



# ***The BOJ's exit policy in uncharted territory***

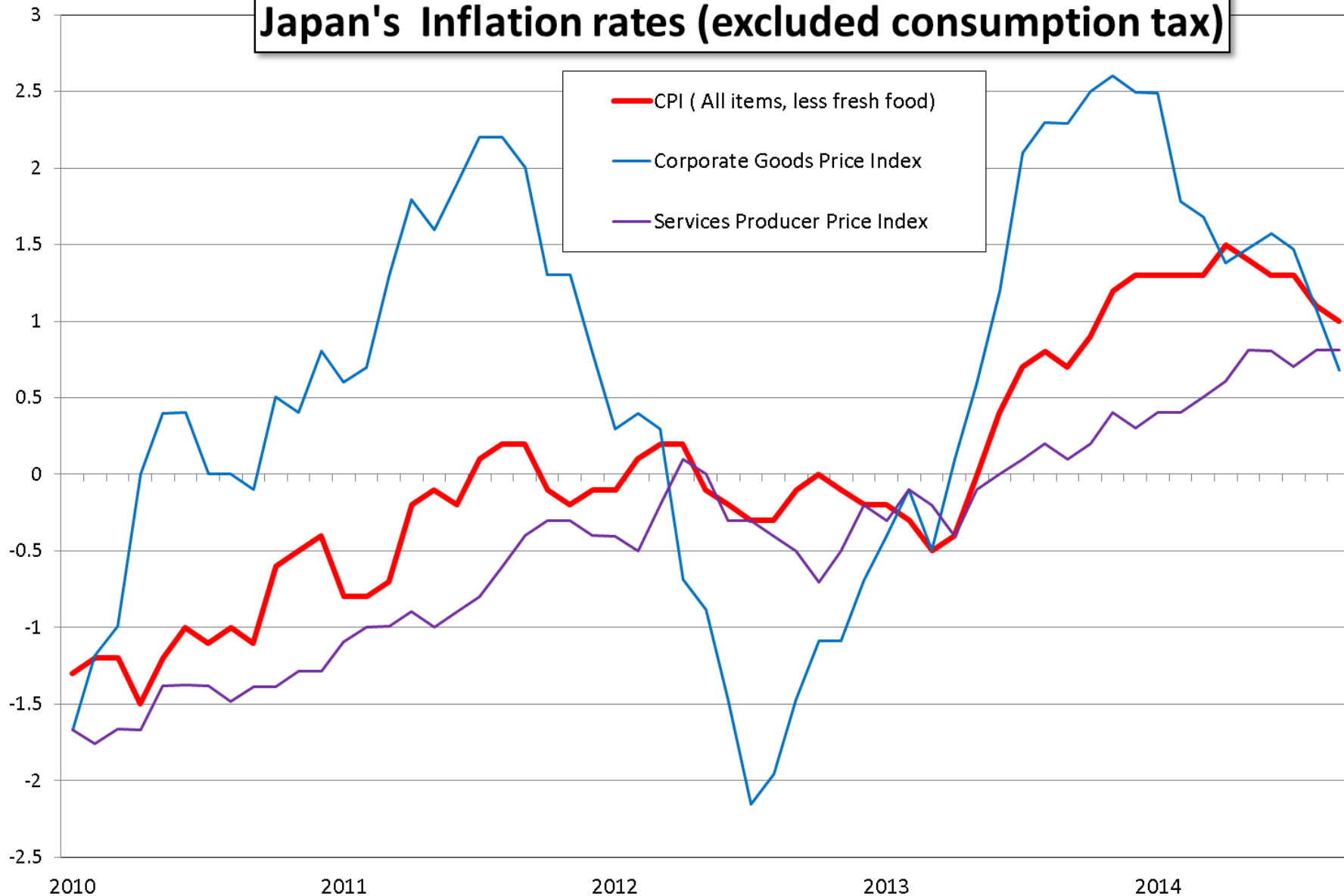
***November 7, 2014***

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Totan Research***

# The Quantitative Qualitative Easing (QQE) started on April 4, 2013

- The BOJ will conduct money market operations so **that the monetary base** will increase at an annual pace of about **60-70 trillion yen**.
- It will purchase **JGBs** so that their amount outstanding will increase at an annual pace of about **50 trillion yen** to meet the monetary base target.
- With a view to lowering risk premia of asset prices, the Bank will purchase **ETFs** and **J-REITs** so that their amounts outstanding will increase at an annual pace of **1 trillion yen** and **30 billion yen** respectively.

## Japan's Inflation rates (excluded consumption tax)





## 3 factors which supported the QQE (1)

**Firstly; The improvement of the global economy gave a positive effect to Japan's economy.**

The euro crisis bottomed out in the autumn of 2012.

As the US economy recovered and the Fed started the tapering of the QE3, the yen depreciated considerably.

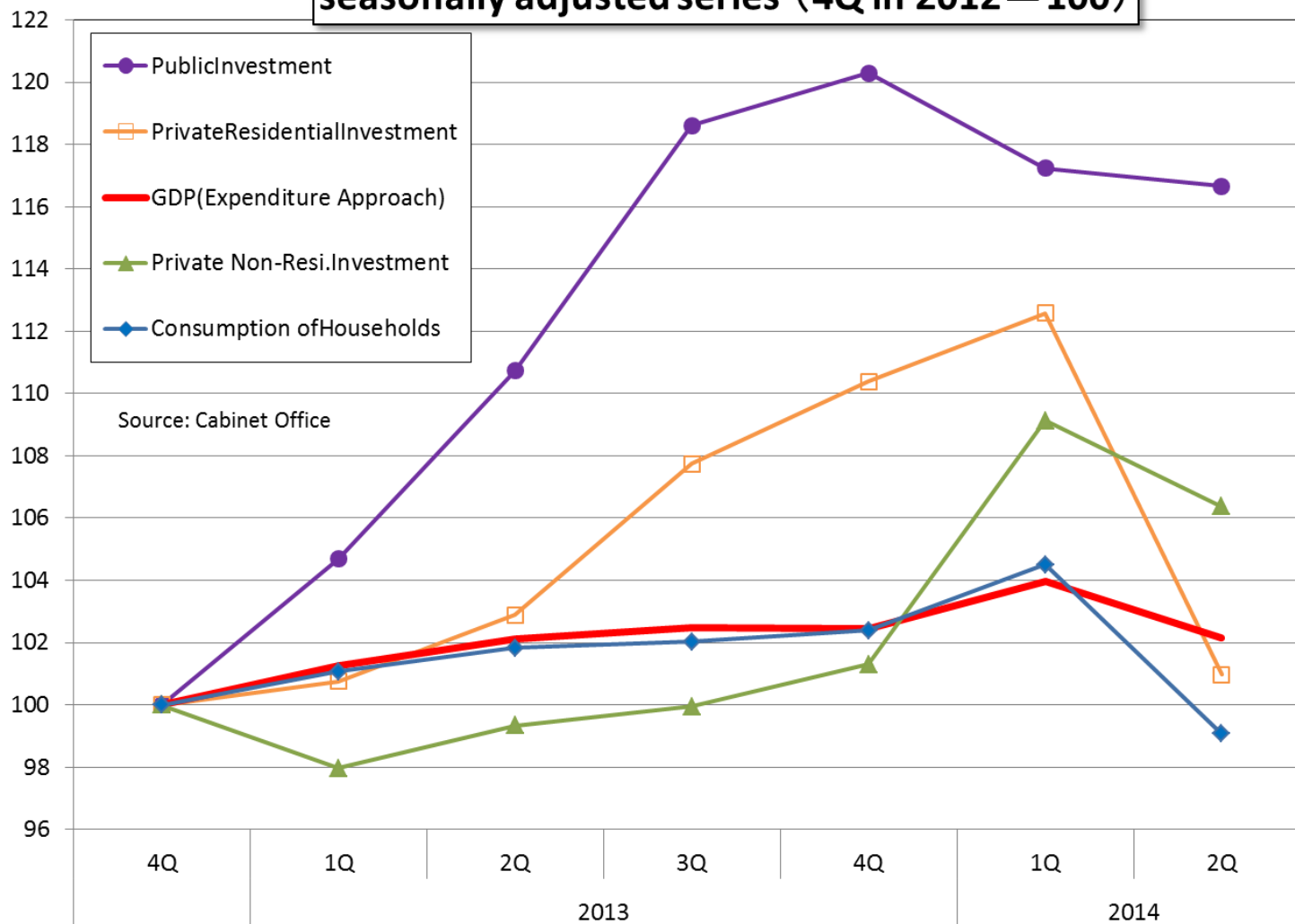
**Secondly; The government supported the policy of the BOJ in a manner never seen before.**

It government requested enterprises to raise wages.

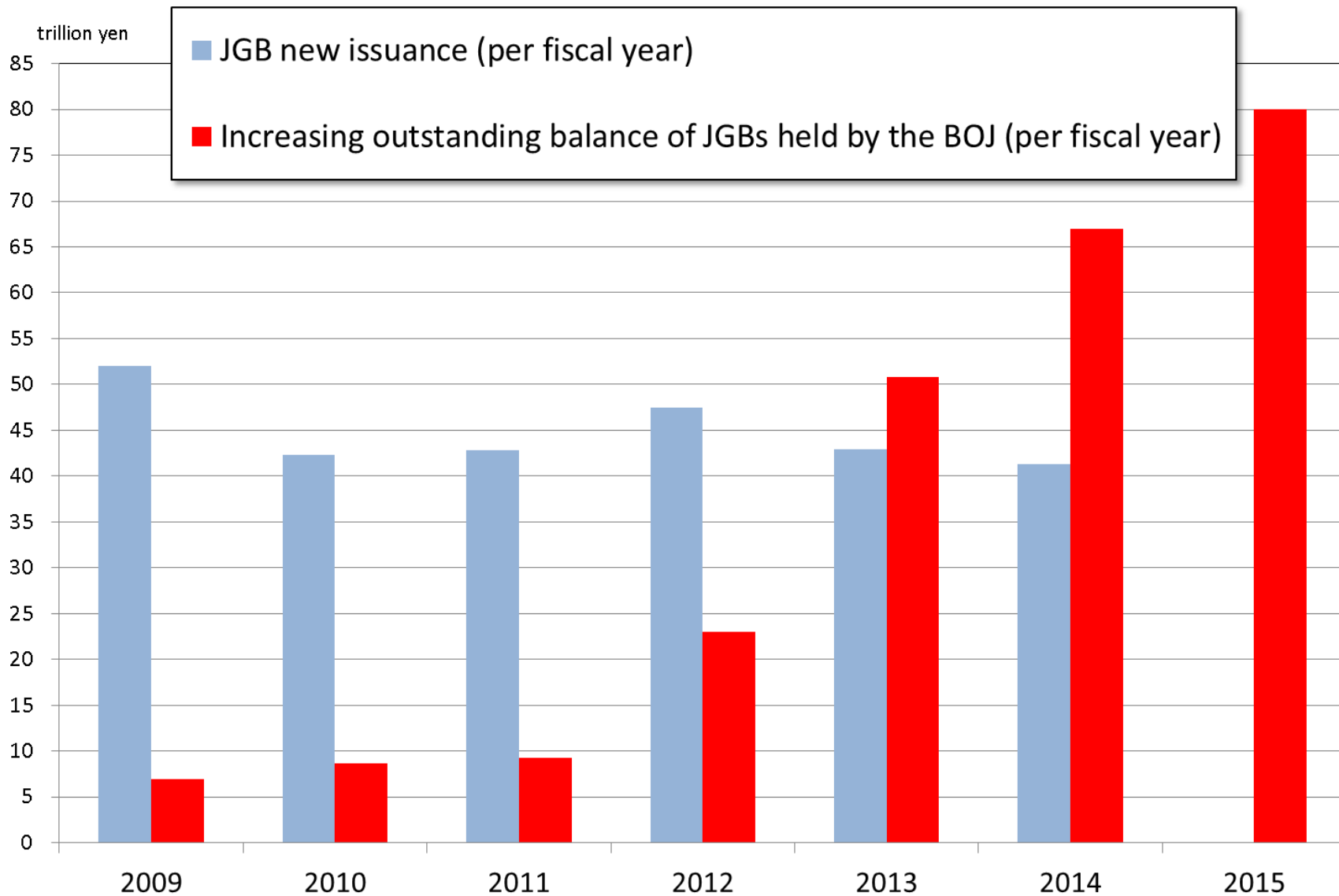
It actively sold "Abenomics" to overseas investors.

It implemented large-scale public investments.

