Liquid Insight

Japan's policy challenge – defend JPY or JGB?

05 October 2023

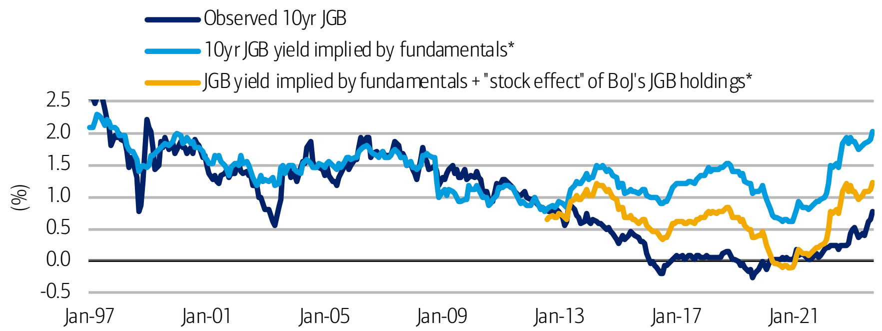
Rates and Currencies Research
Global

Key takeaways

- Defending JPY by raising yen rates costly with high US rates vol.
- BoJ and MoF likely to try easing JGB weakness and USD/JPY strength by bond buying ope. and FX intervention.
- Risk of FX intervention to rise if USD/JPY rallies to 151 after NFP, but we remain bearish on JGB and JPY vs USD.

By Shusuke Yamada and Tomonobu Yamashita

Chart of the Day: 10yr JGB yield consistent with fundamentals + stock effect of BoJ's JGB holdings
Fundamentals imply the 10yr JGB yield around 2% but the stock effect may be significant



Source: BofA Global Research, BoJ, Bloomberg; For the methodology, see: BoJ could act if 10yr JGB yield hits 75bp 09 August 2023.
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MoF intervention or BoJ policy change?

In June, we argued that Japan would respond to yen weakness by the BoJ's policy tweak (see: Yen weakness in '22 = headache for MoF; Yen weakness in '23 = tailwind for BoJ 07 June 2023). As the BoJ had tweaked YCC in the Jul MPM, we argued that the MoF would manage FX volatility until the BoJ's Oct MPM (see: Japanese policymakers' "ideal" USD/JPY scenario 22 August 2023). Now, the risk of the MoF's FX intervention relative to the BoJ's policy tweak has risen further, due to elevated volatility in US rates.

We argue that an attempt to support JPY by raising yen rates, especially the 10yr rate as a front-end hike appears premature, could be costly as it may require QT, risks destabilizing the JGB and global bond markets, and could face political resistance for its implications for public debt sustainability. Until US rates volatility subsides, Japan's policymakers would have to mitigate yen and JGB weakness by utilizing FX intervention and additional bond purchases, which may send a mixed signal to the market. Short JGB and JPY vs USD continues to be the trade for Japan for the rest of 2023, in our view (see: Short JGB, not USD/JPY 12 September 2023).

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External environment may call for FX intervention

Since the BoJ's YCC tweak in Jul, the external environment has changed. Upside volatility has risen in the US rates market, pushing USD higher (Exhibit 1). This is an environment in which the MoF intervened to shore up JPY in Sep and Oct 2022 while the BoJ remained on hold. It was only after US rates stabilized that the BoJ tweaked YCC in Dec 2022 and Jul 2023.

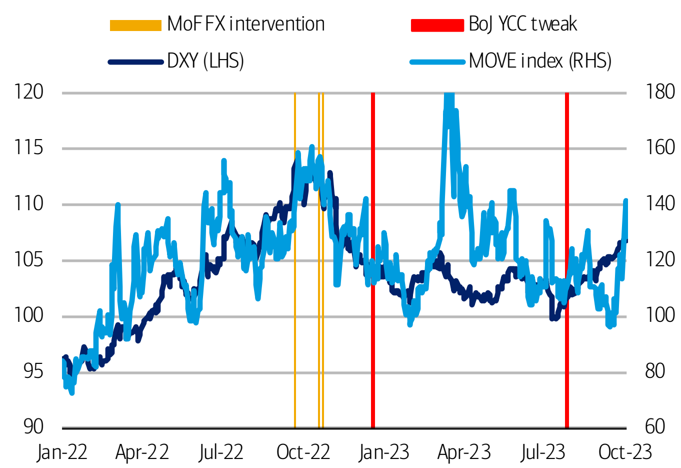
One difference today is FX volatility. In Sep and Oct 2022, USD/JPY 1m and 3m implied volatilities were above 12, whereas they are below 10 today. However, this does not mean the MoF would not intervene until general JPY volatility picks up. Masato Kanda, the MoF's currency chief, recently noted that the MoF would look at various measures of volatility, and JPY's moves from the start of the year is something they would look at. USD/JPY has risen 14% year-to-date, less than the 27% rise from the start of 2022 to when the MoF intervened in Sep 2022, but it is a sizable move relative to recent history.

