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Japanese Life Insurer Results

JGB investment accelerates, foreign bond investment slows, while FX hedging methods diversify

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- **Japanese life insurers accelerated their accumulation of domestic bonds in FY18, logging their largest single-year increase since FY13, according to aggregated data of the 11 largest companies. The build-up was aggressive in the category of liability-reserve-matching bonds, suggesting superlong JGBs were accumulated for ALM purposes.**

- **Overall JGB growth came to JPY1.7trn, up nearly JPY1trn over the previous year's increase. Although the increase in 10y+ bonds was small by comparison, this was largely due to previously purchased bonds moving closer to maturity and slipping into shorter-term categories as a result. Balances of long-duration JGBs such as 30s and 40s may need to increase further in order to maintain JGB portfolio duration.**

- **That said, given the recent trend in EEV/MCEV, it is currently difficult to expect life insurer investments to fuel the kind of rapid bull-flattening of the JGB curve witnessed through the summer of 2016. Although EEV/MCEV was down slightly with the decline in yields at end-March 2019, levels were only marginally lower than at end-March 2018, even with superlong yields falling to their lowest level since FY16, due to the effect of an extension in asset duration linked to past ALM and the utilization of UFR premised on risk free rates. In this sense, life insurers are in a different business environment than they were at that time.**

- **Foreign bond holdings increased further to JPY47.4trn at end-FY18, but net purchases for the year came to just JPY1.75trn, slightly undershooting FY17 (JPY1.77trn) and marking the lowest level since FY11.**

- **The FX hedging ratio in foreign bonds dropped to 71.7% in FY18, the lowest level in three years, from 76.1% in FY17, suggesting an accelerated move away from hedging as FX-hedged USTs became increasingly less attractive. Meanwhile, life insurers increased their use of FX options with a surge in both long puts and short calls indicating a move to build low-cost options through risk-reversals.**

- **The reduction in FX hedging ratios serves to tighten short-term USDJPY xccy basis. Demand to buy dips around the lower bound of the expected range for USDJPY as indicated in the FY19 investment plans of major life insurers (105-110) is likely to persist, perhaps suppressing JPY appreciation pressures to an extent. However, there is also a risk that rapid JPY appreciation could lead to selling by dealers.**

I. Life insurers accelerate their JGB investment

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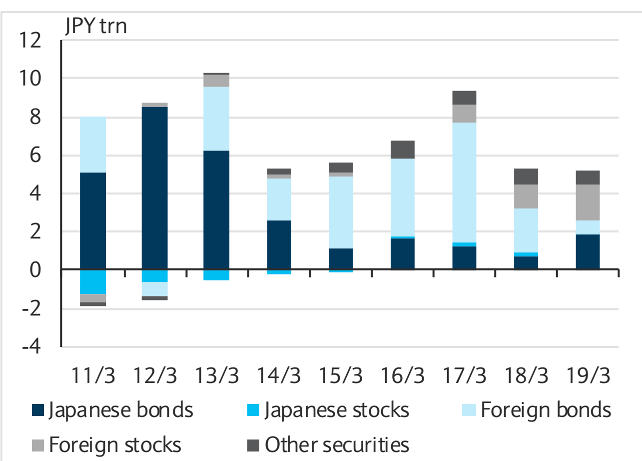
Japan's 11 largest life insurers released their FY18 results on 24 May. Although there were individual differences among them, we have highlight characteristic developments on an aggregated basis, focusing on items related to securities investment.