## Real Gross Domestic Product seasonally adjusted series (4Q in 2012 = 100)



⇒ This can be called typical “helicopter money”





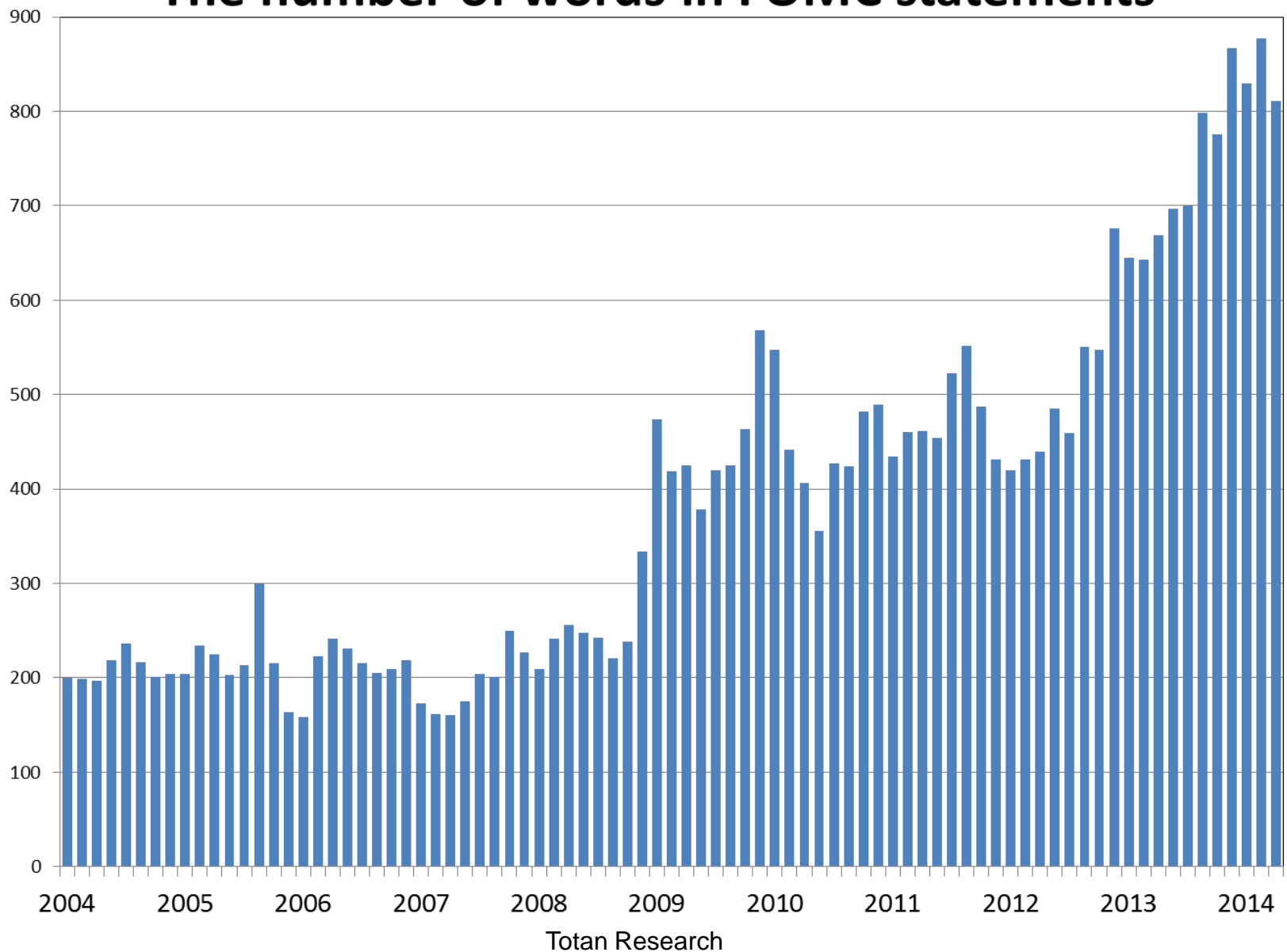
## 3 factors which supported the QQE (2)

### **Thirdly; “The effect of monetary shaman”**

Professor Holmes of Binghamton University, who is an anthropologist, said that, as central banks in recent years have tended to work on the market expectations by words. He published “Economy of Words” in 2013.

A reporter of the FT who felt sympathy with his treatise pointed out that central bankers in recent years are “**monetary shaman**” as they are trying to move the market by their oracles.

# The number of words in FOMC statements

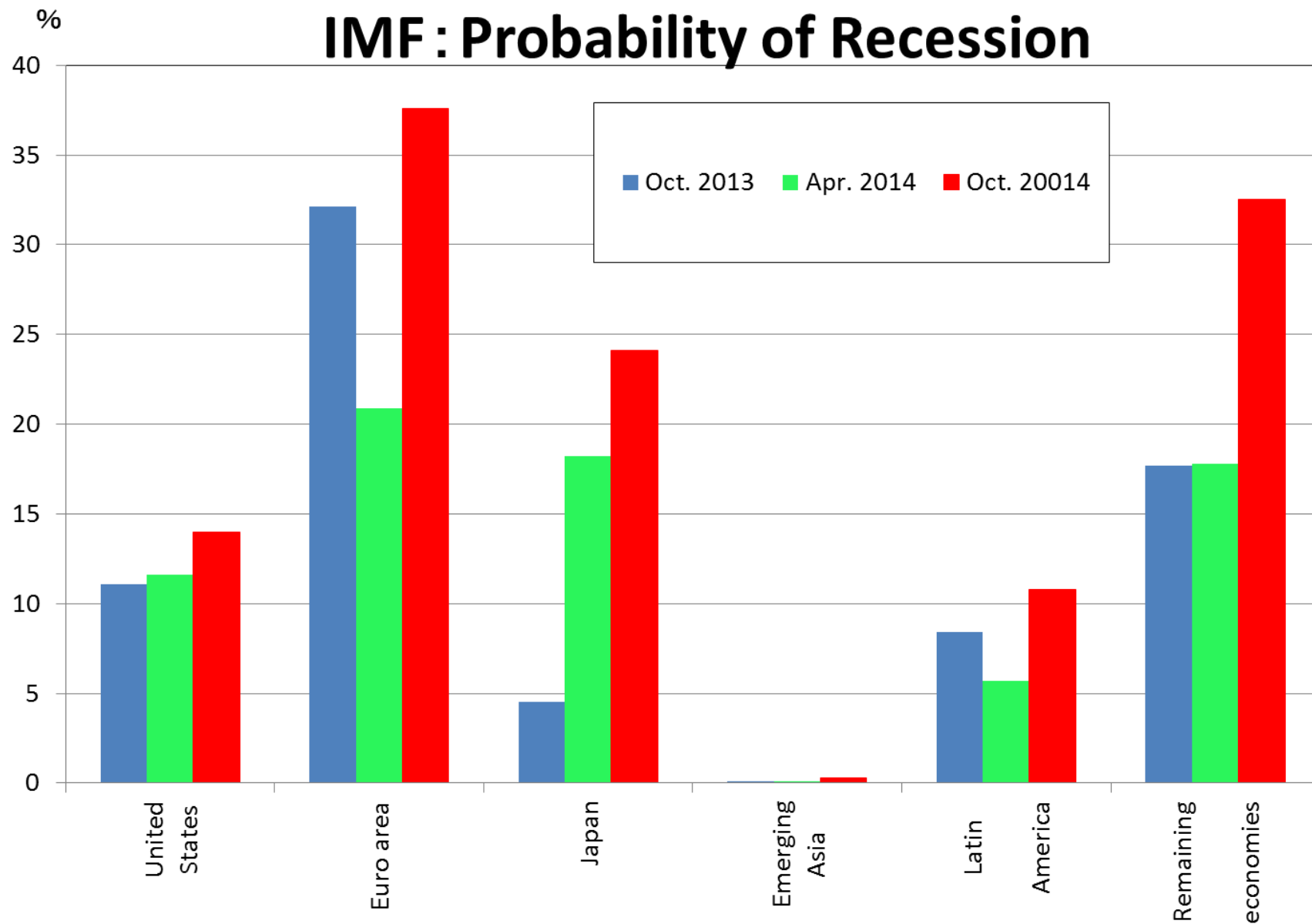




# Shaman Kuroda's Oracle for the QQE

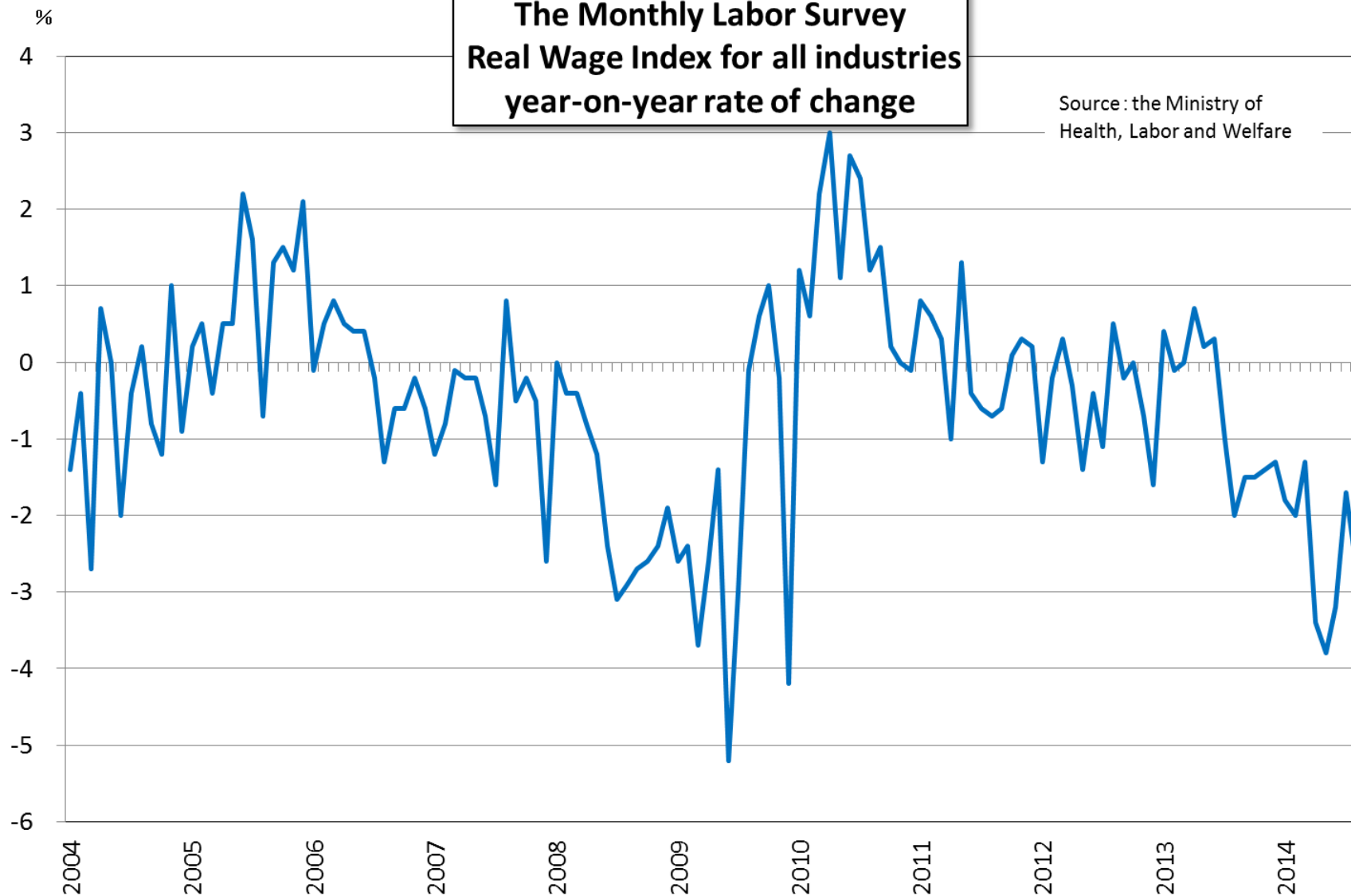
- The Bank will achieve the price stability target of **2** percent in the CPI at the earliest possible time, with a time horizon of about **two** years.
- It will **double** the monetary base and the amounts outstanding of JGBs as well as ETFs in **two** years, and more than **double** the average remaining maturity of JGB purchases.
- It will continue with the QQE, aiming to achieve the price stability target of **2** percent, as long as it is necessary for maintaining that target in a stable manner.

