

JHF No.187 Monthly MBS Issue

Strategic Memorandum DSBE022

FICC Research Dept.

Chief Strategist of Securitization

Koji Matsushita

(81) 3 5555-8778

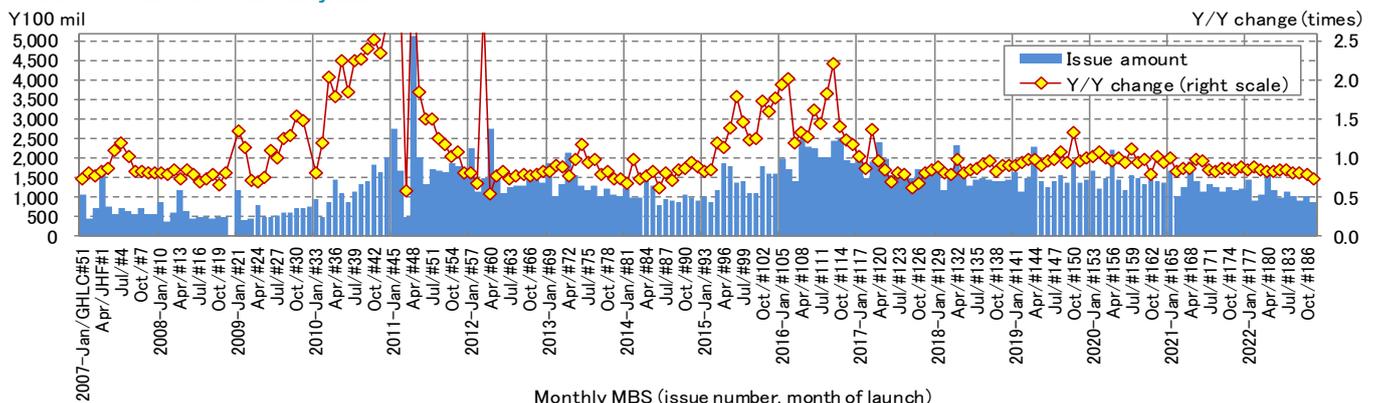
koji1.matsushita@daiwa.co.jp

Daiwa Securities Co. Ltd.

➤ Shocking 30% y/y decline for Flat 35 usage despite unprecedented rate suppression

- The Japan Housing Finance Agency (JHF) plans to issue its No. 187 Monthly MBS. The coupon will be set by referencing the yield of the on-the-run 10-year JGB.
- JHF RMBS are issued with home loans as the underlying asset. The assets eligible to be used as collateral for the No. 187 issue are the Y107.9bn of Flat 35 loans originated in October. Assuming overcollateralization at a credit enhancement ratio of 21.0%, which is what it was the previous issue, the issuance amount will be Y85.3bn.
- New usage of Flat 35 in October fell 27% vs October 2021. The system was expanded, including the launch of Flat 35S (ZEH) in October, which may explain why the interest rates offered by Flat 35 were suppressed. This is an unusual market response that does not reflect the rising rates of interest for the Japan Housing Finance Agency's (JHF) monthly mortgage-backed securities (MBS). However, the lower Flat 35 usage despite these efforts to keep rates lower than the previous month was a shock.
- Based on our prepayment model, we estimate a WAL of 10.29 years (based on 10 November closing prices; same hereinafter). The expected WAL based on the JHF's PSJ Forecast Statistical Data is 9.38 years.
- At a launch spread the same as the previous issue of 49bp, the coupon of the upcoming issue will be 0.74%. In this case, the PSJ model YCS would be 16.5bp, 2.5bp higher than the previous issue's 14.0bp. The PSJ model YCS of the previous issue in the secondary market is 15.8bp, which would mean the upcoming issue will have a coupon of 0.74% and launch spread of 49bp.
- We think it appropriate that supply and demand will meet at the launch spread of about 48-49bp. If so, the coupon would be about 0.73-0.74%.

Chart: Issue Amount of Monthly MBS



Source: JHF; compiled by Daiwa Securities.
Note: Estimate for No. 187 issue.

Issuance of JHF MBS and Situations of Flat 35

No. 187 to be launched in November

The Japan Housing Finance Agency (JHF) plans to price (launch) its No. 187 MBS this month. Issuance terms are determined by the spread-pricing method, in which a new issue's coupon is set on the launch date by adding a launch spread—which is determined based on investor demand—to the compound yield on a benchmark 10Y JGB (JB368 in this case) at the time of the launch. The launch date is scheduled in mid-November, and the payment date is scheduled on 25 November.

Issuance amount of about Y85bn

Candidate trust assets for the No. 187 totaled Y107.9bn, all of which were Flat 35 loans originated in October. The issue is likely to have the highest ratings from S&P and R&I. The issue amount is to be announced on 11 November. If the credit enhancement ratio is unchanged from that for the previous issue at 21.0%, the issue amount is estimated at Y85.3bn.

