

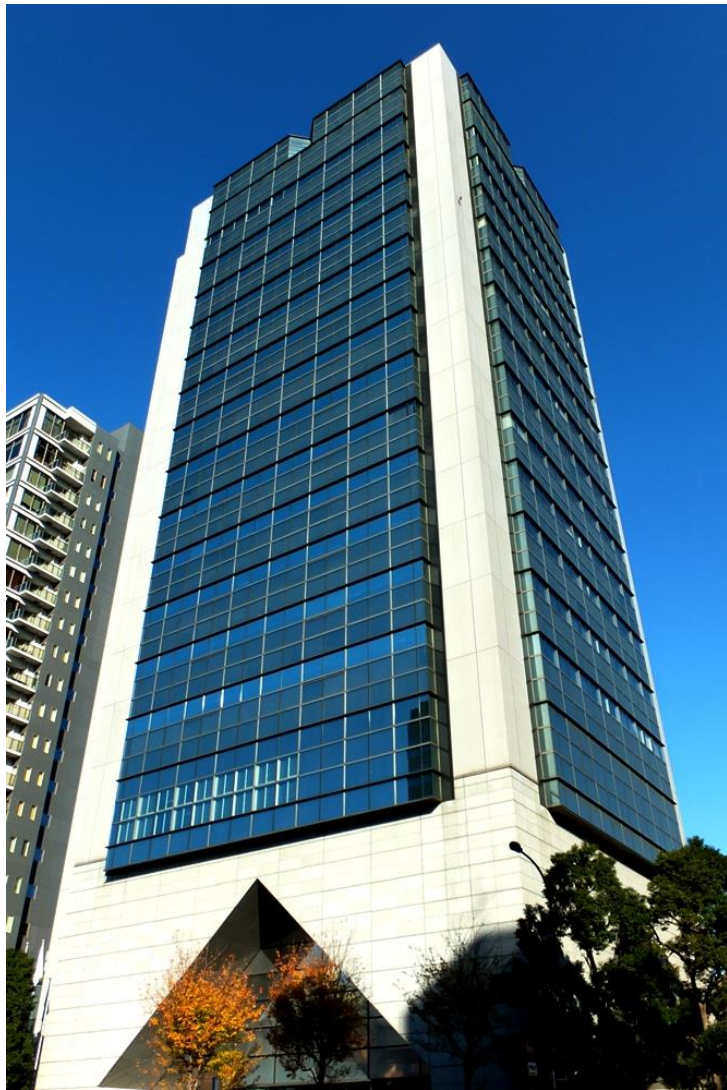
Session 3: Exploring ASEAN Bond Landscape for Best Long Term Fixed Rate Mortgage: Issuer Perspective

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Profile of Japan Housing Finance Agency (JHF)



Established: in April 2007

Total Assets: 27,392 billion JPY (app. 243 billion USD)

Capitalization: 712 billion JPY (app. 6.3 billion USD)

All paid in by the Government of Japan

Net Income: 216 billion JPY (app. 1.9 billion USD)

※FY2015: USD=105JPY

Competent Ministers

Minister of Land, Infrastructure, Transport and Tourism (MLIT)

Minister of Finance (MOF)

Number of staff: 915

Head Office: Tokyo, Japan

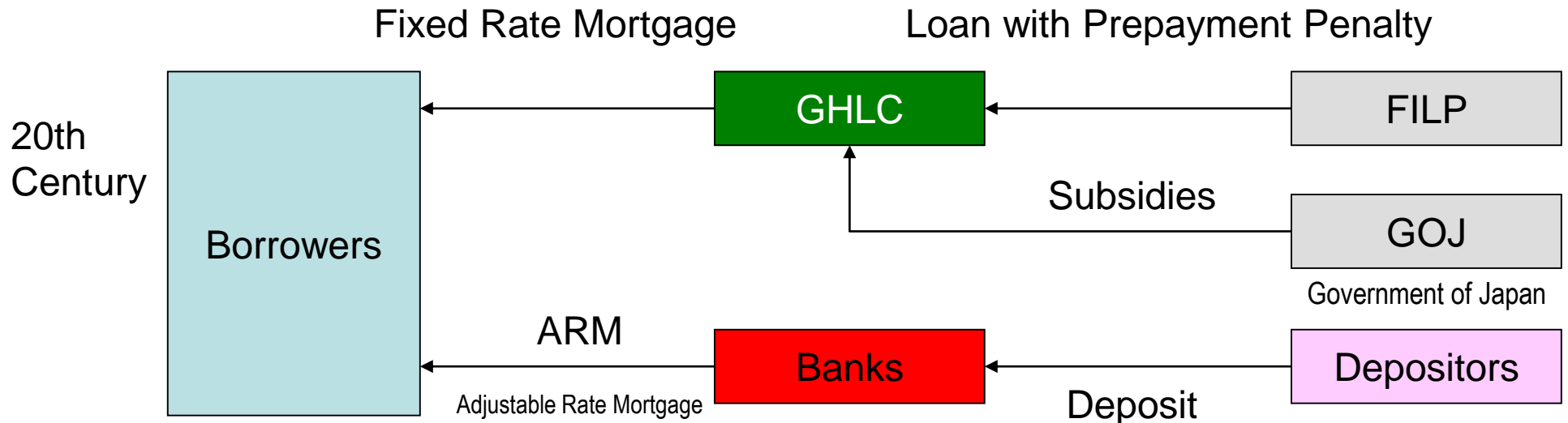
Regional Office: 8 offices in major cities

Main line of business

Secondary market operation under securitization support business, Direct mortgage origination for disaster mitigation or urban rehabilitation, Mortgage insurance, Management of legacy assets of GHLC, etc.

Reform of Japanese Mortgage Market at the turn of the century

- **Government Housing Loan Corporation (“GHLC”)** was established in 1950 to originate fixed rate mortgages funded and subsidized by the Government of Japan and enhance the quality of houses in Japan.
- In the late 1990’s, competition with banks in the primary mortgage market intensified and GHLC incurred significant losses because prepayment surged.
- The government of Japan decided to **wind down GHLC and establish JHF** to support private sector to originate fixed rate mortgages through secondary market operation.

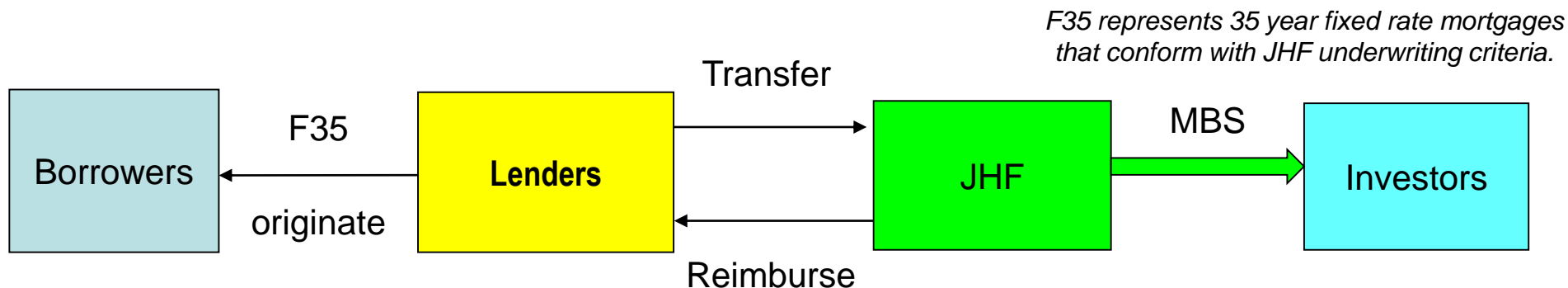


FILP: Fiscal Investment and Loan Program

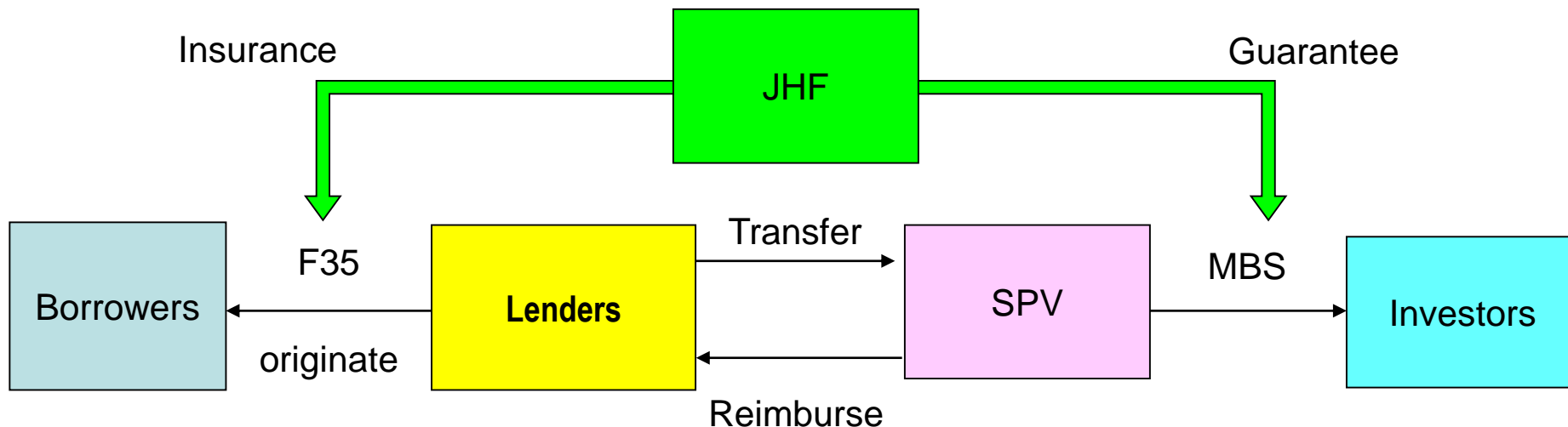
Two lines of business under JHF secondary market operation

Structures of mortgage market operations at JHF are quite similar to those in the US.

