

# JHF No.180 Monthly MBS Issue

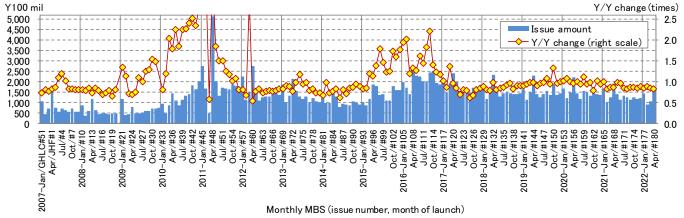
### > Average new Flat 35 loan rose to a record high Y32.3mn

Strategic Memorandum DSBE020 FICC Research Dept.

> Chief Strategist of Securitization Koji Matsushita (81) 3 5555-8778 koji1.matsushita@daiwa.co.jp

Daiwa Securities Co. Ltd.

- The Japan Housing Finance Agency (JHF) plans to issue its No. 180 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. 180 issue are the Y202.2bn of Flat 35 loans originated in March. Assuming overcollateralization at a credit enhancement ratio of 20.6 %, which is what it was the previous issue, the issuance amount will be Y160.5bn.
- The aggregate amount of new Flat 35 loans declined 16% y/y in March, but the average amount per loan rose to a record high of Y32.3mn. The average age of the borrower is high at 42.5 years old, close to the highest ever, an indication that Flat 35 usage by younger home buyers has been weak.
- Based on our prepayment model, we estimate a WAL of 9.96 years (based on 11 April closing prices; same hereinafter). The expected WAL based on the JHF's PSJ Forecast Statistical Data is 9.23 years.
- At a launch spread the same as the previous issue of 26bp, the coupon of the upcoming issue will be 0.50%. In this case, the PSJ model YCS would be 9.0bp, 0.5bp lower than the previous issue's 9.5bp. The PSJ model YCS of the previous issue in the secondary market is 9.4bp, which would mean the upcoming issue will have a coupon of 0.50-0.51% and launch spread of 26-27bp.
- We think it appropriate that supply and demand will meet at the launch spread of about 26-27bp. If so, the coupon would be about 0.50-0.51%.



### Chart: Issue Amount of Monthly MBS

Source: JHF; compiled by Daiwa Securities. Note: Estimate for No. 180 issue.



## Issuance of JHF MBS and Situations of Flat 35

No. 180 to be launched in April

The Japan Housing Finance Agency (JHF) plans to price (launch) its No. 180 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 (JB366 in this case) at the time of the launch. The launch date is scheduled in mid-April, and the payment date is scheduled on 27 April.

Issuance amount of Candidate trust assets for the No. 180 totaled Y202.2bn, all of which were Flat 35 loans about Y160bn originated in March. The issue is likely to have the highest ratings from S&P and R&I. The issue amount is to be announced on 14 April. If the credit enhancement ratio is unchanged from that for the previous issue at 20.6%, the issue amount is estimated at Y160.5bn.

100%

90% 80% 35S 70%

60%

30%

■5Y

. ■ 10Y

Source: JHF; compiled by Daiwa Securities.

Share of Flat 50% 40%

The amount of new Flat 35 mortgages originated in March was Y202.2bn, up M/M owing to seasonality but down 16% Y/Y. The lowest retail rate on the mortgages was 1.43% (including group credit life insurance premiums), up 0.08ppt M/M and up 0.08ppt Y/Y. The lowest rate on Flat 20 mortgages (with terms of 20 years or less) was 1.31%, up 0.08ppt M/M and up 0.05ppt Y/Y.

