Developing and Financing Green Housing in ASIA September 21,2022

Session 1: Green Housing Landscape
Case Study:
Flat35S program by Japan Housing Finance Agency(JHF)



KOBAYASHI Masahiro

Executive Director, Member of the Board, Japan Housing Finance Agency (JHF)

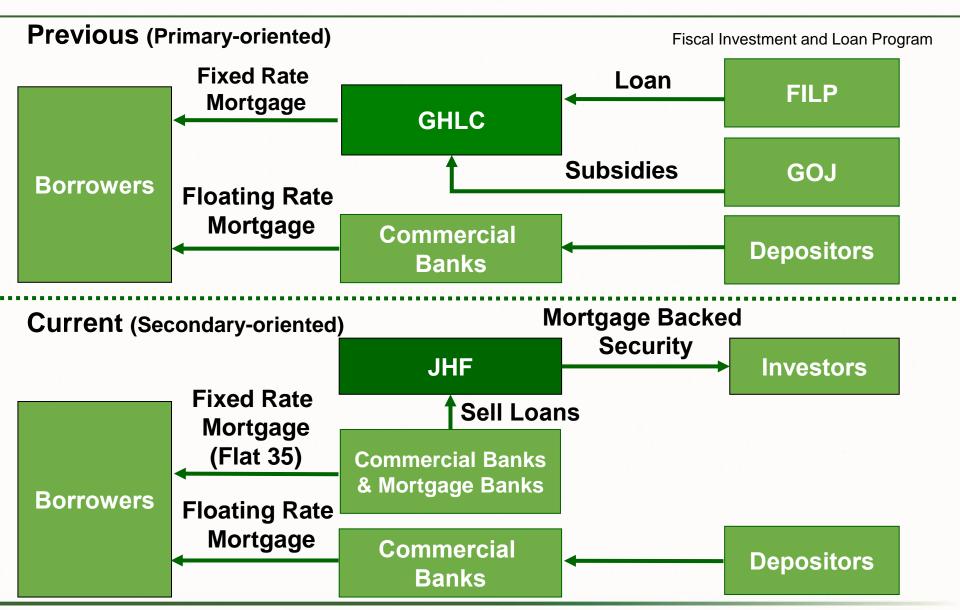
JHF (Japan Housing Finance Agency)



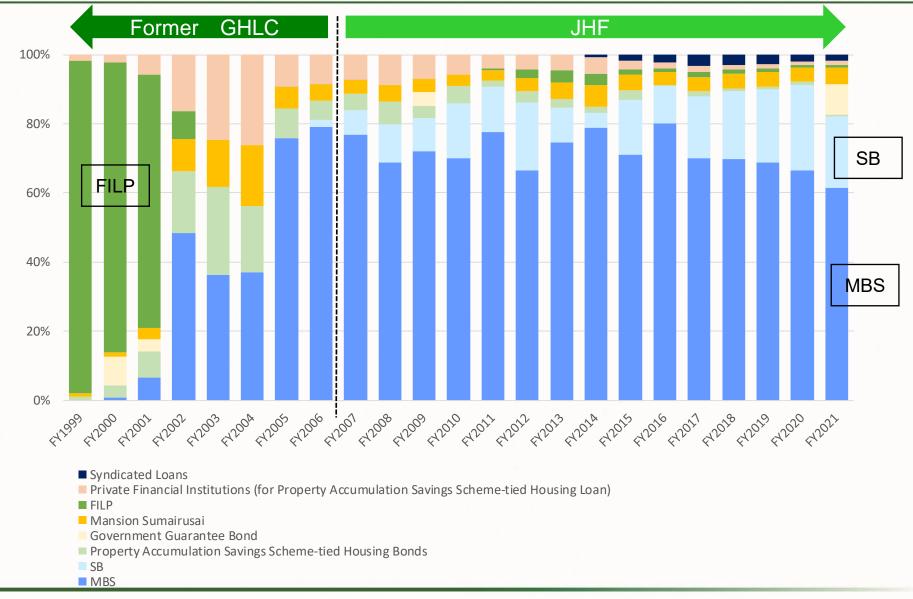
Established:	in April 2007 (Former Government Housing Loan Corporation (GHLC) was established in 1950)				
Total Assets ¹ : Capitalization ¹ :	27,254 billion JPY (app. 224 billion USD) 694 billion JPY (app. 5.7 billion USD) All paid in by the Government of Japan				
Net Income ² :	229 billion JPY (app. 1.9 billion USD)				
	1 USD = 121.64 JPY				
Supervising Authorities:	Ministry of Land, Infrastructure,Transport and Tourism (MLIT)Ministry of Finance (MOF)				
Number of directors and employees ³ :	906				
Head Office: Regional Office:	Tokyo, Japan 8 offices in major cities				
Main line of business:	 Securitization Support Business (Secondary market operation) Loan Origination Business Housing Loan Insurance Business Management of legacy assets of GHLC 				