■ Purchase Program (similar to [Fannie Mae and Freddie Mac MBS Credit Guarantee Business](#))



■ Guarantee Program (similar to [FHA + Ginnie Mae](#))



GHLC and JHF

	GHLC	JHF
Established	1950	2007
Ownership	100% Owned by the Government of Japan	
Mission	<ul style="list-style-type: none"> • Provide liquidity to mortgage markets to low and medium income household • Enhance quality of housing 	
Main Products	Fixed Rate Mortgages	
Main Business	Origination in primary mortgage market (Compete with private sector)	Secondary market operation (Support private sector)
Main Funding Source	Borrowing from the Government	Mortgage Backed Securities (MBS)
Subsidy	Yes	No (in principle)

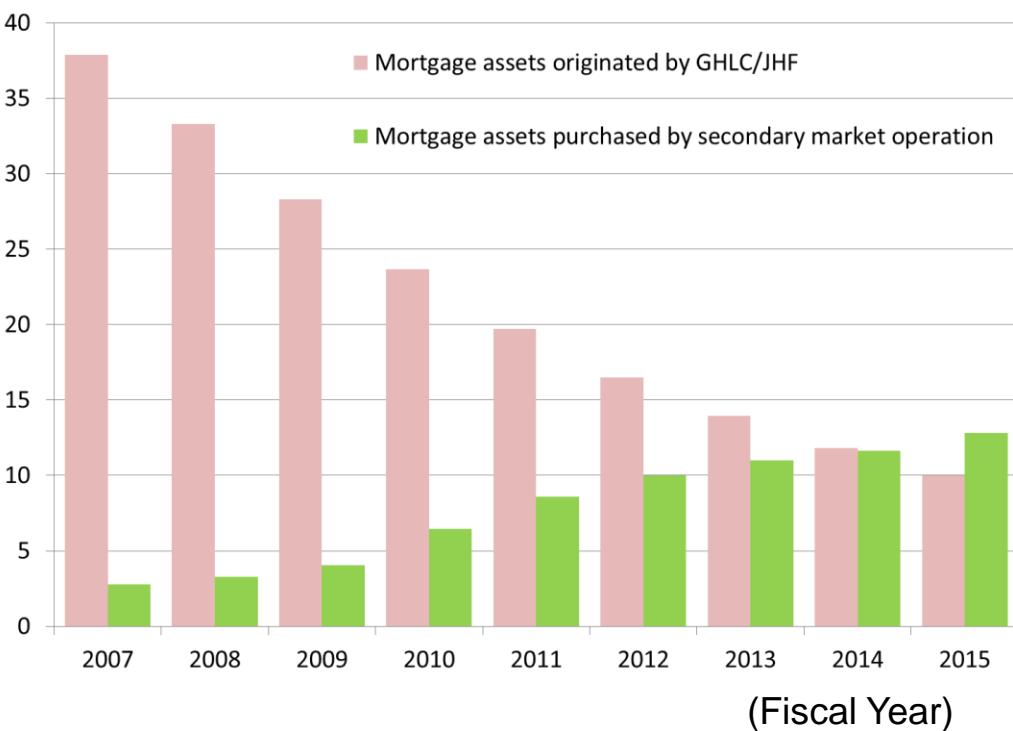
(Note) JHF still originates mortgages for such exceptional cases as disaster mitigations. In such cases, JHF still have access to funding from the MOF FILP and subsidies from General Appropriations.

Major balance sheet items of JHF

Secondary market operation has become the most major balance sheet items both for assets and liabilities for JHF in FY2015 to replace legacies of GHLC.

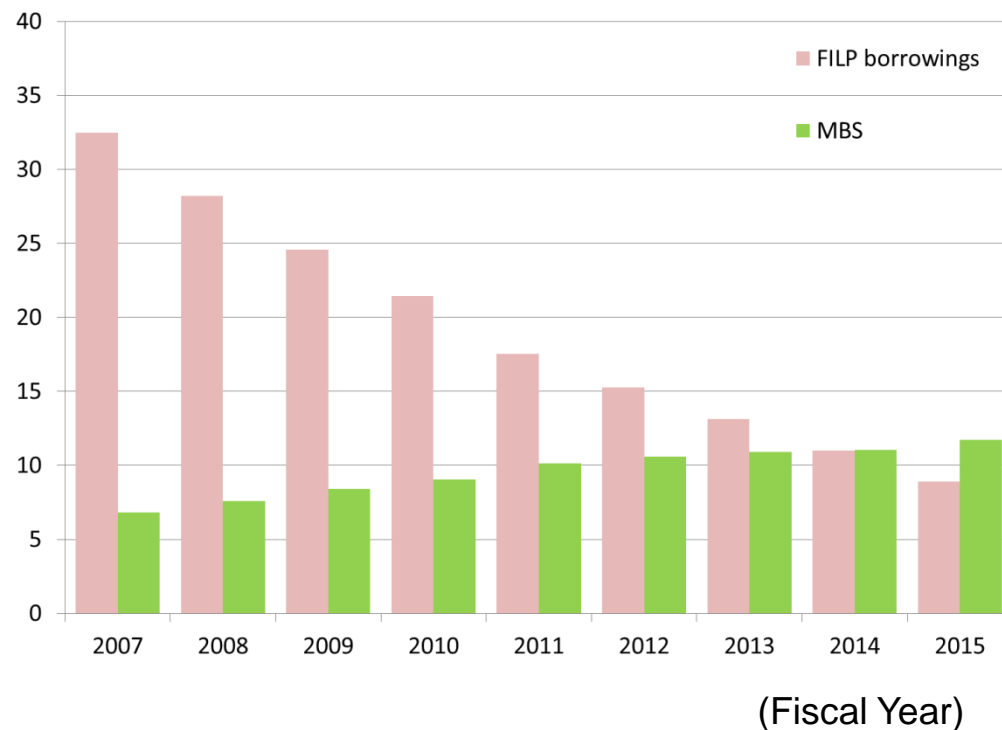
Assets

(trillion JPY)



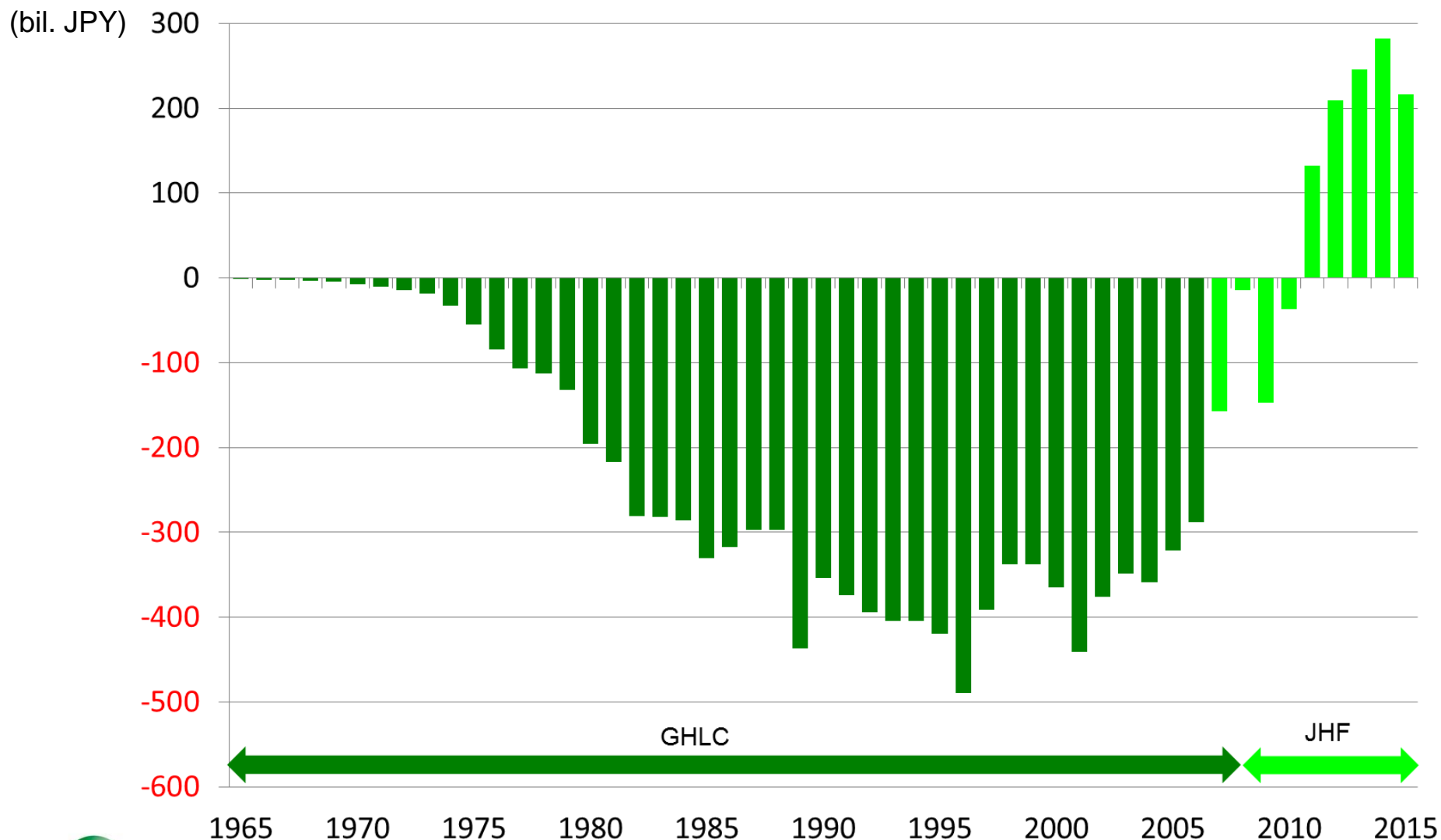
Liabilities

(trillion JPY)