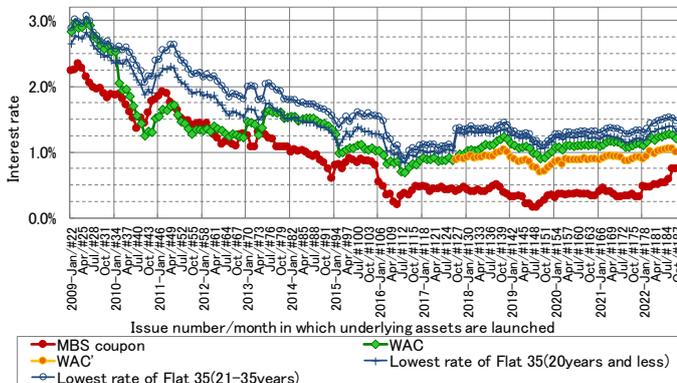
The amount of Flat 35 loans declined 27% y/y in October

The amount of new Flat 35 mortgages originated in October was Y107.9bn, down m/m owing to seasonality and down 27% y/y. The lowest retail rate on the mortgages was 1.48% (including group credit life insurance premiums), down 0.04ppt m/m and up 0.18ppt y/y. The lowest rate on Flat 20 mortgages (with terms of 20 years or less) was 1.32%, down 0.07ppt m/m and up 0.14ppt y/y.

Relationship with introduction of Flat 35S (ZEH)

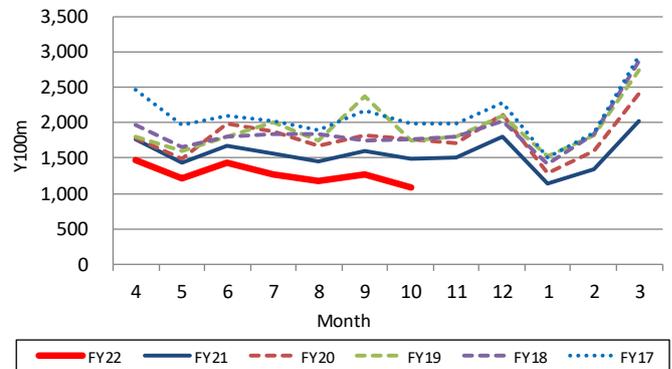
New systems such as Flat 35S (ZEH) were launched from October, but usage turned even more lackluster. Flat 35 interest rates were suppressed compared to the previous month, which is unusual. Normally, the residential mortgage-backed securities (RMBS) rate just before the launch is reflected. In this case we would expect a 0.08% rise from September, but there was a decline of 0.12 point. Even if there is no correlation between the RMBS issuance level and the Flat 35 interest rate, there is no problem provided the management of JHF is solid. However, it is shocking that the usage amount has turned even more sluggish

Chart: Interest Rate of Flat 35 Loans and JHF MBS (monthly trend)



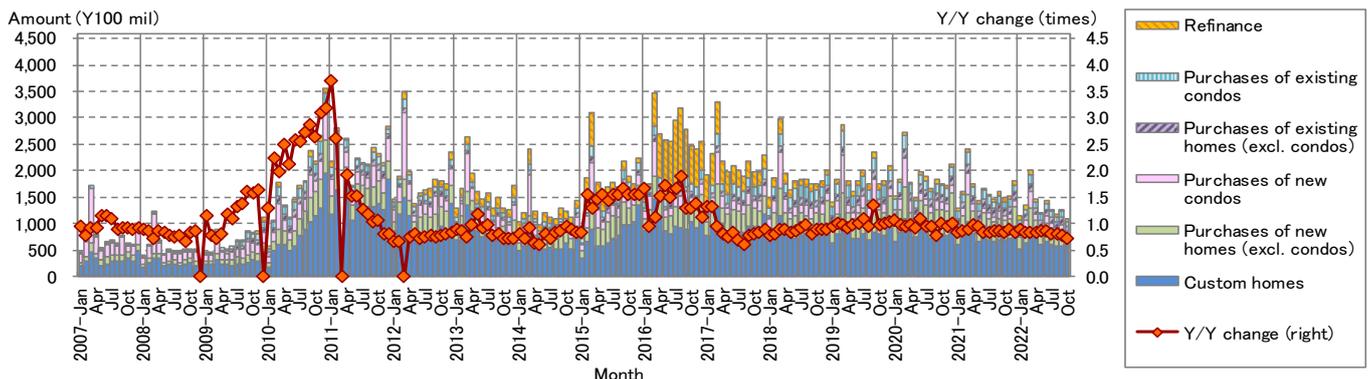
Source: JHF; compiled by Daiwa Securities.

Chart: Seasonality of New Flat 35 Loans



Source: JHF; compiled by Daiwa Securities.

Chart: Flat 35 Loans by Type of Loans



Source: JHF; compiled by Daiwa Securities.