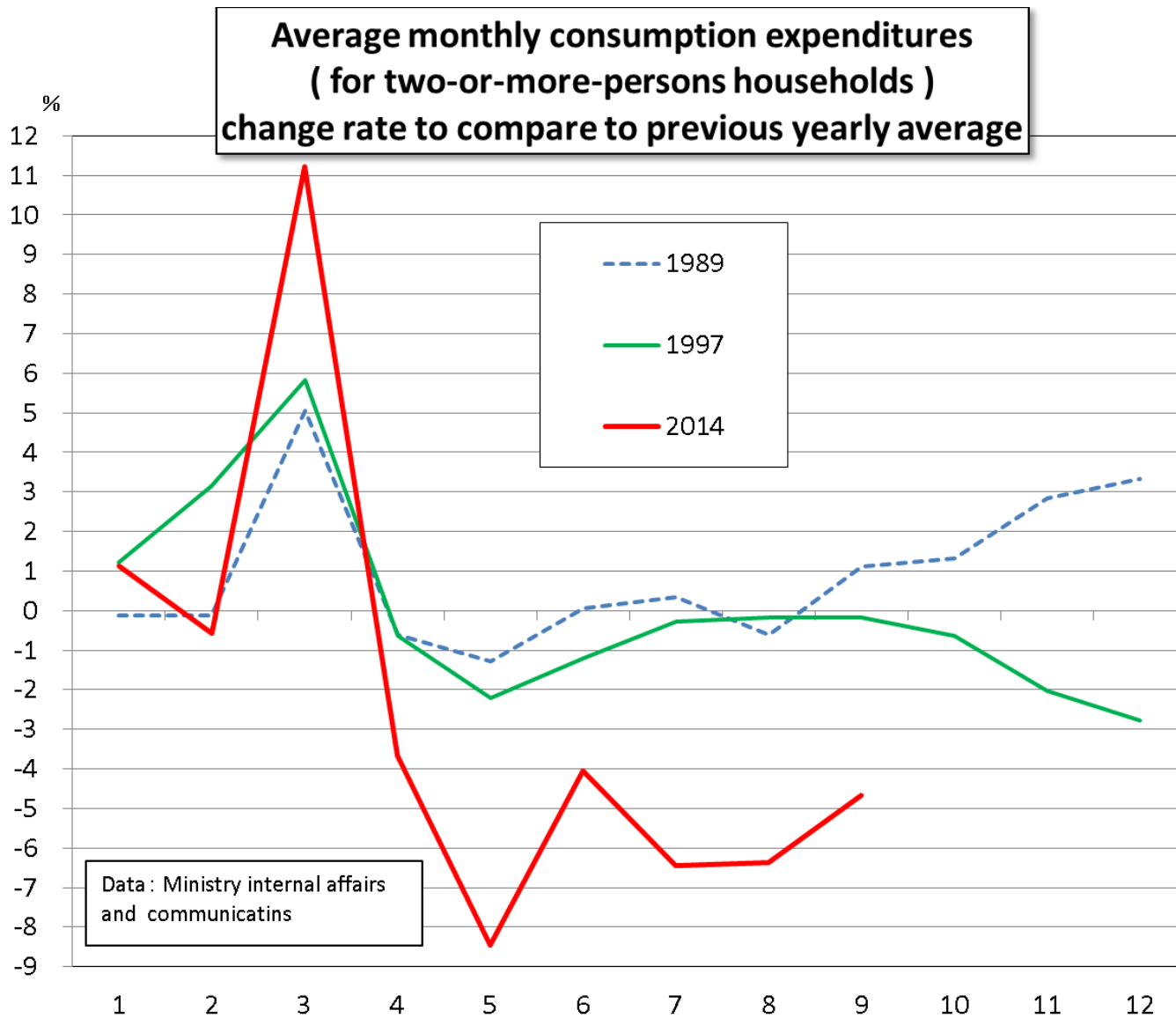
# IMF : Probability of Recession



**The Monthly Labor Survey  
Real Wage Index for all industries  
year-on-year rate of change**

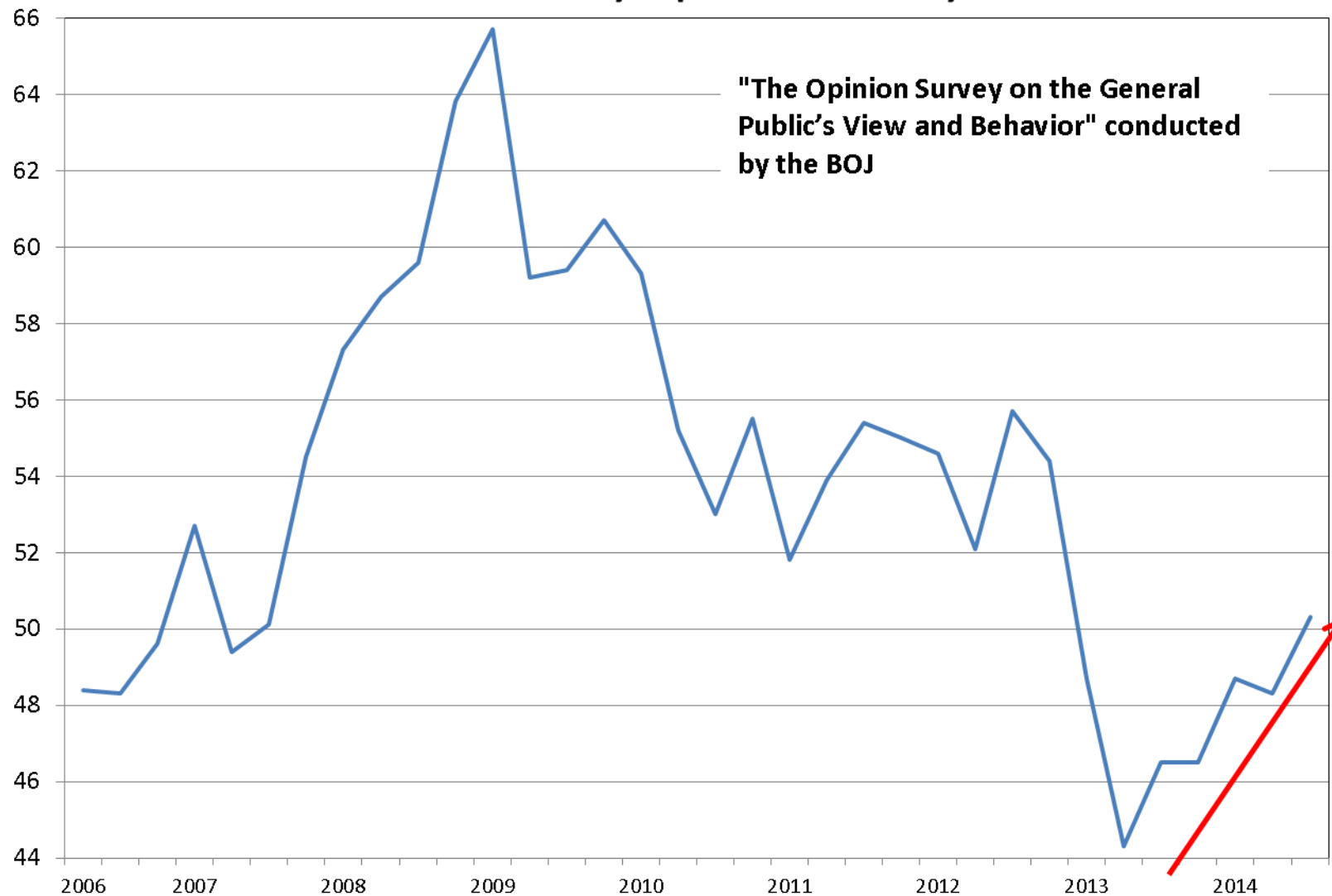
Source : the Ministry of  
Health, Labor and Welfare