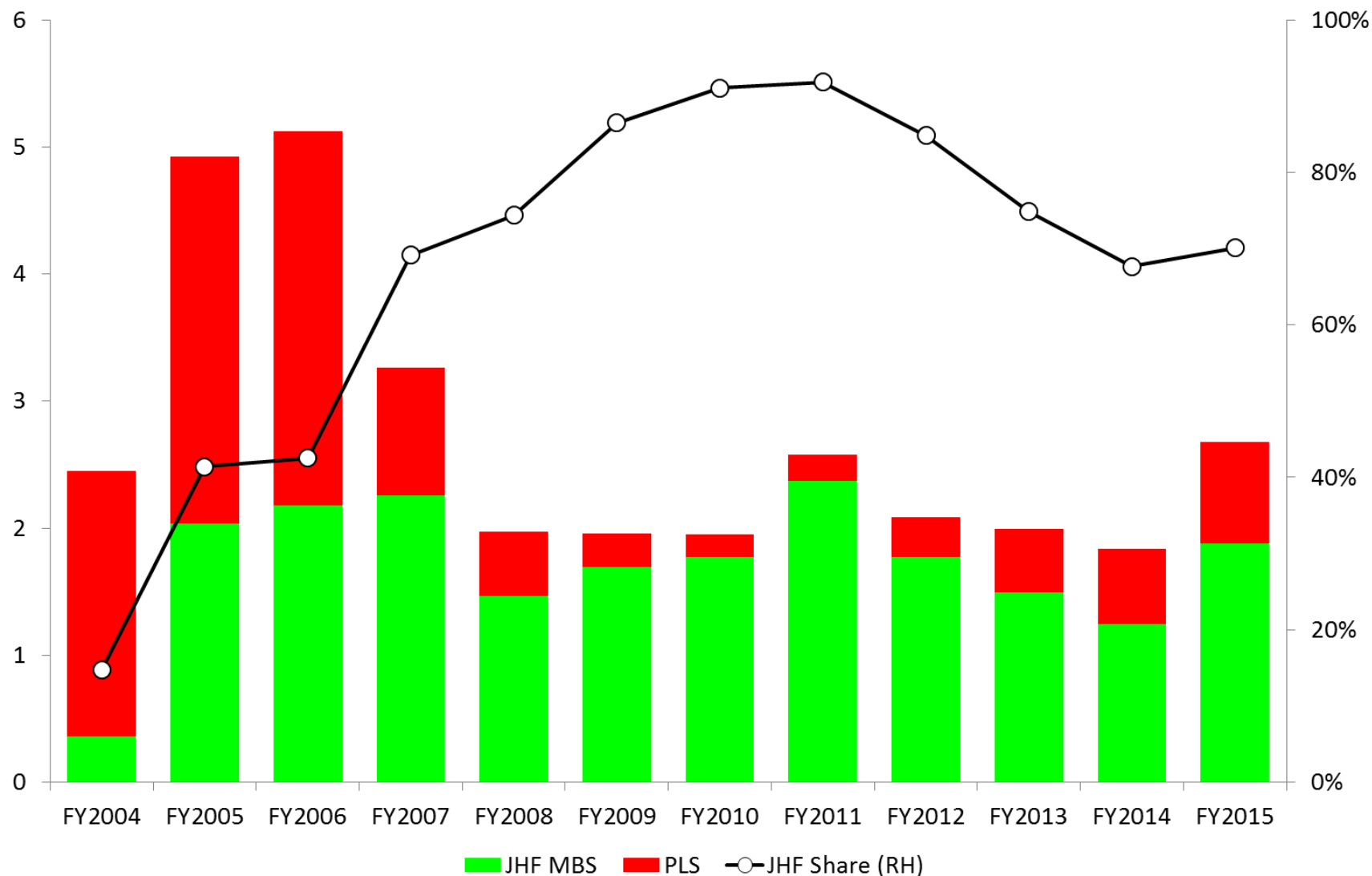
Remarkable improvement of net income

GHLC used to receive subsidy from the Government of Japan, but JHF is making profit.



MBS issuance volume in Japan

(trillion JPY)



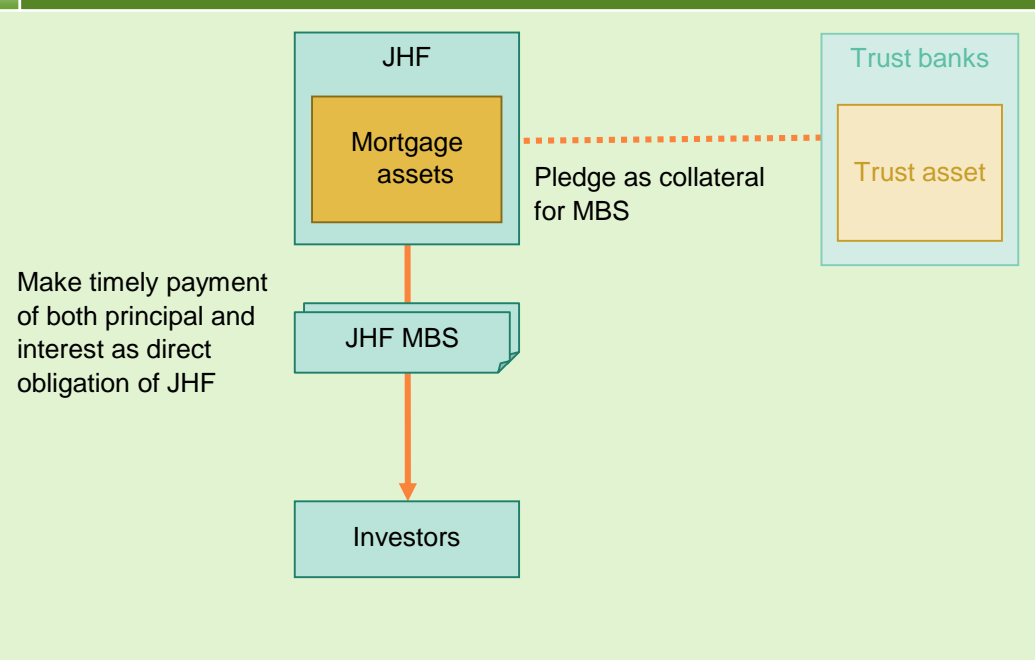
JHF MBS –similarity with Covered Bond

■ JHF MBS is an asset-backed Zaito (agency) bond

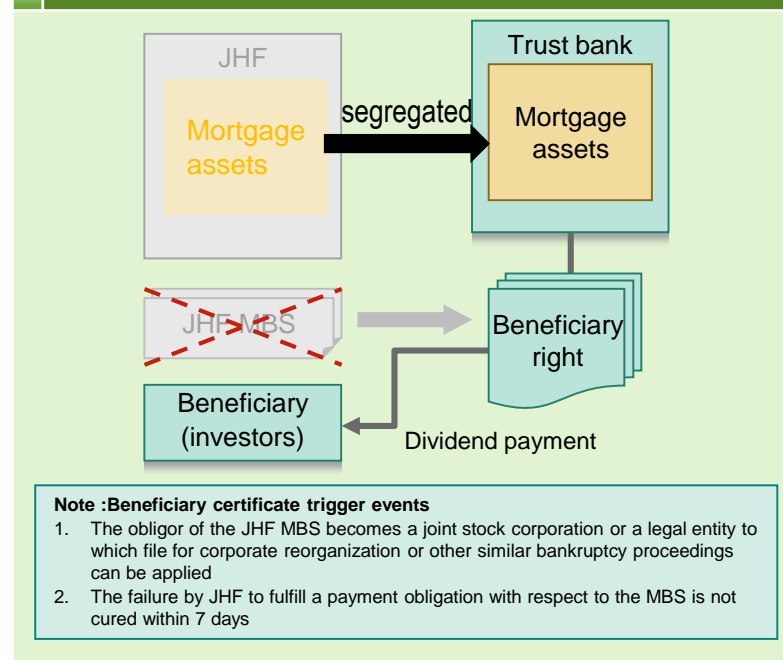
Before any beneficiary certificate trigger event, interest and principal are paid by JHF, as if MBS is a corporate bonds

- The JHF MBS is supported by both the stand alone credit of JHF and the quality of assets collateralized.
- Due to Japanese government's policy to extend flexible loan modifications to troubled borrowers, JHF retains the housing loans on its balance sheet; retained mortgage assets serves as collateral to the MBS issued
- After beneficiary certificate trigger event including insolvency of JHF, JHF MBS will be converted into beneficiary right
- Risk weight of JHF MBS, as a Zaito bond, is 10% under standardized approach
- JHF MBS is recognized as negotiable instrument and as such enjoys liquidity in the secondary market trading.

Before Beneficiary Certificate Trigger Event



After Beneficiary Certificate Trigger Event



Diversification of MBS and Covered Bond

from the perspectives of cash flow and balance sheet treatment

		Patern of Cash Flow	
		Bullet (Straight Bond)	Pass-through (with Amortization and prepayment)
Balance Sheet Treatment of Assets	On-Balance	Pfandbrief (Germany) Cédulas Hipotecarias (Spain)	JHF MBS (Japan) Særligt Dækkede Obligationer (Denmark) Fannie Mae MBS, Freddie Mac PC (US) As of Jan2010
	Off-Balance	Obligations Foncières (France) Obbligazioni Bancarie Garantite (Italy)	<div> Fannie Mae MBS, Freddie Mac PC (US) </div> Ginnie Mae MBS (US) Private Label Securities (US) Master-Trust MBS (UK)