Aggressive buildup of domestic bonds as liability-reserve-matching

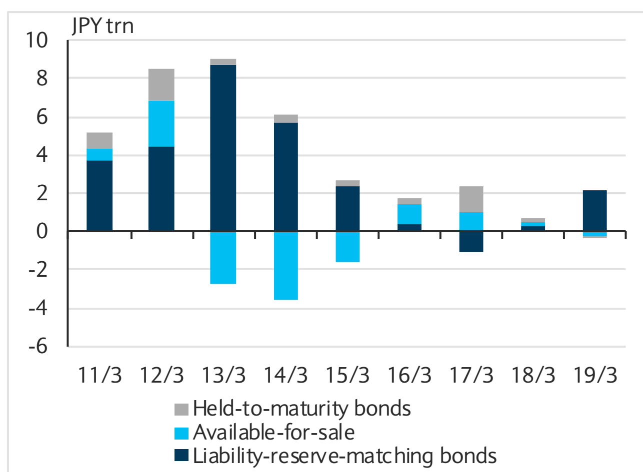
First, looking at changes in securities holdings (Figure 1), Japanese life insurers accelerated their accumulation of domestic bonds from end-March 2018, logging their largest single-year increase since FY13. In foreign securities, on the other hand, holdings continued to

FIGURE 1
Change in securities holdings



Source: Life insurer disclosures, Barclays Research

FIGURE 2
Change in domestic bonds by accounting classification



Note: Domestic bonds within liability-reserve-matching bonds calculated by subtracting domestic bonds within available-for-sale securities and held-to-maturity bonds from domestic bonds as a whole.
Source: Life insurer disclosures, Barclays Research

grow more slowly as a trend since peaking in FY16, driven by deceleration in bonds; equity holdings actually grew at a faster pace. This suggests strengthened risk-taking in such forms as investment trusts. Viewed together with the changes in holdings by accounting classification, domestic and foreign bonds both decreased for the first time in several years in the available-for-sale category, while increasing in the liability-reserves-matching category. This increase in the holdings of domestic bonds in the liability-reserve-matching category suggests an accumulation of superlong JGBs for ALM purposes, as discussed below (Figure 2).

JGB balances increase sharply

Within domestic bonds, balances increased sharply for JGBs. The overall growth in JGBs exceeded JPY1.7trn, surpassing the FY17 increase by nearly JPY1trn and marking the largest such increase since FY15. The increase in 10y+ sectors came to JPY354bn, the first such increase since FY15, but this appeared small compared with the overall growth in JGB holdings. Indeed, the average duration of JGB portfolios appeared to shorten slightly based on our estimates factoring in certain assumptions (Figure 3). Perhaps this was due largely to previously purchased superlong JGBs moving into shorter sectors with the passage of time (shift from 10y+ sector to 7-10y sector). This implies that life insurers may need to continue increasing their holdings of long-duration JGBs such as 30s and 40s, either through outright purchases or switching within the superlong sector, in order to maintain JGB portfolio duration.

Securing high yield by actively investing in long-term corporate bonds

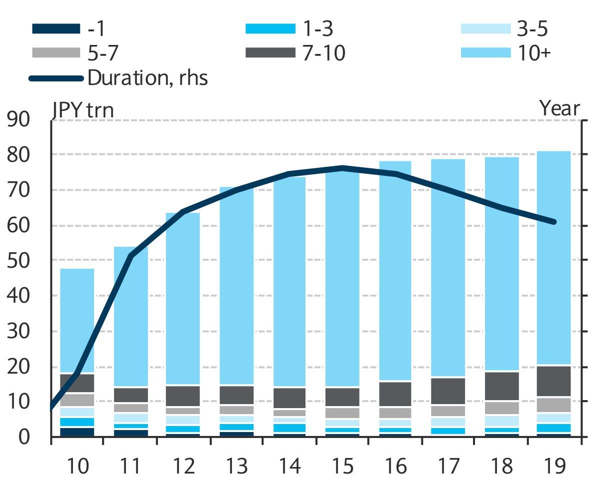
In Japanese municipal bonds and corporate bonds (credit investment), life insurers continued to reduce their balances of the former, while increasing their holdings of the latter compared with FY17. The increase in corporate bond holdings was especially noticeable in the 7-10y and 10y+ sectors, suggesting life insurers secured higher yields by moving into longer-dated credit products (Figure 4). Estimating the average duration of corporate bond portfolios under certain assumptions, as we did for JGBs, we see a steady extension of duration (Figure 4).