Terms for the previous issue

Launch spread of 49bp and coupon of 0.74%

The No. 186 (Y100.0bn) was launched on 21 October with a coupon of 0.74 %. The coupon was determined by adding the launch spread of 49bp on the compound yield of benchmark JB368. The OAS at launch (our estimate; same hereinafter) stood at -12.2bp (1.1bp higher than previous issue) and the YCS was 1.3bp (3.2bp higher than the previous issue). Based on the PSJ Forecast Statistical Data, the yield curve spread (YCS) fell 6.3bp to 14.0bp at the time of the launch

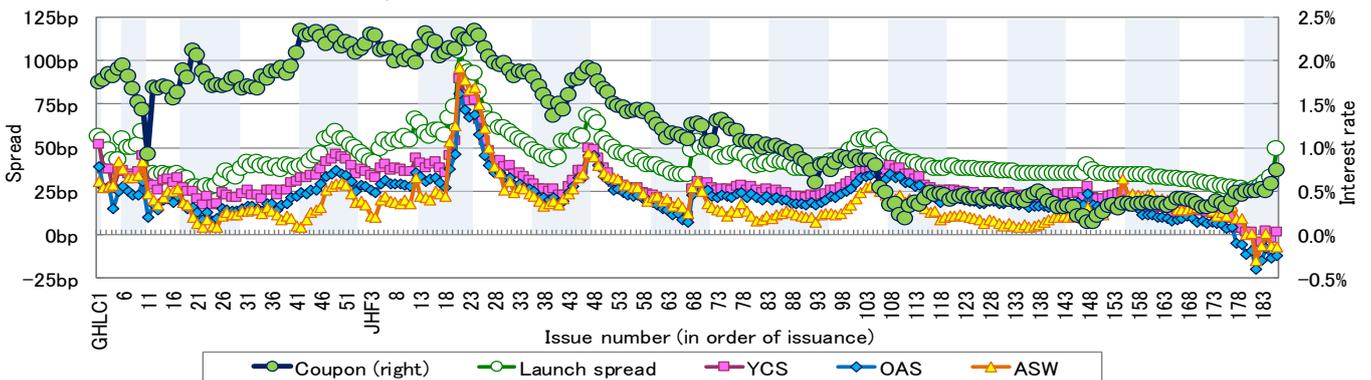
10-year UST temporarily rose to 4.7%

The coupon rose 16bp m/m. Since the on-the-run 10-year JGB (reference JGB) yield is unchanged, the only contribution is a nominal addition. The theoretical yield curve also rose, but when equalized on a duration-weighted basis, it was less than the nominal expansion, so the option adjusted spread (OAS) and YCS expanded. In October, the rise in long-term bond yields in developed countries accelerated, with the 10-year US Treasury yield briefly reaching 4.7%. The long-term JGB market is also awaiting a rising yield phase. The issuance level could be the answer obtained by building up the nominal addition to meet the investment demand, which is largely receding, while having a sufficient interest rate that anticipates expectations for higher yields.

10-year JGB yield pegged at upper limit of 0.25%

The current 10-year JGB yield has lost its indexation as a risk-free rate because the BOJ's yield curve control (YCC) policy has pegged the upper limit for this yield at 0.25%.

Chart: Issuance Terms for JHF Monthly MBS



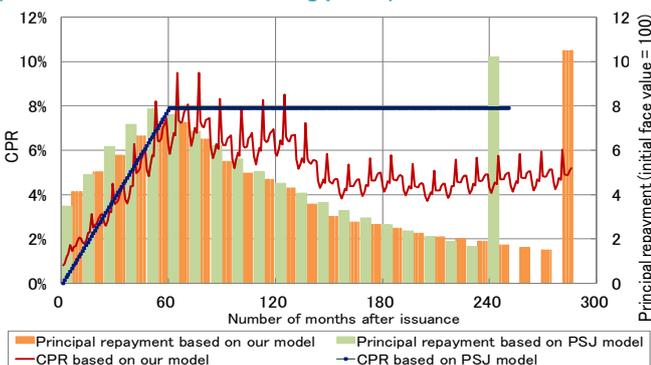
Source: JHF and our estimates.

Note: The background colors indicate different fiscal years.

Different risk premiums depending on expected cash flow distribution

With regard to the pricing of JHF MBS, it should be noted that the risk premium varies depending on the expected cash flow distribution. The expected cash flows of the primary JHF MBS based on our prepayment model have terms that are somewhat longer than those based on the PSJ Forecast Statistical Data. As a result, YCSs based on our prepayment model are several basis points lower than those based on the PSJ Forecast Statistical Data. Following a minor change to our model in July 2019 we have continued updating our parameters.

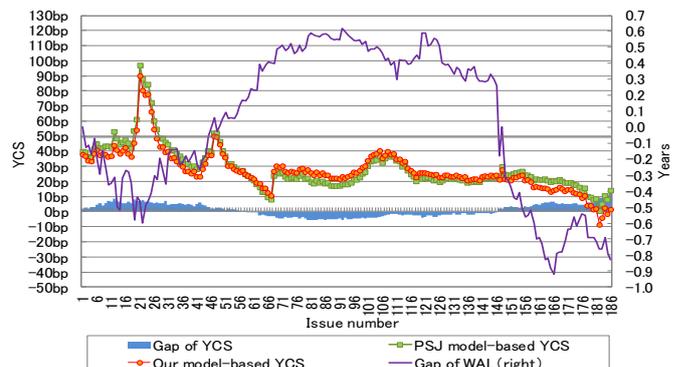
Chart: Expected CPR & Principal Repayment for No. 187 Issue (based on 11 November closing prices)



Source: Our estimates.

Note: Although principal repayments are made every month, the graph shows annual repayment totals.