The average size of a Flat 35 loan rose to a record high

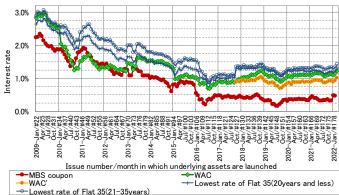
The amount of Flat 35

in March

loans declined 16% y/y

The average size of a new Flat 35 loan in March was Y32.3mn, the highest ever (see pages 7 and 8). Housing prices back calculated from LTV are also at a record high. The average age of flat 35 borrowers was 42.5 years old, close to a new high. As home prices have risen, usage of Flat 35 loans by younger home buyers has declined.

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



20% 10% 0% - FARSER AND Jacobe All and the second s 600 201 201 201 201 201 201 2018 2019 2016 2017 Month/ MBS issue number backed by the Flat35 pool Period of rate cut

■20Y

10Y/20Y

SY/10Y

2020-

5Y/20Y

202

2022

Source: JHF; compiled by Daiwa Securities.

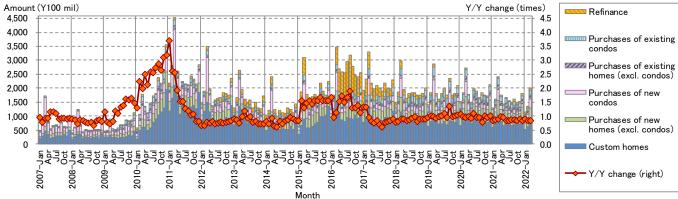


Chart: Flat 35 Loans by Type of Loans

Source: JHF; compiled by Daiwa Securities.



## Terms for the previous issue

Launch spread of 26bp and coupon of 0.46%

Reflection of bear-

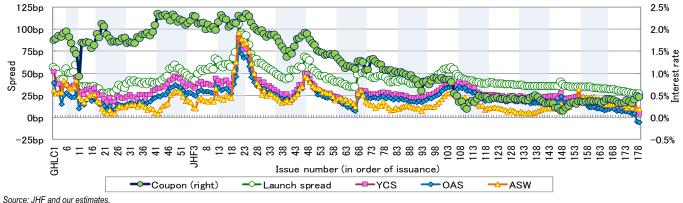
The No. 179 (Y106.9bn) was launched on 16 March with a coupon of 0.46%. The coupon was determined by adding the launch spread of 26bp on the compound yield of benchmark JB366. The OAS at launch (our estimate; same hereinafter) stood at -5.8bp (1.1bp tighter than previous issue) and the YCS was 3.6bp (equal to the previous issue).

The launch spread is unchanged from last month and thus the coupon directly reflects the steepening in JGB yields decline in the benchmark JGB yield. Meanwhile, we think the OAS has become substantially more negative because (1) yields on superlong JGBs have risen by much more than has the benchmark JGB yield and (2) market interest rates have become considerably more volatile. With the option premium (YCS minus OAS) getting wider but the YCS unchanged, OAS declined.

Investment demand for yield in the secondary market as well

The on-the-run issue was valued at an OAS of 2bp in the secondary market, but there appears to be some inclination to buy at an OAS below zero also. The price suggests there is demand close to referenced trading values. With market rates rising, demand is becoming more likely to form based on bond-equivalent yield (BEY) in the secondary market, as well.



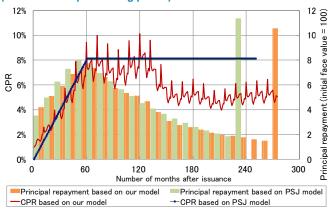


Note: The background colors indicate different fiscal years.

### **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. This had caused a steady lengthening of the forecast maturity at issuance since the No. 147, but this trajectory changed from the No. 165.