- 1 As of 31 March, 2022
- 2 For the year ended 31 March, 2022
- 3 As of 1 April, 2022

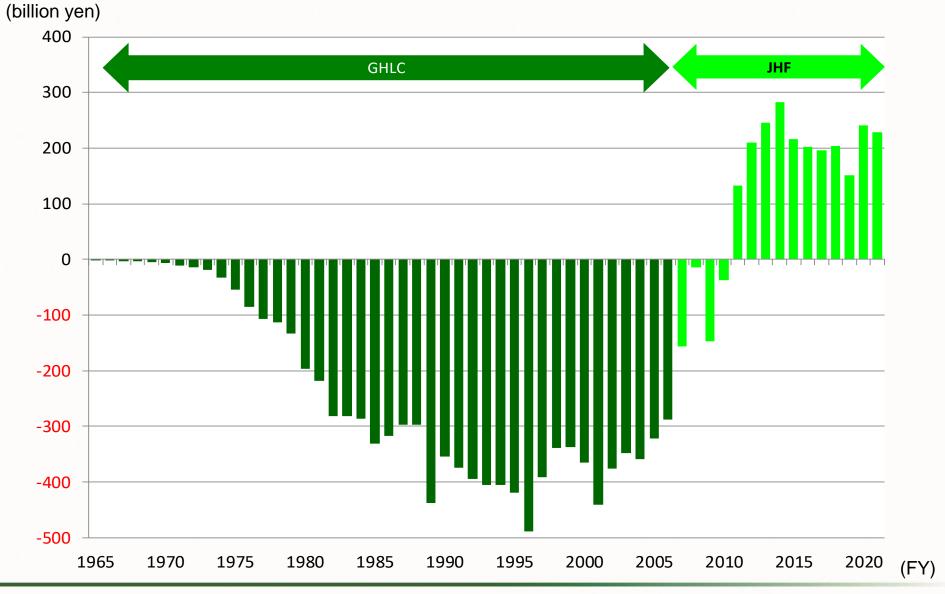
Transition from GHLC to JHF



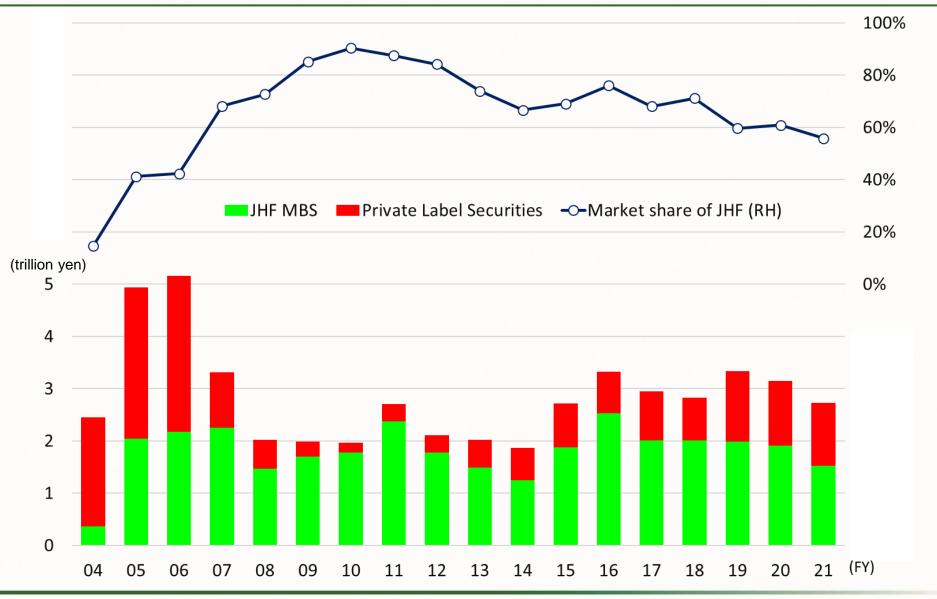
Source of Funds (FY1999 – FY 2021)