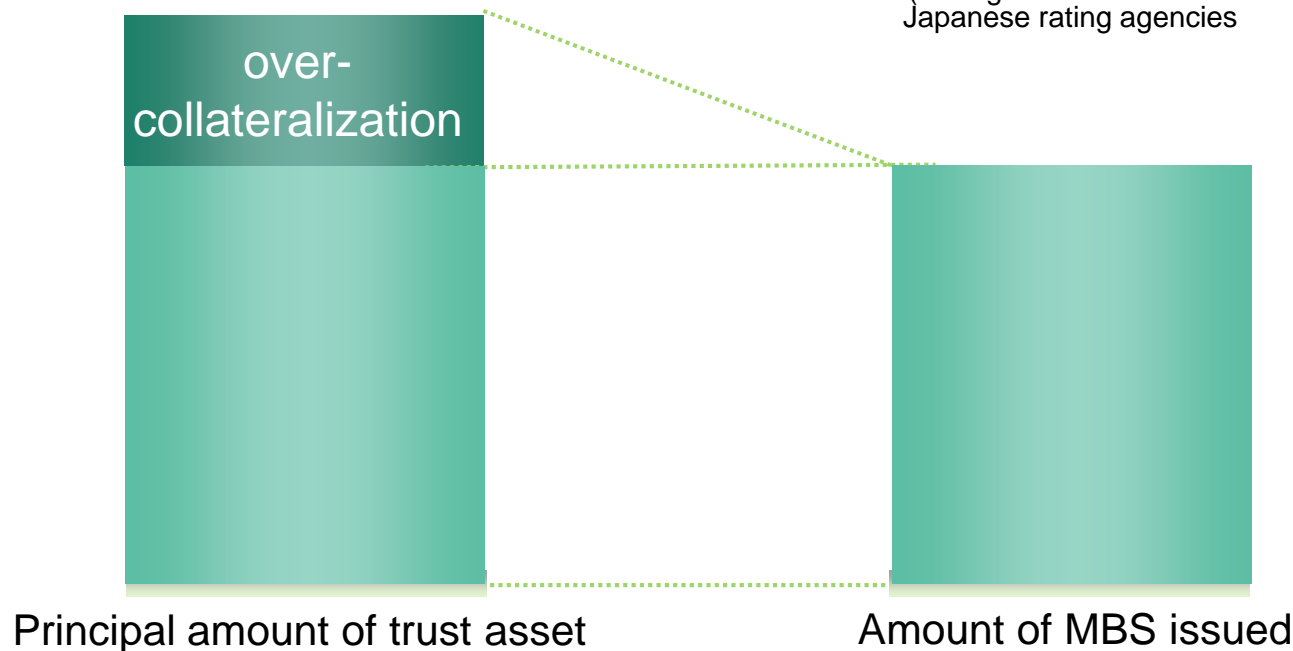
Achievement of AAA ratings by over-collateralization for JHF MBS

- Sufficient level of the over-collateralization is provided to achieve the highest AAA ratings at the time of JHF MBS issuance

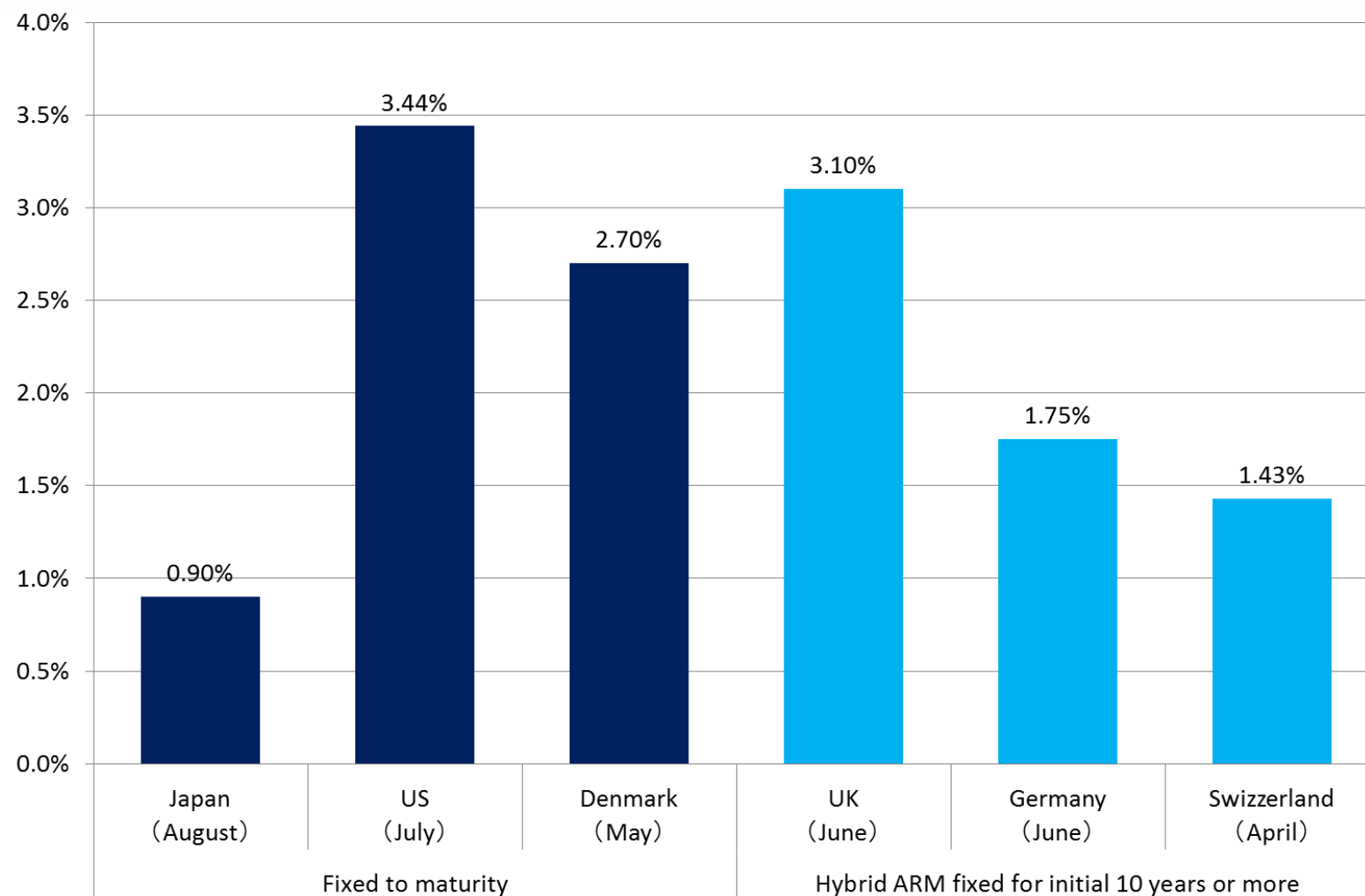
Concept of over-collateralization

At the time of issuance JHF MBS receives **AAA** ratings from S&P and R&I

* R&I(Rating and Investment Information, Inc.) is one of major Japanese rating agencies