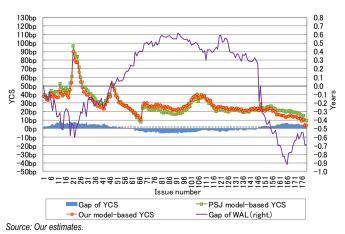




Source: Our estimates

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

### Chart: Difference in YCS for Monthly MBS at Launch

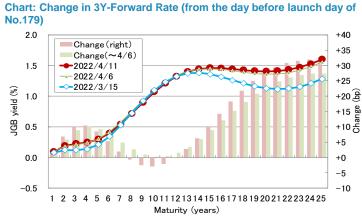




## Cash flow characteristics and issuance terms for No. 180

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 11 April 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 9.96 years (9.89 years for the previous issue) and the expected final maturity 23.0 years (22.5 years). The PSJ forecast is 6.96% (vs. 7.01% for the previous issue).
  - The PSJ Calculation Statistical Value (average) is 8.12% (vs. 8.17% for the previous issue). Accordingly, the expected WAL is 9.23 years (vs. 9.20 years for the previous issue) and the expected final maturity 20.0 years (20.0 years).



Forecast maturities are slightly longer than for the previous issue, but not by much. With the JGB yield curve rising, the expected future refinancing rate based on forward rates has risen for many points in the future, but the weighted-average coupon (WAC) of the underlying assets (housing loans) is also higher than it was for the previous issue, and estimating from those differences, we do not think the refinancing incentive of home loan borrowers has changed much.

The underlying loan pool's WAC (weighted average coupon; see pp. 7-8) is 1.23% and the WAC' 1.01%, 0.08% higher than the previous issue's.

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. 180 MBS	(based on 11)	April closing prices)
Unart. Launon		101 HQ. 100 MIDO		

aluations	of JHF_MB	S_#180 Pri	cing(Simu	lation)					11-Apr-22		
	Base	e Yield: JGB	(366G) YTM	0.234	%				(Tokyo Close)		
		Valuations of Cash Flows									
Launch Spread	Daiwa Model			PSJ Model			Indications of Previous RMBS Iss				
	Coupon	Dynamic		Static		PSJ forecast Statistical Data(Ave)			(#176)		
		OAS	YCS	ASW	ModDur	YCS	ASW	ModDur			
<b>22</b> bp	0.46 %	-13.6	-1.6	-2.6	9.611	4.9	1.3	8.994	(Issuance Terms)		
<b>23</b> bp	0.47 %	-12.6	-0.6	-1.6	9.603	5.9	2.3	8.987	Launch Spread=26bp		
<b>24</b> bp	0.48 %	-11.5	0.4	-0.6	9.595	6.9	3.3	8.981	Coupon=0.46%		
<b>25</b> bp	0.49 %	-10.5	1.5	0.3	9.588	7.9	4.3	8.975	(Valuations at the time of Launch)		
26 bp	0.50 %	-9.4	2.5	1.3	9.580	9.0	5.3	8.968	【CF based on Daiwa Model】:		
<b>27</b> bp	0.51 %	-8.4	3.5	2.3	9.573	10.0	6.3	8.962	OAS=-5.8bp, YCS=3.6bp, ASW=9.1bp		
<b>28</b> bp	0.52 %	-7.4	4.5	3.3	9.565	11.0	7.2	8.956	【CF based on PSJ Model】:		
<b>29</b> bp	0.53 %	-6.3	5.6	4.3	9.558	12.0	8.2	8.949	YCS=9.5bp、ASW=12.9bp		
<b>30</b> bp	0.54 %	-5.3	6.6	5.3	9.550	13.1	9.2	8.943	(Valuations in the secondary market)		
<b>31</b> bp	0.55 %	-4.2	7.6	6.3	9.543	14.1	10.2	8.937	【CF based on Daiwa Model/Daiwa Pric		
<b>32</b> bp	0.56 %	-3.2	8.7	7.2	9.535	15.1	11.2	8.930	OAS=2bp、YCS=13bp、ASW=11.2bp		
33 bp	0.57 %	-2.2	9.7	8.2	9.528	16.1	12.2	8.924	[CF based on PSJ Model/JSDA price]		
<b>34</b> bp	0.58 %	-1.1	10.7	9.2	9.520	17.1	13.2	8.918	YCS=9.4bp、ASW=5.4bp		
35 bp	0.59 %	-0.1	11.8	10.2	9.513	18.2	14.1	8.911			
<b>36</b> bp	0.60 %	1.0	12.8	11.2	9.505	19.2	15.1	8.905			
<b>37</b> bp	0.61 %	2.0	13.8	12.2	9.498	20.2	16.1	8.899	]		
<pre><daiwa model=""> <psj based="" data="" forecast="" model="" on="" psj="" statistical=""></psj></daiwa></pre>											
	PSJ 6.96 % Ave: 8.12 % (Median:8.33)%										
	WAL	9.96	years		9.23	years	(9.14	) 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 previous issue in the secondary market used in the Secondary market used in the PSJ model are based on the JSDA's Trading Reference Statistical Data.