Decline in EEV/MCEV limited despite decline in yields

European embedded value (EEV) and market consistent embedded value (MCEV) were slightly lower at end-March 2019 than at end-March 2018 based on the six companies that disclosed such figures. Although adjusted net worth (ANW) increased due to an increase in unrealized gains on bonds from the decline in yields, many companies saw a sharp drop in the value of in-force business (VIF) with the decrease in investment income (interest

FIGURE 3

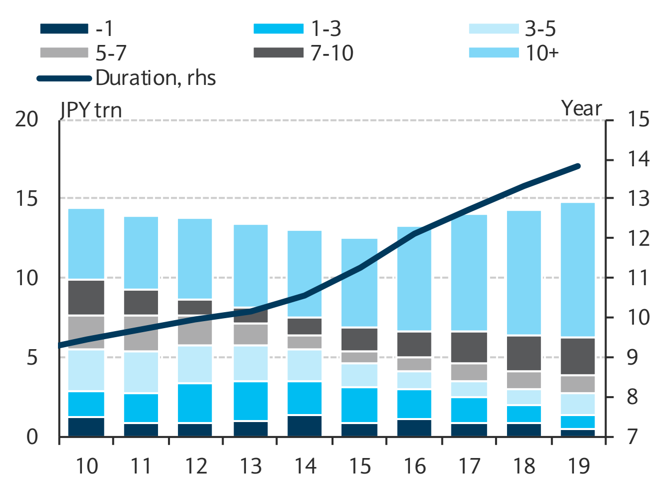
JGB holdings by term to maturity and estimated duration



Note: Duration calculated with 1y-shorter issues as 0.5y, 1-3y issues as 2y, 3-5y issues as 4y, 5-7year issues as 6y, 7-10y issues as 8.5y and 10y+ issues as 20y.
Source: Life insurer disclosures, Barclays Research

FIGURE 4

Japanese corporate bond holdings by term to maturity and estimated duration

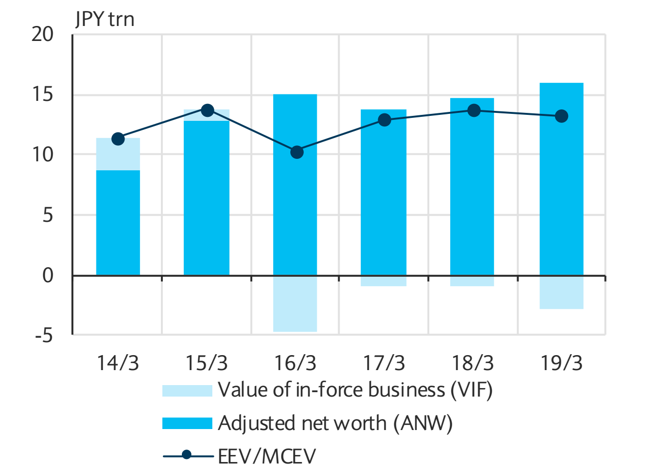


Note: Duration calculated with 1y-shorter issues as 0.5y, 1-3y issues as 2y, 3-5y issues as 4y, 5-7year issues as 6y, 7-10y issues as 8.5y and 10y+ issues as 20y.
Source: Life insurer disclosures, Barclays Research

margins) expected further in the future, weighing on EEV/MCEV (Figure 5). That said, EEV/MCEV levels were down just slightly compared with end-March 2018, even with superlong yields falling to their lowest level since FY16. This may be due to the effect of an extension in asset duration linked to past ALM and the disclosure of EEV/MCEV extrapolated by a method utilizing ultimate forward rates (UFR) for superlong portions exceeding 30y and 40y on the assumption of risk free rates (Figure 6). As noted, demand for long-duration bonds is expected to remain constant, but the recent trend in EEV/MCEV suggests the business environment may be different than it was previously. We currently find it difficult to expect life insurer investments to fuel the kind of rapid bull-flattening of the JGB curve witnessed through the summer of 2016.