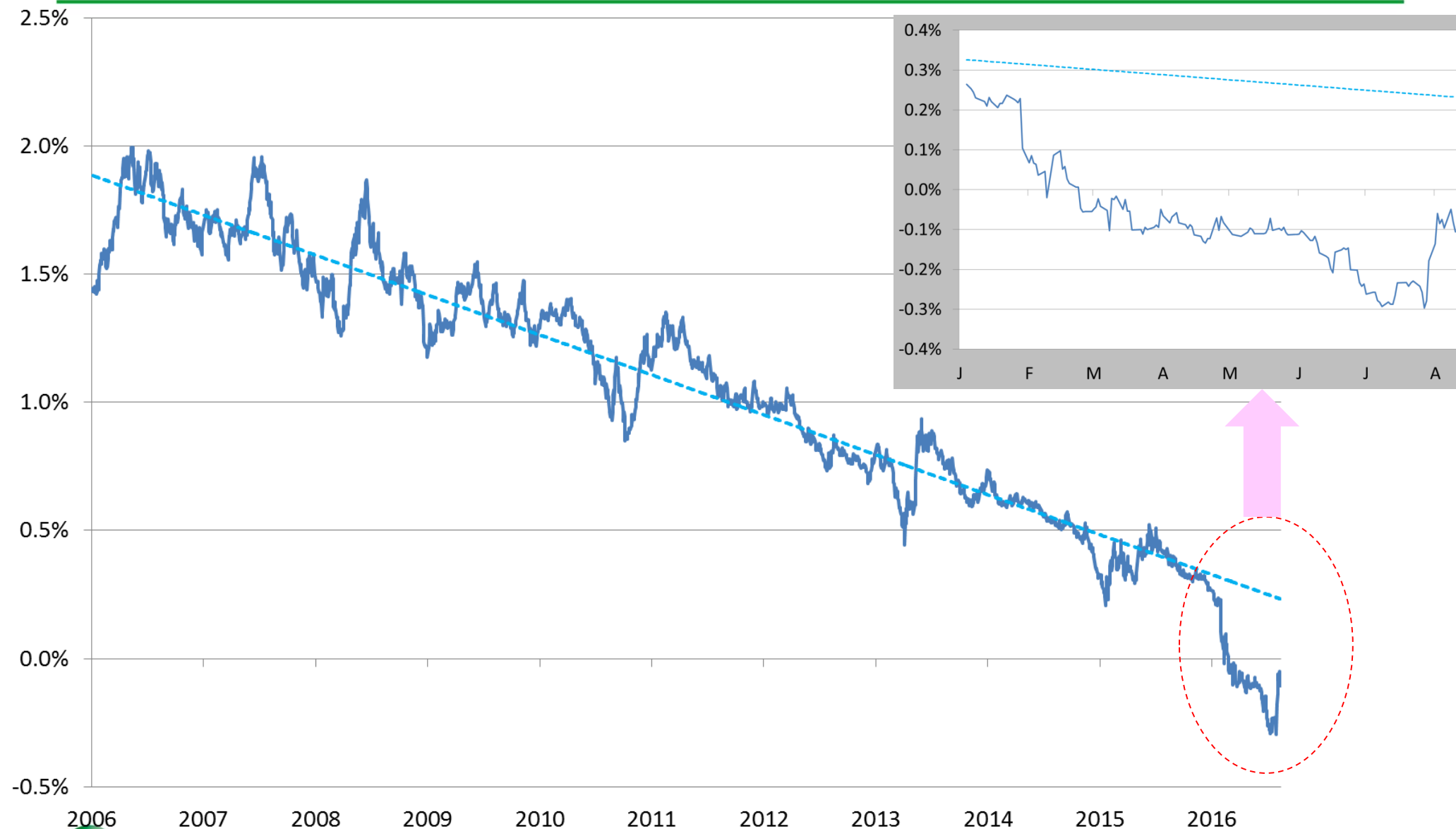


Mortgage interest rate in several major economies as of 2016

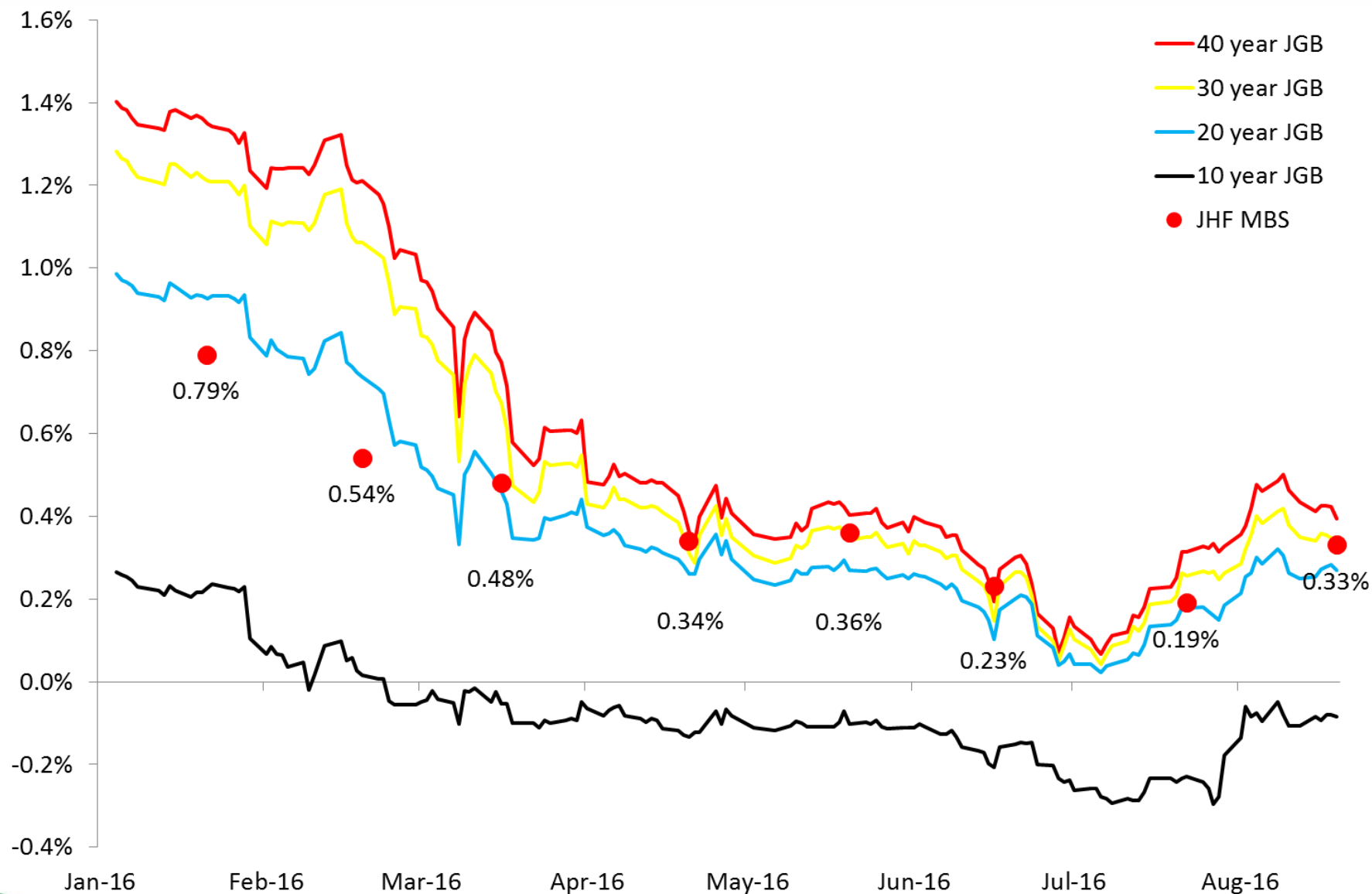


US: CONTRACT RATE ON 30-YEAR, FIXED-RATE CONVENTIONAL HOME MORTGAGE COMMITMENTS, Denmark: Long-term mortgage rate, UK: Secured lending (mortgage) rates for UK MFIs (excluding central bank), Germany: Effective interest rates of German banks / New business / Housing loans to households with collateral and/or guarantees, initial rate fixation of over 10 years, Switzerland: Mortgages with fixed interest rates

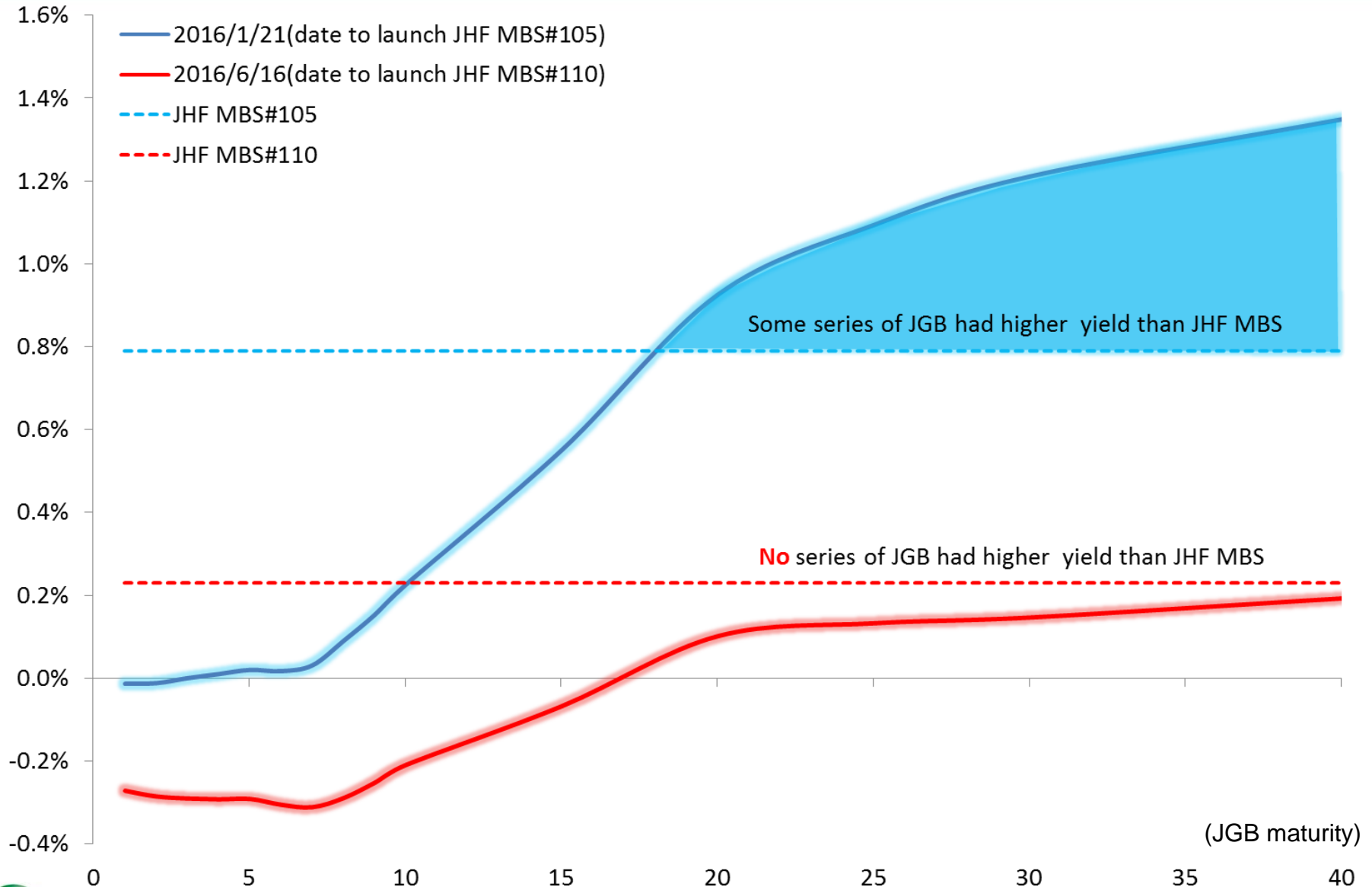
10 year JGB yield in Japan in the past 10 years