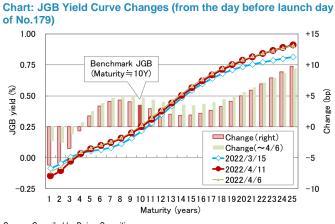
2) Figures for both Trading Reference Statistical Data and PSJ Forecast Statistical Data are average figures.

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. 179) was launched at a time when the on-the-run 10-year JGB yield was testing new highs and approaching 0.25%, but it subsequently dropped down to around 0.20% in response to the BOJ reiterating its commitment to yield curve control.



Source: Compiled by Daiwa Securities.

If the launch spread is the same as the previous issue at 26bp, the No. 180 will have a coupon of 0.50%. Based on the average PSJ forecast, the YCS would be 9.0bp, 0.5bp narrower than when the previous issue was launched. Additionally, the OAS would be -9.4bp, 3.6bp more negative than the OAS when the previous issue was launched.

This more negative OAS can be attributed to our model for estimating OAS since July 2019 reflecting volatility of the swaption market and to that volatility being high recently. Our prepayment model itself shows a widening of the option premium (the difference between YCS and OAS), based on synergistic effects and the rise in interest rate volatility since then.

   	<pre><our oas="" of="" reflects="" the="" volatility="" yields=""></our></pre>
OAS reflects rising volatility	Realistically, for fixed maturity yields, the volatility observed at a future point in time is a completely different concept than the volatility currently indicated by forward yields. When assessing OAS using swaption volatility under multiple interest rate scenarios, including the unrealistic one of long-term rates remaining volatile the entire time, it would in principle be a conservative measure of risk premium rather than an assessment of spreads (YCS) based on the average forecast cash flow. On the other hand, there is no correlation between the daily volatility of market interest rates and the refinancing rate, because the latter is affected by RMBS prepayments often does not change over the course of several months. That said, it is reasonable to evaluate risk premiums more conservatively when market volatility is rising, and this makes it meaningful to look at the OAS.
OAS vs. volatility	When expecting the same OAS, prices are likely to decline when volatility rises. When volatility is high, OAS will narrow to reflect higher volatility (assuming the yield curve is not inverted), even when YCS and BEY are the same as usual.
OAS is decisive because it becomes more conservative under high volatility	When considering the current market's forecast of future interest rate volatility, a somewhat conservative expected value of surplus return relative to keeping money invested in JGBs would probably be a good yardstick to use for making investment decisions. However, when high volatility like what we have seen recently looks unlikely to last for long, it may be better to put more of a priority than usual on YCS and treat OAS as a conservatively measured risk premium using more difficult stress scenarios than usual.
Increasing the weight of PSJ forecasts	There may be increasing weight placed on valuing spreads based on forecast cash flow using a PSJ model.
	The connection with secondary market levels is also of concern. We confirmed spread levels from our offices' prices and JSDA Trading Reference Statistical Data for the previous issue and then looked at the connection with the current issue. For convenience, we used our offices' prices for our model's cash flow analysis and JSDA Trading Reference Statistical Data for the PSJ model-based cash flow estimates (the JSDA's published PSJ Forecast Statistical Data; PSJ values based on the average of the 0bp yield curve scenario).
	The connections with the previous issue are shown as follows (secondary market levels and benchmark yield are as of the 11 April close).



