

## JHF No.157 Monthly MBS Issue

Strategic Memorandum DSBE011

FICC Research Dept.

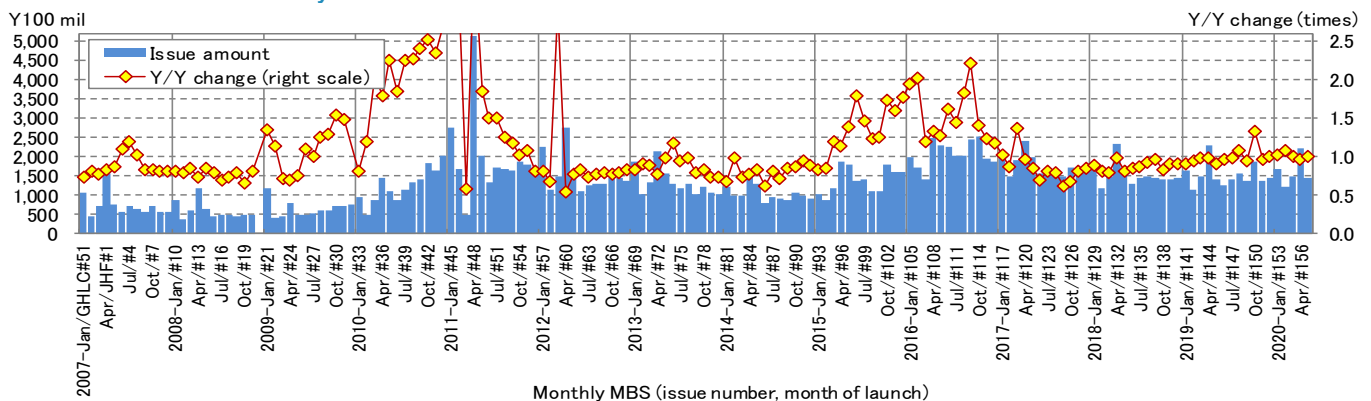
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Daiwa Securities Co. Ltd.

### ➤ Disruptions from covid-19 minimal, issuance volume flat y/y

- The Japan Housing Finance Agency (JHF) plans to issue its No. 157 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 April, with a total amount of Y179.1 bil. If the credit enhancement ratio is unchanged from that for the previous issue at 19.8%, the issue amount is estimated at Y143.6 bil.
- The lowest retail rate on a Flat 35 loan in April increased 0.06ppt relative to March and was up 0.03ppt in y/y terms. The amount of originations declined, 35% relative to March and 1% relative to April 2019. The m/m decline was caused by Japan's seasonal factors in a pullback from the usual March increase in home purchases and consequent large usage of Flat 35 loans. The y/y decline can be attributed to disruptions from covid-19, although the impacts proved minimal relative to the constraints on activity.
- Based on our prepayment model, we estimate a WAL of 9.49 years (based on 14 May closing prices; same hereinafter). The expected WAL based on the JHF's PSJ Forecast Statistical Data is 8.94 years.
- The No. 156, launched in March, had a launch spread of 34bps and a coupon of 0.35%. Based on the same launch spread, the No. 157 would have a coupon of 0.33% and an OAS of 14.8bps, 1.3bps tighter than the previous issue's launch OAS. Based on the No. 156's OAS in the secondary market, the No. 157's launch spread is estimated at 33-34bps and the coupon 0.32-0.33%.
- We think it appropriate that supply and demand will meet at the launch spread of about 33-35bps. If so, the coupon would be about 0.32-0.34%.

Chart: Issue Amount of Monthly MBS



Source: JHF; compiled by Daiwa Securities.  
 Note: Estimate for No. 157 issue.

## Issuance of JHF MBS and Situations of Flat 35

### No. 157 to be launched in May

The Japan Housing Finance Agency (JHF) plans to price (launch) its No. 157 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 (JB358 in this case) at the time of the launch. The launch date is scheduled in mid-May, and the payment date is scheduled on 28 May.

### Issuance amount of about Y143 bil

Candidate trust assets for the No. 157 totaled Y179.1 bil, all of which were Flat 35 loans originated in April. The issue is likely to have the highest ratings from S&P and R&I. The issue amount is to be announced on 15 May. If the credit enhancement ratio is unchanged from that for the previous issue at 19.8%, the issue amount is estimated at Y143.6 bil.