After NFP, watch 151

As we head into the US NFP release tomorrow, we think the risk of intervention rises if USD/JPY rallies toward 151 (spot ref: 149):

- 150 is a psychological level for the public and the market. A rally beyond 150 could accelerate if there is no intervention.
- In the three intervention episodes in Sep and Oct 2022, USD/JPY rallied 1.3% (Sep 22), 1.2% (Oct 21), and 1.4% (Oct 24) intraday before intervention appeared to take place. 1.2% above current spot (149) is 150.8.
- With the US 10yr yield above 4.7%, the MoF may judge further sell-off in the US rates market would not be justified by fundamentals. Our US rates team analysis suggests US 10-year yield of 5% would have to fulfill several new conditions (US Rates Watch: 10yT at 5% - What Would it Take? 26 September 2023)

Exhibit 1: DXY index and MOVE index vs Japan's policy action
Rising USD and elevated rates vol led to MoF intervention in Sep/Oct 2022 while BoJ tweaked YCC amid stable/falling DXY and low rates vol in Dec 2022 and Jul 2023



Source: BofA Global Research, Bloomberg

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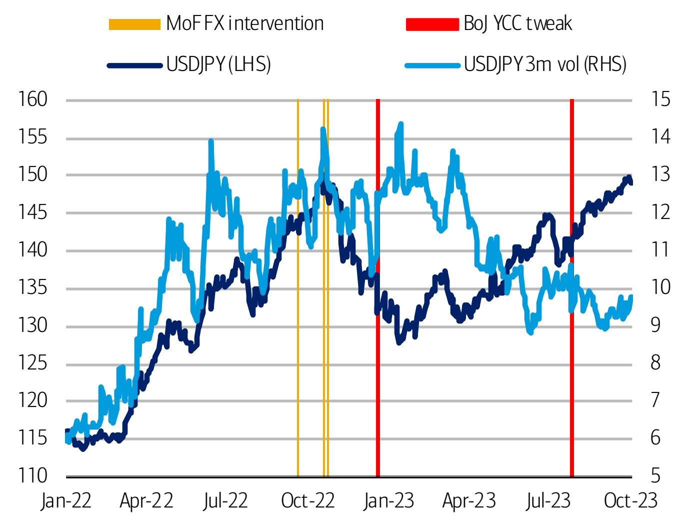
Exhibit 2: USD/JPY spot and 3m implied vol vs Japan's policy action
General vol remains subdued but USD/JPY has risen notably in recent months



Source: BofA Global Research, Haver, Bloomberg

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Defending JPY by raising yen rates costly w/ high rates vol

If there is no FX intervention, what would it take for the BoJ to balance JPY's supply/demand? We think a front-end rate hike is unlikely to be used to defend JPY, at least until the BoJ can justify the move on fundamentals. Our economists think the earliest timing for the BoJ's NIRP removal is Dec MPM, while their base case is Jan MPM (see: Japan Macro Watch: BoJ review: Still cautious 22 September 2023).

Also, even if the BoJ delivers a NIRP removal, if it cannot commit to further rate hikes, it would be seen as a dovish hike and it may not be effective to support JPY in today's higher global rates environment. We think it unlikely that the BoJ can remove NIRP and commit to further hikes as early as at the Oct MPM.