FIGURE 5

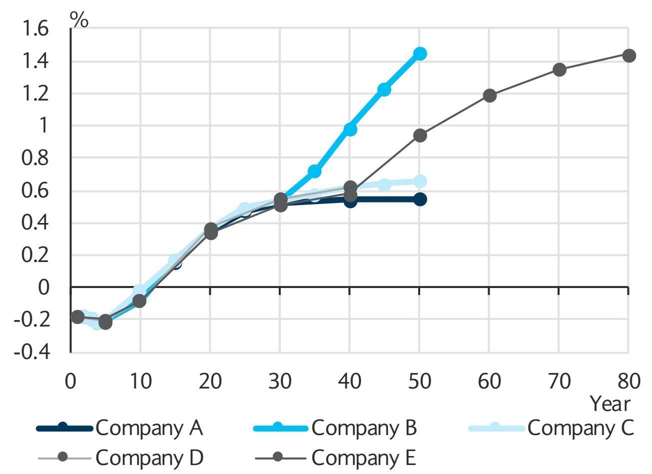
Trend in EEV/MCEV



Source: Life insurer disclosures, Barclays Research

FIGURE 6

Assumed JGB risk free rate as of end-March 2019



Source: Life insurer disclosures, Barclays Research

II. Life insurers slow their foreign bond investment, diversify FX hedging methods

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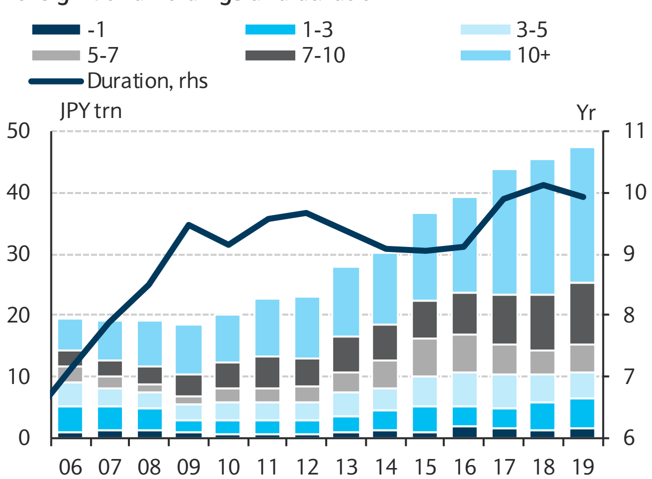
- **Foreign bond holdings increased further to JPY47.4trn at end-FY18, but net purchases for the year came to just JPY1.75trn, slightly undershooting FY17 (JPY1.77trn) and marking the lowest level since FY11.**
- **The FX hedging ratio in foreign bonds dropped to 71.7% in FY18, the lowest level in three years, from 76.1% in FY17, suggesting an accelerated move away from hedging as FX-hedged USTs become increasingly less attractive. Meanwhile, life insurers increased their use of FX options with a surge in both long puts and short calls indicating a move to build low-cost options through risk reversals.**
- **The reduction in FX hedging ratios serves to tighten short-term USDJPY xccy basis. Demand to buy dips around the lower bound of the expected range for USDJPY as indicated in the FY19 investment plans of major life insurers (105-110) is likely to persist, perhaps suppressing JPY appreciation pressures to an extent. However, there is also a risk that rapid JPY appreciation could lead to massive selling by FX option dealers.**

Foreign bond investment slows somewhat

Foreign bond holdings increased further to JPY47.4trn at end-FY18, but net purchases for the year came to just JPY1.75trn, slightly undershooting FY17 (JPY1.77trn) and marking the lowest level since FY11 (Figure 7). By maturity, holdings fell slightly for 10y+ issues, the first decline in nine years, but the reduction in superlong bonds was limited to a few insurers and may have reflected moves in mortgage securities (where actual duration is short). In any case, the weighted average duration for foreign bonds came to 9.9 years, remaining around 10 years for a third consecutive year, suggesting there was not a large adjustment to duration. Looking at foreign-currency assets (eg, bonds, equities, deposits) by currency denomination, there were no major allocation changes with USD still accounting for over 60% of the total and EUR accounting for around 20% (Figure 8).