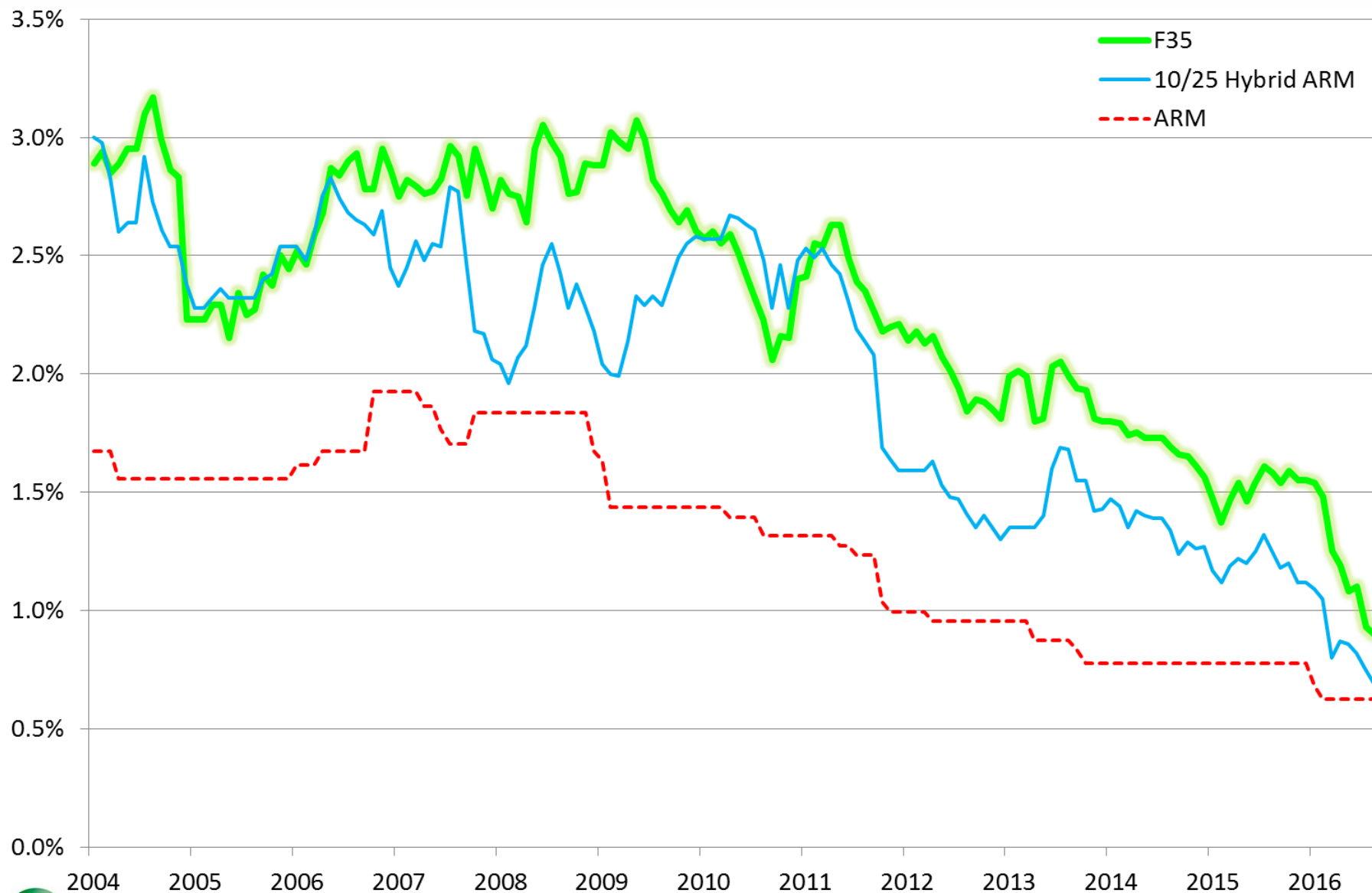
JGB yields and JHF MBS nominal coupon



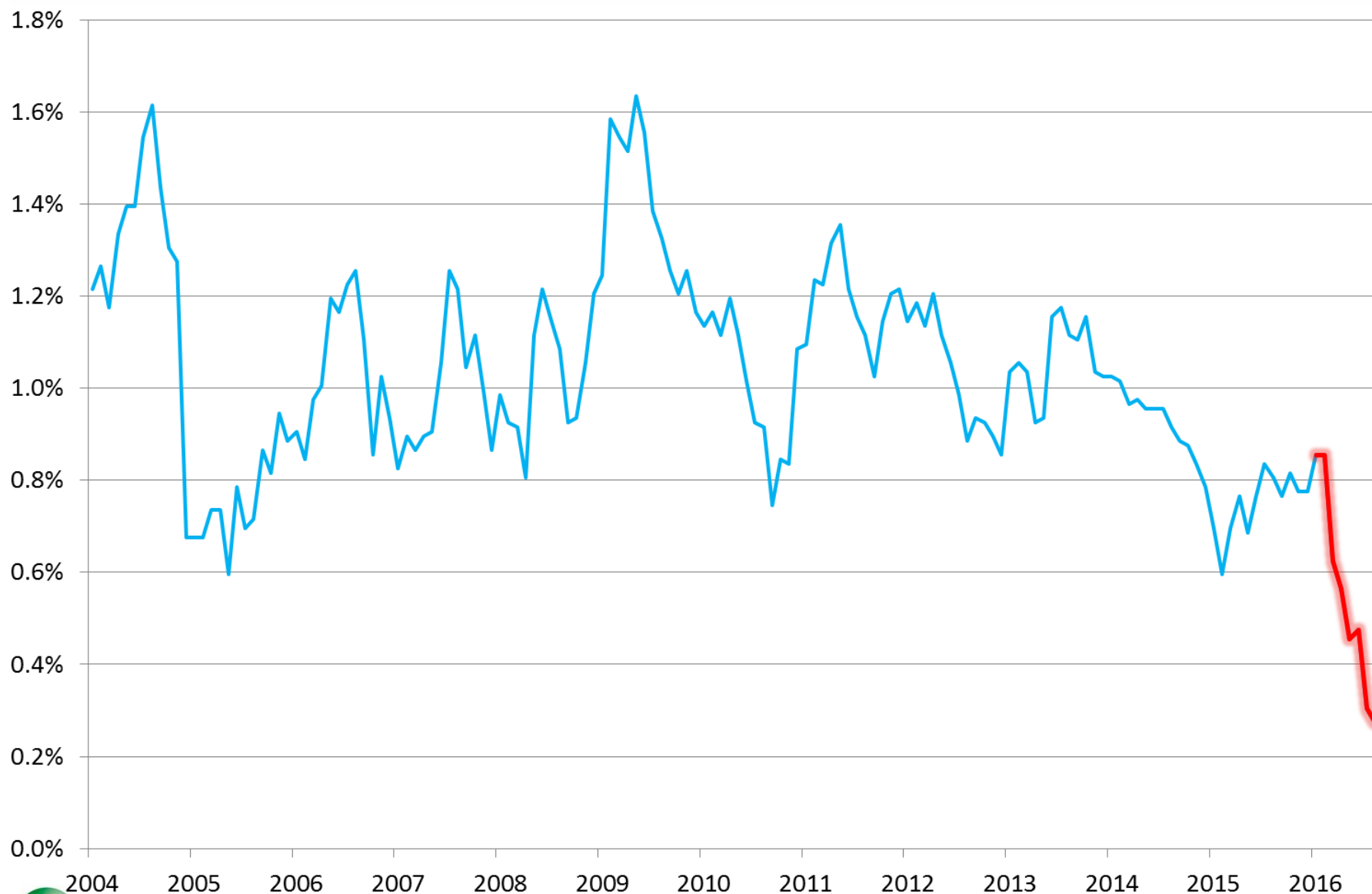
JGB yield curve and JHF MBS nominal coupon in January and June 2016



