

JHF No.155 Monthly MBS Issue

Strategic Memorandum DSBE009

FICC Research Dept.

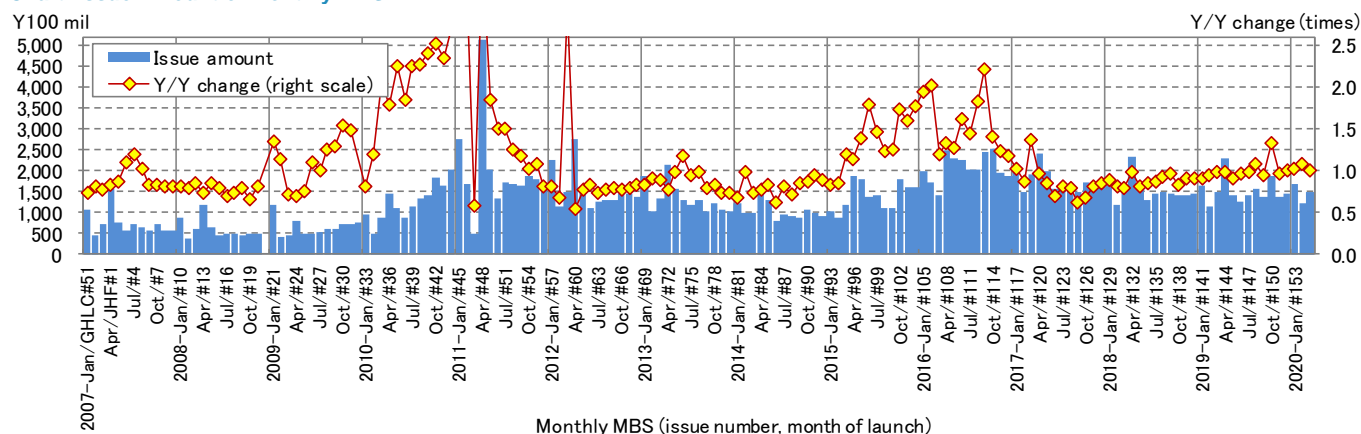
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Daiwa Securities Co. Ltd.

➤ Supporting funding for the future while awaiting remedies for COVID-19

- The Japan Housing Finance Agency (JHF) plans to issue its No. 155 Monthly MBS. The coupon will be set by referencing the yield of the on-the-run 10-year JGB.
- JHF MBS are backed by housing loans and issued with overcollateralization. All the candidate assets used as collateral for the upcoming issue are Flat 35 loans originated in February, with a total amount of ¥182.9 bil. If the credit enhancement ratio is unchanged from that for the previous issue at 19.7%, the issue amount is estimated at ¥146.8 bil.
- The lowest retail rate on a Flat 35 loan in February increased 0.01ppt relative to January. That rate was 0.03ppt lower on a 35yr loan and 0.02ppt lower on a 20yr loan than it was in February 2019. The value of originations increased 20% relative to January and declined 1% relative to February 2019. We attribute the m/m growth largely to seasonality (home purchases tend to be lower in January).
- Based on our prepayment model, we estimate a WAL of 9.36 years (based on 10 March closing prices; same hereinafter). The expected WAL based on the JHF's PSJ Forecast Statistical Data is 8.87 years.
- The No. 154, launched in February, had a launch spread of 34bps and a coupon of 0.30%. Based on the same launch spread, the No. 155 would have a coupon of 0.29% and an OAS of 19.2bps, 0.1bps wider than the previous issue's launch OAS. Based on the No. 154's OAS in the secondary market, the No. 155's launch spread is estimated at 31bps and the coupon 0.26%.
- We think it appropriate that supply and demand will meet at the launch spread of about 31-34bps. If so, the coupon would be about 0.26-0.29%.

Chart: Issue Amount of Monthly MBS



Source: JHF; compiled by Daiwa Securities.
 Note: Estimate for No. 155 issue.

Issuance of JHF MBS and Situations of Flat 35

No. 155 to be launched in March

The Japan Housing Finance Agency (JHF) plans to price (launch) its No. 155 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 (JB357 in this case) at the time of the launch. The launch date is scheduled in mid-March, and the payment date is scheduled on 26 March.

Issuance amount of about Y146 bil

Candidate trust assets for the No. 155 totaled Y182.9 bil, all of which were Flat 35 loans originated in February. The issue is likely to have the highest ratings from S&P and R&I. The issue amount is to be announced on 12 March. If the credit enhancement ratio is unchanged from that for the previous issue at 19.7%, the issue amount is estimated at Y146.8 bil.

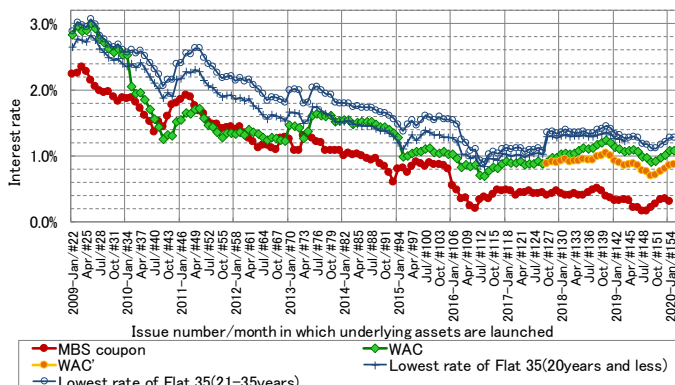
The usage of Flat 35 loans increased 20% m/m on seasonal factors

The lowest retail rate on Flat 35 loans in February was 1.28% for a 35-year loan (LTV of no more than 90%, includes costs of adding group credit insurance, here and below) and 1.23% for a 20-year loan, in both cases a 1bp m/m increase. In a y/y comparison, however, the lowest rate was 3ppt lower on a 35yr loan and 2ppt lower on a 20yr loan. Originations increased 2% m/m, we think largely because of seasonality (home purchases tend to be lower in January), and declined 1% in y/y terms.