FIGURE 7

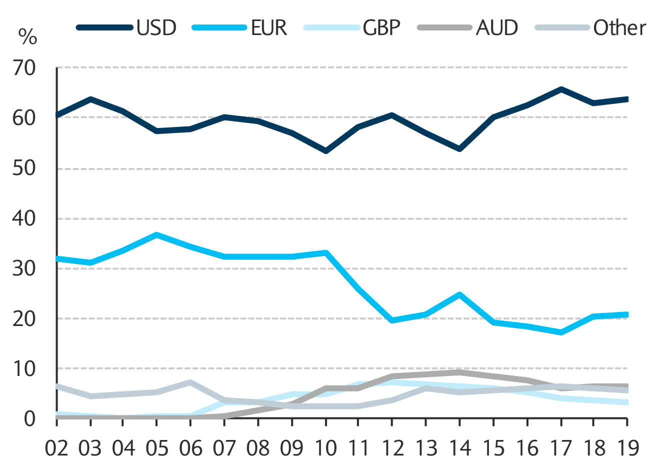
Foreign bond holdings and duration



Note: Weighted average duration calculated with -1y issues as 0.5y, 1-3y issues as 2y, 3-5y issues as 4y, 5-7year issues as 6y, 7-10y issues as 8.5y and 10y+ issues as 15y. Source: Disclosures of 11 Japanese life insurers, Barclays Research. Source: Disclosures of 11 life insurers , Barclays Research

FIGURE 8

Foreign currency assets by currency denomination



Source: Disclosures of 11 life insurers , Barclays Research

FX hedging ratios at a three-year low

The FX hedging ratio in foreign bonds dropped to 71.7% in FY18, the lowest level in three years, from 76.1% in FY17 (Figure 9). This was due to life insurers slightly reducing their balance of FX forwards/xccy basis swaps for the first time in nine years, while continuing to slightly increase their holdings of foreign bonds. Presumably, FX hedges were removed, especially on USD, as FX-hedged USTs began to show negative returns with the UST curve flattening on a pullback in expectations for Fed rate hikes, putting excess returns over superlong JGBs clearly into negative territory. Of course, many companies continue to cite brisk sales of foreign-currency insurance products, suggesting actual FX hedging ratios have likely not fallen to the extent implied by these figures. According to the Nikkei newspaper on 24 May, the four major life insurer groups increased the sales of their foreign-currency insurance products by about 60% to JPY3.45trn (ie, that JPY1.3trn net increase amounts to nearly 3% of their foreign-currency bond holdings).

Difficult to see a further rapid decline in FX hedging ratios

Looking ahead, life insurers are somewhat leaning toward raising their FX hedging ratios in FY19 based on our survey results (see *Barclays Japanese Investor Survey: Pursuing foreign bonds across the board*, 26 May 2019). This may reflect a preference to invest in US spread products and European bonds, where carry can be secured even with FX hedges, rather than take more risk in the FX space. This preference may also explain why hedging ratios are more elevated now than around FY04-05, when FX-hedged foreign bonds similarly became less attractive. Given the low expectations for further Fed rate hikes, it is difficult to see FX hedging ratios dropping rapidly like they did at that time.