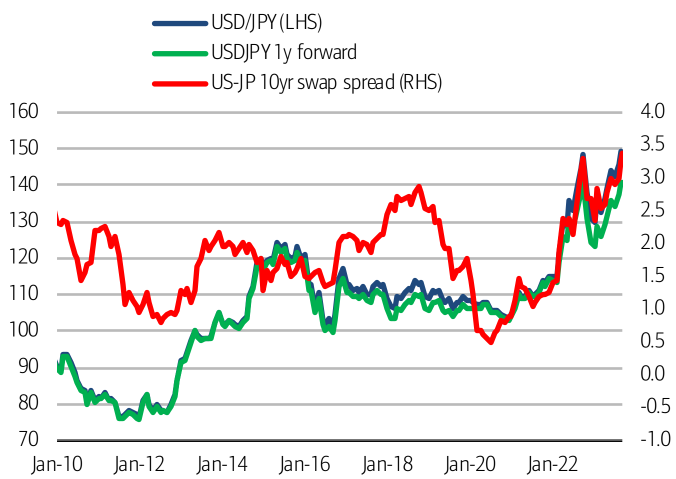
How much should BoJ raise the 10yr yield to support JPY?

In the near-term, we think raising the long-end rate is an option available to the BoJ to support JPY. We use the relationship between USD/JPY and the US-JP 10yr swap spread since 2021, which has been consistent (Exhibit 3), to estimate the rise in the 10yr yen rate needed to support JPY. This method may not be rigorous in many ways and the front-end carry could defuse the impact of any compression in the long-end rate spread on the USD/JPY rate over time, but it can be a useful exercise for the sake of estimating the magnitude of a potential rise in the yen rates needed to meaningfully impact JPY.

We also consider the impact of the yen rates' rise for US rates. US rates' higher beta to yen rates would make the needed rise in the yen rates to compress the US-JP rates gap bigger, as evident from the last two episodes of the YCC tweak (Exhibit 4).

Exhibit 3: USD/JPY spot and 1y forward vs US-JP 10yr OIS spread

USD/JPY correlates with interest rate spread



Source: BofA Global Research, Bloomberg

Relationship between USD/JPY and 10yr swap spread from 2021 to Sep 2023: USD/JPY = 88.5 + 18.1 x (USD 10yr OIS – JPY 10yr OIS)

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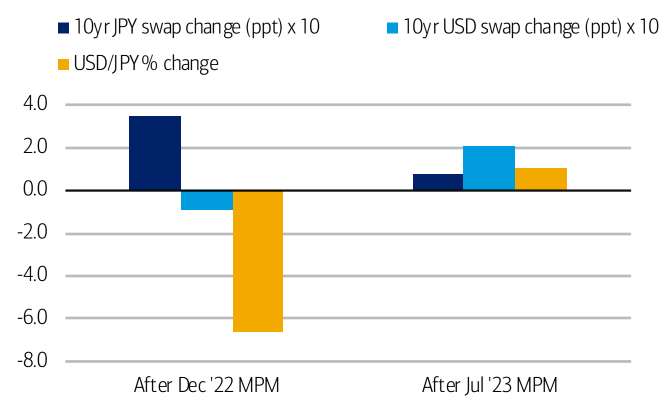
Exhibit 4: Market reaction to the BoJ's YCC tweaks in Dec '22 and Jul '23

YCC tweak in Dec '22 led to a decline in USD/JPY as US rates did not react to the rise in yen rates, but YCC tweak in Jul '23 did not lead to lower USD/JPY as US rates rose more than yen rates



Source: BofA Global Research, Bloomberg

Period: Dec 19 2022 - Jan 13 2023; Jul 27 2023 – Aug 3 2023

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To support JPY, 10yr swap rate may have to rise to 1.5% in quiet environment...

For the target USD/JPY level, we refer to USD/JPY 1y forward, which stands at 140.7 (Exhibit 1). With the Fed's first rate cut priced for the middle of 2024, if the market believes USD/JPY will sell-off to below the 1y forward within the next 6 months, the risk reward and the demand/supply for JPY may improve.

140.7 is 17% above a purchasing power parity level (PPP, 120.6 as of 2Q23) relative to 10-year history (Exhibit 5). JPY would still be cheap but should be more acceptable for the public and policymakers than the current USD/JPY level at 149, 24% above PPP. It has been rare for USD/JPY to be more than 20% above PPP in recent history.

