

The Evolution of Monetary Policy Focal Points

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Abstract: With near-zero policy rates becoming the norm in many advanced economies, the focus on long-term bond yields has strengthened considerably. The unconventional monetary policy decision by the Bank of Japan (BOJ) in September 2016 to explicitly target the 10-year Japanese government bond (JGB) yield institutionalised this process – by effectively creating a new monetary policy focal point. In this paper, we study the importance of such focal points. Empirically, we also investigate how JGB benchmark maturities ranging from 1 to 30 years has affected other benchmark maturities over time. We find that the 10-year bond, indeed, became more influential in 2016. However, the effect was surprisingly short-lived. The results suggest that once financial market participants anchored their expectations of the 10-year JGB yield to the new BOJ target, the attention merely shifted towards even longer maturities. Contrary to the logic of the monetary transmission mechanism, we also find the short end of the yield curve has been an absorber, rather than transmitter, of influence during the last decades.

Keywords: Bank of Japan; bonds; focal points; monetary policy; yield curve control

JEL Classification Numbers: C32; C5; E43; E52; G15

Central banks and focal points

Central banks often adopt anchors and targets to steer the expectations of market participants and the wider public. Indeed, anchors, targets, benchmarks, pegs, focal points etc., are very common and extremely helpful for coordination processes towards some kind of goal – a crucial aspect of many economic activities. In a classic example, Thomas Schelling (1960) illustrates this by posing the question: “If you are to meet a stranger in New York City, but you cannot communicate with the person, then when and where will you choose to meet?” The most common answer is “noon at Grand Central Terminal.” Game theorists, in particular, have found this example intriguing, as the meeting point and time could be conceptualised as a kind of equilibrium for a voluntary exchange or a monetary transaction. However, anchors, targets, benchmarks, pegs and focal points typically have deep sociological, institutional and political underpinnings. Some evolve and become formalised via habits and conventions, whereas others are constructs solidifying relationships of power (Stenfors 2018; Stenfors and Lindo 2018).

Fixed exchange rate regimes

As an annexe of the state and leader of the club of banks, the central bank has significant power to choose a particular monetary focal point and coordinate others’ behaviour towards it. However, it is by no means absolute. Throughout modern history, numerous central banks have tried to maintain a fixed exchange rate regime – a monetary policy focal point in the form of a specific exchange rate or a reasonably narrow range within which this exchange rate is allowed to fluctuate without central bank intervention. Importantly, regardless of whether a currency is perceived to be over- or undervalued, a fixed exchange rate regime involves trying to maintain trust in the central bank’s ability and commitment to its chosen focal point indefinitely. For instance, when market speculators (unsuccessfully) tested the long-lasting Danish krone peg against the euro at 7.46 in February 2015, Denmark’s central bank Governor Lars Rohde stated that he would do “whatever it takes” and that the central bank could “go on forever” to defend the peg – in other words to forcefully keep the focal point unchanged at 7.46 (Milne 2015). However, Denmark belongs to a group of exceptions, and the lifetime of most exchange rate pegs have tended to be relatively short.

Inflation targeting

Since the 1990s, there has been a systematic trend to abandon such fixed exchange rates in favour of floating exchange rates, price stability and inflation targeting. Instead, monetary policy targets in the form of economic indicators such as inflation have become common. Inflation *per se* cannot come under the attack by speculators – regardless of how inflation is defined (e.g. CPI or CPIF), the nominal target of the inflation rate (e.g. 2% or 2-3%) or the horizon for when this target is supposed to be met (e.g. 2 or 3 years).

Inflation targeting, therefore, eliminates an almost inevitable battle between the central bank and financial market participants to preserve or break a specific focal point.

However, this does not mean that the central bank has given up all its power. It simply means that the focal point obtained a more *indirect* characteristic. According to the logic of the monetary transmission mechanism, the official interest rate set by the central bank filters through to the rest of the economy via medium- and long-term interest rates. Further, following the expectations hypothesis of the term structure of interest rates, bond yields of different maturities are closely correlated. Chotibhak Jotikasthira, Anh Le and Christian Lundblad (2015) find that co-movements among bond yields can be derived from either the central bank policy rate (the ‘policy channel’) or term premia (the ‘risk compensation channel’). Historically, central banks have been content to exercise influence over short-term maturities. Indeed, during the early years of inflation targeting, they were reluctant to tamper with the market forces that ultimately had the final say in the level of long-term yields. Instead, the difficulty in steering long-term interest rates (and hence the inflation rate) started to become addressed through a trend towards greater transparency. Market uncertainty could be minimised by publicly announcing monetary policy meeting schedules, voting results, and minutes.