Chart: Difference in YCS for Monthly MBS at Launch



Source: Our estimates.

Cash flow characteristics and issuance terms for No. 187

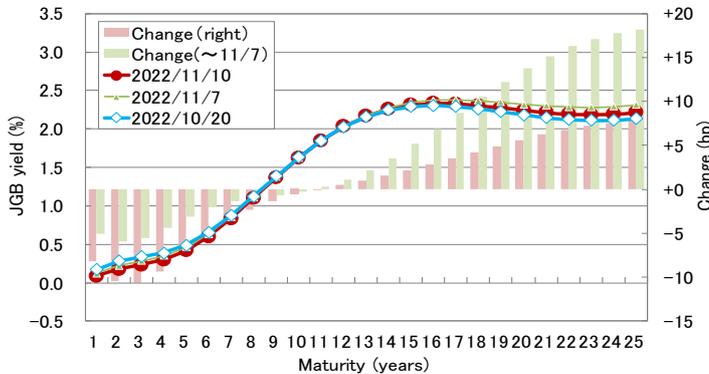
We take a look at the issuance terms for the upcoming issue. Based on expected cash flow using our prepayment model and the PSJ model, we estimate the issuance terms (the coupon and launch spread) and the risk premiums.

Expected maturity of 9~10 years

The expected cash flow distribution for the upcoming issue (the chart on the previous page, based on 10 November closing prices; hereinafter the same unless otherwise noted) is about the same as the previous issue (at the time of its launch; same hereinafter).

- Based on our model, the expected WAL is 10.29 years (10.18 years for the previous issue) and the expected final maturity 23.9 years (23.4 years). The PSJ forecast is 6.48% (vs. 6.67% for the previous issue).
- The PSJ Calculation Statistical Value (average) is 7.91% (vs. 8.00% for the previous issue). Accordingly, the expected WAL is 9.38 years (vs. 9.35 years for the previous issue) and the expected final maturity 20.4 years (20.4 years).

Chart: Change in 3Y-Forward Rate (from the day before launch day of No.186)



The forecast maturities are slightly longer than the previous issues. The impact of the suppressed rate offered by Flat 35 in October was meaningful. WAC (weighted average coupon) is 1.21% and WAC' is 0.99%, down 0.05 point from the previous issue (see pages 7-8). JGB yields fell modestly, starting with the 5yr-7yr zone and the 3-year forward rate is twisted roughly 12 years out. As such, the refinancing incentive (WAC' – refinancing loan rate) assumed for most future periods declined and the estimated prepayments shrank.

Source: JHF; compiled by Daiwa Securities.

Note: WAC' means the Weight Average Coupon excl. premiums for JHF group credit life insurance

Chart: Launch Spread Estimates for No. 187 MBS (based on 10 November closing prices)

| Valuations of JHF_MBS_#187 Pricing(Simulation) | | | | | | | | | 10-Nov-22 (Tokyo Close) | |
|--|--------|--------------------------|-------------|------|--------|--|-----------------------|--------|--|--|
| Base Yield: JGB(368G) YTM 0.244 % | | | | | | | | | | |
| Launch Spread | Coupon | Valuations of Cash Flows | | | | | | | Indications of Previous RMBS Issue (#186) | |
| | | Daiwa Model | | | | PSJ Model | | | | |
| | | Dynamic | Static | | | PSJ forecast | Statistical Data(Ave) | | | |
| | | OAS | YCS | ASW | ModDur | YCS | ASW | ModDur | | |
| 44 bp | 0.69 % | -15.9 | -2.8 | -9.4 | 9.732 | 11.3 | -1.6 | 8.894 | (Issuance Terms) Launch Spread=49bp Coupon=0.74% (Valuations at the time of Launch) [CF based on Daiwa Model]: OAS=-12.2bp, YCS=1.3bp, ASW=-7.1bp [CF based on PSJ Model]: YCS=14bp, ASW=-0.3bp (Valuations in the secondary market) [CF based on Daiwa Model/Daiwa Price] OAS=0bp, YCS=13.5bp, ASW=5.6bp [CF based on PSJ Model/JSDA price]: BEY=0.734%, YCS=15.8bp, ASW=2.7bp | |
| 45 bp | 0.70 % | -14.8 | -1.7 | -8.4 | 9.723 | 12.3 | -0.6 | 8.888 | | |
| 46 bp | 0.71 % | -13.8 | -0.7 | -7.4 | 9.715 | 13.4 | 0.3 | 8.881 | | |
| 47 bp | 0.72 % | -12.7 | 0.4 | -6.4 | 9.707 | 14.4 | 1.3 | 8.875 | | |
| 48 bp | 0.73 % | -11.7 | 1.4 | -5.4 | 9.699 | 15.5 | 2.3 | 8.869 | | |
| 49 bp | 0.74 % | -10.6 | 2.5 | -4.4 | 9.691 | 16.5 | 3.3 | 8.862 | | |
| 50 bp | 0.75 % | -9.5 | 3.6 | -3.5 | 9.683 | 17.5 | 4.3 | 8.856 | | |
| 51 bp | 0.76 % | -8.5 | 4.6 | -2.5 | 9.675 | 18.6 | 5.3 | 8.849 | | |
| 52 bp | 0.77 % | -7.4 | 5.7 | -1.5 | 9.667 | 19.6 | 6.3 | 8.843 | | |
| 53 bp | 0.78 % | -6.3 | 6.7 | -0.5 | 9.659 | 20.6 | 7.2 | 8.837 | | |
| 54 bp | 0.79 % | -5.3 | 7.8 | 0.5 | 9.651 | 21.7 | 8.2 | 8.830 | | |
| 55 bp | 0.80 % | -4.2 | 8.8 | 1.5 | 9.643 | 22.7 | 9.2 | 8.824 | | |
| 56 bp | 0.81 % | -3.1 | 9.9 | 2.5 | 9.635 | 23.8 | 10.2 | 8.817 | | |
| 57 bp | 0.82 % | -2.1 | 10.9 | 3.4 | 9.627 | 24.8 | 11.2 | 8.811 | | |
| 58 bp | 0.83 % | -1.0 | 12.0 | 4.4 | 9.619 | 25.8 | 12.2 | 8.805 | | |
| 59 bp | 0.84 % | 0.1 | 13.0 | 5.4 | 9.610 | 26.9 | 13.2 | 8.798 | | |
| | | <Daiwa Model> | | | | <PSJ Model/based on PSJ Forecast Statistical Data> | | | | |
| | | PSJ | 6.48 % | | | Ave: 7.91 % | | | (Median: 8.03) % | |
| | | WAL | 10.29 years | | | 9.38 years | | | (9.32) years | |