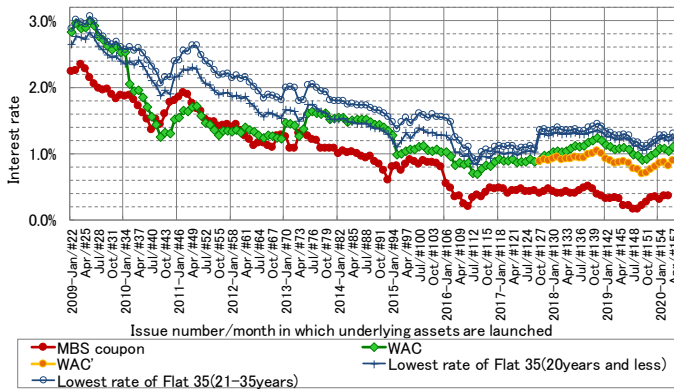
### The usage of Flat 35 loans declined 1% y/y

The lowest retail rate on Flat 35 loans in April was 1.3% for a 35-year loan (maximum LTV of 90%; includes costs of adding group credit insurance; here and below), 6bp higher than in March and 3bp higher than in April 2019. The lowest rate on 20-year loans was 1.23%, 4bp higher m/m and 2bp higher y/y. Originations declined 35% m/m, we think largely on seasonality, following the usual trend of a pullback in April from growth in home purchases and Flat 35 loans in March. The 1% y/y decline can be attributed to disruptions from covid-19, although the impacts proved minimal relative to the constraints on household and business activity.

### Strong growth in built-to-order homes as in typical years

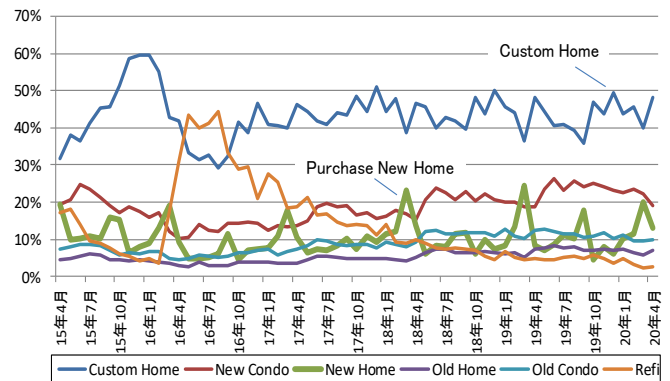
About half of the Flat 35 loans written in April were used to purchase built-to-order (custom) homes. In most years there tends to be an increase in spec homes in March and an increase in custom homes in April on seasonal factors, and the same trend held in 2020. The trend in home purchases was not affected by the pandemic.

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



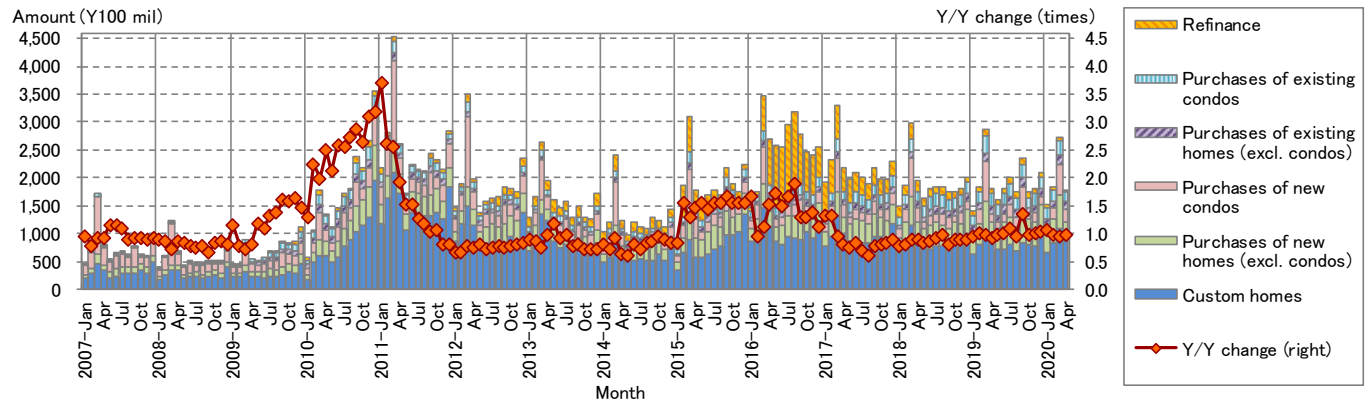
Source: JHF; compiled by Daiwa Securities.