Net income (loss) of GHLC and JHF

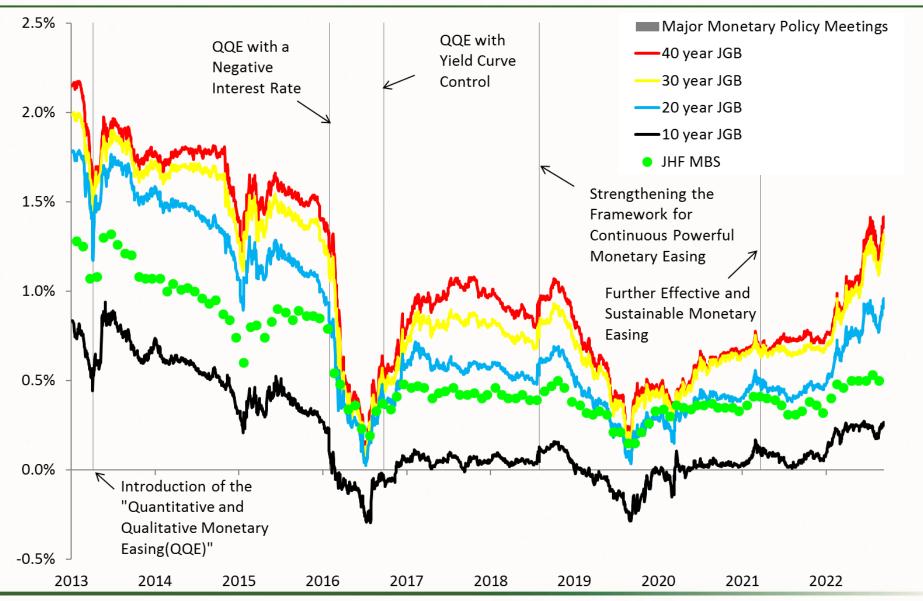


MBS issuance amount in Japan

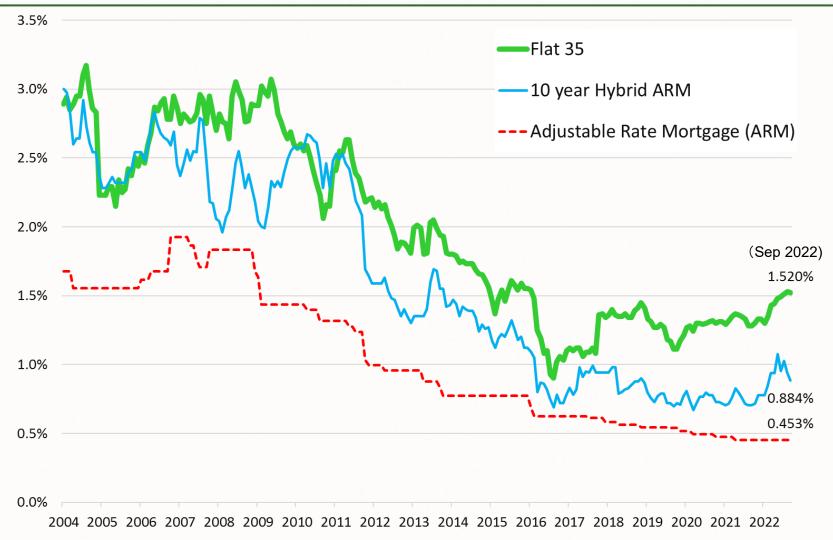


6

Financial market conditions



Interest rate by type of mortgage product



* "Adjustable Rate Mortgage (ARM)" and "10 year Hybrid ARM" are the average of preferential interest rates offered by city banks.

[%]The lowest interest rates for Flat 35 of repayment term 21~35 years and maximum LTV 90%

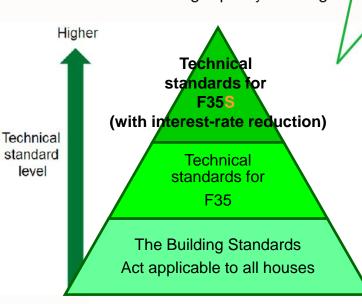
[%]The interest rate of Flat 35 includes premium for group life insurance after October 2017.

Technical standard of Flat 35S

JHF establishes the technical standards for Flat 35.

The standards are largely divided into essential standards and standards for Flat 35S.

Specifically, JHF applies preferential interest rates for a certain period for housing that is highly energy efficient, seismic resistant, barrier- free, durable and flexibility performance to attract consumers to the high quality housing.