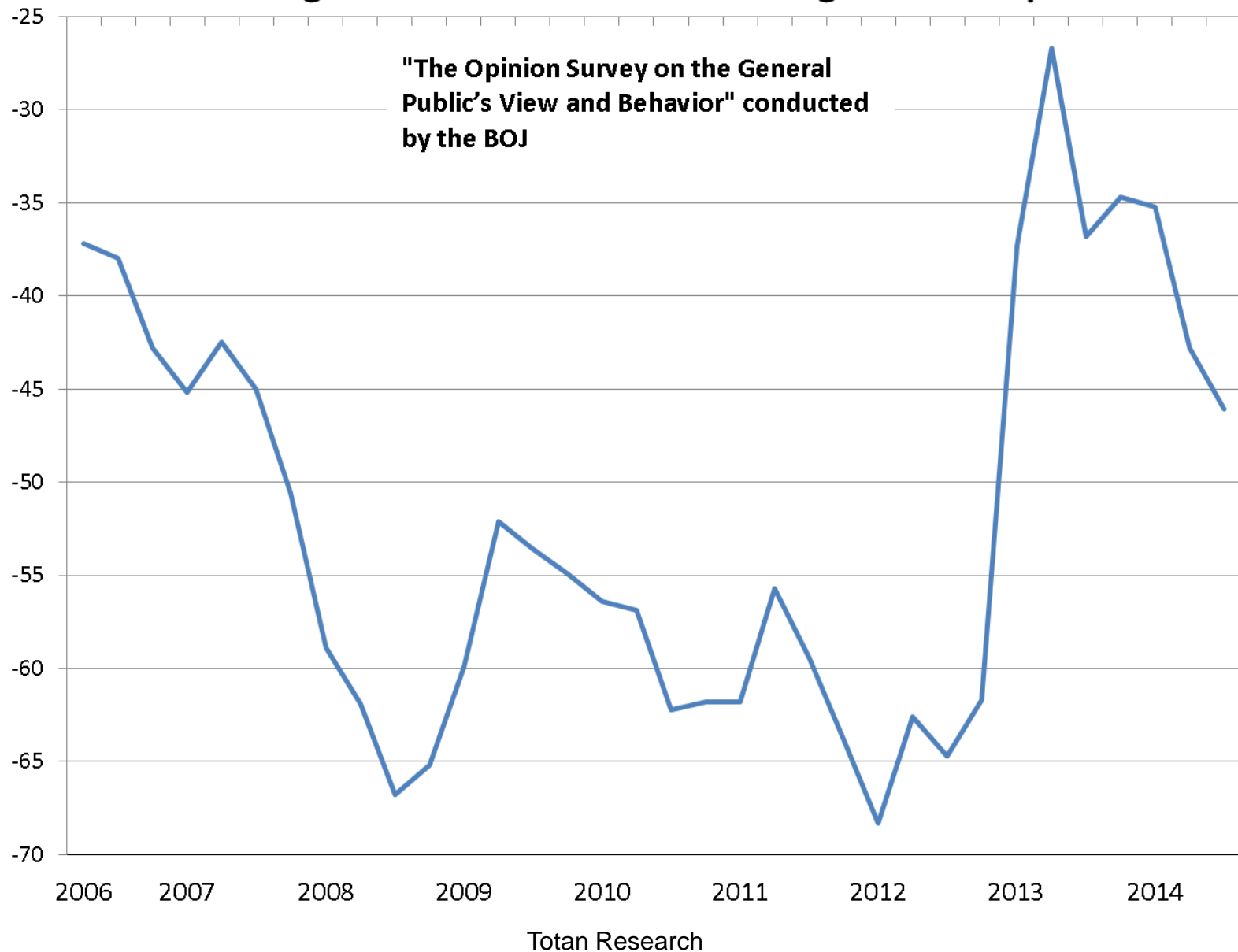


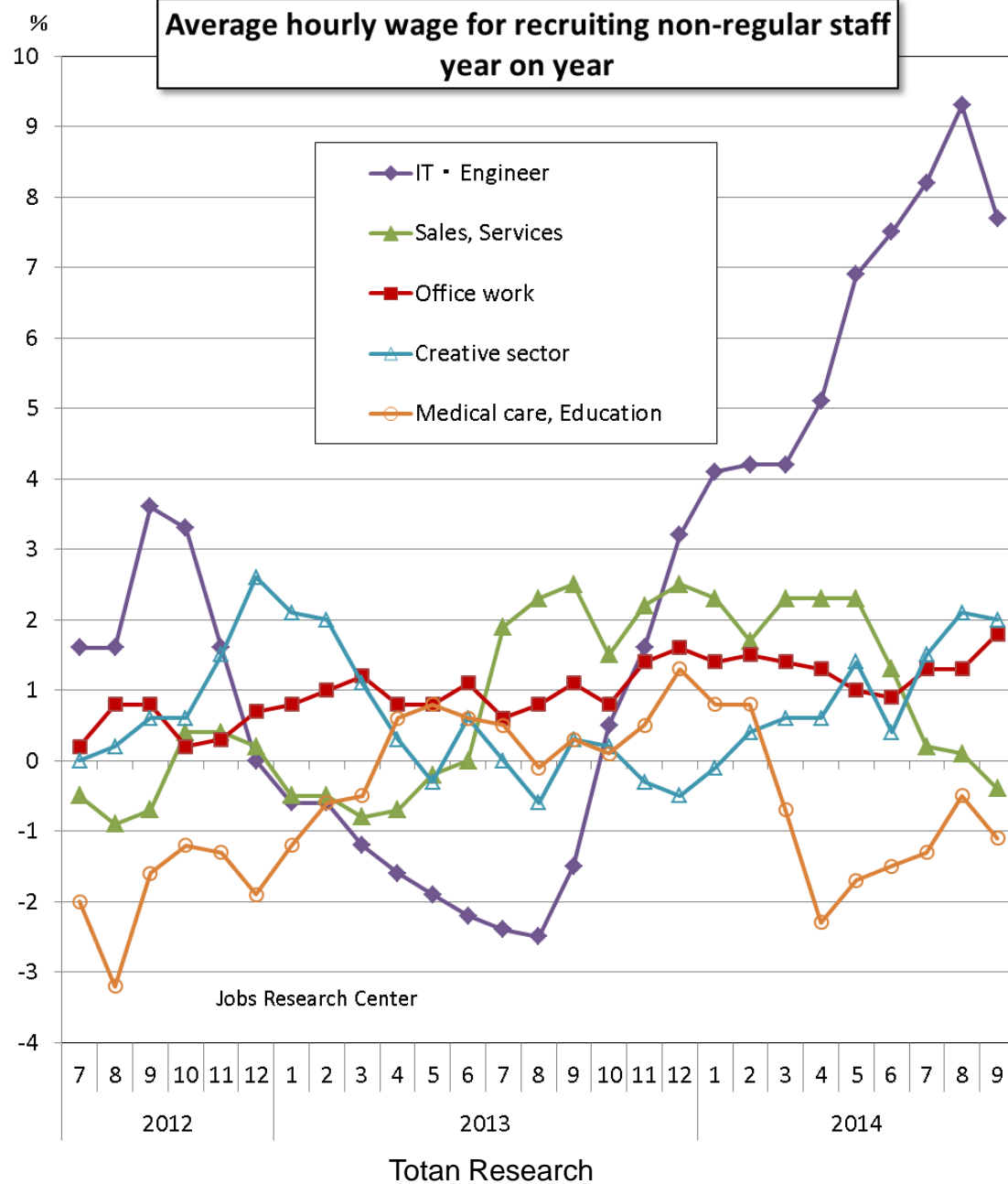
%

## "I would cut my expenses within a year."

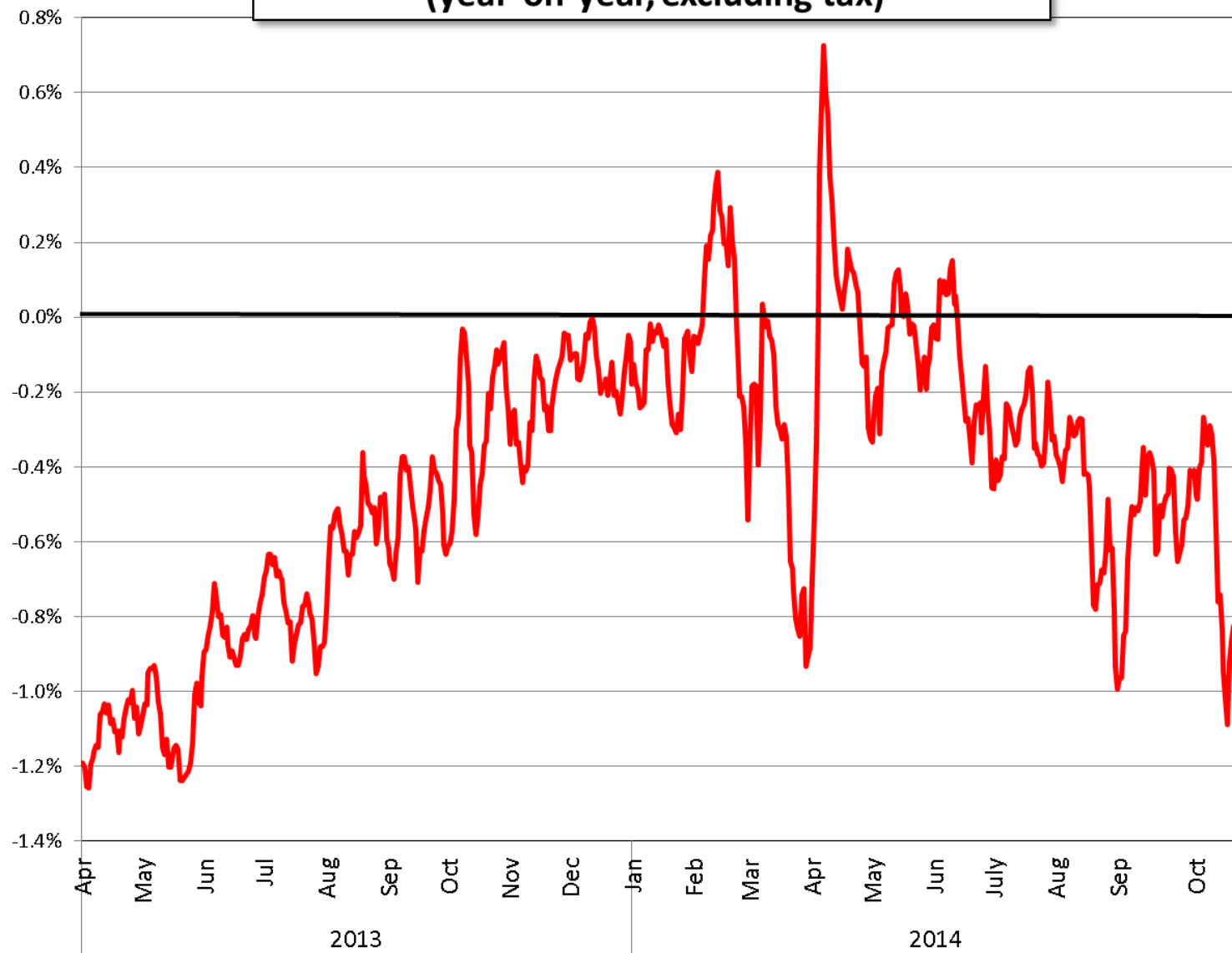


## The image about the future economic growth in Japan





**UTokyo Daily Price Index: 7-days moving average  
(year-on-year, excluding tax)**

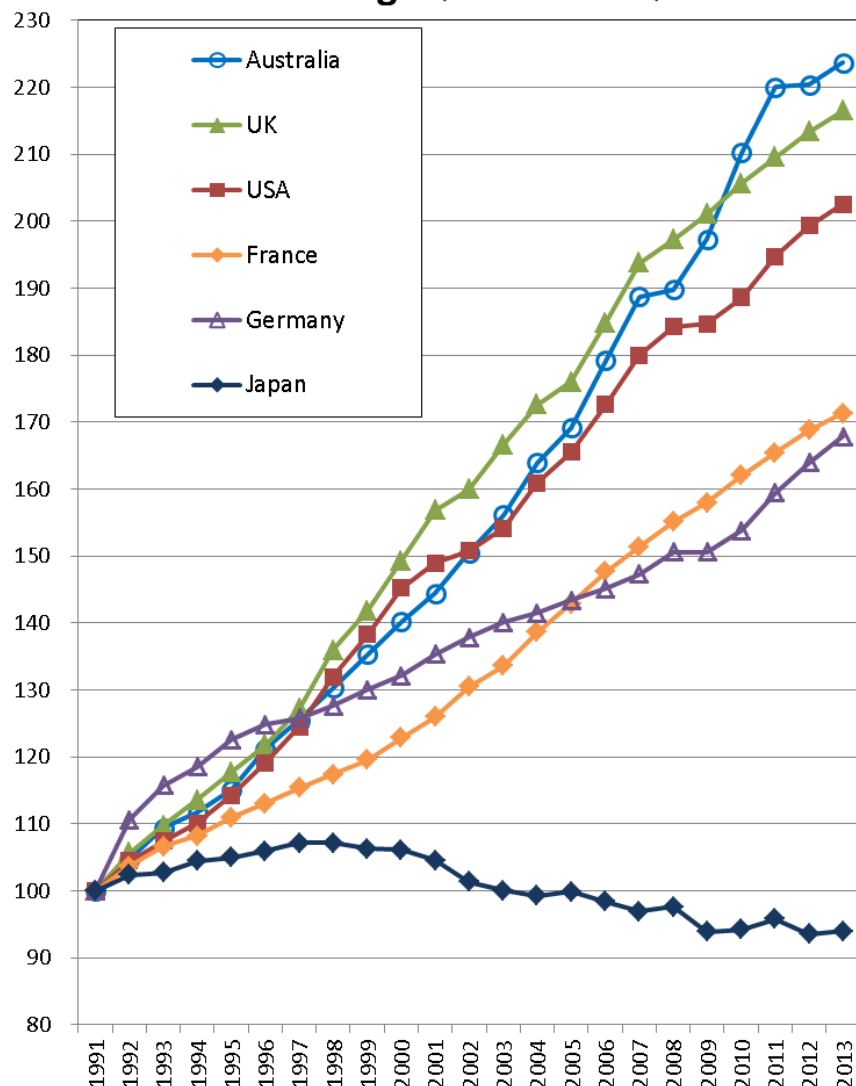




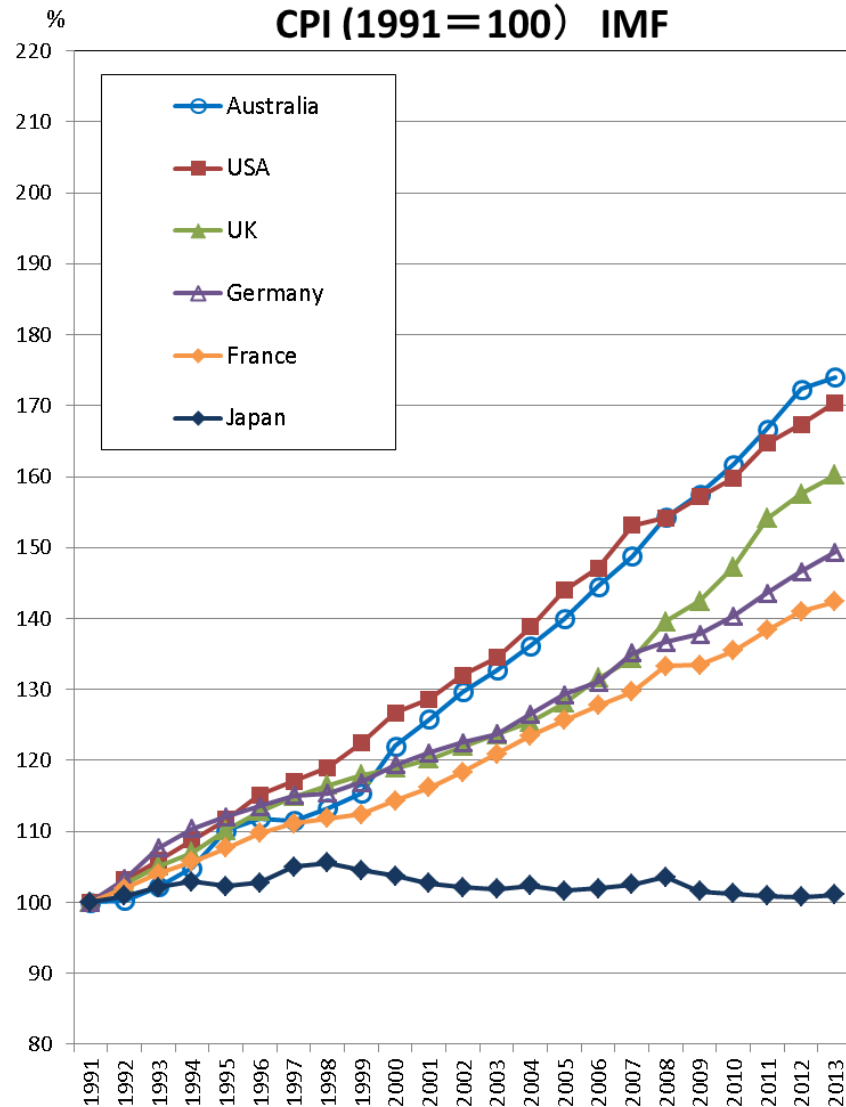
**“The most desirable range of dollar/yen rate”**  
(The Japan Chamber of Commerce and Industry)

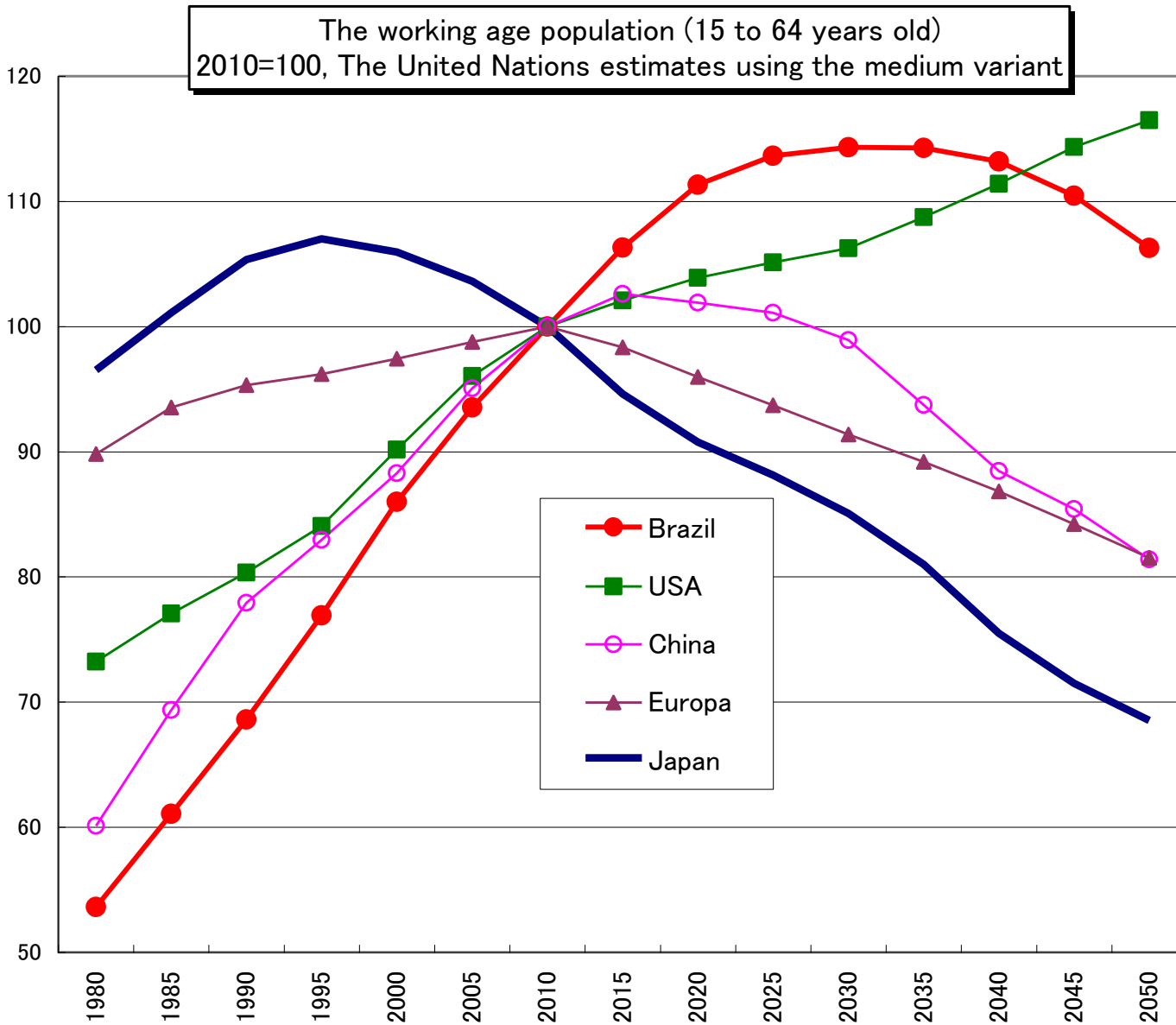
<b>The September survey in 2014</b>	
less than 90 yen	4.8%
90 to 95 yen	6.9%
95 to100 yen	30.5%
100 to105 yen	38.8%
105 to110 yen	13.6%
110 to115 yen	2.5%
115 to120 yen	1.6%
beyond 120 yen	1.3%