FX options see more widespread use

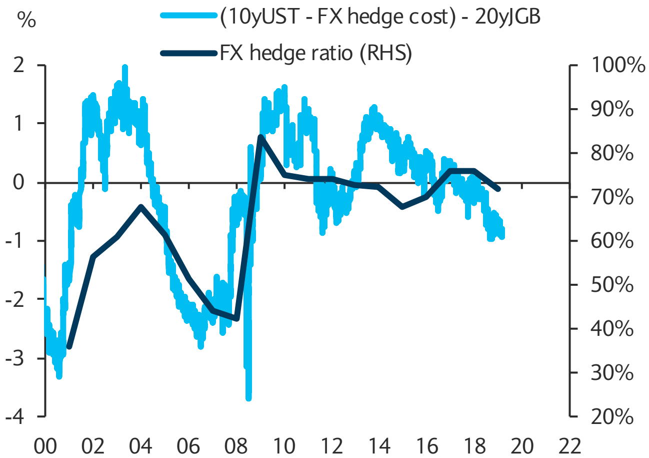
While life insurers reduced their hedging through FX forwards/xccy basis swaps, they increasingly turned to FX options. Long put positions came to JPY2.6trn at end-FY18, more than triple the levels seen at end-FY17 (Figure 10). At the same time, short call positions surged to JPY1.8trn, suggesting a move by life insurers to build low-cost options through risk reversals. Indeed, we believe FX options offer an effective way to boost efficiency in USD funding costs (see “More opportunity to improve returns through foreign currency funding than pursuit of yield” in *Market Strategy Japan*, 17 May 2018). However, it is important to bear in mind that, due to the accumulation of such long put positions, USDJPY selling as a hedge due to negative gamma could accelerate during periods of rapid JPY appreciation.

Market implications

The reduction in FX hedging ratios serves to tighten short-term USDJPY xccy basis. If the shift from FX-hedged USTs to US spread products and European bonds continues, widening pressures linked to the hedging demand of life insurers would likely shift further from short-term USDJPY xccy basis to medium/long-term USDJPY xccy basis and short-term EURJPY xccy basis. As for the impact on the spot market, demand to buy dips around the lower bound of the expected range for USDJPY as indicated by the FY19 investment plans of major life insurers (105-110) is likely to persist, perhaps suppressing JPY appreciation pressures to an extent. However, life insurers appear cautious overall in their outlook for USDJPY (with 114-115 widely seen as the upper bound of the range), making it difficult to see them aggressively chasing the market higher. At the same time, there is also a risk that rapid JPY appreciation could lead to accelerated hedge selling by FX option dealers, abruptly reversing USDJPY supply-demand dynamics at certain low strike levels.

FIGURE 9

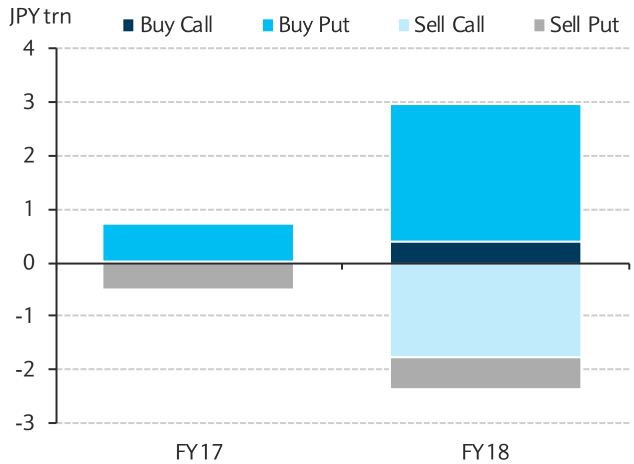
FX hedging ratios and FX-hedged UST returns



Note: FX-hedged foreign bonds calculated using 3m FX forwards
Source: Disclosures of 11 Japanese life insurers, Bloomberg, Barclays Research

FIGURE 10

FX option positions



Note: Only publicly disclosed FX option balances
Source: Disclosures of 11 life insurers , Barclays Research

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