Source: Compiled by Daiwa Securities.

Note: 1) Figures in colored cells show similar indications to those in the previous issue, as indicated in the right section (Indications of Previous MBS Issue) with the same colors. Spreads in the previous issue at launch are based on those at the time of pricing. The spreads in the previous issue in the secondary market used in the Daiwa model are based on Daiwa prices, and the spreads in the previous issue in the secondary market used in the PSJ model are based on the JSDA's Trading Reference Statistical Data.

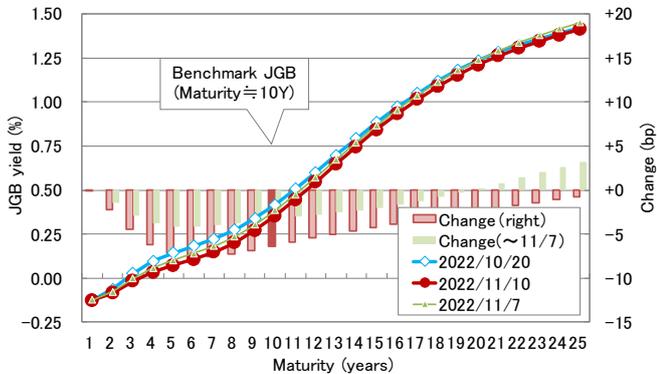
2) Figures for both Trading Reference Statistical Data and PSJ Forecast Statistical Data are average figures.

3) Estimated cash flow is based on the assumption that clean-up call options are exercised in initial April or October after the outstanding amount becomes 10% or less of the original.

Launch spread indications

The previous issue (No. 186) was launched at a time when the on-the-run 10-year JGB yield was stuck at 0.25%, the upper bound set by YCC. Since then, the 10-year JGB yield has also remained around 0.25%.

Chart: JGB Yield Curve Changes (from the day before launch day of No.186)



Source: Compiled by Daiwa Securities.

For the No. 187 issue, for example, the launch spread is 49bp and the coupon is 0.74%, both the same as the previous issue. At this time, the YCS evaluated by the forecast CF based on the PSJ forecast statistics (mean value) is 16.5bp, up 2.5bp from 14.0bp when the previous issue was launched. Also at this time, the OAS would be -10.6bp, 10.1bp less negative than the OAS when the previous issue was launched (based on 10 Nov close).

The OAS and YCS are increasing because the theoretical JGB yield curve based on all issues is declining even though the on-the-run 10-year JGB yield is unchanged. When the on-the-run 10-year JGB yield is fixed, the yield curve decline is greater than the launch spread decline and the spread (duration weighted) is positive by that amount.

The deeply negative value of the OAS, which is used to evaluate the prevailing market conditions, is also due to the fact that our OAS estimates are modeled to reflect both the volatility of the swaption market and the recent high volatility trend. Since the prepayment forecast also becomes more interest rate sensitive, the synergistic effect is that the option premium (difference between YCS and OAS) is larger, which in turn narrows the OAS by the same amount.

The connections with the previous issue are shown as follows (secondary market levels and benchmark yield are as of the 10 November close). As for the secondary market, we would like to confirm the risk premium level and changes in the trading reference statistics as a price evaluation closer to the actual market, since our OTC mid-price for the current issue seems to be excessively conservative.