Chart: Flat 35 Loans Type of 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 34bps and coupon of 0.35%

The No. 156 (Y219.5 bil) was launched on 17 April with a coupon of 0.35%. The coupon was determined by adding the launch spread of 34bp on the compound yield of benchmark JB358. The OAS at launch (our estimate; same hereinafter) stood at 16.1bps (3.5bps tighter than previous issue) and the YCS was 20.3bps (3.7bps tighter).

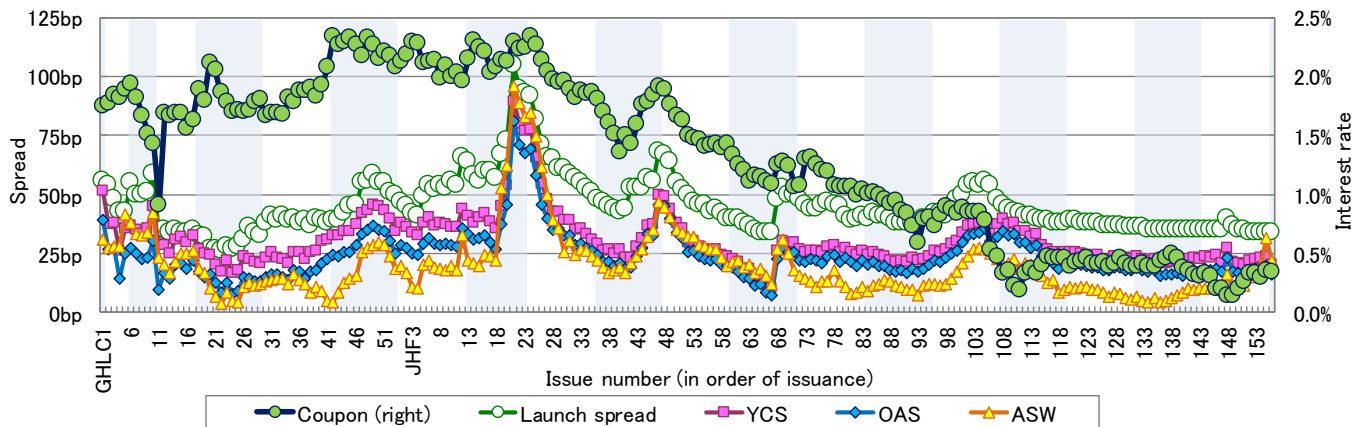
### Impacts from covid-19 disruptions were minimal

The launch spread of 34bp was the same as last month. Many investors became less tolerant of risk because of uncertainty from the pandemic, and this widened spreads between high-grade and low-grade bonds in the corporate bond market. Investor demand for high-grade bonds is unchanged, however, and their spreads have been stable. Investor demand for JHF RMBS has not weakened and there was apparently sufficient excess demand.

### OAS are consistent with the secondary market

The benchmark JGB yields that coupons reflect barely declined, but the narrowing of OAS and YCS can be attributed to the rise in JGB yields in the short-term and superlong zones. This is consistent with changes in the risk premium of the on-the-run bond (the No. 155) in the secondary market.

Chart: Issuance Terms for JHF Monthly MBS

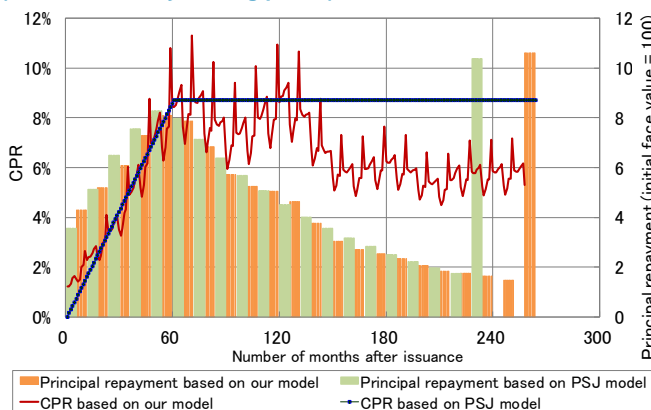


Source: JHF and our estimates.  
 Note: The background colors indicate different fiscal years.