Preferential interest rates are designed to encourage new borrowing

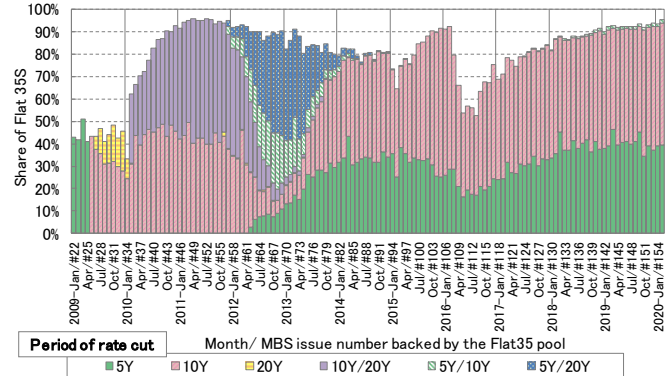
A record-high 94% of Flat 35 borrowers were able to access a preferential rate, and the majority of Flat 35 borrowers who did not get a preferential rate were refinancing existing mortgages (refis are ineligible for preferential rates).

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



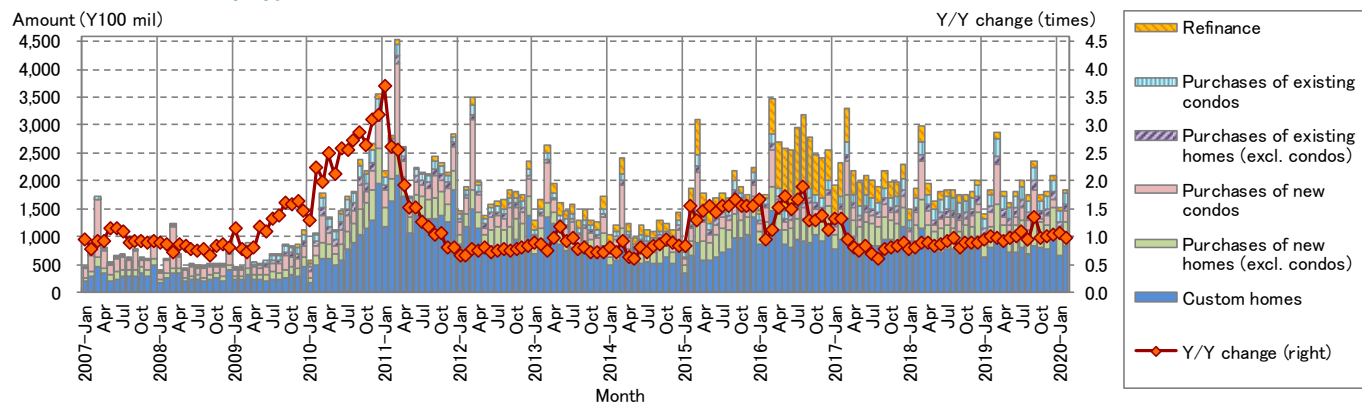
Source: JHF; compiled by Daiwa Securities.

Chart: Preferential Rate Scheme



Source: R&I; 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 34bps and coupon of 0.30%

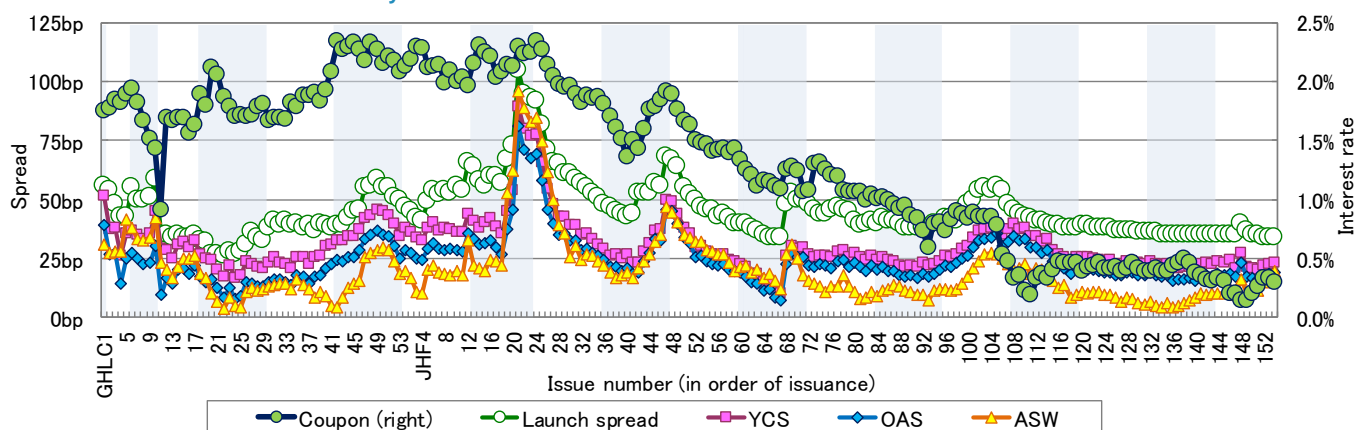
The No. 154 (Y122.4 bil) was launched on 19 February with a coupon of 0.30%. The coupon was determined by adding the launch spread of 34bp on the compound yield of benchmark JB357. The OAS at launch (our estimate; same hereinafter) stood at 19.3bps (0.9bps wider than previous issue) and the YCS was 23.4bps (0.7bps wider).