(Connection with risk premium of previous issue)

【Pricing using our model's cash flow estimates】

- The No. 186's launch OAS was -12.2bp and the YCS 1.3bp. Based on the similar OAS and YCS, the No. 187's launch spread would be 47-48bp and the coupon 0.72-0.73%.
- The previous issue in the secondary market would have an OAS valuation of 0.0bp and a YCS of 13.5bp if it were at our mid-price (Y99.10). The launch spread for the current issue, which will yield OAS and YCS close to these, will be 59bp, with a coupon of 0.84%.
- The previous issue in the secondary market would have an OAS valuation of -10.8bp and a YCS of 3.1bp based on the reference trading value (Y100.06). The launch spread for the current issue, which will yield close OAS and YCS, will be 49-50bp, with a coupon of 0.74-0.75%.

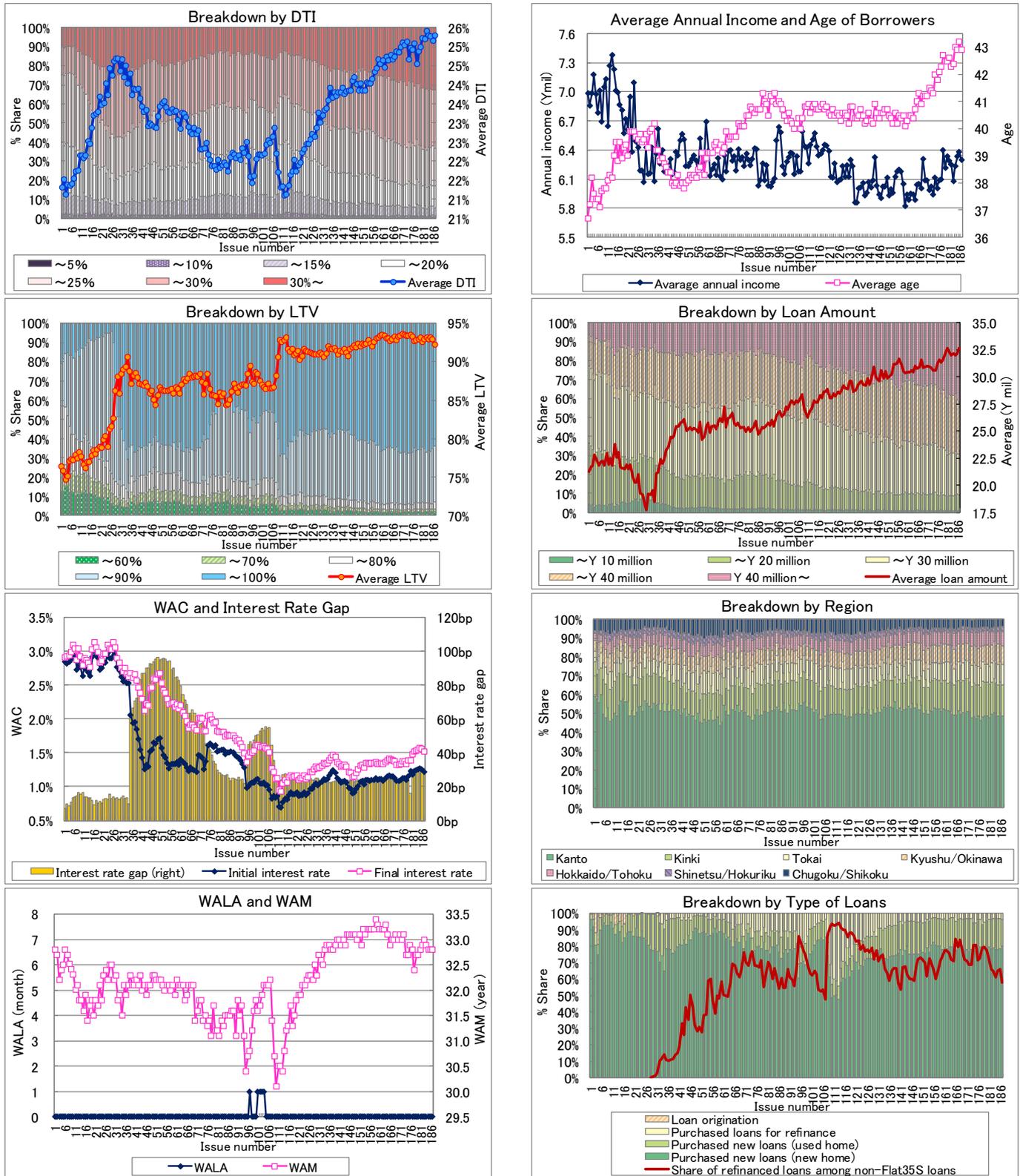
【Pricing using average PSJ forecast-based cash flow estimates】

- The No. 186's launch YCS was 14.0bp. Based on the similar YCS, the No. 187's launch spread would be 47bp and the coupon 0.72%.
- In the secondary market, the No. 186's YCS is 15.8bp. In line with this, the No. 187's launch spread would be about 48bp and the coupon 0.73%.