### Different risk premiums depending on expected cash flow distribution

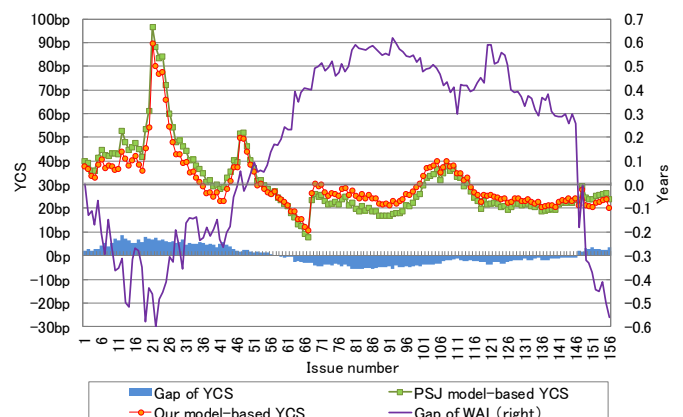
With regard to the pricing of JHF MBS, it should be noted that the risk premium varies depending on the expected cash flow distribution. The expected cash flows of JHF MBS No.157 based on our prepayment model have terms that are somewhat longer than those based on the PSJ Forecast Statistical Data. As 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. 157 Issue (based on 14 May 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. 157

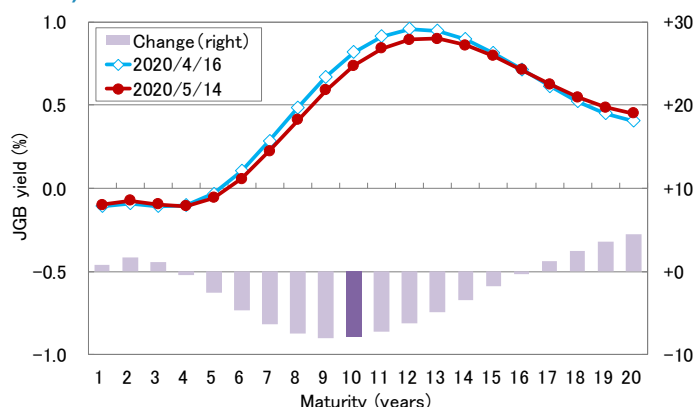
We take a look at the issuance terms for the upcoming issue. Based on expected cash flow using our prepayment model and the PSJ model, we estimate the issuance terms (the coupon and launch spread) and the risk premiums.

### Expected maturity of around 9 years

The expected cash flow distribution for the upcoming issue (the chart on the previous page based on 14 May 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.

- Based on our model, the expected WAL is 9.49 years (9.51 years for the previous issue) and the expected final maturity 21.9 years (22.0 years). The PSJ forecast is 7.80% (vs. 7.77% for the previous issue).
- The PSJ Calculation Statistical Value (average) is 8.72% (vs. 8.70% for the previous issue). Accordingly, the expected WAL is 8.94 years (vs. 8.95 years for the previous issue) and the expected final maturity 19.4 years (19.5 years).

Chart: Change in 3Y-Forward Rate (from the day before launch day of No.156)



Source: JHF; compiled by Daiwa Securities.

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

Forecast maturities are about the same as for the previous issue. Market JGB yields flattened on maturities of eight years and longer, but the implied forward rate declined in the 5-15-year zone and rose on shorter maturities, while changes in the refinancing incentive and expected prepayments commensurate with the assumed refinancing rate in future periods were offset for the entire period. The underlying loan pool's weighted average coupon (WAC, based on the weighted average interest rate of home loan borrowers; see pp6-7) increased 0.07ppt from the previous issue, from 0.81% to 0.88%.

Chart: Launch Spread Estimates for No. 157 MBS (based on 14 May closing prices)

Valuations of JHF_MBS_#157 Pricing(Simulation)									14-May-20 (Tokyo Close)	
Base Yield: JGB(358G) YTM -0.010 %										
Launch Spread	Coupon	Valuations of Cash Flows							Indications of Previous RMBS Issue (#156)	
		Daiwa Model				PSJ Model				
		Dynamic	Static			PSJ forecast Statistical Data(Ave)				
	OAS	YCS	ASW	ModDur	YCS	ASW	ModDur			
29 bp	0.28 %	9.7	14.4	17.5	9.294	17.6	19.4	8.831	(Issuance Terms)	
30 bp	0.29 %	10.8	15.5	18.5	9.287	18.6	20.4	8.825	Launch Spread=34bp	
31 bp	0.30 %	11.8	16.5	19.5	9.280	19.7	21.4	8.819	Coupon=0.35%	
32 bp	0.31 %	12.8	17.5	20.5	9.273	20.7	22.4	8.813	(Valuations at the time of Launch)	
33 bp	0.32 %	13.8	18.5	21.5	9.266	21.7	23.4	8.807	[CF based on Daiwa Model]:	
34 bp	0.33 %	14.8	19.5	22.5	9.260	22.7	24.4	8.801	OAS=16.1bp, YCS=20.3bp, ASW=22.1bp	
35 bp	0.34 %	15.9	20.5	23.4	9.253	23.7	25.5	8.795	[CF based on PSJ Model]:	
36 bp	0.35 %	16.9	21.6	24.4	9.246	24.7	26.5	8.789	YCS=23.8bp, ASW=24bp	
37 bp	0.36 %	17.9	22.6	25.4	9.239	25.7	27.5	8.783	(Valuations in the secondary market)	
38 bp	0.37 %	18.9	23.6	26.4	9.232	26.8	28.5	8.777	[CF based on Daiwa Model/Daiwa Price]	
39 bp	0.38 %	19.9	24.6	27.4	9.225	27.8	29.5	8.771	OAS=14bp, YCS=18.6bp, ASW=21.3bp	
40 bp	0.39 %	21.0	25.6	28.4	9.218	28.8	30.5	8.765	[CF based on PSJ Model/JSDA price]:	
		<Daiwa Model>			<PSJ Model/based on PSJ Forecast Statistical Data>				YCS=22.2bp, ASW=23.1bp	
		PSJ 7.80 %			Ave: 8.72 % (Median: 8.74) %					
		WAL 9.49 years			8.94 years (8.94) 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.