Impact from decline in JGB yields

The coupon declined 4bp from 0.30% last month. The spread of COVID-19 sparked concerns over a recession, suppressing long-term rates in the advanced economies, and this was reflected directly by a decline in the benchmark JGB yield. Both OAS and YCS widened on technical factors. When the deal was priced, the yield on the on-the-run 10-year JGB was high relative to the overall yield curve, and this mostly explains why the bond's coupon was set higher.

The launch spread of 34bp was the same as last month. It had looked like the coupon could drop below 0.3% as the date for setting terms approached, and this pricing confirmed there was enough investment demand for that to happen.

Chart: Issuance Terms for JHF Monthly MBS



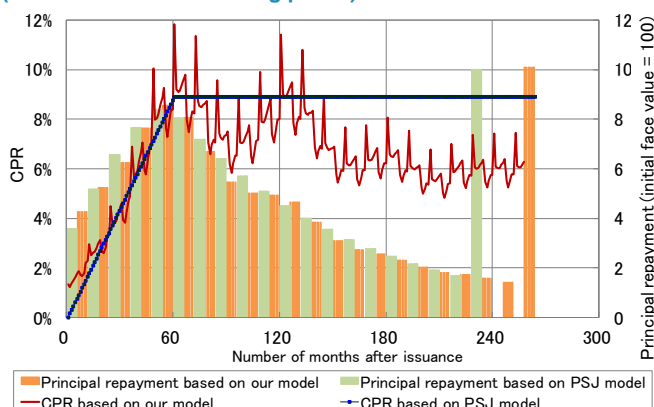
Source: JHF and our estimates.

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 JHF MBS No.155 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. Due to a minor change, our model provides a longer expected maturity at the time of new issuance than before, leading to a decline in YCS. The No. 147 issue, launched in July 2019, is the first one to reflect the impact from this.

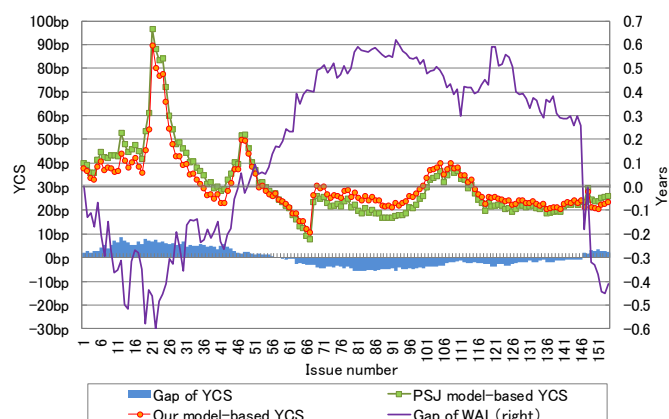
Chart: Expected CPR & Principal Repayment for No. 155 Issue (based on 10 March closing prices)



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.

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.

The expected cash flow distribution for the upcoming issue (the chart on the previous page, based on 10 March closing prices; hereinafter the same unless otherwise noted) is about the same as the previous issue (at the time of its launch; same hereinafter). Both our model and PSJ Forecast Statistical Data suggest that the expected WAL is about 9 years. The length has changed little compared to the previous issue.

- Based on our model, the expected WAL is 9.36 years (9.34 years for the previous issue) and the expected final maturity 21.5 years (21.6 years). The PSJ forecast is 8.01% (vs. 8.05% for the previous issue).
- The PSJ Calculation Statistical Value (average) is 8.90% (vs. 8.79% for the previous issue). Accordingly, the expected WAL is 8.87 years (vs. 8.93 years for the previous issue) and the expected final maturity 19.5 years (19.6 years).

Figure 1 is a combined bar and line chart showing the JGB yield and its change by maturity. The x-axis represents Maturity (years) from 1 to 20. The left y-axis represents JGB yield (%) from -1.0 to 1.0. The right y-axis represents Change (bp) from -20 to +20. The legend indicates three data series: Change (right) (purple bars), 2020/2/18 (blue line with diamonds), and 2020/3/10 (red line with circles). The 2020/3/10 yield starts at approximately -0.25% for 1-year maturity and increases to a peak of about 0.85% at 12 years, then declines. The 2020/2/18 yield starts at approximately -0.15% for 1-year maturity and increases to a peak of about 0.75% at 12 years, then declines. The change in yield (purple bars) shows a significant increase starting around 6 years maturity, peaking at approximately 18 bp for 10-year maturity, and then declining.

Maturity (years)	2020/2/18 Yield (%)	2020/3/10 Yield (%)	Change (bp)
1	-0.15	-0.25	-6
2	-0.15	-0.25	-6
3	-0.18	-0.25	-7
4	-0.20	-0.20	-5
5	-0.15	-0.10	5
6	0.00	0.05	10
7	0.10	0.25	15
8	0.30	0.45	15
9	0.45	0.65	20
10	0.60	0.80	18
11	0.65	0.85	15
12	0.70	0.85	15
13	0.70	0.80	10
14	0.65	0.70	5
15	0.55	0.60	0
16	0.45	0.50	-5
17	0.35	0.40	-10
18	0.25	0.30	-15
19	0.30	0.20	-18
20	0.30	0.15	-20

The expected average maturity was virtually unchanged, because there was a significant steepening of market JGB yields twisted on either side of the 10-year sector, and the implied forward rate (3-year) rose in the 5-year to 15-year zone but declined in the less-than-5-year and over-15-year zones. There was a division between periods of rising refinancing incentives and periods of shrinking refinancing incentives, resulting in an offsetting of their respective impacts from changes in expected prepayment. The underlying loan pool's weighted average coupon (WAC; see pp6-7) rose 0.01ppt from the previous issue, from 0.85% to 0.86%.