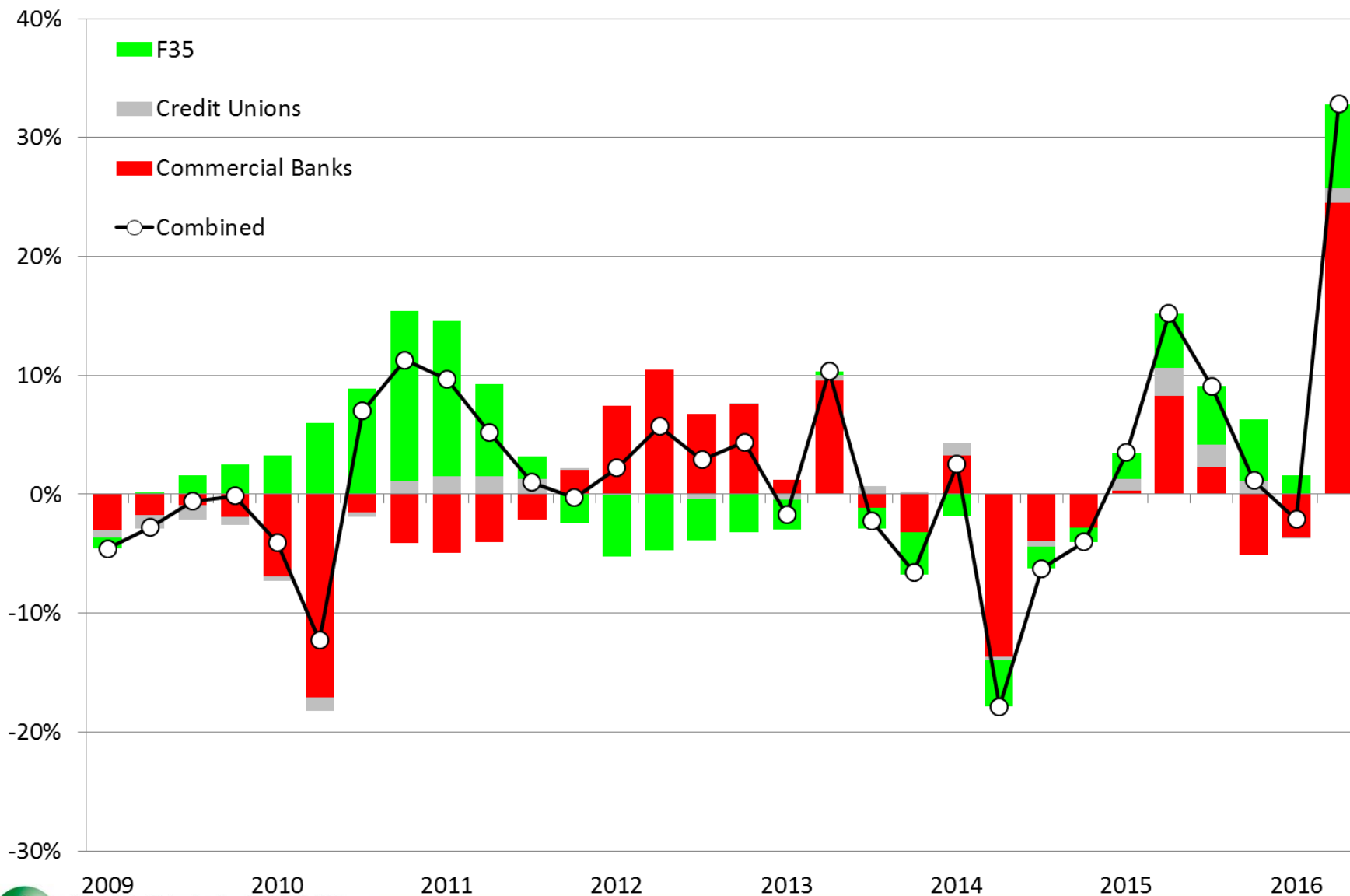
Mortgage interest rate in Japan



Difference of mortgage interest rate between F35 and ARM

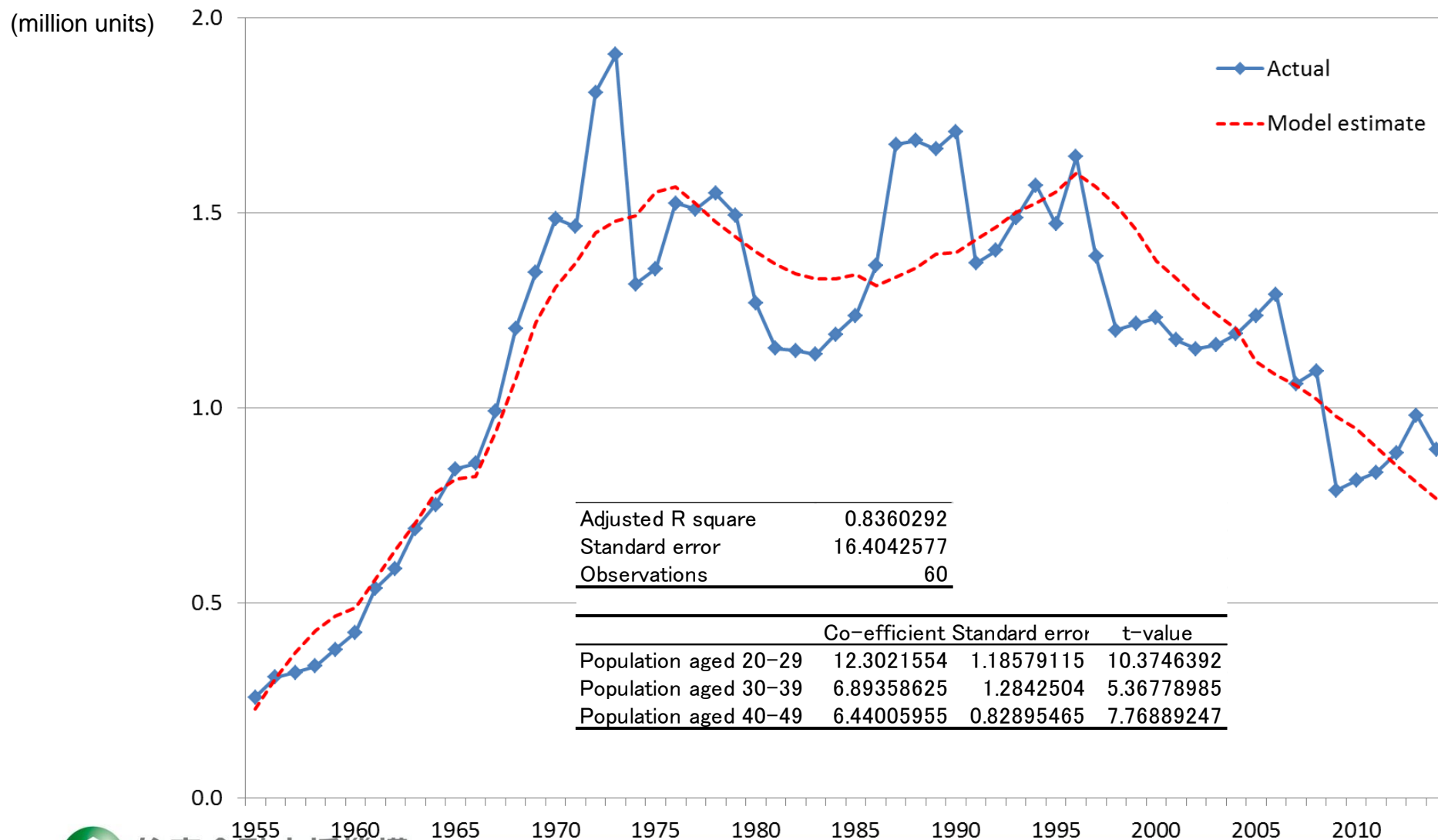


Mortgage origination volume; year over year change and contribution

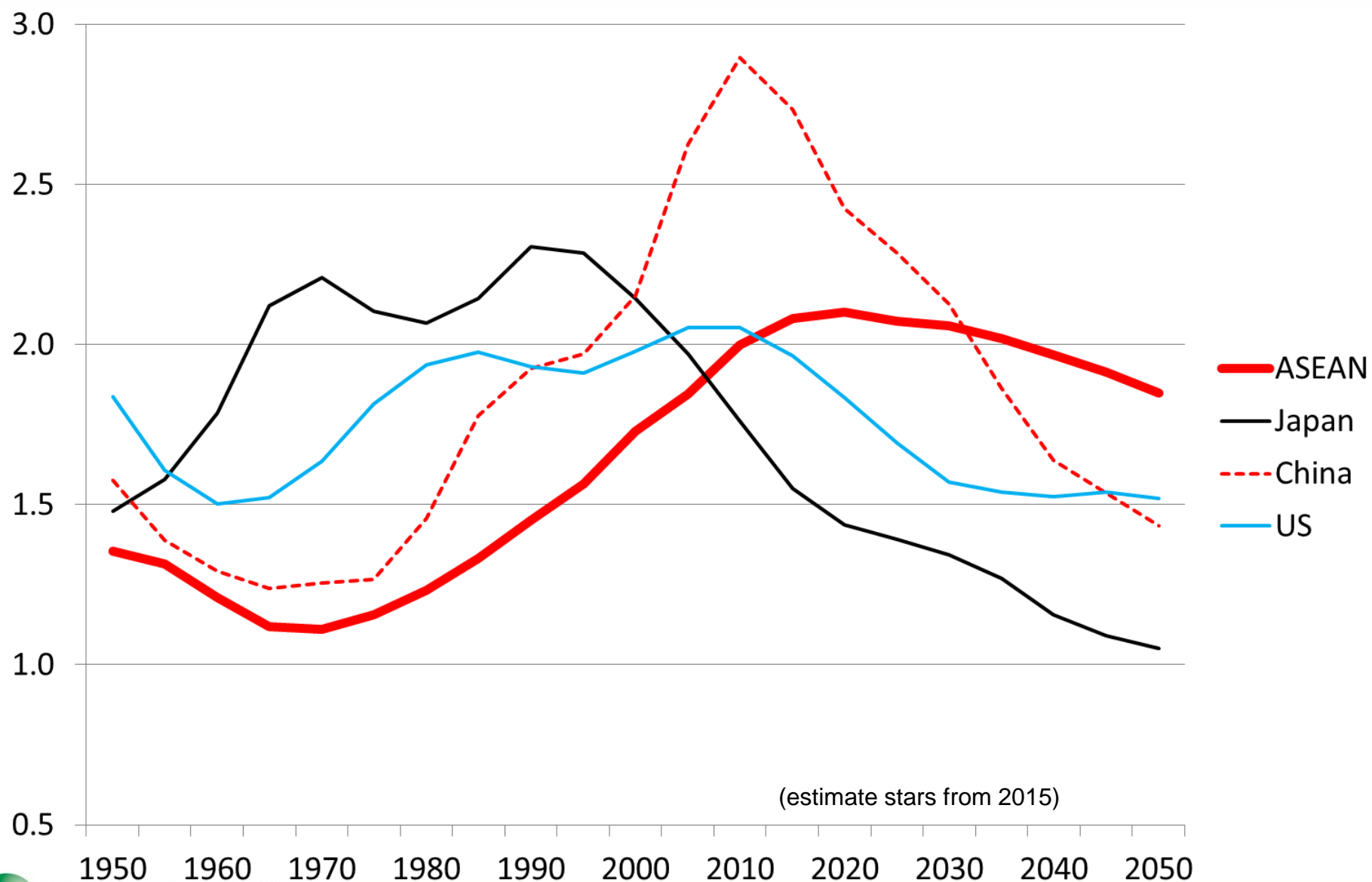


Housing starts and estimate by model based on demography in Japan

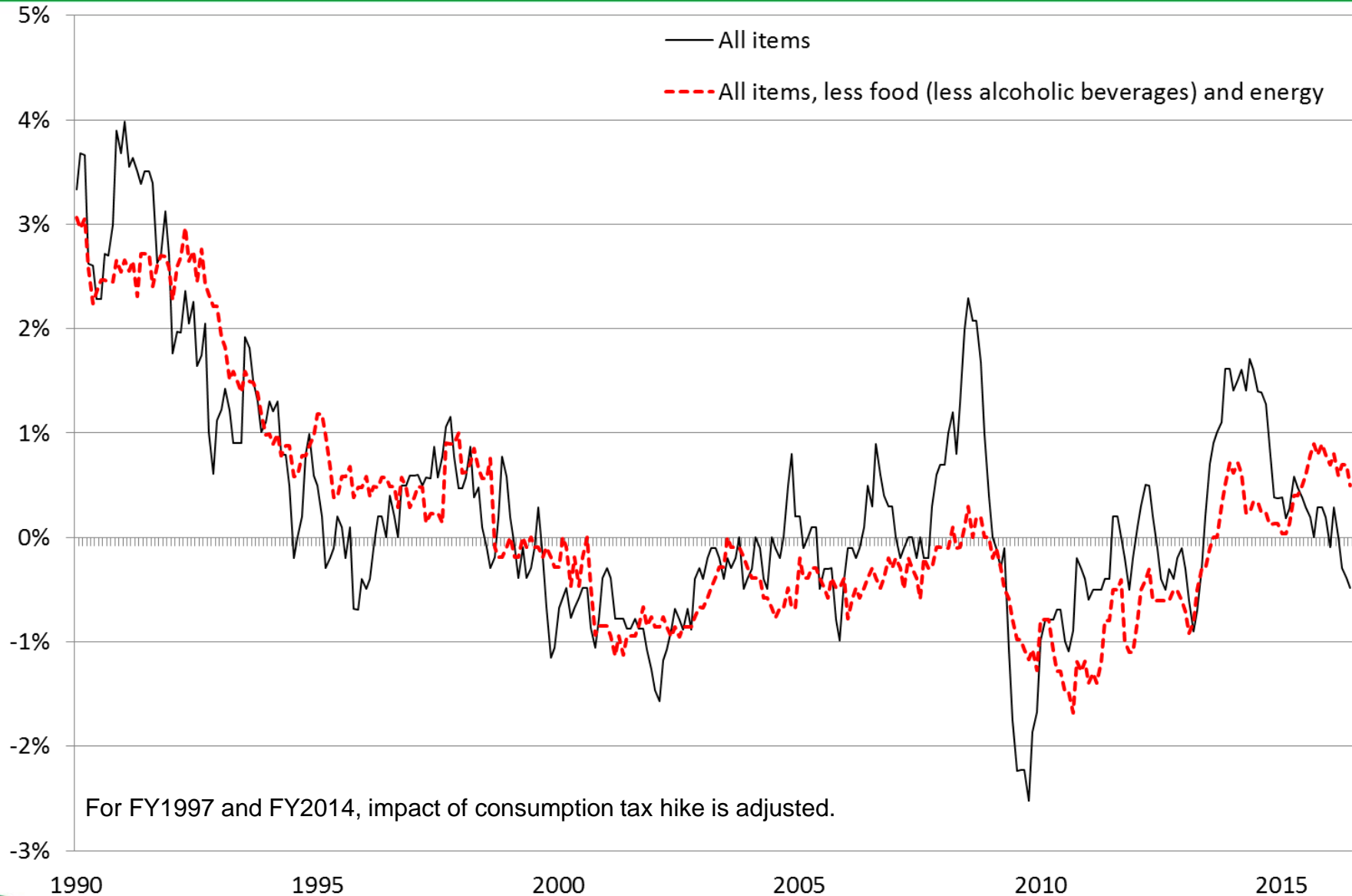
Housing starts in Japan has strong correlation with core working age populations.