Unconventional Monetary Policy

Nonetheless, the usage of more direct and formal focal points became much more explicit with the launch of so-called “forward guidance” (Stenfors 2014). With this, market participants were presented with a blueprint for how the central bank would behave under various scenarios in the future. To paraphrase Thomas Schelling, market participants were not explicitly told to meet at noon at Grand Central Terminal. Still, they were given clues as to where others might be likely to encounter if an event were to happen. By openly disclosing the central bank’s view of the possible interest rate path in the future and the circumstances when this scenario might change, a string of focal points could be sprinkled along the yield curve towards which market participants could then anchor their expectations. The focal points were not randomly chosen but rather followed conventional benchmark maturities such as six months, one year, two years, etc.

With the advent of the Great Recession, the deployment of forward guidance, coupled with a battery of other unconventional monetary policies, increased considerably. Then, following the Eurozone sovereign debt crisis, the ECB Governor Mario Draghi made one of the boldest moves in this famous “whatever it takes” speech on 26 July 2012 (ECB 2012). The speech, which came to substantially lower bond yields across the Eurozone, was interpreted as if the ECB were prepared to go any length, or at least much further than previously envisaged, to save the euro. However, despite having a huge impact on financial markets in general and European government bond yields in particular, the speech did not alter any existing focal points as such. Instead, it signalled a warning to market participants not to be led astray by economic commentators and speculators who had become tempted to anchor their expectations to the demise of the Eurozone project.

Yield Curve Control

Since near-zero policy rates have become the norm in many advanced economies since the Great Recession, the focus of attention to long-term bond yields has strengthened considerably. The COVID-19 pandemic has provided further impetus, as governments have become faced with higher levels of debt that will need to be managed in the future. The logical next step from a sting of focal points based upon expectations and promises that are open to interpretation is a firm target of a specific yield for a particular maturity along the yield curve spectrum.

Although it had been adopted in the past (in the US during and the immediate aftermath of WW2), Japan became a pioneer with yield curve control in the modern era. The unconventional monetary policy decision by the Bank of Japan (BOJ) on 21 September 2016 to explicitly target the 10-year Japanese government bond (JGB) yield at around 0% effectively institutionalised a new yield curve anchor – a role historically only played by the short-term policy rate (BOJ 2016).

From a theoretical perspective, introducing a completely new focal point is important by serving as a reminder of the debate during the first half of the 20th century concerning the role of expectations in monetary policy. The fact that interest rates have been low in Japan for a very long time has prompted comparisons to the writings by John Maynard Keynes (1935) on the “liquidity trap”. Furthermore, the idea that the central bank could determine the current, future and the possibly even the expected future interest rate goes back to the contributions by Ralph George Hawtrey (1923; 1934) and John Richard Hicks (1977). Put together, they pose a crucial question: “Can, and shall, the state systematically intervene to determine the long-term interest rate?”

From a simple theoretical and practical point of view, the Japanese reform is significant because it questions whether the logic of the first steps of the monetary transmission mechanism is fit for purpose. If the central bank suddenly tells market participants to get accustomed to a 10-year yield of 0% and then uses its power to stand by its commitment, why would the market need to second-guess and constantly generate new expectations of future interest rates?

