest rates translated to a strong effect on overall economic activity, although there is anecdotal evidence in the case of Australia, Canada, and New Zealand that it supported activity in the housing market.

Interestingly, theory would suggest that forward guidance would have a larger effect on yields of shorter maturity, especially in smaller economies since their domestic monetary policy would likely have a greater near-term impact and would not affect longer-term risk premia priced in global markets. Although anecdotal evidence suggests this hypothesis is likely true, compelling econometric evidence has not been found.

In the next section of the essay, we identify and assess various factors that seem to condition the influence of forward guidance on interest rates and overall macroeconomic conditions. The evaluation draws specifically on the experiences of our sample of central banks.

38 In open economies, the other potential channel is via the exchange rate as shifts in expected future short-term rates would affect the exchange rate through interest rate parity conditions.

5. Factors Affecting the Impact of Forward Guidance

Various factors can influence the impact of forward guidance, and the important trade-off with policy flexibility and nimbleness. In a comprehensive study, Dell’Arriccia, Rabanal and Sandri (2018) identify several factors that can influence the impact of forward guidance as well as complicate empirical evaluation of its effectiveness. The first is the degree to which markets already expect the forward guidance that the central bank delivers. The greater the extent to which any specific forward guidance is anticipated by the public and financial markets, the less likely it is that the guidance will alter interest rates or other macroeconomic variables, since the central bank’s policy path is already built into the expectations of market participants. The implication is that forward guidance will have a stronger impact the more “unconventional” the signaled policy path, if the path signaled is credible to market participants. The BoJ’s forward guidance was arguably not credible given the very parlous state of Japan’s economy. In this regard, Evans (2017) cautions that if the central bank’s policy commitment represents a major departure from market’s understanding of its reaction function, then it needs to prepare the public ahead of time to establish the credibility of the policy path it is guiding.

Credibility is the second factor identified by Dell’Arriccia, Rabanal and Sandri. Shirai (2013) flatly asserts that unconditional commitment is, in practice, not credible. Both Shirai and Evans, argue that a balance between credibility and impact on one hand and policy flexibility on the other is best achieved by the central bank using state-contingent forward guidance. Evans argues further that for forward guidance to be credible and thus more effective, it should be outcome or state-contingent, consistent with its own mandate.

As noted earlier, both the ECB and the Federal Reserve appeared to be putting more emphasis on flexibility in their forward guidance announcements as inflation increased over 2022–23. The state-contingent guidance became more qualitative and less concrete in terms of its description of the relevant state-contingencies. This shift reflected concerns that they both had been too slow to raise their policy rates as inflation rose because they had given guidance in 2020 and 2021 that they did not want to do so for some time and wanted to follow through with that guidance (Sablík, 2022).³⁹ In contrast, the Bank

39 The Fed’s reluctance to raise its policy interest rate was also driven by its new flexible average inflation-targeting framework, which maintained that past underachievement of the inflation target should be made up for by future overshoots and that only shortfalls from maximum sustainable employment should affect the conduct of monetary policy. In addition, Donald Kohn, a former Federal Reserve

of Canada, maintained its state-contingent forward guidance consistent with its mandate as inflation increased, but imparted some flexibility into this guidance by shortening the projected horizon for sustainably achieving its two percent inflation mandate.

A third factor mentioned is that forward guidance should be clearly communicated so that markets interpret the guidance in the manner intended by the central bank. In this regard, a complicated state-contingent policy guidance can be confusing to the public and market participants—a criticism that BoE Deputy Governor Broadbent applied to the BoE's forward guidance in 2013 that linked future interest rate moves to the unemployment rate conditional upon a set of other factors. At the same time, if forward guidance is too open-ended, the central bank risks exacerbating macroeconomic volatility as market expectations become less well anchored to the current policy path. Instead of qualitative forward guidance, which has been found to have limited impact, central banks should improve their economic projections to better incorporate the effects of nonlinearities, supply shocks and heterogeneity across households and firms and adopt more transparent communications of their projections. In particular, central banks need to better communicate the uncertainty surrounding their projections to market participants by publishing risk or “what if” scenarios and associated policy interest rate paths (Bernanke, 2024). Such scenarios would mitigate interest rate volatility because they provide the opportunity for the central bank to explain how it would react to potential economic shocks. Better communication of its reaction function in this way would obviate the need to make promises about specific interest-rate plans (Bruce and Schomberg, 2022).

Vice Chair, argued that the Federal Reserve maintained its forward guidance for too long because it waited to raise interest rates only until after it began to taper the pace of its purchases of government bonds and this created an unnecessary delay (Lee, Boocker and Wessel, 2023). Orphanides (2023) maintains that the ECB was also significantly delayed in responding to an unexpected increase in inflation by its calendar-based commitment to its asset purchase programs and its linking of interest rate increases to ending its asset purchases. These experiences indicate that linking the duration of forward guidance to that of other tools may render it too inflexible, limiting the central bank's ability to calibrate its use to changing economic circumstances.