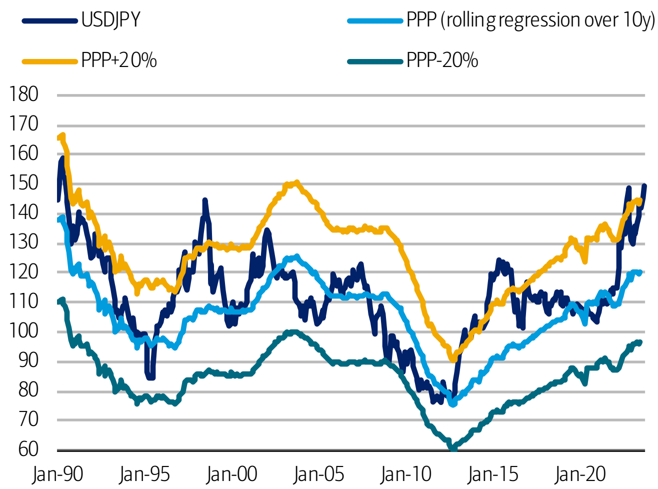
To bring USD/JPY to 140.7, the current 1y forward level, the 10yr JPY swap rate should rise to 1.5% with a 0 US rates beta to yen rates.

... but it may need to rise above 2% in today's environment

What makes it more difficult for the BoJ to defend JPY today is a likely high beta of the US rates to the yen rates. Given the bearish momentum in global rates, if the BoJ tries to raise the 10yr rate higher, it could add selling pressure on the US and global rates. Then, the US-JP interest rate spread could even widen instead as it did after the BoJ's YCC tweak in July.

If we assume a 0.5 beta of the US rates to the yen rates, to bring USD/JPY to 140.7, current 1y forward level, the 10yr JPY swap rate should rise to 2.1%.

Exhibit 5: USD/JPY vs PPP (based on PPI, rolling 10yr history)
Current PPP = 121 in this matrix



Source: BofA Global Research, Haver, Bloomberg

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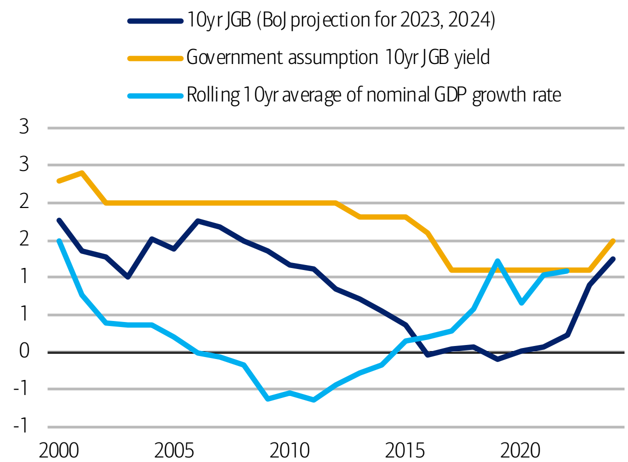
Exhibit 6: 10yr JGB yield and the government's assumption interest rate
JGB yields have been lower than the government's assumption rate



Source: BofA Global Research, Bloomberg, MoF

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Can the BoJ raise the 10yr rate sufficiently?

If the BoJ decides to raise the 10yr rate to defend JPY, how should it proceed? By utilizing the BoJ's previous study in 2021, we find that the 10yr JGB yield implied by today's fundamentals would be 2.0% with the 10yr US Treasury yield, the job-to-applicant ratio, and the core CPI index as inputs (for details, see: Liquid Insight: BoJ could act if 10yr JGB yield hits 75bp 09 August 2023). However, the estimated stock effect of the BoJ's JGB holding is 0.8%. If we subtract this from the fundamentals-based estimate, the implied rate would be 1.2% (Chart of the day).

10yr JGB's "fair value" with BoJ's stock effect = 1.2%, not high enough

If we assume today's 10yr swap spread at 20bp, the 10yr JGB yield at 1.2% would imply USD/JPY at 143.1 with a 0 US rates beta to JP rates, still above the 1y forward, or higher at 146.9 with a 0.5 beta. For the BoJ to raise the 10yr rate beyond that, the BoJ may have to at least cut the size of its bond purchases on top of raising the 10yr YCC ceiling currently set at 1%, though further studies need to be done on the stock effect and the flow effect of the BoJ's bond buying.