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

Valuations of JHF_MBS_#155 Pricing(Simulation)									10-Mar-20 (Tokyo Close)
Base Yield: JGB(357G) YTM -0.050 %									
Launch Spread	Coupon	Valuations of Cash Flows							
		Daiwa Model				PSJ Model			
		Dynamic	Static			PSJ forecast Statistical Data(Ave)			
		OAS	YCS	ASW	ModDur	YCS	ASW	ModDur	
23 bp	0.18 %	8.0	13.0	19.9	9.236	15.4	21.4	8.823	
...		...							
29 bp	0.24 %	14.1	19.1	25.8	9.196	21.5	27.5	8.787	
30 bp	0.25 %	15.1	20.1	26.8	9.190	22.5	28.5	8.781	
31 bp	0.26 %	16.1	21.2	27.8	9.183	23.5	29.5	8.775	
32 bp	0.27 %	17.2	22.2	28.8	9.176	24.5	30.5	8.770	
33 bp	0.28 %	18.2	23.2	29.8	9.170	25.5	31.5	8.764	
34 bp	0.29 %	19.2	24.2	30.7	9.163	26.5	32.5	8.758	
35 bp	0.30 %	20.2	25.2	31.7	9.156	27.6	33.5	8.752	
36 bp	0.31 %	21.2	26.2	32.7	9.150	28.6	34.6	8.746	
37 bp	0.32 %	22.2	27.2	33.7	9.143	29.6	35.6	8.740	
38 bp	0.33 %	23.3	28.2	34.7	9.136	30.6	36.6	8.734	

<Daiwa Model>

PSJ 8.01 %
WAL 9.36 years

<PSJ Model/based on PSJ Forecast Statistical Data>

Ave: 8.90 %
8.87 years

(Median: 8.98) %
(8.84) years

Indications of Previous RMBS Issue (#154)

(Issuance Terms)

Launch Spread=34bp
Coupon=0.30%

(Valuations at the time of Launch)

[CF based on Daiwa Model]:
OAS=19.3bp, YCS=23.4bp, ASW=19.8bp

[CF based on PSJ Model]:
YCS=26.0bp, ASW=21.3bp

(Valuations in the secondary market)

[CF based on Daiwa Model/Daiwa Price]:
OAS=16.0bp, YCS=20.9bp, ASW=27.4bp

[CF based on PSJ Model/JSDA price]:
YCS=22.5bp, ASW=27.1bp

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.

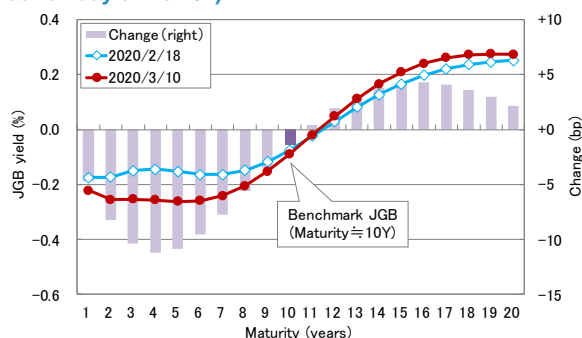
3) Estimated cash flow is based on the assumption that clean-up call options are exercised in initial April or October after the outstanding amount becomes 10% or less of the original.

Launch spread indications

The previous issue (No. 154) was launched when the on-the-run 10-year JGB was yielding less than it was the previous month. The benchmark yield also declined this time, as the further spread of COVID-19 raised fears of a recession in the US and pushed long-term JGB yields lower.

If the launch spread is the same as the previous issue at 34bps, the No. 155 coupon would be 0.29%. This would put the OAS at 19.2bps, almost same as the previous issue's launch OAS. The reason there was no difference in OAS when the launch spread was the same is that there was a steepening throughout the JGB yield curve, offsetting the factors affecting changes in OAS (narrowing in the over-10-year zone and widening in the up-to-10-year zone).

Chart: JGB Yield Curve Changes (from the day before launch day of No.154)



Source: Compiled by Daiwa Securities.

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).

We did a launch spread case study for the current issue and compared spreads based on cash flow using our model and the PSJ model (based on the average for the JHF's PSJ Forecast Statistical Data). The connections with the previous issue are shown as follows (secondary market levels and benchmark yield are as of the 10 March close).

(Connection with risk premium of previous issue)

[Pricing using our model's cash flow estimates]

- The No. 154's launch OAS was 19.3bps and the YCS 23.4bps. Based on the similar OAS and YCS, the No. 155's launch spread would be 33-34bps and the coupon 0.28-0.29%.
- In the secondary market, the No. 154's OAS is 16.0bps and the YCS 20.9bps. In line with these, the No. 155's launch spread would be about 31bps and the coupon 0.26%.

[Pricing using PSJ forecast-based cash flow estimates]

- The No. 154's launch YCS was 26.0bps. Based on the similar YCS, the No. 155's launch spread would be about 33-34bps and the coupon 0.28-0.29%.
- In the secondary market, the No. 154's YCS is 22.5bps. In line with this, the No. 155's launch spread would be about 30bps and the coupon 0.25%.

(Demand forecast for No. 155 issue and issuance level)