(Demand forecast for No. 187 issue and issuance level)

| | |
|---|--|
| Relationship with Flat 35S (ZEH) | A new preferential interest rate menu, Flat 35S (ZEH), is being offered to new Flat 35 users since October. Flat 35 and JHF's RMBS have entered a new phase in their system expansion to facilitate the realization of a sustainable society. |
| No change to RMBS marketability | Although this is the first time that JHF's monthly bonds are funded using credit from the new system, the system change will have no particular impact on the marketability of RMBS. As with the previous monthly bonds, it would be appropriate to consider investing in light of the secondary market as well. |
| Forecast maturities | As global long-term interest rates continue to fluctuate widely, concerns may emerge about whether the forecast maturities for JHF's monthly bond issues at the time of issuance will lengthen in the future. Please refer to the Topic Report in our November monthly report (Japanese only) released on 14 November, for a discussion of the forecast maturities at the time of issuance |
| Coupon of 0.70-0.79% | The personal opinion of your author is that the launch spread for this issue will confirm sufficient demand and be either 48-49bp. In this case, the coupon would be 0.73-0.74% (based on 10 November closing prices). |

Characteristics of Underlying Loan Pools for All JHF Monthly MBSs



Source: JHF; compiled by Daiwa Securities.
 Note: Candidate pool used for No. 187 issue.

Characteristics of Underlying Loans: No. 187 Monthly MBS and Last Six Issues (No. 181-186)

| | JHF #181 | JHF #182 | JHF #183 | JHF #184 | JHF #185 | JHF #186 | JHF #187 | Ave. of previous 6 issues | Change from #186 | |
|--|--------------------|----------|----------|----------|--------------------|----------|----------|---------------------------|------------------|-------|
| Loan Pool Selected in | Apr-2022 | May-2022 | Jun-2022 | Jul-2022 | Aug-2022 | Sep-2022 | Sep-2022 | | | |
| Loan Application Started in | Jul-2019 | Nov-2019 | Apr-2020 | Feb-2020 | Dec-2019 | Aug-2019 | Jul-2019 | | | |
| Repayment Started in | Feb-2022, Apr-2022 | May-2022 | Jun-2022 | Jul-2022 | Jun-2022, Aug-2022 | Sep-2022 | Oct-2022 | | | |
| Initial Outstanding Entrusted Assets (Y mil) | 147,021 | 121,961 | 143,543 | 127,322 | 116,800 | 126,645 | 107,990 | 130,549 | -18,655 | |
| Issue Size (Y mil) | 117,000 | 97,000 | 113,500 | 101,200 | 92,900 | 100,000 | TBD | 103,600 | - | |
| Excess Collateral (Y mil) | 30,021 | 24,961 | 30,043 | 26,122 | 23,900 | 26,645 | TBD | 26,949 | - | |
| Overcollateralization | 20.4% | 20.4% | 20.9% | 20.5% | 20.4% | 21.0% | TBD | 20.6% | - | |
| Number of Loans | 4,504 | 3,777 | 4,488 | 3,961 | 3,650 | 3,943 | 3,311 | 4,054 | -632 | |
| Average Outstanding Loan (Y mil) | 32.642 | 32.290 | 31.975 | 32.144 | 32.000 | 32.119 | 32.616 | 32.195 | +0.497 | |
| Average LTV | 92.57% | 92.88% | 93.13% | 92.98% | 93.16% | 92.94% | 92.27% | 92.94% | -0.67% | |
| Average DTI | 25.23% | 25.20% | 25.41% | 25.31% | 25.27% | 25.16% | 25.31% | 25.26% | +0.15% | |
| Average LTV for Refinance | 72.80% | 70.61% | 72.85% | 74.22% | 70.72% | 75.83% | 71.50% | 72.84% | -4.33% | |
| Average DTI for Refinance | 18.83% | 19.24% | 19.66% | 19.33% | 18.85% | 18.47% | 17.91% | 19.06% | -0.56% | |
| Average Annual Income of Obligors (Y mil) | 6.287 | 6.250 | 6.081 | 6.232 | 6.335 | 6.380 | 6.294 | 6.261 | -0.085 | |
| Average Age of Obligors | 42.6 | 42.3 | 42.4 | 43.0 | 42.9 | 43.2 | 42.9 | 42.7 | -0.3 | |
| WAC (Initial Rate) | 1.18% | 1.23% | 1.24% | 1.26% | 1.27% | 1.26% | 1.21% | 1.24% | -0.05% | |
| WAC (Final Rate) | 1.48% | 1.52% | 1.53% | 1.55% | 1.57% | 1.56% | 1.52% | 1.53% | -0.04% | |
| WALA (Weighted Average Loan Age) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | +0 | |
| WALA for Refinance | 127 | 127 | 129 | 132 | 133 | 132 | 135 | 130 | +3 | |
| WAM | 394 | 395 | 396 | 395 | 394 | 394 | 394 | 394 | +0 | |
| Maturity Structure of Loans at Origination (% share) | Up to 10Y | 0.1% | 0.0% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% | -0.0% | |
| | 10-20Y | 5.5% | 4.8% | 4.8% | 4.9% | 5.4% | 5.1% | 5.1% | +0.2% | |
| | 20-25Y | 4.5% | 4.9% | 3.7% | 4.7% | 4.3% | 4.4% | 4.5% | +0.1% | |
| | 25-30Y | 7.1% | 7.4% | 7.2% | 6.8% | 7.3% | 7.4% | 7.6% | +0.2% | |
| | Over 30Y | 82.8% | 82.9% | 84.2% | 83.5% | 83.0% | 83.0% | 82.5% | 83.2% | -0.5% |
| % share of loans with bonus payments | (in number) | 7.7% | 7.5% | 6.9% | 7.0% | 7.4% | 7.1% | 7.5% | 7.3% | +0.4% |
| | (in value) | 8.3% | 8.1% | 7.6% | 7.7% | 7.9% | 8.0% | 8.5% | 7.9% | +0.6% |
| Type of Loan | new | 96.3% | 96.4% | 97.0% | 96.9% | 96.7% | 96.7% | 96.5% | 96.7% | -0.2% |
| | refinanced | 3.7% | 3.6% | 3.0% | 3.1% | 3.3% | 3.3% | 3.5% | 3.3% | +0.2% |
| Loan Amount at Origination (% share) | Up to Y10 mil | 0.8% | 1.0% | 0.9% | 0.8% | 0.8% | 1.0% | 0.7% | 0.9% | -0.2% |
| | Y10-20 mil | 7.5% | 7.8% | 8.0% | 7.8% | 8.2% | 8.6% | 8.3% | 8.0% | -0.4% |
| | Y20-30 mil | 21.8% | 21.9% | 22.1% | 22.7% | 23.2% | 21.3% | 21.9% | 22.2% | +0.5% |
| | Y30-40 mil | 30.1% | 31.3% | 30.6% | 30.6% | 30.4% | 28.5% | 27.7% | 30.3% | -0.8% |
| | Y40-50 mil | 20.2% | 19.7% | 20.5% | 20.3% | 20.0% | 20.8% | 20.9% | 20.3% | +0.0% |
| | Over Y50 mil | 19.5% | 18.3% | 17.8% | 17.8% | 17.5% | 19.7% | 20.6% | 18.4% | +0.8% |
| Loan Amount by Region (% share) | Hokkaido/Tohoku | 7.7% | 6.7% | 5.6% | 7.0% | 6.7% | 7.2% | 7.7% | 6.8% | +0.6% |
| | Kanto | 47.8% | 49.7% | 50.5% | 49.9% | 48.7% | 49.9% | 48.5% | 49.4% | -1.4% |
| | Shinetsu/Hokuriku | 2.1% | 2.0% | 2.0% | 2.6% | 2.3% | 2.5% | 2.5% | 2.2% | +0.0% |
| | Tokai | 9.7% | 10.5% | 9.9% | 10.2% | 10.7% | 10.9% | 10.8% | 10.3% | -0.1% |
| | Kinki | 17.7% | 16.8% | 17.8% | 16.3% | 16.6% | 16.8% | 16.8% | 17.0% | +0.0% |
| | Chugoku | 3.0% | 3.1% | 2.9% | 3.2% | 2.7% | 2.5% | 2.4% | 2.9% | -0.1% |
| | Shikoku | 1.8% | 1.4% | 1.2% | 1.2% | 1.5% | 1.0% | 1.4% | 1.3% | +0.4% |
| | Kyushu/Okinawa | 10.2% | 9.8% | 10.1% | 9.6% | 10.7% | 9.3% | 9.8% | 10.0% | +0.5% |