(Connection with risk premium of previous issue)

**RMBS** issuance is

### [Pricing using our model's cash flow estimates]

- $\triangleright$ The No. 179's launch OAS was -5.8bp and the YCS 3.6bp. Based on the similar OAS and YCS, the No. 180's launch spread would be 27-30bp and the coupon 0.51-0.54%.
- In the secondary market, the No. 179's OAS is 2.0bp and the YCS 13.0bp. In line with ⊳ these, the No. 180's launch spread would be about 37bp and the coupon 0.61%.

### [Pricing using average PSJ forecast-based cash flow estimates]

- ⊳ The No. 179's launch YCS was 9.5bp. Based on the similar YCS, the No. 180's launch spread would be about 26-27bp and the coupon 0.50-0.51%.
- In the secondary market, the No. 179's YCS is 9.4bp. In line with this, the No. 180's  $\triangleright$ launch spread would be about 26-27bp and the coupon 0.50-51%.

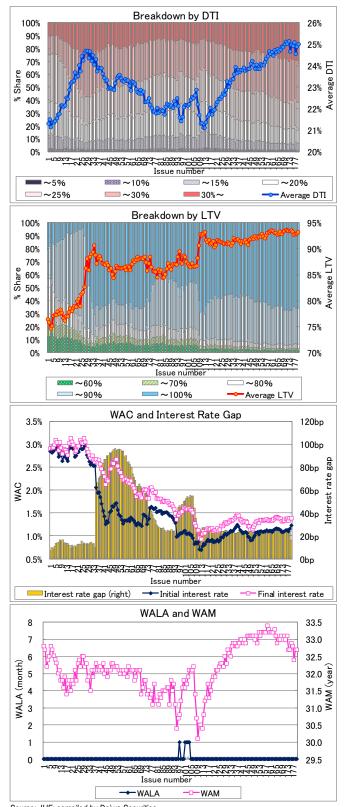
## (Demand forecast for No. 180 issue and issuance level)

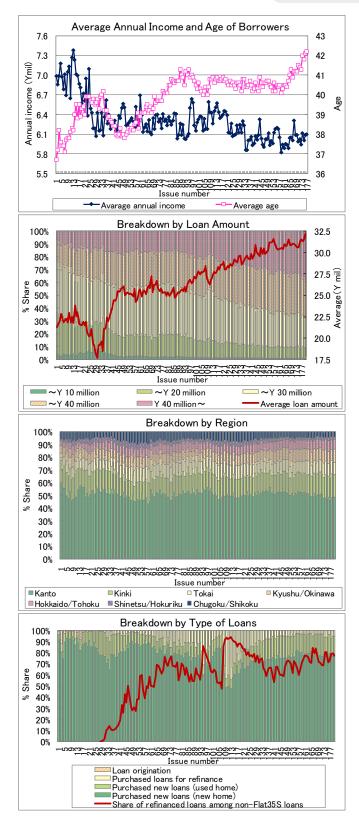
We expect the amount of the upcoming issue to be about 16% smaller than the year-ago steady despite lack of issue because of the weak volume of the new Flat 35 mortgages that comprise the growth in Flat 35 loans underlying assets. However, it would probably be more useful to offer the option of fixed-rate loans, which insulate home purchasers from inflation risk and increases in interest payments. The interest rate offered on Flat 35 loans reflects the coupon on the monthly RMBS issued the month prior. We expect upcoming RMBS issuance to be steady.

The personal opinion of your author is that the launch spread for this issue will confirm Coupon of 0.5% sufficient demand and be either 26-27bp. In this case, the coupon would be 0.50-0.51% (based on 11 April closing prices).