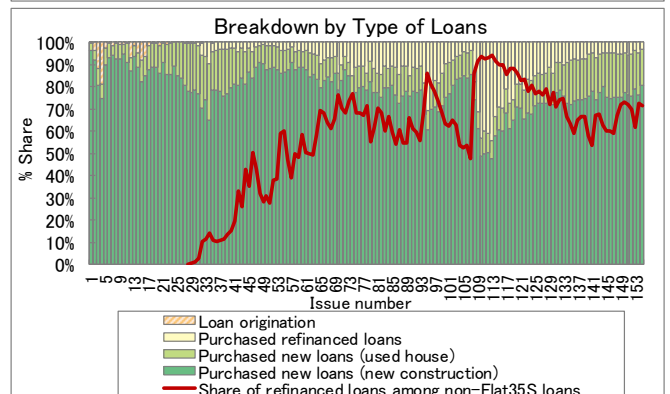
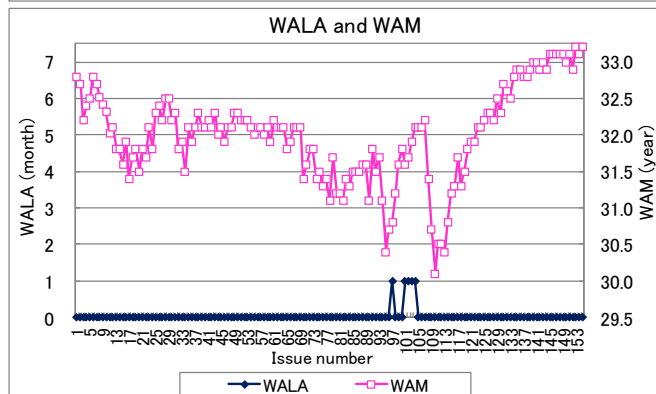
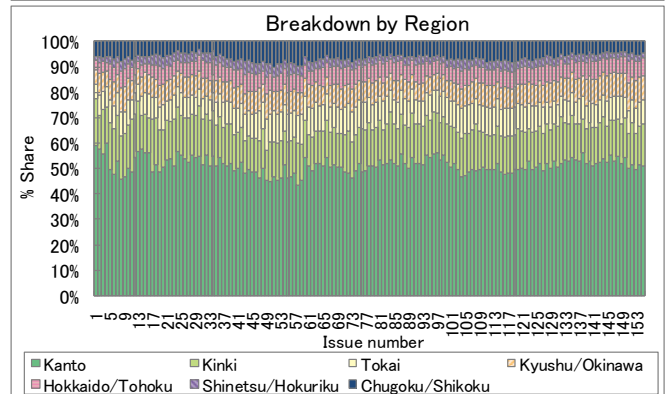
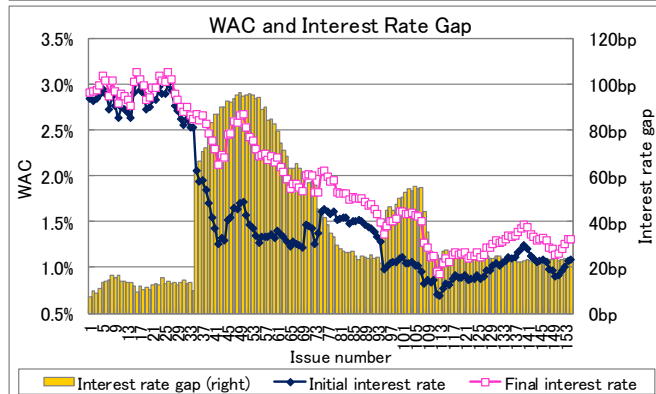
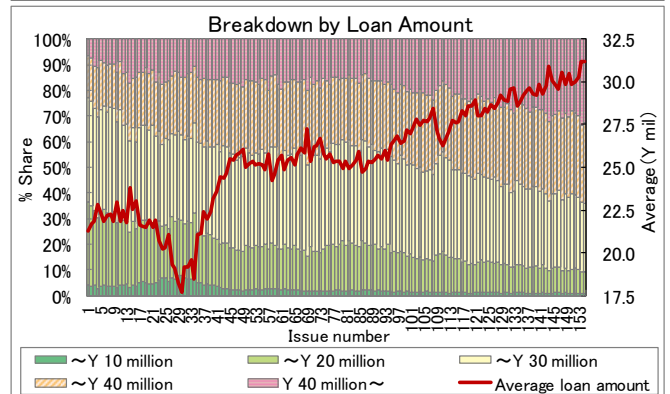
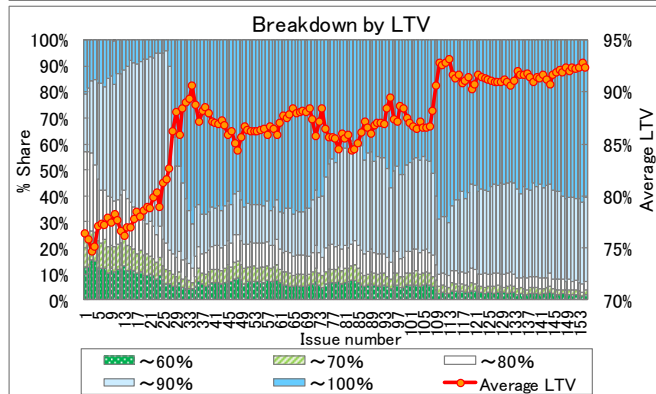
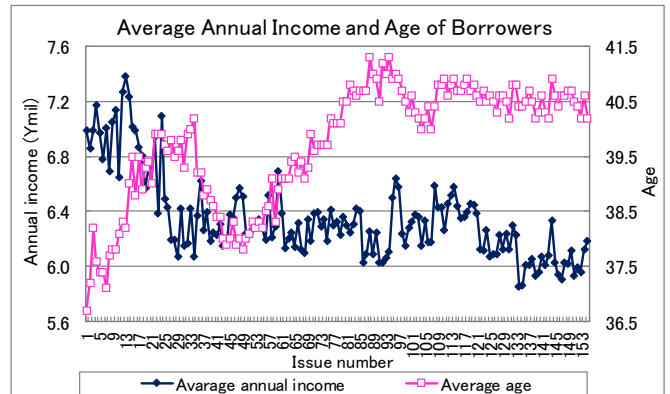
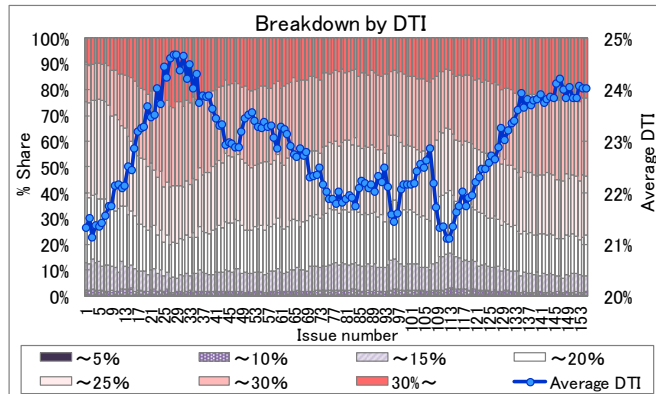
Impacts from the coronavirus