Source: JHF; compiled by Daiwa Securities.

Note: Candidate pool used for No. 187 issue.

IMPORTANT

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Issues are rated 1, 2, 3, 4, or 5 as follows:

- 1: Outperform TOPIX/benchmark index by more than 15% over the next 12 months.
- 2: Outperform TOPIX/benchmark index by 5-15% over the next 12 months.
- 3: Out/underperform TOPIX/benchmark index by less than 5% over the next 12 months.
- 4: Underperform TOPIX/benchmark index by 5-15% over the next 12 months.
- 5: Underperform TOPIX/benchmark index by more than 15% over the next 12 months.

Benchmark index: TOPIX for Japan, S&P 500 for US, STOXX Europe 600 for Europe, HSI for Hong Kong, STI for Singapore, KOSPI for Korea, TWII for Taiwan, and S&P/ASX 200 for Australia.

Target Prices

Daiwa Securities Co. Ltd. sets target prices based on its analysts' earnings estimates for subject companies. Risks to target prices include, but are not limited to, unexpected significant changes in subject companies' earnings trends and the macroeconomic environment.

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Notification items pursuant to Article 37 of the Financial Instruments and Exchange Law

(This Notification is only applicable to where report is distributed by Daiwa Securities Co. Ltd.)

If you decide to enter into a business arrangement with our company based on the information described in this report, we ask you to pay close attention to the following items.

- In addition to the purchase price of a financial instrument, our company will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction. In some cases, our company also may charge a maximum of ¥2 million per year as a standing proxy fee for our deposit of your securities, if you are a non-resident.
- For derivative and margin transactions etc., our company may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements**.
- There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
- There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by our company.
- Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants.

* The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

** The ratio of margin requirements etc. to the amount of the transaction cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

When making an actual transaction, please be sure to carefully read the materials presented to you prior to the execution of agreement, and to take responsibility for your own decisions regarding the signing of the agreement with our company.

Corporate Name: Daiwa Securities Co. Ltd.

Registered: Financial Instruments Business Operator, Chief of Kanto Local Finance Bureau (Kin-sho) No.108

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