6. Concluding Remarks

Many central banks have used different forms of forward guidance about the future path of their policy interest rate in an effort to shape expectations about longer-term market interest rates and influence economic outcomes, thereby helping to achieve their policy mandates.

Softer, more qualitative forms of Delphic forward guidance may contribute to monetary policy transparency, but such guidance lacks accountability and thus is not very credible. Consequently, the evidence of its impact on monetary conditions and economic outcomes is mixed and not meaningful.

A better approach would be to adopt more explicit forms of Delphic forward guidance, such as publishing the policy rate path consistent with the central bank's central economic projection. While announcing such a path would be conditional on the projection and not a commitment, it would nonetheless enhance the transparency and accountability of monetary policy.⁴⁰ Central banks would not only be forced to explain the path and how it contributes to achieving its mandate, but also shifts in the path as the economic outlook changes. Such explanations would provide useful information about the central bank's reaction function, namely how it adjusts its policy rate in response to economic developments.

A compelling case can also be made for the use of Odyssean or extraordinary forward guidance to provide additional monetary stimulus during severe economic downturns when the policy interest rate is constrained by the effective lower bound. This form of forward guidance is more credible because it entails a commitment by the central bank to hold the policy interest rate at the ELB until a certain economic outcome is achieved that is consistent with its policy mandate. Some central banks have complemented this state-contingent forward guidance with an indication of how long this commitment might last, using phrases such as “for an extended period.”⁴¹ While adding a time dimension to the guidance makes it more concrete and understandable, and perhaps more effective, it renders the guidance less flexible because central banks may be less able to adjust this temporal commitment as economic conditions change. Managing this

40 Gliberman and Schembri (2023) examine the improvements in central bank transparency in recent decades.

41 The Reserve Bank of New Zealand was a rare example of a central bank that used only a time-contingent form of forward guidance during the pandemic.

trade-off between impact and flexibility is the primary challenge central banks face in using Odyssean forward guidance.

Central banks do not, however, have an established framework to follow for Odyssean forward guidance. Much of what has been done in the past, has typically been developed “on the fly” during the two most severe economic crises in recent decades. A more deliberate and systematic approach should be taken towards Odyssean forward guidance to educate financial market participants and the public about its purpose and use. Such an approach would strengthen the credibility of the forward guidance and improve the trade-off between the impact of forward guidance and its flexible application to changing economic circumstances.

In particular, credibility would be enhanced if the Odyssean forward guidance were anchored on a central economic projection to allow central banks to complement state-contingent forward guidance with a time dimension as the Bank of Canada did during the pandemic. In Canada, the extraordinary forward guidance had a material economic impact. The Bank was able to flexibly adjust the expected duration of its commitment based on the evolving economic outlook.

Another important lesson from the recent experience with Odyssean forward guidance during the pandemic concerns the concomitant use of other tools such as large-scale asset purchases or yield curve control.⁴² Often the rationale offered by central banks for the combined use of these extended tools at the ELB is that they are complementary and self-reinforcing. The evidence (e.g., Sutherland, 2022) indicates that their impact is not additive; thus, combining them does not necessarily add to credibility and generate a synergistic impact. Moreover, using these tools in combination may work at cross-purposes as seen in the cases of the Federal Reserve, the European Central Bank, and the Reserve Bank of Australia, where the use of other tools constrained the central banks’ ability to adjust their forward guidance during the pandemic as inflation pressures increased faster than expected.

Therefore, in light of this recent experience and evidence, central banks should be prepared to use Odyssean forward guidance as their preferred tool for providing additional monetary stimulus when their policy rates are at the effective lower bound.⁴³ Using

42 The use of negative policy rates is even more controversial as the experience with them is very mixed.

43 Recent experience and evidence also suggest that Odyssean forward guidance should be the first choice among other extended monetary policy tools for small open economies. While central banks in large economies such as the United States and the European Union may be able to influence prevailing global real interest rates and risk premia through tools such as LSAPs, these tools have a much smaller impact for central banks in small open economies such as Canada, Australia, and New Zealand, as they operate largely through the exchange rate channel. The best they can hope to achieve with extended

it in a deliberate and well-explained manner would be credible and would ease monetary conditions during a severe economic downturn when more stimulus is needed. Moreover, it can be applied in a flexible and nimble manner, without the legacy effects of the other extended tools.

monetary policy tools is to influence expectations of short-term interest rates and bond yields over the short-to-medium term and this could be most easily achieved using credible Odyssean forward guidance.

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