## Characteristics of Underlying Loan Pools for All JHF Monthly MBSs

# Daiwa Securities





# Characteristics of Underlying Loans: No. 180 Monthly MBS and Last Six Issues (No. 174-179)

Source: JHF; compiled by Daiwa Securities. Note: Candidate pool used for No. 180 issue.



		JHF #174	JHF #175	JHF #176	JHF #177	JHF #178	JHF #179	JHF #180	Ave. of previous 6 issues	Change from #179
Loan Pool Selected in		Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022		
Loan Application Started in		Jun-2019	Jun-2018	May-2018	Sep-2019	Jan-2019	Aug-2019	Nov-2018		
Repayment Started in		Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022	************************	
Initial Outstanding Entr	usted Assets (Y mil)	160,067	148,803	151,560	179,839	114,504	134,748	202,259	148,254	+67,511
Issue Size (Y mil)		126,700	117,700	119,700	143,100	90,700	106,900	TBD	117,467	-
Excess Collateral (Y m	il)	33,367	31,103	31,860	36,739	23,804	27,848	TBD	30,787	-
Overcollateralization		20.8%	20.9%	21.0%	20.4%	20.7%	20.6%	TBD	20.7%	-
Number of Loans		5,228	4,857	4,849	5,700	3,656	4,265	6,271	4,759	+2,006
Average Outstanding L	oan (Y mil)	30.617	30.637	31.256	31.550	31.320	31.594	32.253	31.162	+0.659
Average LTV		93.42%	93.47%	93.33%	92.70%	92.79%	92.90%	93.14%	93.10%	+0.24%
Average DTI		24.68%	24.97%	24.93%	25.10%	24.55%	24.88%	25.00%	24.85%	+0.12%
Average LTV for Refina	ance	89.36%	88.50%	86.77%	85.48%	86.50%	87.19%	87.05%	87.30%	-0.14%
Average DTI for Refinance		18.66%	18.71%	19.51%	18.33%	18.56%	18.63%	18.17%	18.73%	-0.46%
Average Annual Income of Obligors (Y mil)		6.117	6.006	6.086	6.093	6.398	6.214	6.330	6.152	+0.116
Average Age of Obligo	rs	42.0	41.8	42.1	42.3	42.7	42.5	42.5	42.2	+0.0
WAC (Initial Rate)		1.08%	1.10%	1.13%	1.13%	1.10%	1.15%	1.23%	1.12%	+0.08%
WAC (Final Rate)		1.32%	1.34%	1.37%	1.37%	1.34%	1.39%	1.39%	1.35%	+0.00%
WALA (Weighted Aver	age Loan Age)	0	0	0	0	0	0	0	0	+0
WALA for Refinance		117	117	124	120	119	122	125	120	+3
WAM		392	392	395	394	389	392	392	392	+0
Maturity Structure of	Up to 10Y	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	+0.0%
Loans at Origination	10-20Y	5.6%	5.6%	5.1%	5.5%	6.4%	5.6%	5.3%	5.6%	-0.4%
(% share)	20-25Y	5.1%	5.4%	4.2%	4.6%	5.9%	5.5%	5.1%	5.1%	-0.4%
	25-30Y	7.8%	7.1%	7.2%	7.0%	8.0%	6.8%	7.3%	7.3%	+0.6%
	Over 30Y	81.4%	81.9%	83.5%	82.7%	79.5%	82.0%	82.2%	81.8%	+0.2%
% share of loans with	(in number)	9.2%	8.3%	7.7%	8.3%	7.6%	8.5%	5.8%	8.3%	-2.7%
bonus payments	(in value)	10.1%	9.4%	8.4%	9.4%	8.2%	9.5%	6.4%	9.2%	-3.2%
Type of Loan	new	94.3%	94.4%	96.4%	96.2%	93.2%	95.0%	95.1%	94.9%	+0.1%
	refinanced	5.7%	5.6%	3.6%	3.8%	6.8%	5.0%	4.9%	5.1%	-0.1%
Loan Amount at Origination (% share)	Up to Y10 mil	0.9%	1.0%	0.8%	0.9%	1.1%	0.9%	0.8%	0.9%	-0.1%
	Y10-20 mil	9.4%	9.5%	8.6%	7.9%	9.3%	8.5%	8.1%	8.8%	-0.4%
	Y20-30 mil	26.7%	25.9%	25.3%	24.4%	24.2%	24.5%	23.6%	25.2%	-0.8%
	Y30-40 mil	30.0%	30.9%	31.4%	31.9%	28.2%	30.7%	28.4%	30.5%	-2.2%
	Y40-50 mil	17.2%	18.1%	17.7%	19.2%	18.7%	17.8%	19.5%	18.1%	+1.7%
	Over Y50 mil	15.9%	14.7%	16.3%	15.8%	18.6%	17.7%	19.6%	16.5%	+1.9%
Loan Amount by Region (% share)	Hokkaido/Tohoku	7.3%	7.8%	8.5%	7.9%	7.3%	7.7%	7.7%	7.7%	+0.0%
	Kanto	48.3%	47.3%	48.4%	46.5%	48.2%	48.6%	48.6%	47.9%	+0.0%
	Shinetsu/Hokuriku	1.8%	2.2%	2.6%	2.4%	2.4%	1.8%	1.8%	2.2%	+0.0%
	Tokai	10.9%	10.1%	9.9%	10.0%	10.3%	9.5%	9.5%	10.1%	+0.0%
	Kinki	17.8%	18.1%	16.7%	17.5%	18.9%	18.2%	18.2%	17.8%	+0.0%
	Chugoku	3.2%	2.7%	3.3%	3.0%	2.9%	3.0%	3.0%	3.0%	+0.0%
	Shikoku	1.2%	1.9%	1.0%	1.2%	1.3%	1.2%	1.2%	1.3%	+0.0%
	Kyushu/Okinawa	9.6%	10.1%	9.6%	11.6%	8.8%	10.1%	10.1%	10.0%	+0.0%