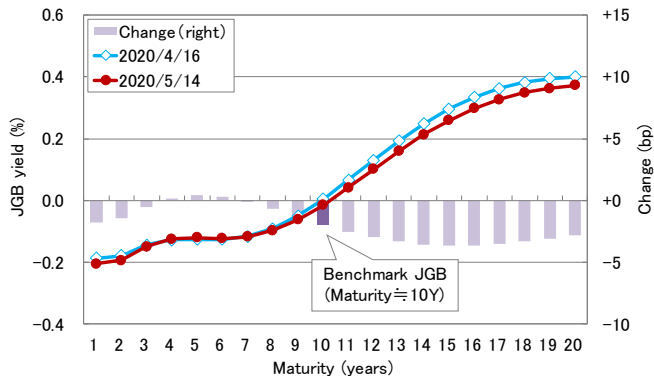
3) Estimated cash flow is based on the assumption that clean-up call options are exercised in initial April or October after the outstanding amount becomes 10% or less of the original.

## Launch spread indications

The previous issue (No. 156) was launched when the on-the-run 10-year JGB was yielding near 0%, nearly the same as it was the month prior. The 10-year JGB yield subsequently declined a bit, dropping into negative territory.

If the launch spread is the same as the previous issue at 34bps, the No. 157 coupon would be 0.33%. This put the OAS at 14.8bps, 1.3bp lower than the previous issue's launch OAS of 16.1bp. The reason that OAS narrowed despite launch spreads being the same is that benchmark yields in shorter-dated zones rose relative to the 10-year zone.

Chart: JGB Yield Curve Changes (from the day before launch day of No.156)



Source: Compiled by Daiwa Securities.

## (Connection with risk premium of previous issue)

### 【Pricing using our model's cash flow estimates】

- The No. 156's launch OAS was 16.1bps and the YCS 20.3bps. Based on the similar OAS and YCS, the No. 157's launch spread would be 35-36bps and the coupon 0.34-0.35%.
- In the secondary market, the No. 156's OAS is 14.0bps and the YCS 18.6bps. In line with these, the No. 157's launch spread would be about 33-34bps and the coupon 0.34-0.35%.

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

- The No. 156's launch YCS was 23.8bps. Based on the similar YCS, the No. 157's launch spread would be about 35-36bps and the coupon 0.34-0.35%.
- In the secondary market, the No. 156's YCS is 22.2bps. In line with this, the No. 157's launch spread would be about 33-34bps and the coupon 0.32-0.33%.

## (Demand forecast for No. 157 issue and issuance level)

### Connection with covid-19 measures

This monthly series JHF RMBS is funded with Flat 35 loans written in April. Given that Japan declared a state of emergency on 7 April, it is encouraging that Flat 35 loan volume only declined in the single digits y/y in April. We think this reflects the toughness of Japanese and their willingness to get on with life to obtain their new house. What may have also helped is that Flat 35 loans rates only increased by the same amount as JGB yields in April. This is because investor demand for JHF RMBS was unaffected by the pandemic and because spreads on JHF RMBS issued in March were unchanged from the ones issued in February.

### Japan starts lifting state of emergency

On 14 May, the Japanese government started lifting its state of emergency. This may further increase investor demand for JHF RMBS, because the risk of reductions in principal are not passed on to investors in JHF RMBS provided there are no problems at JHF and because although there is risk of a change in maturity on JHF monthly issues, that risk will become easier to forecast as the pandemic is brought under control.