The Fed announced an emergency rate cut on 3 March. The consequent strengthening of the yen weighed on long-term rates in Japan, sparking a decline in TOPIX and the Nikkei 225 and pulling long-term yields deeper into negative territory. The large decline in the Dow Jones Industrial Average following the rate cut made it clear that changes in the market environment in reaction to the spread of COVID-19 is being rightly termed the "Coronavirus shock." Following President Trump's announcement of an economic package on 9 March, the Japanese and US stock markets stopped declining and the yen started weakening, pushing the 10-year JGB yield up by 0.1ppt on 10 March. It is possible that economic activity will remain weak and markets will remain volatile until treatments and drugs to weaken COVID-19 can be devised. Given conditions in the market for long-term JGBs, demand forecasts for the upcoming JHF monthly issue may be based on minimal interest rates and minimal spreads.

Coupon of around 0.25% to 0.3%

I personally think that demand for the No.155 issue will meet at a launch spread of around 31-34bps. If so, the coupon is estimated at 0.26-0.29%.

Characteristics of Underlying Loan Pools for All JHF Monthly MBSs



Source: JHF; compiled by Daiwa Securities.
 Note: Candidate pool used for No. 155 issue.

Characteristics of Underlying Loans: No. 155 Monthly MBS and Last Six Issues (No. 149-154)

	JHF #149	JHF #150	JHF #151	JHF #152	JHF #153	JHF #154	JHF #155	Ave. of previous 6 issues	Change from #154
Loan Pool Selected in	Aug-2019	Sep-2019	Oct-2019	Nov-2019	Dec-2019	Jan-2020	Feb-2020		
Loan Application Started in	May-2017	Nov-2016	Jun-2017	Sep-2017	Jun-2017	Mar-2017	Mar-2017		
Repayment Started in	Aug-2019	Sep-2019	Oct-2019	Sep-2019, Nov-2019	Dec-2019	Dec-2019, Jan-2020	Feb-2019		
Initial Outstanding Entrusted Assets (Y mil)	173,953	236,759	236,759	180,231	209,500	152,477	182,925	198,280	+30,447
Issue Size (Y mil)	136,300	186,800	186,800	144,100	167,100	122,400	TBD	157,250	-
Excess Collateral (Y mil)	37,653	49,959	49,959	36,131	42,400	30,077	TBD	41,030	-
Overcollateralization	21.6%	21.1%	21.1%	20.0%	20.2%	19.7%	TBD	20.6%	-
Number of Loans	5,822	7,760	7,760	6,007	6,918	4,890	5,864	6,526	+974
Average Outstanding Loan	29.879	30.510	30.510	30.003	30.283	31.181	31.194	30.395	+0.013
Average LTV	92.37%	92.04%	92.04%	92.23%	92.37%	92.78%	92.36%	92.31%	-0.42%
Average DTI	23.84%	24.05%	24.05%	23.85%	24.07%	24.03%	24.02%	23.98%	-0.01%
Average LTV for Refinance	85.60%	86.33%	86.33%	86.19%	85.65%	85.46%	82.45%	85.93%	-3.01%
Average DTI for Refinance	20.24%	19.41%	19.41%	19.51%	19.59%	19.78%	19.30%	19.66%	-0.48%
Average Annual Income of Obligors (Y mil)	6.019	6.117	6.117	5.994	5.961	6.125	6.182	6.055	+0.056
Average Age of Obligors	40.7	40.7	40.7	40.4	40.2	40.6	40.2	40.6	-0.4
WAC (Initial Rate)	0.97%	0.90%	0.90%	0.97%	1.01%	1.07%	1.08%	0.97%	+0.01%
WAC (Final Rate)	1.20%	1.14%	1.14%	1.21%	1.25%	1.31%	1.31%	1.21%	+0.00%
WALA (Weighted Average Loan Age)	0	0	0	0	0	0	0	0	+0
WALA for Refinance	94	92	92	98	100	95	98	95	+3
WAM	397	396	396	395	398	397	398	397	+1
Maturity Structure of Loans at Origination (% share)	Up to 10Y	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	-0.0%
	10-20Y	4.5%	5.0%	5.0%	4.6%	4.3%	4.1%	4.6%	-0.2%
	20-25Y	3.3%	3.1%	3.1%	3.7%	3.2%	3.4%	3.3%	+0.1%
	25-30Y	7.8%	8.6%	8.6%	8.9%	7.6%	8.0%	8.2%	-0.6%
	Over 30Y	84.4%	83.1%	83.1%	82.8%	84.7%	84.4%	83.8%	+0.8%
% share of loans with bonus payments	(in number)	11.9%	13.6%	13.6%	12.5%	12.2%	14.0%	13.0%	-2.3%
	(in value)	13.9%	15.7%	15.7%	14.2%	14.0%	16.0%	14.9%	-2.7%
Type of Loan	new	94.6%	95.2%	95.2%	95.0%	96.3%	95.2%	95.2%	+1.5%
	refinanced	5.4%	4.8%	4.8%	5.0%	3.7%	4.8%	4.8%	-1.5%
Loan Amount at Origination (% share)	Up to Y10 mil	1.0%	0.8%	0.8%	0.9%	1.0%	0.8%	0.9%	-0.1%
	Y10-20 mil	9.5%	8.8%	8.8%	9.6%	9.1%	8.5%	9.1%	-0.1%
	Y20-30 mil	29.2%	28.4%	28.4%	28.5%	27.9%	26.9%	28.2%	-0.2%
	Y30-40 mil	31.3%	31.5%	31.5%	32.0%	32.3%	30.1%	31.4%	+1.5%
	Y40-50 mil	16.0%	17.2%	17.2%	16.8%	16.2%	17.0%	16.7%	+0.7%
	Over Y50 mil	12.9%	13.3%	13.3%	12.1%	13.4%	16.7%	13.6%	-1.8%
Loan Amount by Region (% share)	Hokkaido/Tohoku	6.6%	6.5%	6.5%	7.2%	7.4%	6.5%	6.8%	+0.7%
	Kanto	52.1%	54.5%	54.5%	51.7%	49.5%	51.5%	52.3%	-0.5%
	Shinetsu/Hokuriku	1.8%	2.0%	2.0%	2.2%	2.5%	2.2%	2.1%	-0.4%
	Tokai	10.8%	8.0%	8.0%	8.9%	9.7%	9.7%	9.2%	-0.2%
	Kinki	15.4%	15.5%	15.5%	16.3%	14.5%	15.0%	15.4%	+1.6%
	Chugoku	3.1%	2.7%	2.7%	3.3%	3.8%	4.2%	3.3%	-0.9%
	Shikoku	1.0%	1.5%	1.5%	1.2%	1.5%	1.2%	1.3%	+0.2%
	Kyushu/Okinawa	9.1%	9.3%	9.3%	9.2%	11.2%	9.7%	9.6%	-0.4%