Types of housing applicable for Flat 35S

High energy-efficient house Installed

- Thermal insulation fully
- Double glazed windows (Protect cold air)
- Solar Panels etc.

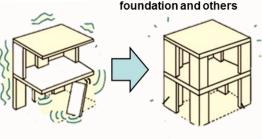




Superior earthquake-resilient house



- Secure wall balance and placement Enhanced earthquake-
- resistance walls Enhanced housing

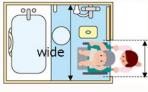


Superior barrier-free performance featured house



- Without difference in level on the floor
- Handrail installment
- Enough width of passage

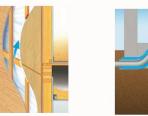




High durability and flexibility featured house



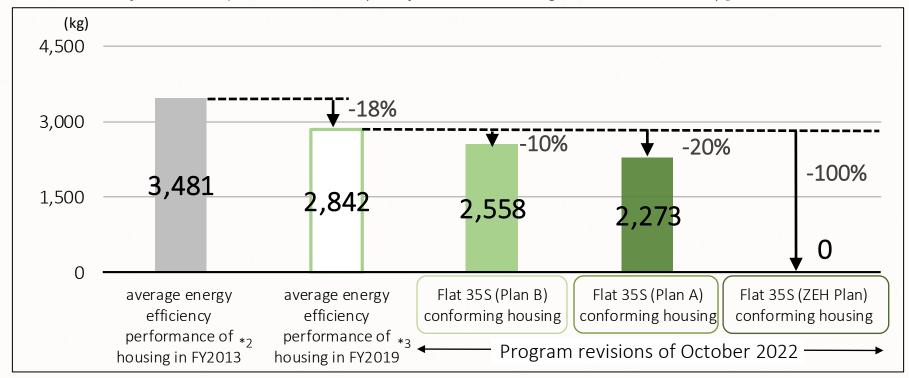
- Preventive measures of moisture
- Dual structured pipes





Carbon dioxide (CO₂) emissions from housing

[Housing with current average energy efficiency performance and CO₂ emissions of housing in conformity with each plan of Flat 35S (newly constructed single detached homes)] *1