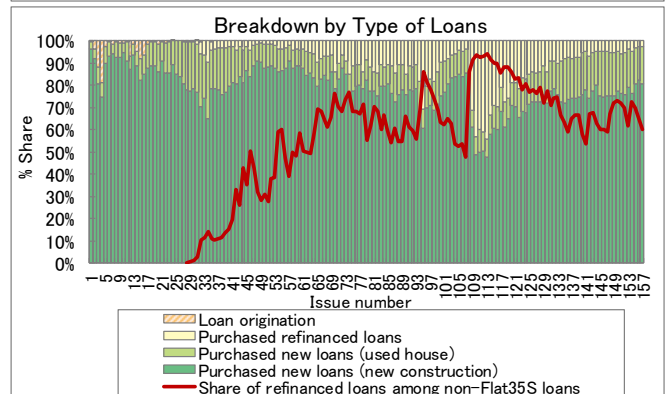
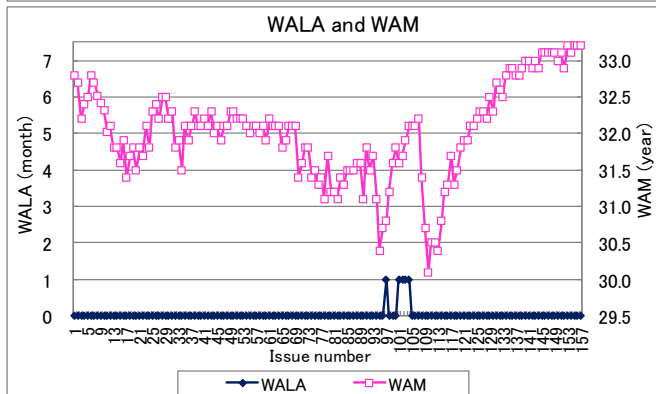
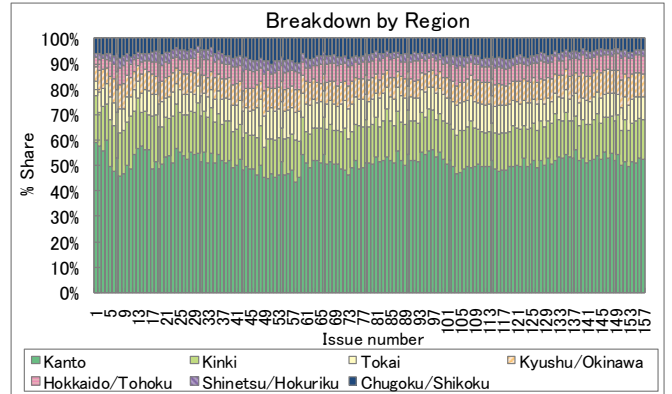
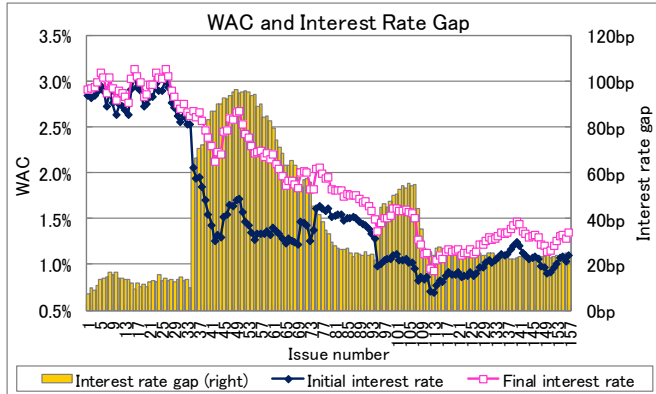