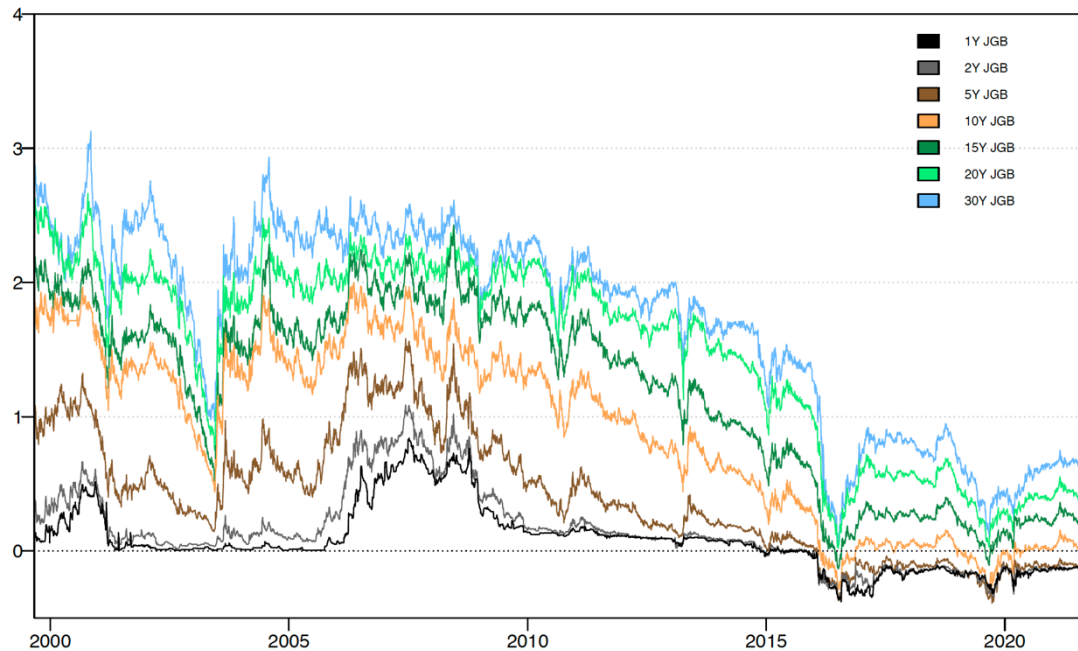
The Case of Japan

From a focal point of view, this prompts two questions. First, suppose the 10-year benchmark maturity has been selected as “the chosen one” among several alternatives. In that case, its importance should, to some degree, have been at the expense of other “competing” nodes along the yield curve – most notably the 5-year and 15-year maturities. Second, and more fundamentally, the change ought to have been followed by a weaker influence from the short end of the yield curve. After all, the yield curve control policy was adopted after a period of realisation that the official central bank interest rate had become insufficient as a means to steer behaviour further out along the yield curve.

We explore these two questions by investigating how the transmission mechanism among benchmarks JGBs have changed over time. Empirically, we do so by employing a

framework that combines a time-varying parameter vector autoregressive (TVP-VAR) model with the dynamic connectedness approach. A technical exposition of the relatively widely adopted methodology is beyond the scope of this paper. For details, see, Francis Diebold and Kamil Yilmaz (2014) and Ioannis Chatziantoniou, David Gabauer and Alexis Stenfors (2020; 2021ab). We include seven key benchmark maturities in our study, namely 1, 2, 5, 10, 15, 20 and 30-year JGBs. Figure 1 depicts the development of these bonds from 2 September 1999 to 4 October 2021.

Figure 1: Japanese Government Bond Yields

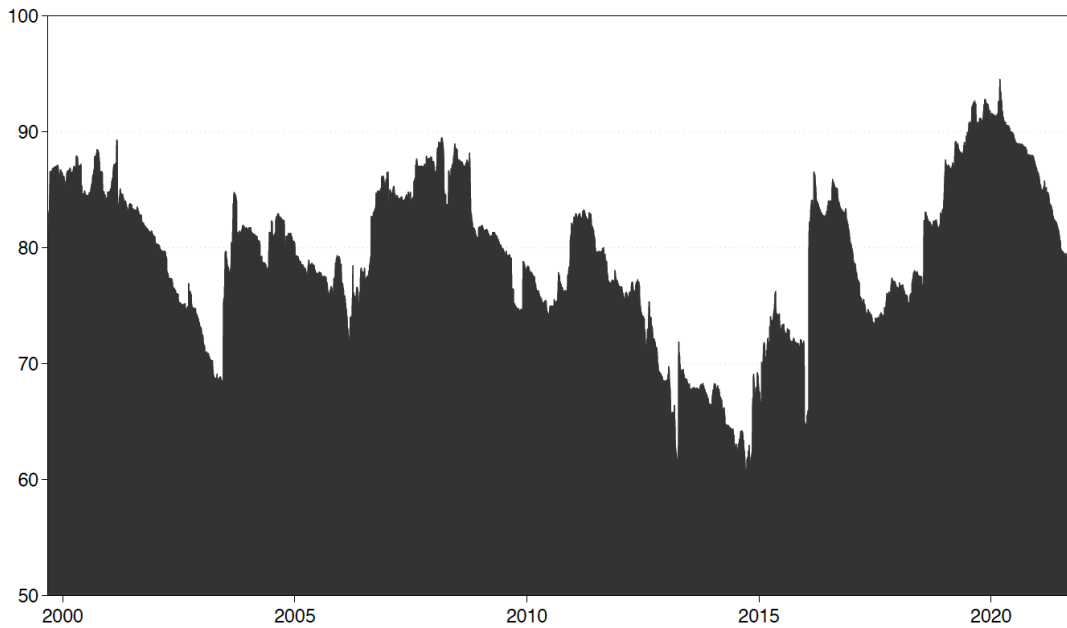


Sources: Bank of Japan and Bloomberg.