BoJ may have to use QT to support JPY

The BoJ may even need to start shrinking the balance sheet to raise the 10yr JGB yield above 1.2% if the stock effect of the BoJ's JGB holdings remains valid. However, QT would go against its current commitment to expanding the monetary base until inflation "exceeds 2 percent and stays above the target in a stable manner" and is quite unlikely in the near term. The BoJ governor Kazuo Ueda sounded cautious about terminating the commitment, citing the announcement effects such a move would have (see: Japan Macro Watch: BoJ review: Still cautious 22 September 2023).

Fiscal considerations to keep 10yr JGB yield < 1.5%

Finally, we also note fiscal considerations of higher yen rates. We have argued that Japan's internal imbalance with the highest level of gross public debt among major economies could limit the scope of monetary tightening (see: Japan Rates and FX Viewpoint: JGB downgrade risks 22 February 2023).

10yr JGB yield > 2% could challenge public debt sustainability

Exhibit 5 shows Japan's 10yr JGB yield, long-term nominal growth history, and the assumption rate of the 10yr JGB yield for the government's budget. IMF projects Japan's primary balance to remain in a deficit for the next 5 years, its forecast horizon. Japanese policymakers may want the interest rate to be lower than the nominal growth rate (and the market's assumption of this) in order to (make the market believe the government can) keep the debt/GDP ratio under control. The 10yr JGB yield is a good reference point given the weighted average maturity of JGBs outstanding, which is around 9 years, and a relatively smooth yield curve.

Japan's nominal GDP grew at an annualized rate of +1.1% over the past decade. If we assume the unchanged real GDP growth rate and an inflation rate 1% higher going forward (10yr BEI has risen to 1.2% vs 0.1-0.6% range from 2017 to 2019), the nominal GDP growth rate would be 2.1%. A 10yr JGB yield above 2% could lead the market to question Japan's debt sustainability (though what actually may matter to debt sustainability is the weighted average yield) and the 10yr JGB yield meaningfully below 2% may be desirable considering the continued primary balance deficit and Japan's elevated gross public debt (above 250% of GDP).

Government reportedly assumes 1.5% JGB yield for FY24

Another reference level is the assumption rate of the 10yr JGB yield for the government's budget. It has been reported that the government would raise the assumption rate from 1.1% in recent years to 1.5% for FY24 (Exhibit 6). While how much importance the government puts on the assumption rate when managing the JGB market is uncertain, the 10yr JGB yield has never exceeded the government's assumption rate in recent years.

Overall, fiscal considerations could make the BoJ keep the 10yr JGB yield below 2% and more likely below 1.5% into FY24. It is reasonable to assume the 10yr JGB yield will be capped somewhere in the 1.2-1.5% ceiling range in 2024. We forecast the 10yr JGB yield to peak at 1.25% in 2024 for the current cycle (see: Japan Rates Watch: We revise 10yr JGB yield forecasts to 0.90% at end-CY23, 1.25% at end-CY24 28 September 2023).

Summary and implications

- Given the wide US-JP interest rate spread, the rise in yen rates to defend JPY needs to be significant especially in today's environment – 10yr swap rate at least 1.5% vs current 1% but more likely above 2% given elevated US rates volatility to generate demand for JPY.

- However, the 10yr JGB yield may be kept below 1.5% and more likely around 1.2% by end-2024, considering the economic fundamentals, the stock effect of the BoJ's JGB holdings, and considerations for Japan's public debt sustainability.

- The BoJ would likely support JGB more with additional bond buying operations in today's environment with higher US rates, higher USD, and elevated rates volatility. The MoF would instead attempt to support JPY by FX intervention.

- In the near-term, we think the risk of MoF intervention would rise if USD/JPY rallies toward 151 after the US employment report tomorrow. That said, as it would not solve the fundamental weakness of JPY (carry), USD/JPY's intraday dip would likely be short-lived and likely shallower than those after interventions in Sep and Oct 2022 (-3.7% - -2.8%) given the lack of crowded positioning and FX volatility. A

USD/JPY dip below 149 would be bought if the MoF intervenes with USD/JPY above 151.

- Short JGB and JPY vs USD continues to be the trade for Japan for the rest of 2023 given elevated USD/JPY carry and still depressed JGB yields relative to fundamentals and depressed real yields relative to global rates.

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- After 1.05 **Global FX Weekly**, 29 Sep 2023
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