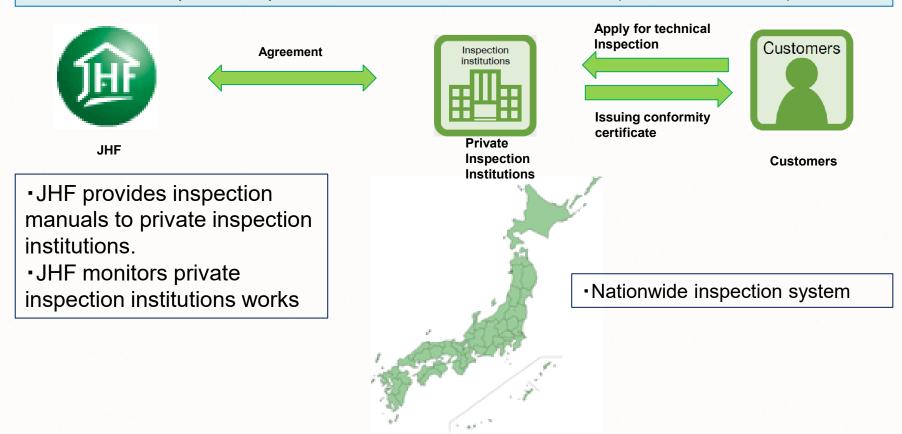
^{*1} The table above presents CO₂ emissions from the primary energy consumption of single detached homes (regional classification 6 [23 wards of Tokyo, etc.], 120m² in area, with heating systems in habitable rooms) estimated based on the Building Energy Efficiency Act. CO₂ emissions from household appliances etc., are not included.

*2 Calculated based on the ratios of housing starts by energy efficiency performance in FY2013 indicated by the Study Group on Energy Efficiency Measures, etc. in Housing and Buildings toward a Decarbonized Society (5th Session) (Document 4) of the Ministry of Land, Infrastructure, Transport and Tourism.

*3 Assumed that houses with average energy efficiency performance are classified as "Thermal Insulation Performance Grade 4 and Primary Energy Consumption Amount Grade 4" because the conformity rate with the energy efficiency standards for newly constructed single detached homes in FY2019 was set at 80% or more in the reference materials of the first session of the Study Group on Energy Efficiency Measures, etc. in Housing and Buildings toward a Decarbonized Society of the Ministry of Land, Infrastructure, Transport and Tourism.

JHF's Technical Inspection System

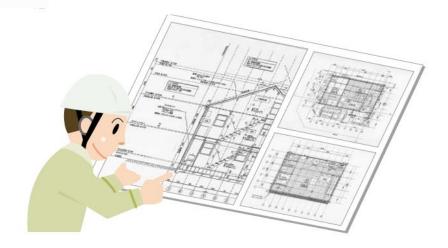
- Inspections are conducted by private inspection institutions which have contractual agreements with JHF.
- The number of private inspection institutions : 130 institutions (As of, March 2022)



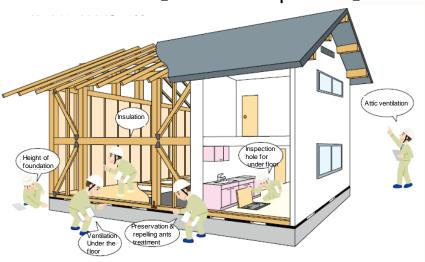
JHF's Technical Inspection Method

- Private inspection institutions conduct inspection of drawing, on-site inspection (Interim inspection and completion inspection).
- Private inspection institutions issue conformity certificate for housing which satisfy JHF's technical standards.

[Inspection of Drawing]



[On Site Inspection]



(X In the case of a detached house to be newly built.)