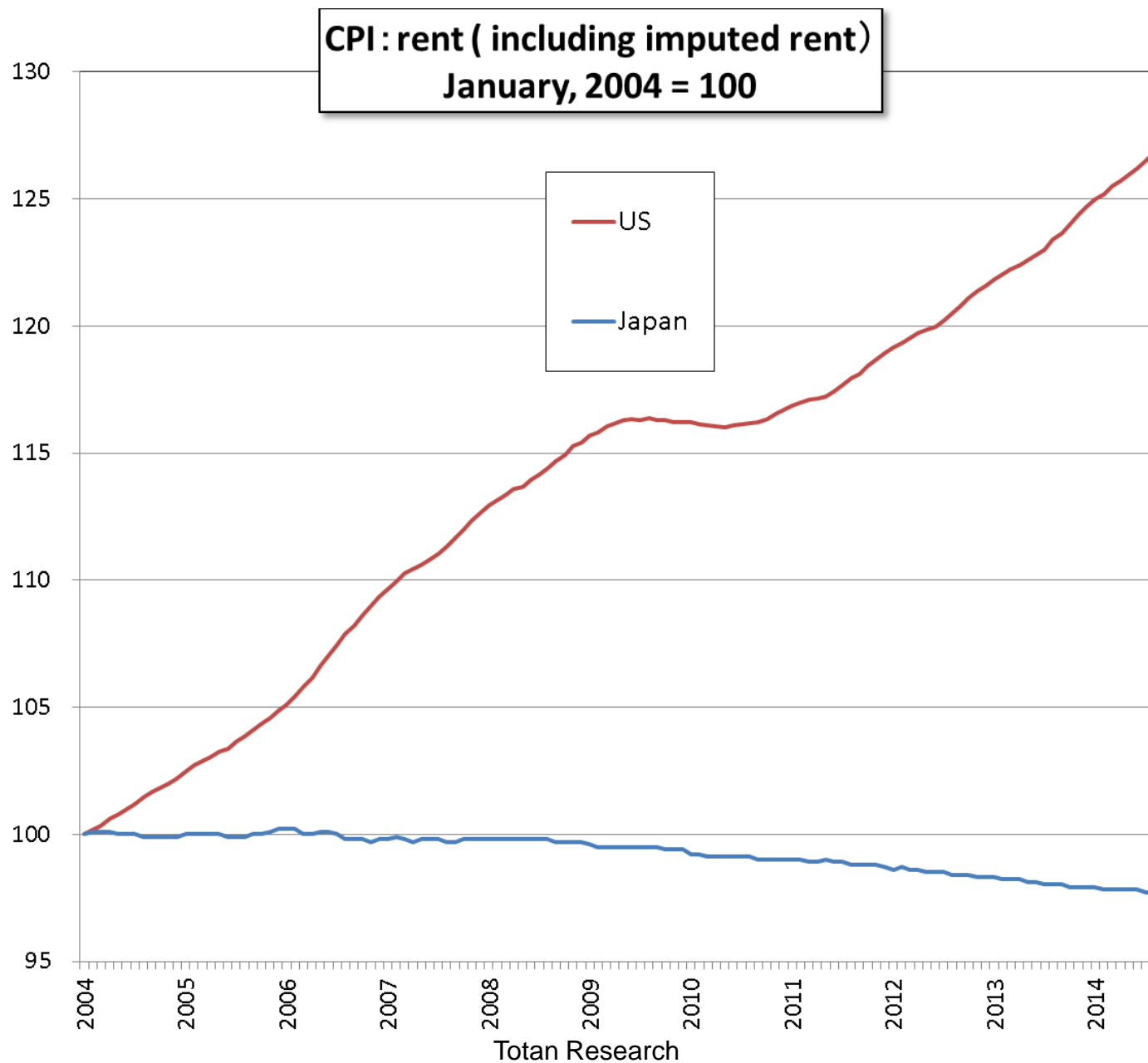
### Nominal wage (1991=100) OECD



### CPI (1991=100) IMF

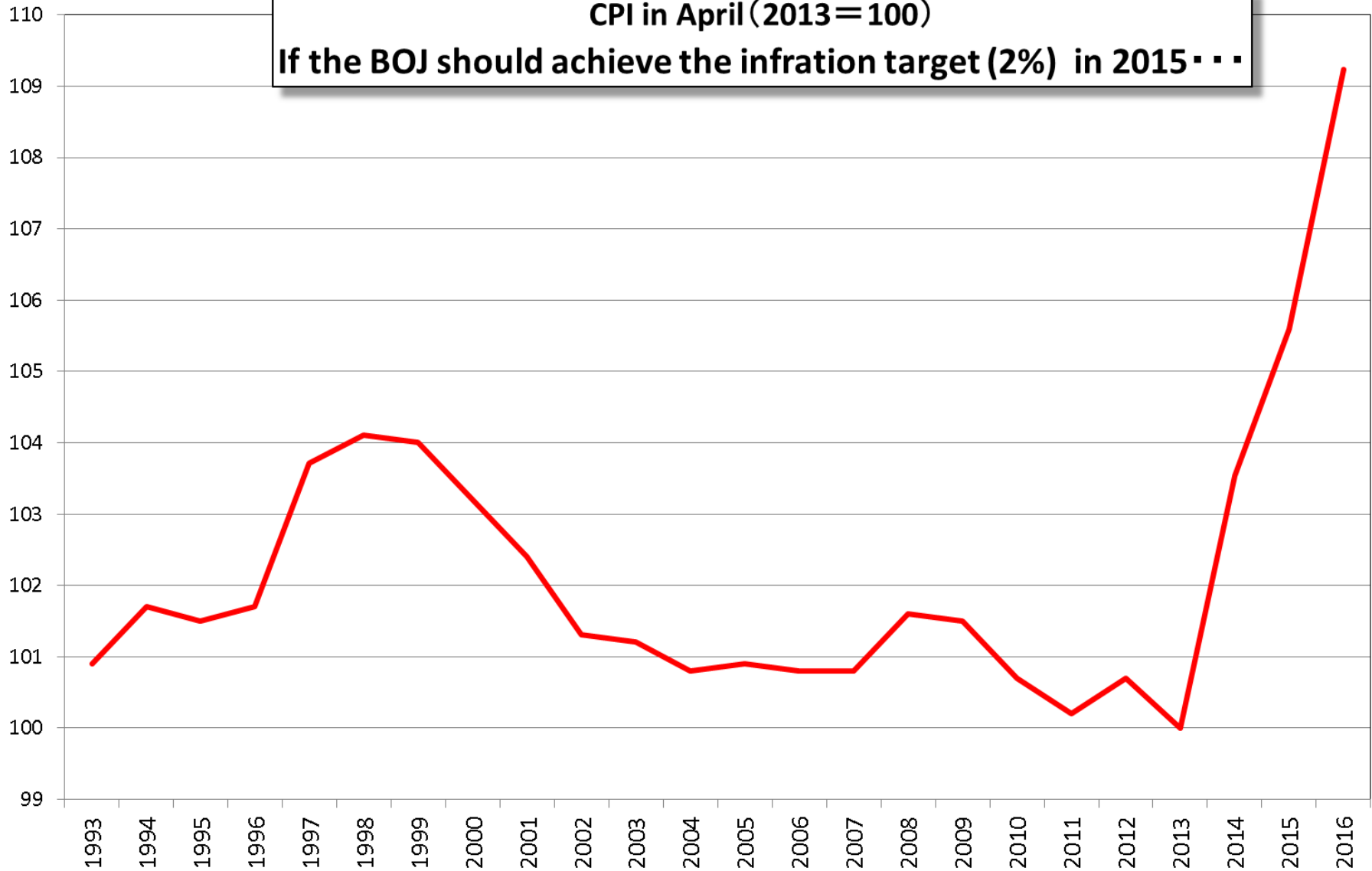


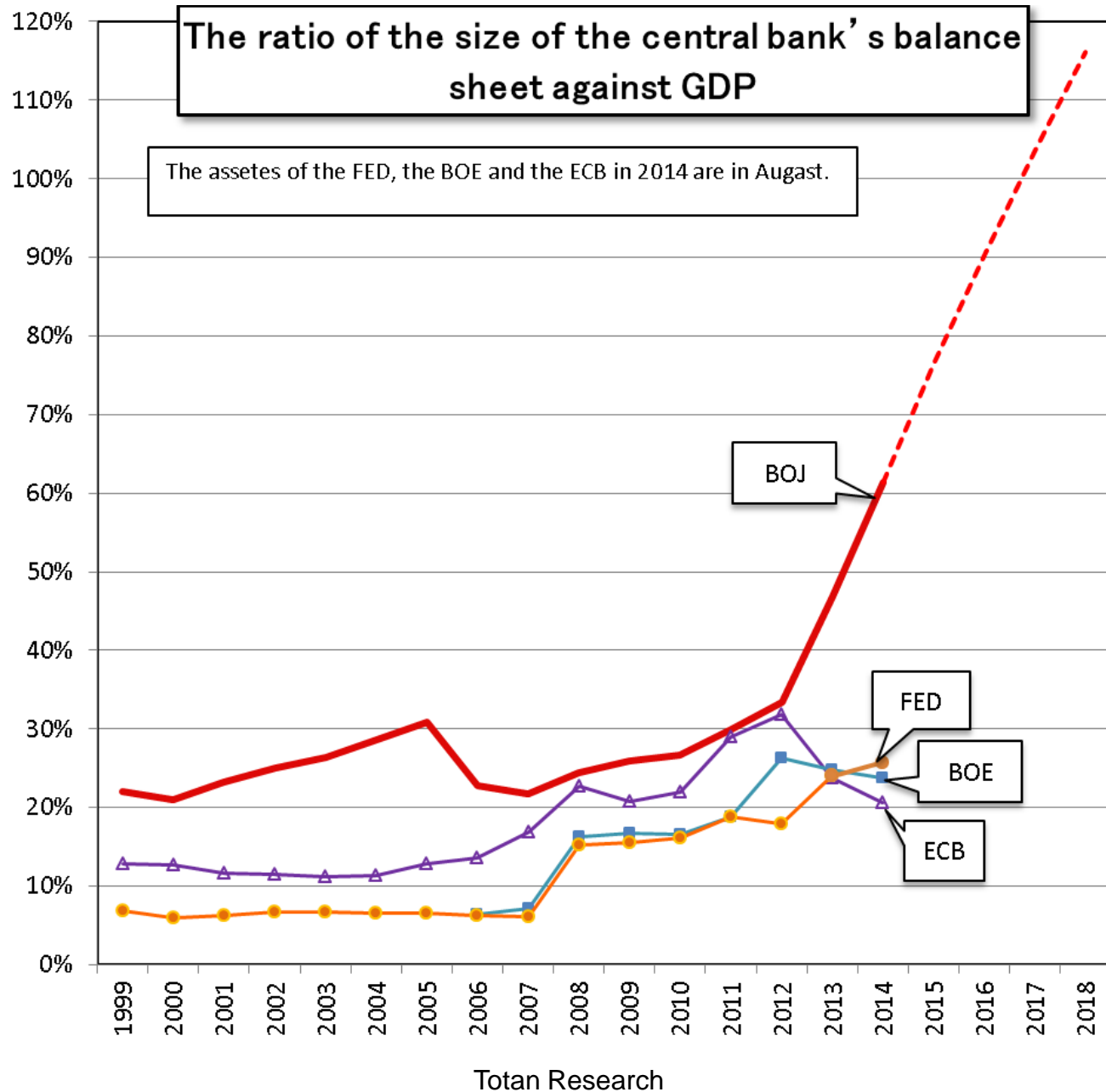




CPI in April (2013 = 100)

If the BOJ should achieve the inflation target (2%) in 2015...



