

Daiwa's View

JGB market: Lessons from the past

- Examination of factors behind rise in volatility in JGB market over past 20 years
- Keys are overseas factors, changes in monetary policy, and changes in market structure
- When assessing effectiveness of YCC, we should note swap rate and corporate bond yields
- Change in environment surrounding financial institutions also needs to be considered

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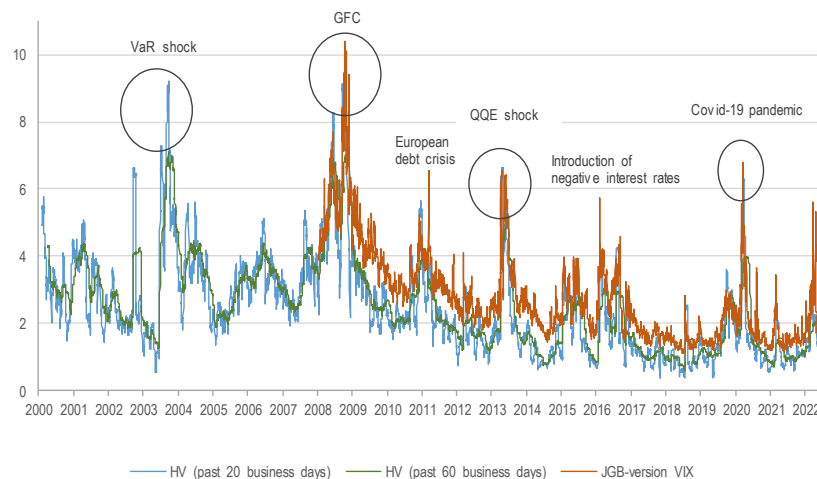
Daiwa Securities Co. Ltd.

JGB market: Lessons from the past

Factors behind rise in volatility in JGB market

In this report, we focus on volatility in the JGB market over the past 20 years and examine factors during high volatility. Based on an analysis of the past, we found three important points: (1) overseas factors, (2) changes in monetary policy, and (3) changes in the market structure, and summarize what should be watched out for in the JGB market going forward.

Chart 1: Historical Volatility of Long-term JGB Futures, JGB-version VIX Index



Source: Bloomberg; compiled by Daiwa Securities.

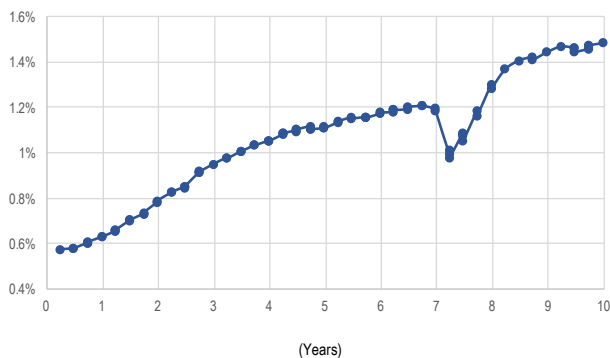
(1) Overseas factors (GFC)

Looking back on the phases when the JGB market became volatile, we can divide them into several patterns. For example, market destabilization in 2008-2009 and spring 2020 was mainly caused by overseas factors. In particular, during the Global Financial Crisis in 2008, the so-called the Lehman shock, basic market functions, such as settlements and repo transactions, were impaired due to the bankruptcy of Lehman Brothers, which was a primary dealer in the JGB market. While the 7-year JGB yield plunged due to pressure to repurchase long-term JGB futures, 5-year and 10-year cash bonds were sold owing to concerns about fundraising. This resulted in significant distortion of the yield curve (Chart 2). Similarly, it can be said that the European debt crisis in 2010 and the COVID-19 shock in March 2020 had an adverse impact on the JGB market.