Source: JHF; compiled by Daiwa Securities. Note: Candidate pool used for No. 180 issue.



### **IMPORTANT**

This report is provided as a reference for making investment decisions and is not intended to be a solicitation for investment. Investment decisions should be made at your own discretion and risk. Content herein is based on information available at the time the report was prepared and may be amended or otherwise changed in the future without notice. We make no representations as to the accuracy or completeness. Daiwa Securities Co. Ltd. retains all rights related to the content of this report, which may not be redistributed or otherwise transmitted without prior consent.

#### Ratings

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.

#### **Disclosures related to Daiwa Securities**

Please refer to <u>https://lzone.daiwa.co.jp/l-zone/disclaimer/e\_disclaimer.pdf</u> for information on conflicts of interest for Daiwa Securities, securities held by Daiwa Securities, companies for which Daiwa Securities or foreign affiliates of Daiwa Securities Group have acted as a lead underwriter, and other disclosures concerning individual companies. If you need more information on this matter, please contact the Research Production Department of Daiwa Securities.

#### **Explanatory Document of Unregistered Credit Ratings**

This report may use credit ratings assigned by rating agencies that are not registered with Japan's Financial Services Agency pursuant to Article 66, Paragraph 27 of the Financial Instruments and Exchange Act. Please review the relevant disclaimer regarding credit ratings issued by such agencies at: <a href="https://lzone.daiwa.co.jp/l-zone/disclaimer/creditratings.pdf">https://lzone.daiwa.co.jp/l-zone/disclaimer/creditratings.pdf</a>

### 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

Memberships: Japan Securities Dealers Association, The Financial Futures Association of Japan, Japan Investment Advisers Association, Type II Financial Instruments Firms Association, Japan Security Token Offering Association