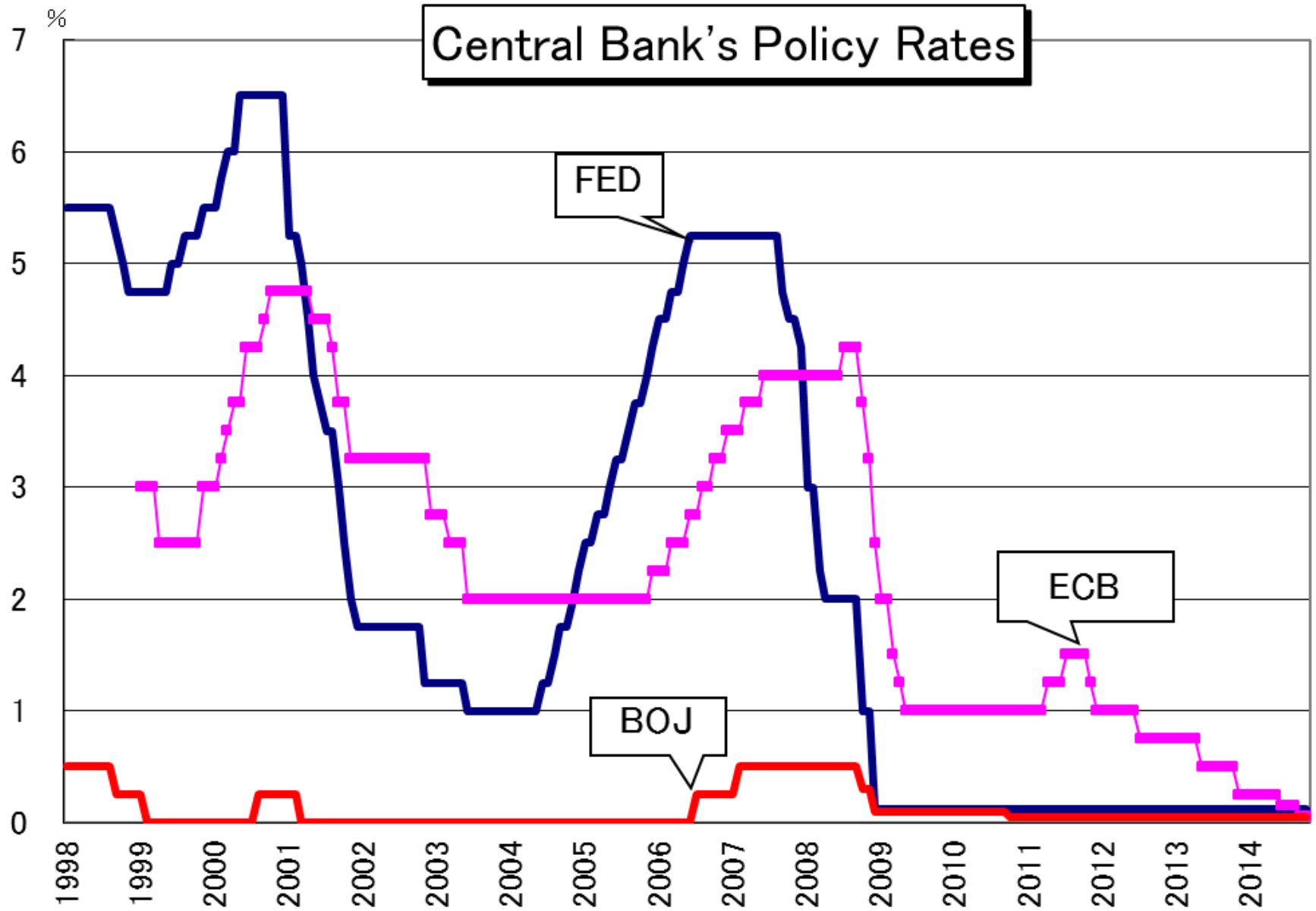


## General government gross debt (Percent of GDP) in 2014 estimated by IMF

<b>1</b>	<b>Japan</b>	<b>245.1</b>
2	Greece	174.2
3	Lebanon	144.9
4	Jamaica	139.9
5	Italy	136.7
6	Portugal	131.3
7	Eritrea	124.9
8	Cyprus	117.4
9	Ireland	112.4
10	Grenada	111.3
11	Cabo Verde	110.4
12	Bhutan	108.1
<b>13</b>	<b>United States</b>	<b>105.6</b>
14	Singapore	103.1
15	Barbados	102.0

16	Belgium	101.9
17	Spain	98.6
18	Maldives	98.3
19	Antigua and Barbuda	97.2
20	France	95.2
21	Egypt	93.8
<b>22</b>	<b>United Kingdom</b>	<b>92.0</b>
23	Sudan	90.8
24	Jordan	90.0
25	Canada	88.1
26	Iceland	86.4
27	St. Kitts and Nevis	86.2
28	St. Lucia	84.6
29	The Gambia	80.2
30	Austria	80.1

38	Germany	75.5
45	Ukraine	67.6
50	Brazil	65.8
55	India	60.5
58	Zimbabwe	58.5
75	Argentina	48.9
77	Mexico	48.0
80	Switzerland	47.2
97	China	40.7
98	Taiwan	40.0
113	Korea	35.4
129	Australia	30.6
163	Russia	15.7
176	Hong Kong	6.5
178	Saudi Arabia	2.6

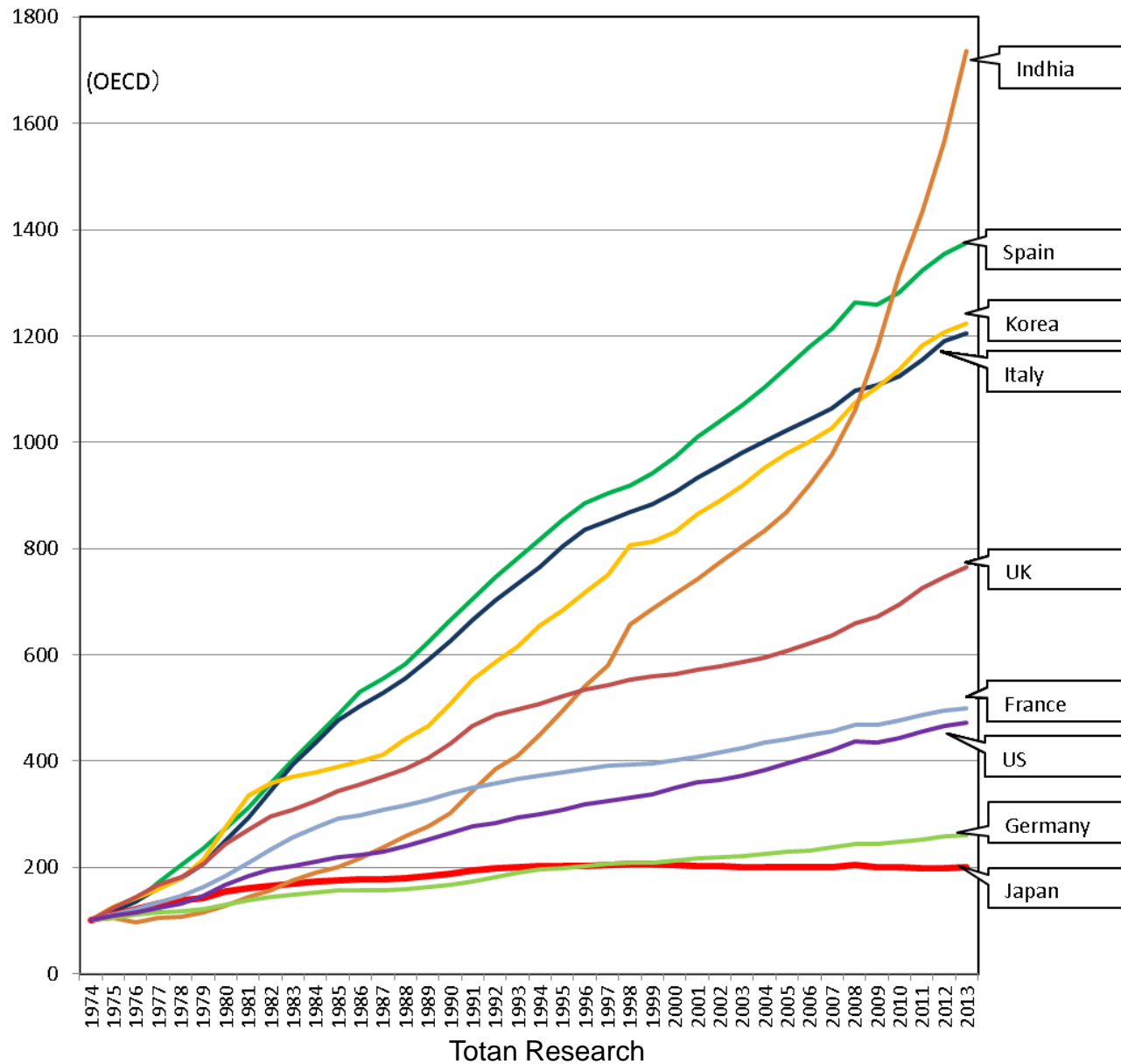


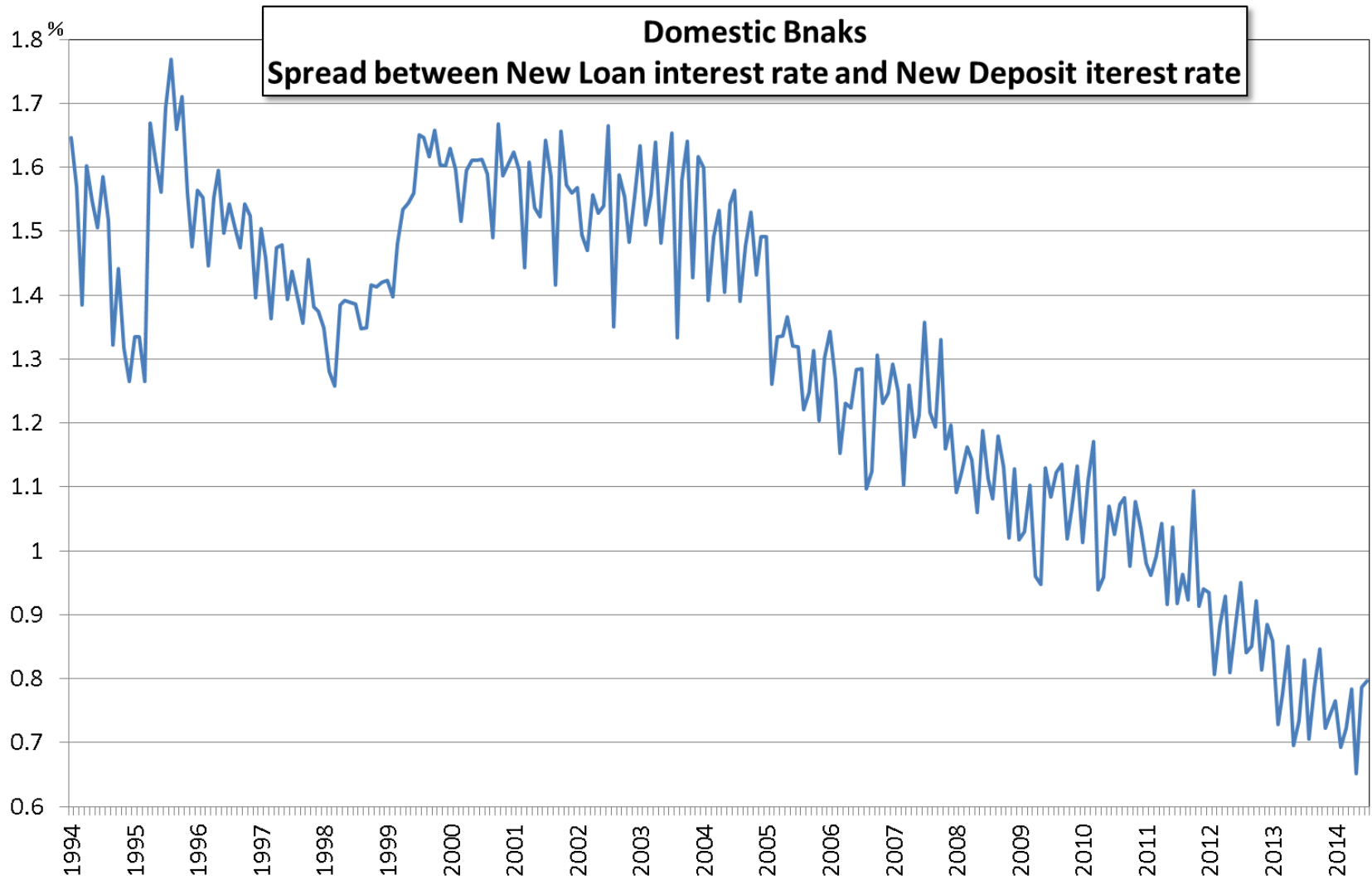




# Additional Charts

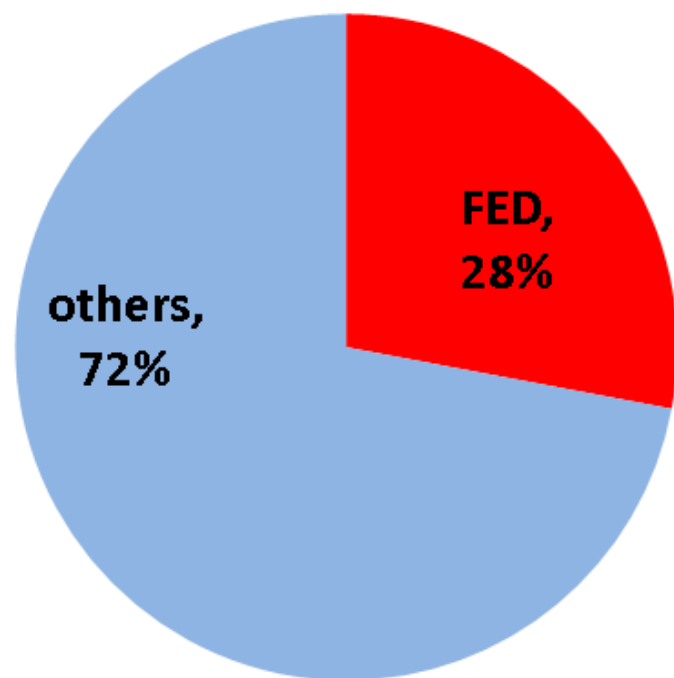
## CPI (1974=100)



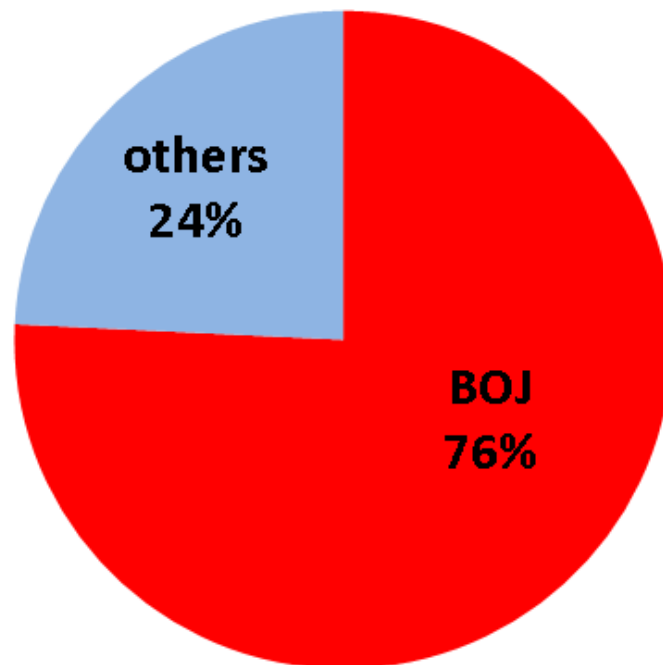


# The BOJ is buying vast amount JGBs

The share of the central bank purchase against the amount of monthly issuance by the government