Inverse dependency ratio

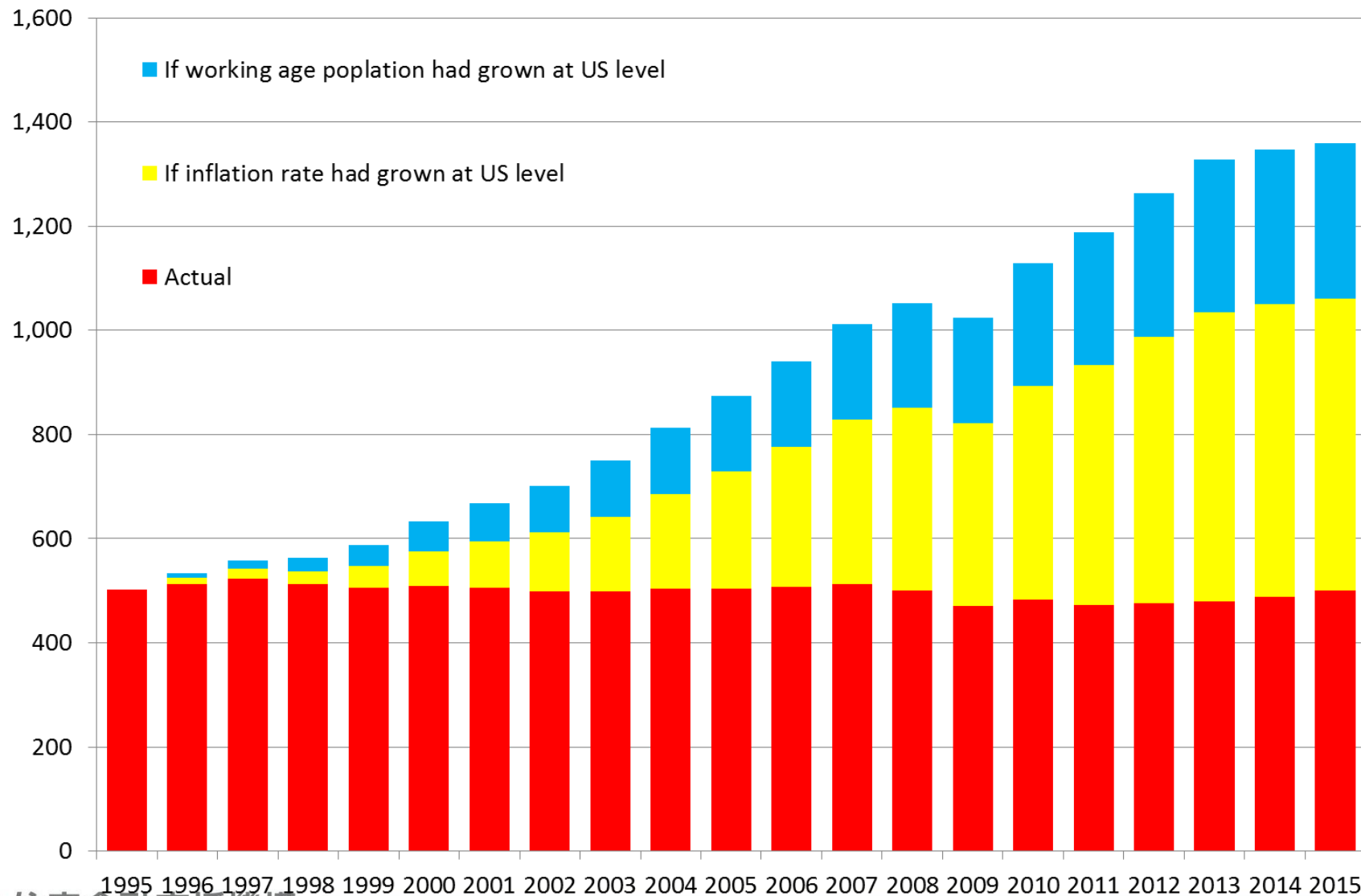


Inflation rate in Japan

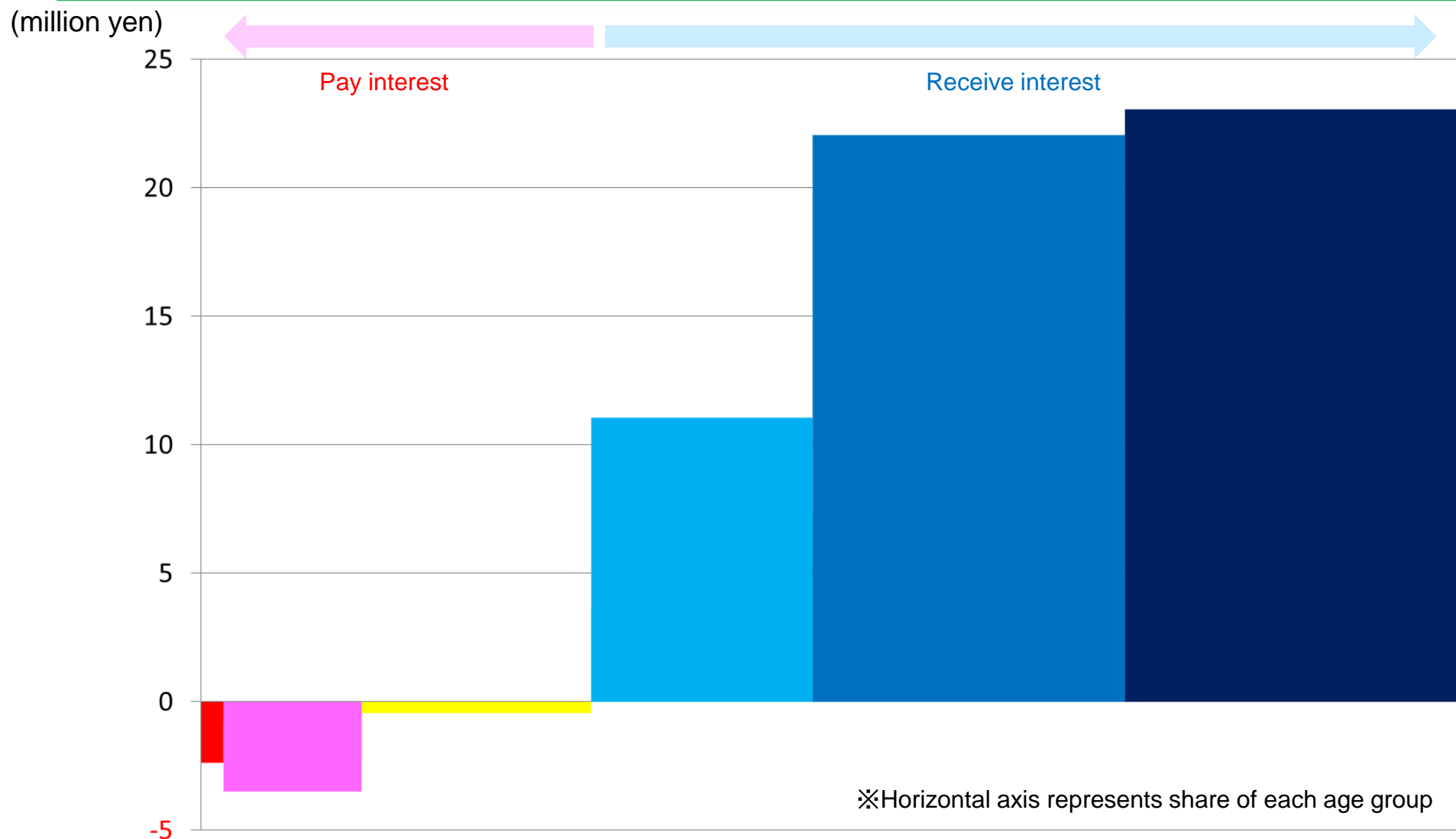


Nominal GDP in Japan stagnated due to deflation and demographics

(trillion JPY)



Net financial assets per household by age group



Thank you for your attention.



Photo : Masahiro Kobayashi

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We urge investors when they are making investment decisions regarding bonds to carefully confirm details of the conditions, content, and structure of the final products in the latest product prospectus prepared for the issuance of the relevant bonds as well as any other most recent available information and accordingly assume personal responsibility for their decisions.