Source: JHF; compiled by Daiwa Securities.

Note: Candidate pool used for No. 155 issue.

Explanatory Document of Unregistered Credit Ratings

In order to ensure the fairness and transparency in the markets, Credit Rating Agencies became subject to the Credit Rating Agencies' registration system based on the Financial Instruments and Exchange Act. In accordance with this Act, in soliciting customers, Financial Instruments Business Operators, etc. shall not use the credit ratings provided by unregistered Credit Rating Agencies without informing customers of the fact that those Credit Rating Agencies are not registered, and shall also inform customers of the significance and limitations of credit ratings, etc.

■ The Significance of Registration

Registered Credit Rating Agencies are subject to the following regulations:

- 1) Duty of good faith.
- 2) Establishment of control systems (fairness of the rating process, and prevention of conflicts of interest, etc.).
- 3) Prohibition of the ratings in cases where Credit Rating Agencies have a close relationship with the issuers of the financial instruments to be rated, etc.
- 4) Duty to disclose information (preparation and publication of rating policies, etc. and public disclosure of explanatory documents).

In addition to the above, Registered Credit Rating Agencies are subject to the supervision of the Financial Services Agency ("FSA"), and as such may be ordered to produce reports, be subject to on-site inspection, and be ordered to improve business operations, whereas unregistered Credit Rating Agencies are free from such regulations and supervision.

■ Credit Rating Agencies

[Standard & Poor's]

The Name of the Credit Rating Agencies group, etc

The name of the Credit Rating Agencies group: S&P Global Ratings ("Standard & Poor's")

The name and registration number of the Registered Credit Rating Agency in the group: S&P Global Ratings Japan Inc. (FSA commissioner (Rating) No.5)

How to acquire information related to an outline of the rating policies and methods adopted by the person who determines Credit Ratings

The information is posted under "Unregistered Rating Information" (<http://www.standardandpoors.co.jp/unregistered>) in the "Library and Regulations" section on the website of S&P Global Ratings Japan Inc. (<http://www.standardandpoors.co.jp>)

Assumptions, Significance and Limitations of Credit Ratings

Credit ratings assigned by Standard & Poor's are statements of opinion on the future credit quality of specific issuers or issues as of the date they are expressed and they are not indexes which show the probability of the occurrence of the failure to pay by the issuer or a specific debt and do not guarantee creditworthiness. Credit ratings are not a recommendation to purchase, sell or hold any securities, or a statement of market liquidity or prices in the secondary market of any issues.

Credit ratings may change depending on various factors, including issuers' performance, changes in external environment, performance of underlying assets, creditworthiness of counterparties and others. Standard & Poor's conducts rating analysis based on information it believes to be provided by the reliable source and assigns credit ratings only when it believes there is enough information in terms of quality and quantity to make a conclusion. However, Standard & Poor's does not perform an audit, due diligence or independent verification of any information it receives from the issuer or a third party, or guarantee its accuracy, completeness or timeliness of the results by using the information. Moreover, it needs to be noted that it may incur a potential risk due to the limitation of the historical data that are available for use depending on the rating.

This information is based on information Daiwa Securities Co. Ltd. has received from sources it believes to be reliable as of March 7th, 2017, but it does not guarantee accuracy or completeness of this information. For details, please refer to the website of S&P Global Ratings Japan Inc. (<http://www.standardandpoors.co.jp>)

[Moody's]

The Name of the Credit Rating Agencies Group, etc

The name of the Credit Rating Agencies group: Moody's Investors Service ("MIS")

The name and registration number of the Registered Credit Rating Agency in the group: Moody's Japan K.K. (FSA commissioner (Rating) No.2)

How to acquire information related to an outline of the rating policies and methods adopted by the person who determines Credit Ratings

The information is posted under "Unregistered Rating explanation" in the section on "The use of Ratings of Unregistered Agencies" on the website of Moody's Japan K.K. (The website can be viewed after clicking on "Credit Rating Business" on the Japanese version of Moody's website (https://www.moody.com/pages/default_ja.aspx))

Assumptions, Significance and Limitations of Credit Ratings

Credit ratings are Moody's Investors Service's ("MIS") current opinions of the relative future credit risk of entities, credit commitments, or debt or debt-like securities. MIS defines credit risk as the risk that an entity may not meet its contractual, financial obligations as they come due and any estimated financial loss in the event of default. Credit ratings do not address any other risk, including but not limited to: liquidity risk, market value risk, or price volatility. Credit ratings do not constitute investment or financial advice, and credit ratings are not recommendations to purchase, sell, or hold particular securities. No warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability or fitness for any particular purpose of any such rating or other opinion or information, is given or made by MIS in any form or manner whatsoever.