As can be seen, short-term interest rates have been very low since the Japanese Banking Crisis during the 1990s. Moreover, the yield curve has been positive, i.e. upward-sloping, more or less throughout the period, but has gradually become flatter. The figure also shows that JGBs of different benchmark maturities appear to be closely correlated. The strength of the correlation seems to depend on the closeness of the maturities in question.

Next, let us study the dynamic connectedness of the network of benchmark JGBs. A high connectedness index indicates strong co-movements among the “benchmark nodes” across the yield curve. A low index, by contrast, suggests that a change in one series (e.g. the 5-year bond yield) has little impact on the other series.

Figure 2: Dynamic Total Connectedness

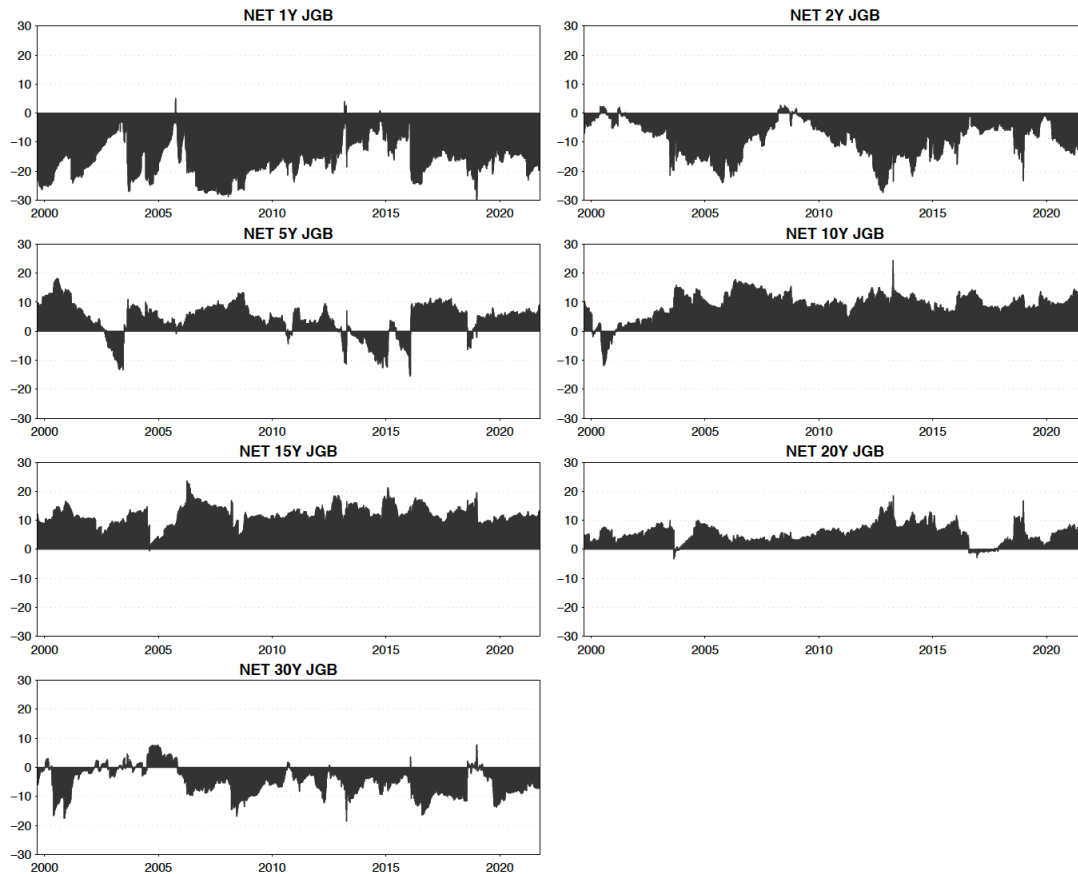


Sources: Bloomberg and authors' calculations. Notes: Results are based on a TVP-VAR model with lag length of order one (BIC) and a 20-step-ahead generalised forecast error variance decomposition.