Under the QE3 (before tapering)

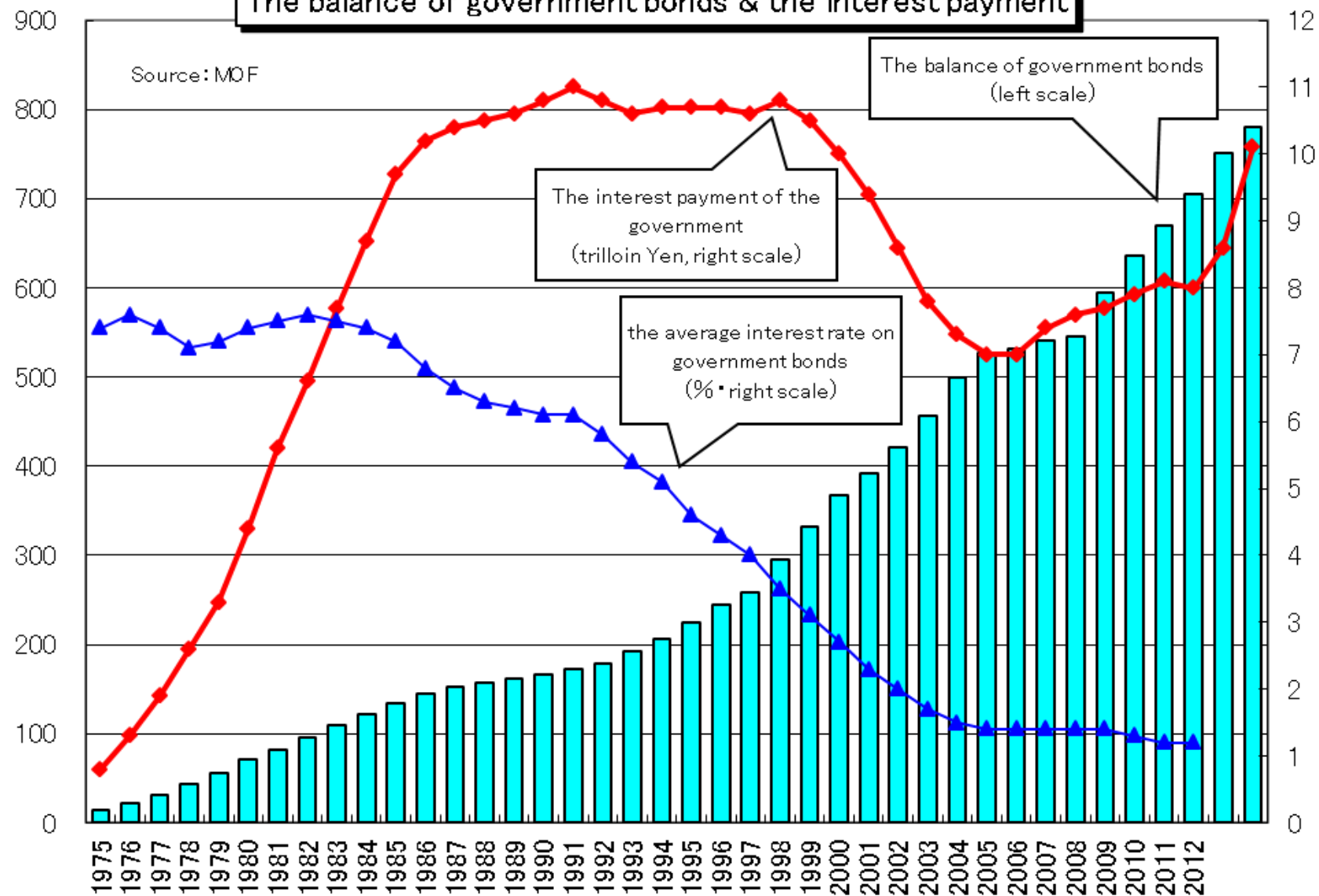


trillion Yen

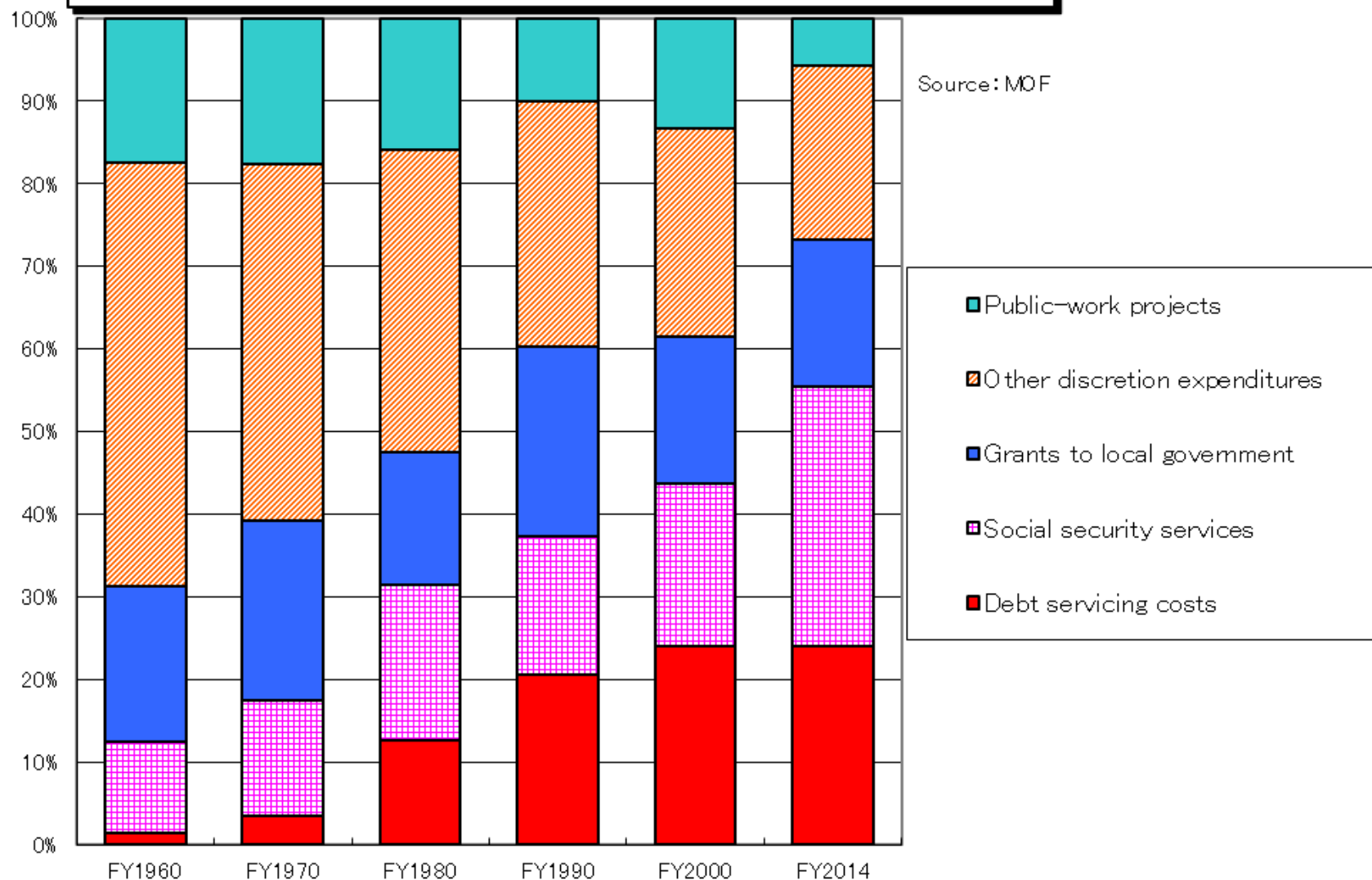
900

## The balance of government bonds & the interest payment

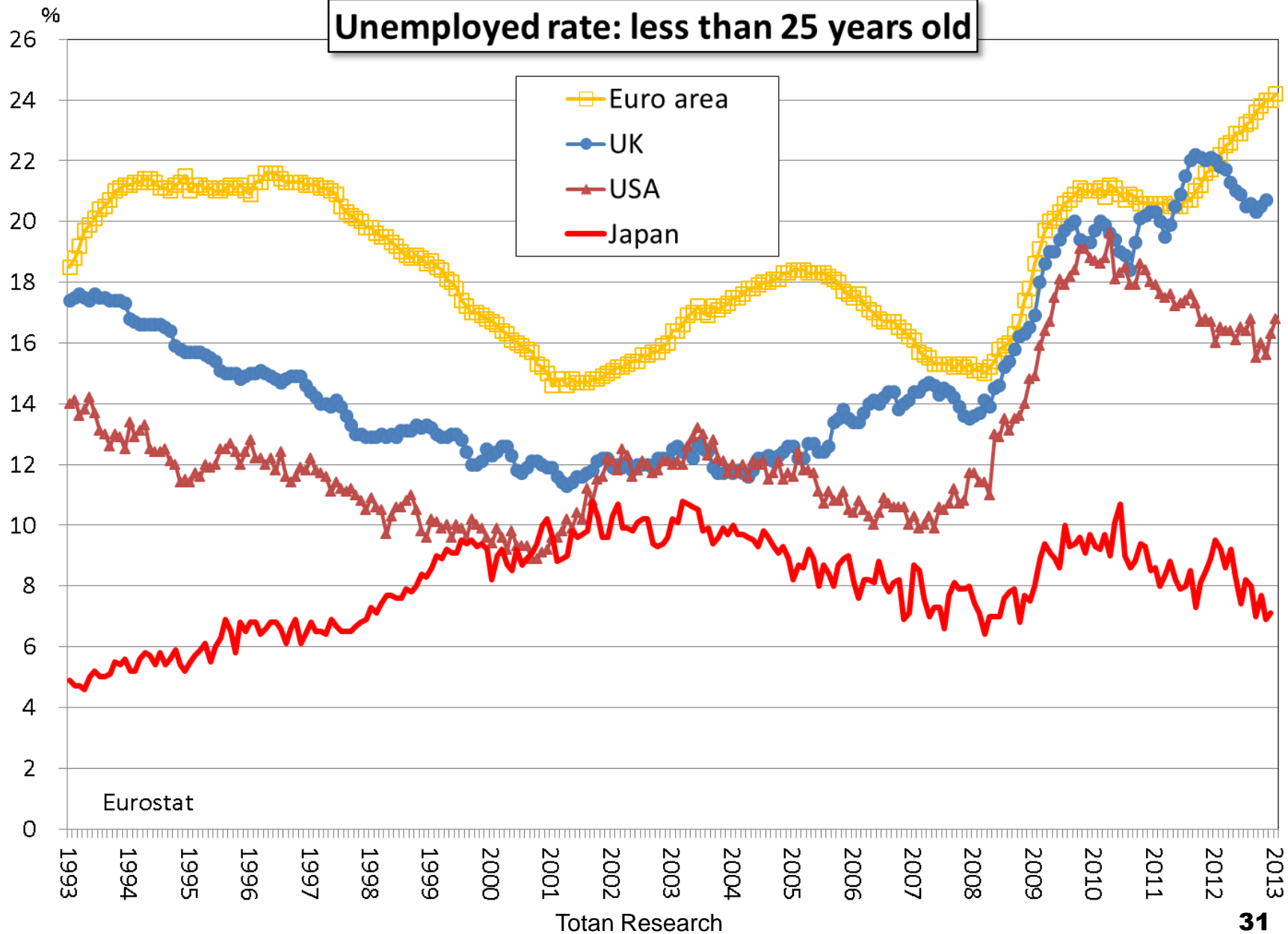
Source: MOF



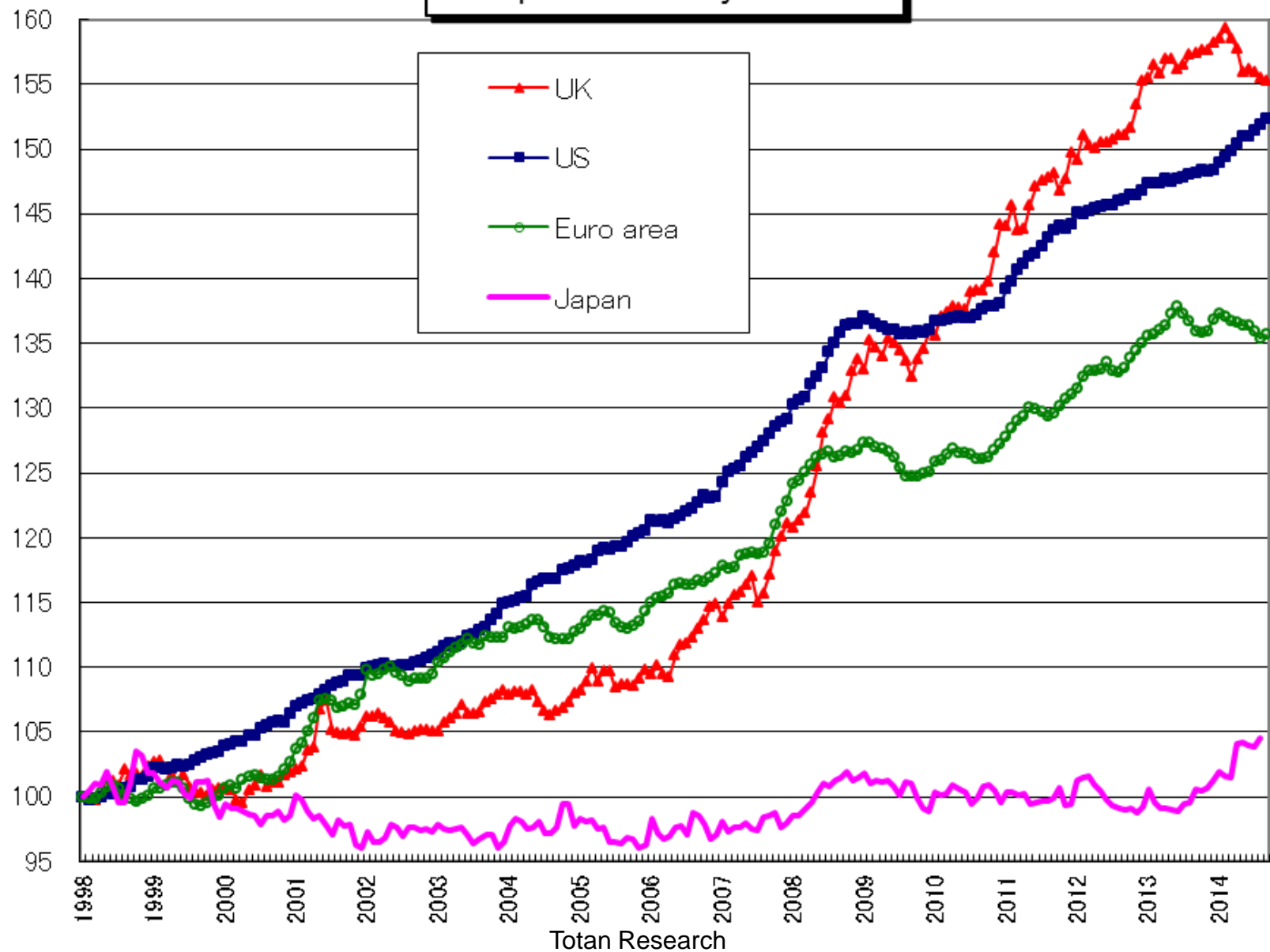