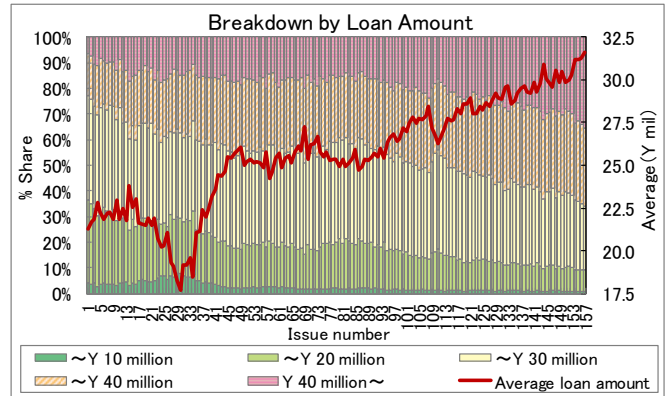
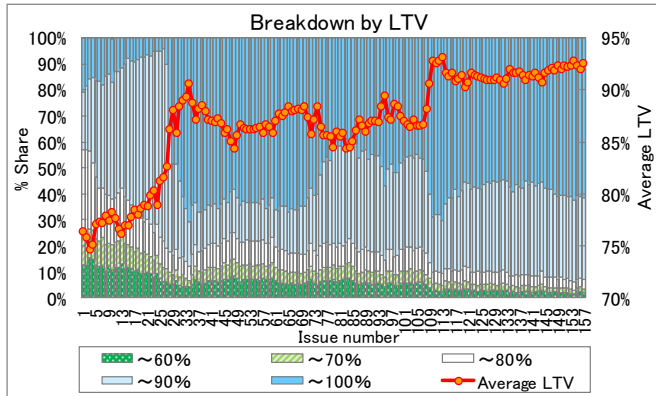
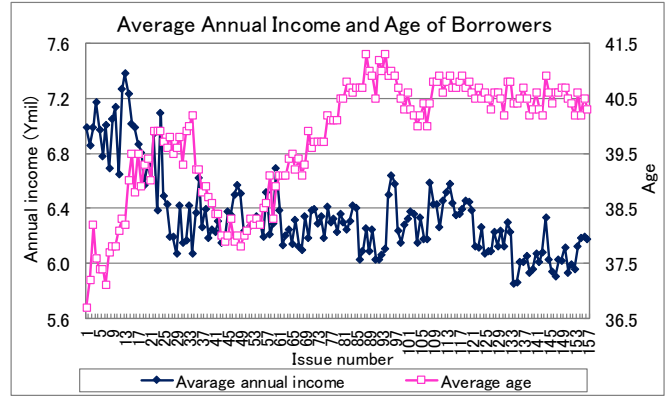
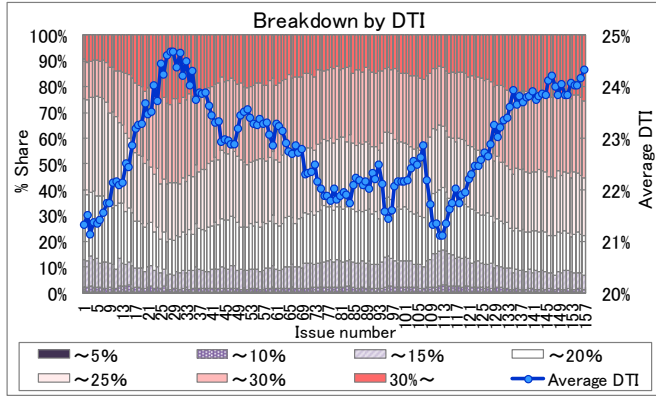
### Coupon of 0.3% range