(2) Change in monetary policy (introduction of QQE)

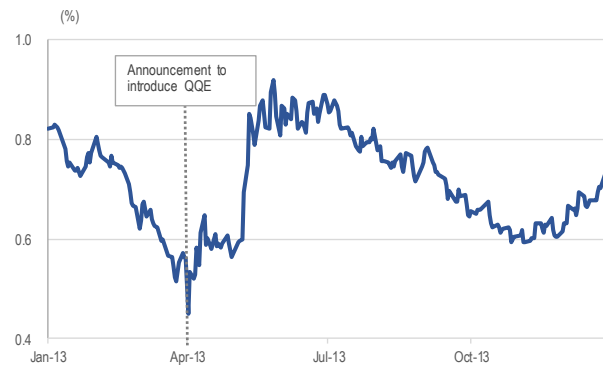
The rise in volatility in 2013 and 2016 was probably caused by unexpected changes in monetary policy at the BOJ, particularly in April 2013, when BOJ Governor Haruhiko Kuroda announced the introduction of "Quantitative and Qualitative Monetary Easing (QQE)" at his first Monetary Policy Meeting. The central bank aimed to aggressively expand the monetary base and doubled purchases of long-term JGBs to around ¥7tn/month. An increase in purchases of government bonds by central banks serves as a factor in lowering long-term yields. Although the 10-year JGB yield had temporarily declined from the mid-0.50% level to the mid-0.40% level, it surged starting the following day. In May, it rose to 0.90% and volatility remained high for the time being.

Chart 2: JGB Yield Curve (18 Sep 2008)



Source: Bloomberg; compiled by Daiwa Securities.

Chart 3: Long-term JGB Yield Before and After Announcement of QQE



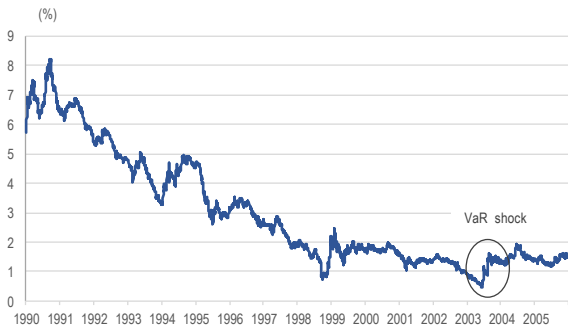
Source: Bloomberg; compiled by Daiwa Securities.

(3) Changes in market structure and VaR shock

The circumstances surrounding the JGB market turmoil in 2003, known as the 'VaR shock,' were different from those of other cases in that volatility rose without clear reasons, such as monetary policy or overseas market factors. Simply looking back on the circumstances at the time shows that the long-term yield had been on a moderate downtrend since 2002 and declined to the mid-0.40% level in June 2003. After the 20-year JGB auction in that month went poorly, the long-term yield surged starting the following day. Then, selling triggered more selling, and the yield momentarily rose to 1.6% in September and volatility remained high for about six months. It has been pointed out that this was caused by the influence of VaR, a risk management method at financial institutions, as shown by the fact that it was called the VaR shock. Under the VaR method, the level of risk exposure that can be held depends on the volatility level. When volatility rises, a negative feedback loop easily occurs because market participants are forced to dispose of positions to reduce risk, and fire selling pushes up market volatility further.

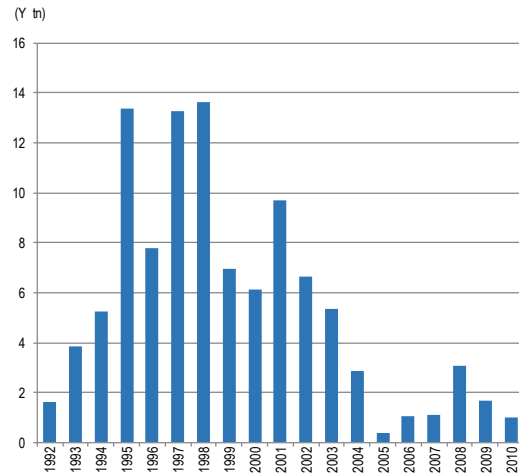
Moreover, when considering the VaR shock from a broader perspective, we cannot overlook changes in structural factors at the time. Due to the bursting of the asset bubble in the early 1990s and the secular recession through the financial crisis in 1997-98, banks suffered from the disposal of bad loans and relied on income from bond dealing. Meanwhile, in May 2003, it was decided to support Risona Bank through the injection of public fund to avoid bankruptcy. This might have meant that the period of concern about the Japanese financial system and bad-loan disposals had almost ended. The time of the VaR shock could possibly be described as a time in which the financial market was experiencing major structural change, rather than as the end of the downtrend in the long-term yield that had continued for around ten years since the beginning of the 1990s.