Based on the information received from issuers or from public sources, the credit risks of the issuers or obligations are assessed. MIS adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MIS considers to be reliable. However, MIS is not an auditor and cannot in every instance independently verify or validate information received in the rating process.

This information is based on information Daiwa Securities Co. Ltd. has received from sources it believes to be reliable as of April 16th, 2018, but it does not guarantee accuracy or completeness of this information. For details, please refer to the website of Moody's Japan K.K. (https://www.moody.com/pages/default_ja.aspx)

[Fitch]

The Name of the Credit Rating Agencies group, etc

The name of the Credit Rating Agencies group: Fitch Ratings ("Fitch")

The name and registration number of the Registered Credit Rating Agency in the group: Fitch Ratings Japan Limited (FSA commissioner (Rating) No.7)

How to acquire information related to an outline of the rating policies and methods adopted by the person who determines Credit Ratings

The information is posted under "Outline of Rating Policies" in the section of "Regulatory Affairs" on the website of Fitch Ratings Japan Limited (<https://www.fitchratings.com/site/japan>)

Assumptions, Significance and Limitations of Credit Ratings

Ratings assigned by Fitch are opinions based on established criteria and methodologies. Ratings are not facts, and therefore cannot be described as being "accurate" or "inaccurate". Credit ratings do not directly address any risk other than credit risk. Credit ratings do not comment on the adequacy of market price or market liquidity for rated instruments. Ratings are relative measures of risk; as a result, the assignment of ratings in the same category to entities and obligations may not fully reflect small differences in the degrees of risk. Credit ratings, as opinions on relative ranking of vulnerability to default, do not imply or convey a specific statistical probability of default.

In issuing and maintaining its ratings, Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The assignment of a rating to any issuer or any security should not be viewed as a guarantee of the accuracy, completeness, or timeliness of the information relied on in connection with the rating or the results obtained from the use of such information. If any such information should turn out to contain misrepresentations or to be otherwise misleading, the rating associated with that information may not be appropriate. Despite any verification of current facts, ratings can be affected by future events or conditions that were not anticipated at the time a rating was issued or affirmed.

For the details of assumption, purpose and restriction of credit ratings, please refer to "Definitions of ratings and other forms of opinion" on the website of Fitch Rating Japan Limited.

This information is based on information Daiwa Securities Co. Ltd. has received from sources it believes to be reliable as of September 27th, 2019, but it does not guarantee accuracy or completeness of this information. For details, please refer to the website of Fitch Rating Japan Limited (<https://www.fitchratings.com/site/japan>)

IMPORTANT

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Conflicts of Interest: Daiwa Securities Co. Ltd. may currently provide or may intend to provide investment banking services or other services to the company referred to in this report. In such cases, said services could give rise to conflicts of interest for Daiwa Securities Co. Ltd.

Daiwa Securities Co. Ltd. and Daiwa Securities Group Inc.: Daiwa Securities Co. Ltd. is a subsidiary of Daiwa Securities Group Inc.

Other Disclosures Concerning Individual Issues:

1) As of 26 April 2016, Daiwa Securities Co. Ltd., its parent company Daiwa Securities Group Inc., GMO Financial Holdings, Inc., and its subsidiary GMO CLICK Securities, Inc. concluded a basic agreement for the establishment of a business alliance between the four companies.

As of end-December 2017, Daiwa Securities Group Inc. owned shares in GMO Financial Holdings, Inc. equivalent to approximately 9.3% of the latter's outstanding shares. Given future developments in and benefits from the prospective business alliance, Daiwa Securities Group Inc. could boost its stake in GMO Financial Holdings, Inc. to up to 20% of outstanding shares.

2) Daiwa Real Estate Asset Management is a subsidiary of Daiwa Securities Group Inc. and serves as the asset management company for the following J-REITs: Daiwa Office Investment Corporation (8976), Nippon Healthcare Investment Corporation (3308), Japan Rental Housing Investments (8986).

3) Samty Residential Investment became a consolidated subsidiary of Daiwa Securities Group Inc. effective 10 September 2019.

4) On 30 May 2019, Daiwa Securities Group Inc. formalized an equity/business alliance with Samty, and as of 14 June 2019 it owned 16.95% of shares outstanding in Samty along with convertible bonds with a par value of ¥10bn. Conversion of all of said convertible bonds into common shares would bring the stake of Daiwa Securities Group Inc. in Samty to 27.28%.

5) Daiwa Securities Group Inc. and Credit Saison Co., Ltd. entered into a capital and business alliance, effective 5 September 2019. In line with this alliance, Daiwa Securities Group Inc. is to acquire up to 5.01% of Credit Saison's total common shares outstanding (excl. treasury shares; as of 31 Jul 2019).

6) NEC (6701): NOTICE REGARDING U.S. PERSONS: This report is not intended for distribution to or use by any person in the United States. Securities issued by NEC Corporation have been suspended from registration in the U.S. and are subject to an order of the U.S. Securities and Exchange Commission dated June 17, 2008, pursuant to Section 12(j) of the Securities Exchange Act of 1934. This document is not a recommendation or inducement of any purchase or sale of such securities by any person or entity located in the U.S. Daiwa Securities Co. Ltd. disclaims any responsibility to any such person with respect to the content of this document. Any U.S. person receiving a copy of this report should disregard it.

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