I personally think that demand for the No.157 issue will meet at a launch spread of around 33-35bps. If so, the coupon is estimated at 0.32-0.34%.

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 14 May close).

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



Source: JHF; compiled by Daiwa Securities.  
 Note: Candidate pool used for No. 157 issue.

## Characteristics of Underlying Loans: No. 157 Monthly MBS and Last Six Issues (No. 151-156)

	JHF #151	JHF #152	JHF #153	JHF #154	JHF #155	JHF #156	JHF #157	Ave. of previous 6 issues	Change from #156
Loan Pool Selected in	Oct-2019	Nov-2019	Dec-2019	Jan-2020	Feb-2020	Mar-2020	Apr-2020		
Loan Application Started in	Jun-2017	Sep-2017	Jun-2017	Mar-2017	Mar-2017	Jun-2017	Oct-2017		
Repayment Started in	Oct-2019	Sep-2019, Nov-2019	Dec-2019	Dec-2019, Jan-2020	Feb-2020	Mar-2020	Apr-2020		
Initial Outstanding Entrusted Assets (Y mil)	236,759	180,231	209,500	152,477	182,925	273,804	179,135	205,949	-94,669
Issue Size (Y mil)	186,800	144,100	167,100	122,400	147,700	219,500	TBD	164,600	-
Excess Collateral (Y mil)	49,959	36,131	42,400	30,077	35,225	54,304	TBD	41,349	-
Overcollateralization	21.1%	20.0%	20.2%	19.7%	19.2%	19.8%	TBD	20.0%	-
Number of Loans	7,760	6,007	6,918	4,890	5,863	8,749	5,661	6,698	-3,088
Average Outstanding Loan	30.510	30.003	30.283	31.181	31.192	31.292	31.644	30.744	+0.352
Average LTV	92.04%	92.23%	92.37%	92.78%	92.37%	91.97%	92.62%	92.29%	+0.65%
Average DTI	24.05%	23.85%	24.07%	24.03%	24.03%	24.16%	24.34%	24.03%	+0.18%
Average LTV for Refinance	86.33%	86.19%	85.65%	85.46%	82.45%	87.12%	82.39%	85.53%	-4.73%
Average DTI for Refinance	19.41%	19.51%	19.59%	19.78%	19.30%	19.29%	19.72%	19.48%	+0.43%
Average Annual Income of Obligor (Y mil)	6.117	5.994	5.961	6.125	6.181	6.193	6.174	6.095	-0.019
Average Age of Obligors	40.7	40.4	40.2	40.6	40.2	40.5	40.3	40.4	-0.2
WAC (Initial Rate)	0.90%	0.97%	1.01%	1.07%	1.08%	1.03%	1.10%	1.01%	+0.07%
WAC (Final Rate)	1.14%	1.21%	1.25%	1.31%	1.32%	1.28%	1.34%	1.25%	+0.06%
WALA (Weighted Average Loan Age)	0	0	0	0	0	0	0	0	+0
WALA for Refinance	92	98	100	95	98	106	101	98	-5
WAM	396	395	398	397	398	398	398	397	+0
Maturity Structure of Loans at Origination (% share)	Up to 10Y	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	-0.0%
	10-20Y	5.0%	4.6%	4.3%	4.1%	3.8%	4.0%	4.3%	+6.4%
	20-25Y	3.1%	3.7%	3.2%	3.4%	3.4%	3.5%	3.4%	+49.5%
	25-30Y	8.6%	8.9%	7.6%	8.0%	7.4%	7.0%	7.9%	+217.5%
	Over 30Y	83.1%	82.8%	84.7%	84.4%	85.2%	85.5%	84.3%	+254.1%
% share of loans with bonus payments	(in number)	13.6%	12.5%	12.2%	14.0%	12.9%	14.0%	13.2%	-0.7%
	(in value)	15.7%	14.2%	14.0%	16.0%	14.7%	16.0%	15.1%	-0.7%
Type of Loan	new	95.2%	95.0%	96.3%	95.2%	96.7%	97.6%	96.0%	-0.1%
	refinanced	4.8%	5.0%	3.7%	4.8%	3.3%	2.4%	4.0%	+0.1%
Loan Amount at Origination (% share)	Up to Y10 mil	0.8%	0.9%	1.0%	0.8%	0.7%	0.8%	0.8%	-0.1%
	Y10-20 mil	8.8%	9.6%	9.1%	8.5%	8.3%	8.5%	8.8%	-0.1%
	Y20-30 mil	28.4%	28.5%	27.9%	26.9%	26.7%	25.8%	27.4%	-1.0%
	Y30-40 mil	31.5%	32.0%	32.3%	30.1%	31.6%	31.1%	31.4%	-0.5%
	Y40-50 mil	17.2%	16.8%	16.2%	17.0%	17.7%	18.2%	17.2%	-0.5%
	Over Y50 mil	13.3%	12.1%	13.4%	16.7%	15.0%	15.7%	14.4%	+2.1%
Loan Amount by Region (% share)	Hokkaido/Tohoku	6.5%	7.2%	7.4%	6.5%	7.2%	7.1%	7.0%	+0.1%
	Kanto	54.5%	51.7%	49.5%	51.5%	50.9%	53.0%	51.8%	-0.4%
	Shinetsu/Hokuriku	2.0%	2.2%	2.5%	2.2%	1.8%	1.9%	2.1%	+0.2%
	Tokai	8.0%	8.9%	9.7%	9.7%	9.5%	8.6%	9.1%	+0.4%
	Kinki	15.5%	16.3%	14.5%	15.0%	16.6%	15.5%	15.5%	-0.2%
	Chugoku	2.7%	3.3%	3.8%	4.2%	3.3%	3.2%	3.4%	+0.1%
	Shikoku	1.5%	1.2%	1.5%	1.2%	1.4%	1.3%	1.4%	+0.2%
Kyushu/Okinawa	9.3%	9.2%	11.2%	9.7%	9.3%	9.4%	9.7%	-0.2%	

Source: JHF; compiled by Daiwa Securities.

Note: Candidate pool used for No. 157 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](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 16<sup>th</sup>, 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](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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**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), Daiwa Securities Living Investment Corporation (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