Chart 4: Trend of Long-term JGB Yield (1990-2005)



Source: Bloomberg; compiled by Daiwa Securities.

Chart 5: Losses on Bad-Loan Disposals at Nationwide Banks

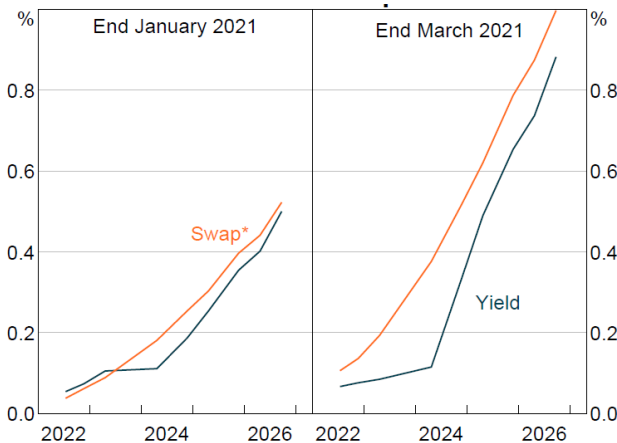


Source: Financial Services Agency; compiled by Daiwa Securities.

**Effectiveness of YCC:
Swap rate and corporate
bond market need to be
checked**

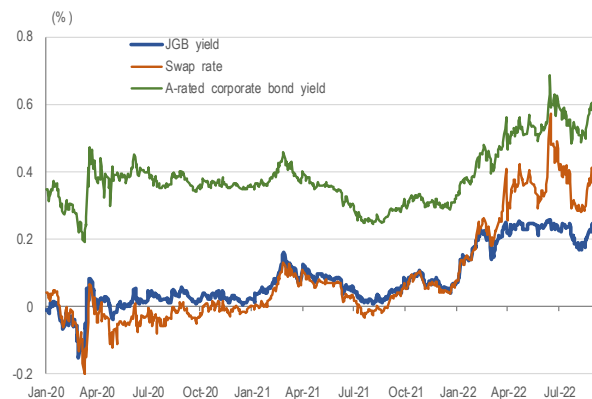
Based on the aforementioned precedents, we think that three points, (1) overseas factors, (2) changes in monetary policy, and (3) changes in the market structure, are important when forecasting the JGB market. Regarding changes in monetary policy, as was emphasized [at the July BOJ MPM](#), the YCC framework is expected to be maintained in the near term. However, in the lead up to the end of the terms of the BOJ governor and two deputy governors next spring, the monetary policy stance that will be taken by the new BOJ leaders is one of the biggest issues for market participants. In [the report](#) announced by the Reserve Bank of Australia in June, the transmission mechanism of the monetary policy was pointed out as a factor behind the removal of the yield target policy. In other words, although the targeted 3-year government bond yield was contained to a low level, the transmission effect was weakened due to the rise in swap rate and fundraising costs in the private sector. Accordingly, we should also note the yield level in the corporate bond market and the balance with the swap rate as important factors when assessing the effectiveness of the YCC policy in Japan.

Chart 6: AGS Yield and Swap Curves



Source: Reprinted from RBA's "Review of the Yield Target."

Chart 7: Various Japanese Yields in 10-year Zone



Source: Bloomberg; compiled by Daiwa Securities.

**Structural change at
financial institutions**

Finally, we touch on a substantial change in the environment surrounding financial institutions in terms of the third factor (the market structure). According to the "Financial Results of Japan's Banks for Fiscal 2021" (*Financial System Report Annex Series*) announced by the BOJ in July, major banks and regional banks posted unrealized losses on bonds and other securities (among available-for-sale securities holdings) as of March 2022. We estimate that the situation is worsening further, considering the rise in yields since April. It is estimated that unrealized gains on all securities (including stocks) are

maintained. However, unrealized gains/losses are important figures in gauging the risk-taking capacity at financial institutions. If its function as a cushion for market fluctuations is declining, this warrants attention.

We have pointed out what should be watched out for going forward based on past phases of high volatility in the JGB market. Central banks around the world are being forced to rapidly shift their monetary policy from easing to tightening amid historically high inflation. We hope that this report, which considers Japan's monetary policy and changes in market structure, will be of some help in improving performance for investors.

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