Encouraging to improve housing quality - before Oct 2022

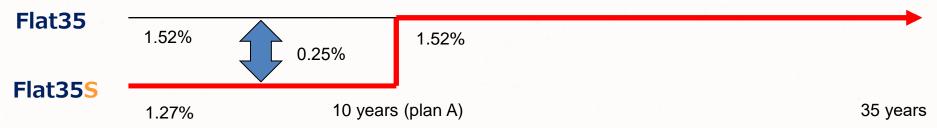
- Flat 35S is a system in which reduced interest rates are applied for a certain period for homebuyers applying for Flat 35 to acquire high-quality housing in terms of energy efficiency, earthquake-resistance and others.
- > There are two interest-rate reduction plans for Flat 35S; Flat 35S (plan A) and Flat 35S (plan B).

Eligible for application from April 1, 2022 to September 30, 2022

Interest-rate reduction plan	Duration of interest-rate reduction	Range of interest-rate reduction
Flat 35S (plan A)	First 10 years	Reduction of 0.25%/year
Flat 35S (plan B)	First 5 years	from Flat 35

^{*1} There is a budgetary ceiling for Flat 35S. Applications will be accepted until the total amount reaches the ceiling. The end date will be notified on the Flat 35 website (www.flat35.com) by three weeks prior to ending.

Interest rate (as of September 2022)



^{*2} Flat 35S is available when constructing and purchasing new housings as well as purchasing existing housings (except "Flat 35" refinancing).

^{*3} In addition to energy efficient housing and earthquake-resilient housing, Flat 35S is also applicable to barrier-free featured housing, high durability and flexibility featured housing such as long-term high quality housing.

Encouraging to improve housing quality - after Oct 2022

Eligible for application from October 1, 2022 to March 31, 2023

Interest-rate reduction plan	Duration of interest-rate reduction	Range of interest-rate reduction from Flat35		
Flat 35S (ZEH plan)	First 10 years	1st - 5th year : 0.50%		
	First 10 years	6th - 10th year : 0.25%		
Flat 35S (plan A)	First 10 years	0.25%		
Flat 35S (plan B)	First 5 years	0.25%		

^{*1} There is a budgetary ceiling for Flat 35S. Applications will be accepted until the total amount reaches the ceiling. The end date will be notified on the Flat 35 website (www.flat35.com) by three weeks prior to ending.

^{*2} Flat 35S is available when constructing and purchasing new housings as well as purchasing existing housings (except "Flat 35" refinancing).

^{*3} In addition to energy efficient housing and earthquake-resilient housing, Flat 35S is also applicable to barrier-free featured housing, high durability and flexibility featured housing such as long-term high quality housing.

Sources of Funds (Annual Fundraising for FY2021)

Instruments	(Green status)	Amount (Billion yen)		Credit Rating	Credit enhancement	Allocation
Mortgage Backed Securities (MBS)		1,521.0		AAA(sf)	Overcollateralization	F35+F35 <mark>\$</mark>
Straight Bonds (SB)		505.0				
	Non-Green	390.0		AA+	Uncollateralized	F35+F35\$
	Green	115.0	225.0	AA+	Uncollateralized	F35 S
Government Guaranteed Bonds (GGB)	Green	220.0	335.0	-	Uncollateralized	F35 S
Others		223.3				
Total		2,469.3				

Other developments related to green housing finance

Introduction of Green Reform Loan (loans for green retrofitting)

In the recent ordinary session of the National Diet ended in June 2022, the bill to amend the Charter of JHF was enacted to authorize JHF to originate loans to retrofit existing houses to meet the higher energy efficiency standard.

Declaration of support for the TCFD

JHF endorsed the recommendations of the Task Force on Climaterelated Financial Disclosures (TCFD) established by the Financial Stability Board (FSB) on June 17th, 2022.

History of cooperation between Cagamas and JHF





JHF signed the Memorandum of Cooperation with Cagamas on October 9, 2019 during the Japan-ASEAN Smart City Network High Level Meeting in Yokohama.

JHF held the Workshop on Green Housing Finance 2020 with Cagamas in online format due to COVID-19 pandemic.

JHF is working closely with Cagamas at ASMMA and ISMMA.