As can be seen from Figure 2, the index has ranged between 60% and 90% during the period studied – confirming the observation that the universe of JGBs is a highly connected system. Notable peaks include the Dot-com bubble in 2000, the Great Recession in 2007-09, the introduction of yield curve control in 2016, and the start of the COVID-19 pandemic in 2020. This seesaw pattern is consistent with the literature that generally shows that connectedness (and herd behaviour) tends to peak around episodes of stress and crises and decline during the early phases of significant policy changes (see, for instance, Chatziantoniou, Gabauer and Stenfors 2020; 2021ab).

However, whereas the overall connectedness across the Japanese yield curve is interesting, the crucial question is whether and how the 10-year bond has changed since it achieved a new formal focal point status in September 2016. In addition, has there been a sudden or gradual reduction in the role of the 1-year bond as a representative of the shorter-end of the yield curve? To answer these questions, let us study whether the individual bonds have influenced, or been influenced by, the other benchmark bond within this network from 1999 to 2021.

Figure 3: Net Total Directional Connectedness



Sources: Bloomberg and authors' calculations. Notes: Results are based on a TVP-VAR model with lag length of order one (BIC) and a 20-step-ahead generalised forecast error variance decomposition.

Figure 3 shows the “net total directional connectedness” among the JGB maturities within this network – ranging from the 1-year to the 30-year bond. A dark area significantly and consistently above [below] zero implies that the bond yield of a specific maturity transmits [receives] strong shocks or influences to [from] the others.

Two observations are notable. First, the 10-year and 15-year (and to a lesser degree 20-year) bonds have acted as transmitters of shocks during the last two decades. The 10-year bond also shows a “hump” around the introduction of yield curve control in 2016 – confirming the notion that the 10-year focal point obtains an elevated status among the long-benchmark bonds. Indeed, Figure 1 shows that ever since the policy change, the BOJ has managed to keep the 10-year bond yield very close to 0%. Interestingly, however, Figure 2 shows that the effect was surprisingly short-lived. The results suggest that once financial market participants anchored their expectations of the 10-year JGB yield to the new BOJ target, the attention merely shifted towards even longer maturities (15-years and beyond). Second, as can be seen, the dark area has almost exclusively been for the 1-year JGB yield. Indeed, it is crystal clear that the shortest bond, more or less throughout the last two decades, has been influenced by longer-term bonds – and not vice versa. It is also notable that the 2-year bond appears to have received influence from, rather than transmitted impact to, other benchmark bonds.

Concluding Remarks

In this paper, we have investigated how the transmission mechanism among Japanese government bonds has changed over time. From a focal point of view, two key findings stand out. First, the short end of the yield curve has been a consistent receiver of influence from longer maturities. Second, the “shock” to the universe of benchmark maturities following the introduction of yield curve control was very short-lived. Once financial market participants anchored their expectations of the 10-year JGB yield to the new BOJ target, the attention merely shifted towards even longer maturities (15-years and beyond). The observations seem to contradict the logic of the monetary transmission mechanism. Moreover, the establishment of a new focal point in the form of yield curve control appears to be surprisingly feasible and less dramatic than observers might like to think.

However, the findings do not necessarily need to be paradoxical. Japan has had near-zero and stable policy interest rates for several decades, and this typical focal point became inadequate to address the challenges a long time ago. It is only logical that the attention to the short end of the yield curve has become more muted. This is consistent with short-term bonds having been receivers of shocks from nodes further out along the yield curve. Indeed, ever since the Japanese banking crisis during the 1990s, the Bank of Japan has gone to extraordinary lengths in terms of monetary policy – ultimately intending to revive the sluggish economy and achieve a moderate and stable inflation rate. The radical policies have ranged from zero interest rate policy and quantitative easing to yield curve control. Whereas zero (or even negative) interest rates and quantitative easing have since become standard in many other advanced economies, yield curve control has not yet been widely adopted elsewhere.

However, on 19 March 2020, the Reserve Bank of Australia announced introducing a yield curve control policy in response to the COVID-19 outbreak (RBA 2020). A target for the yield on 3-year Australian Government bonds was set at around 0.25%, which would be achieved by purchasing bonds in the secondary market. Such interventions would, in addition, “address market dislocations.” Although this policy might become short-lived and temporary, it demonstrates the role of BOJ as a pioneer in adding radical, crisis-driven and extraordinary monetary policy into the mainstream central banking toolbox. Whether the Keynes-inspired BOJ Governor Haruhiko Kuroda’s thought process will spread around the world remains to be seen (Kuroda 2017). Regardless, it serves as an important reminder that even in the era of “independent central banking”, the central bank remains an annexe to the state.

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