Ratio of major factor against fiscal expenditures in the general account



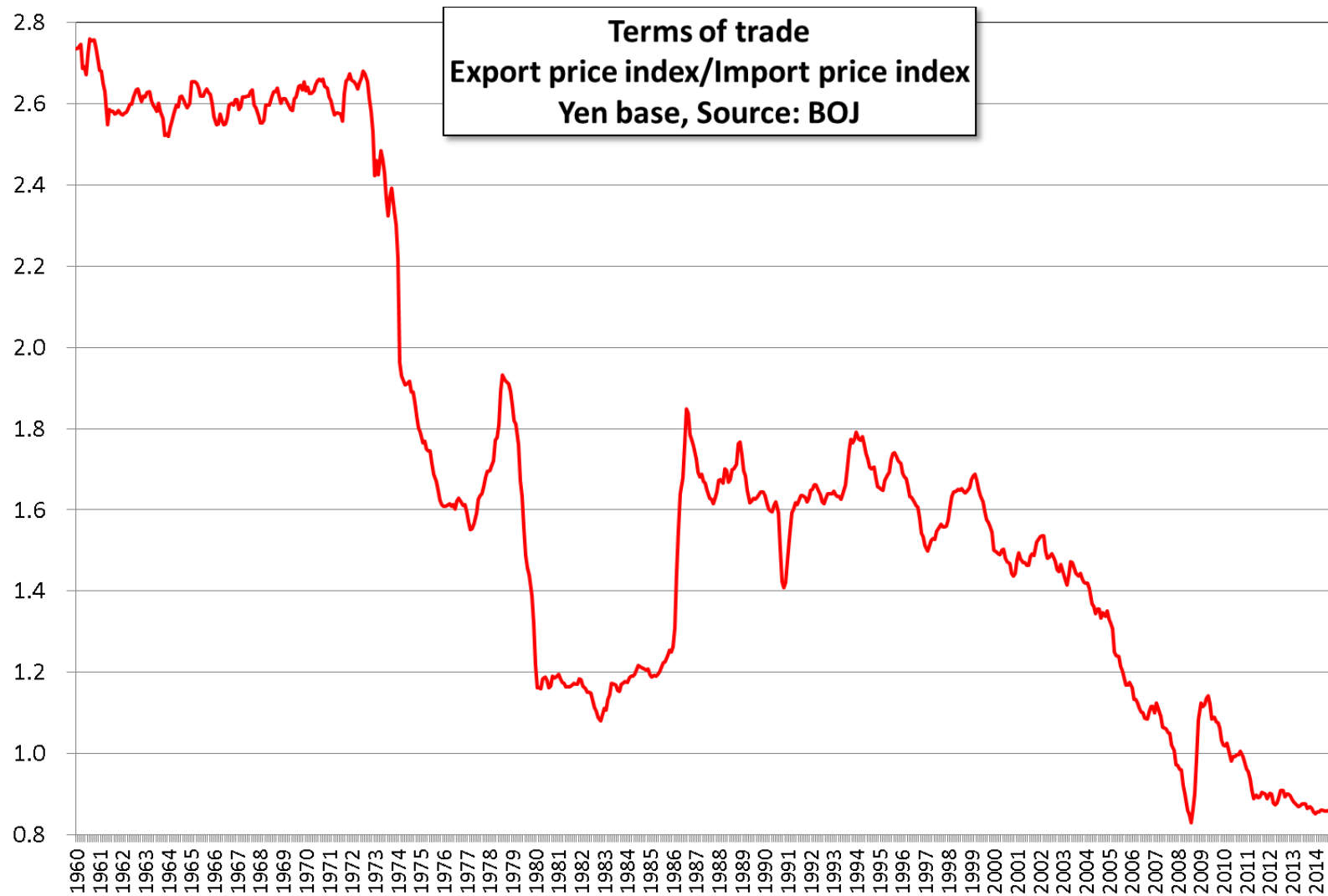
## Unemployed rate: less than 25 years old

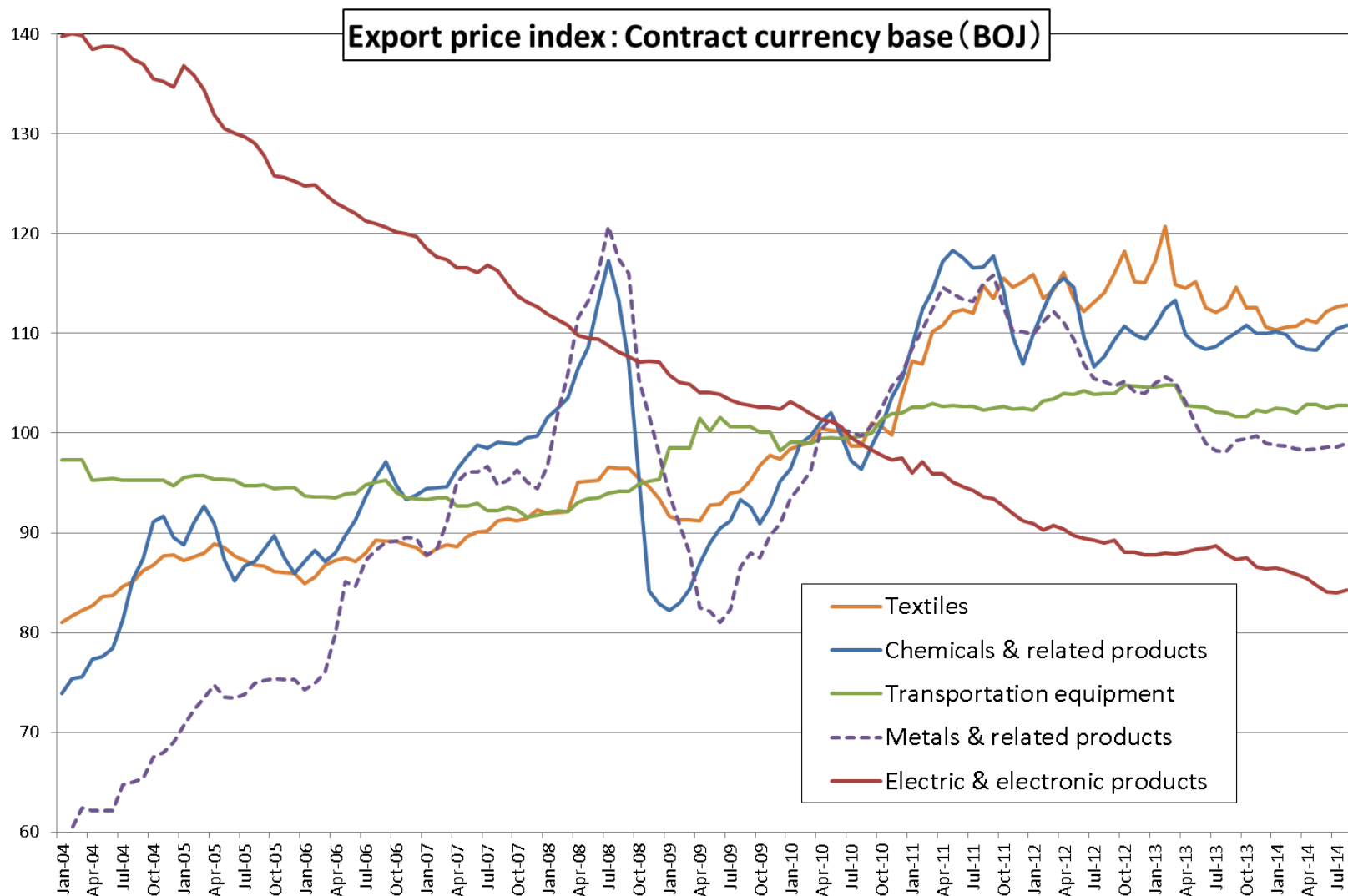


Food price: January 1998=100

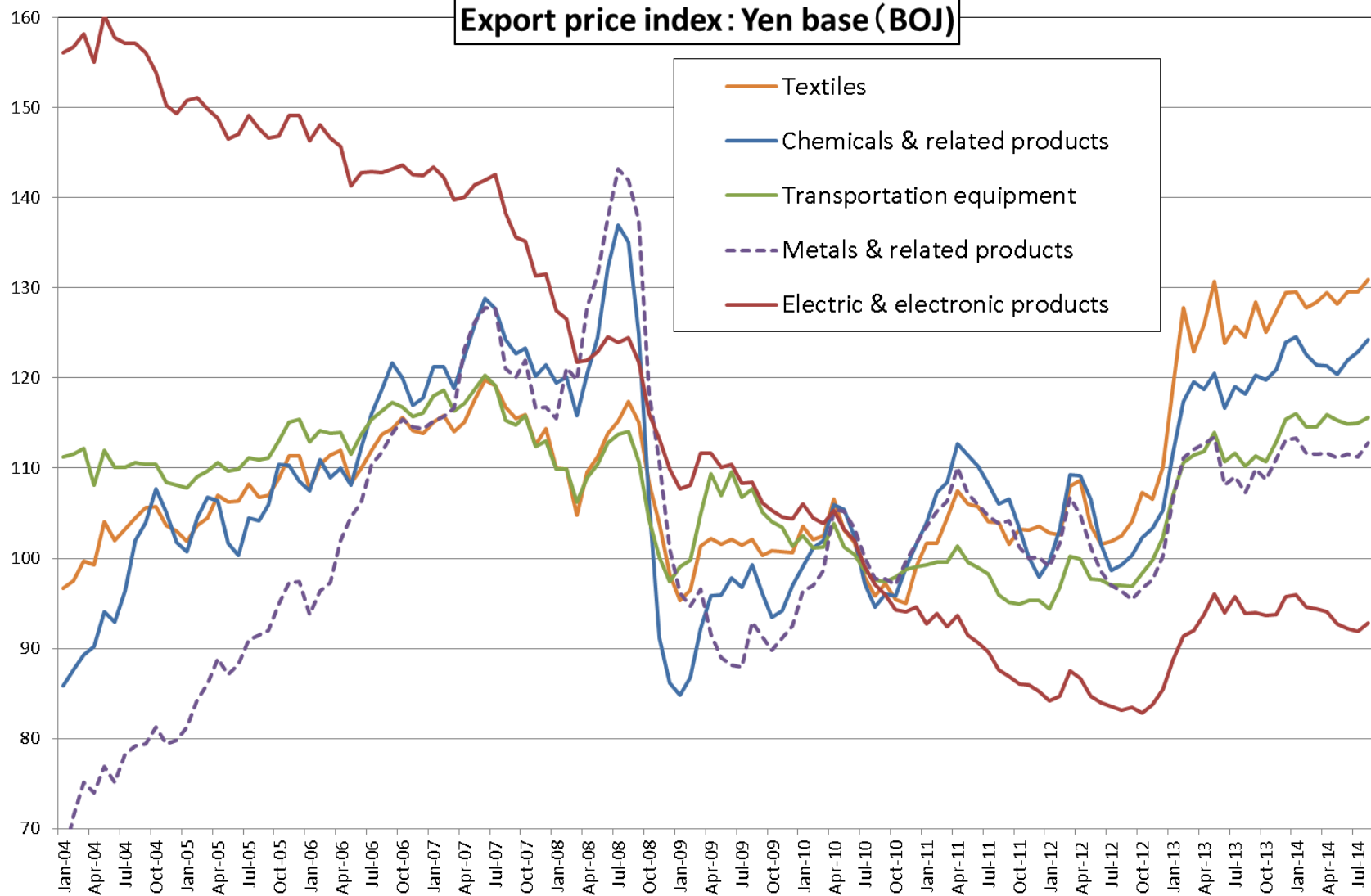




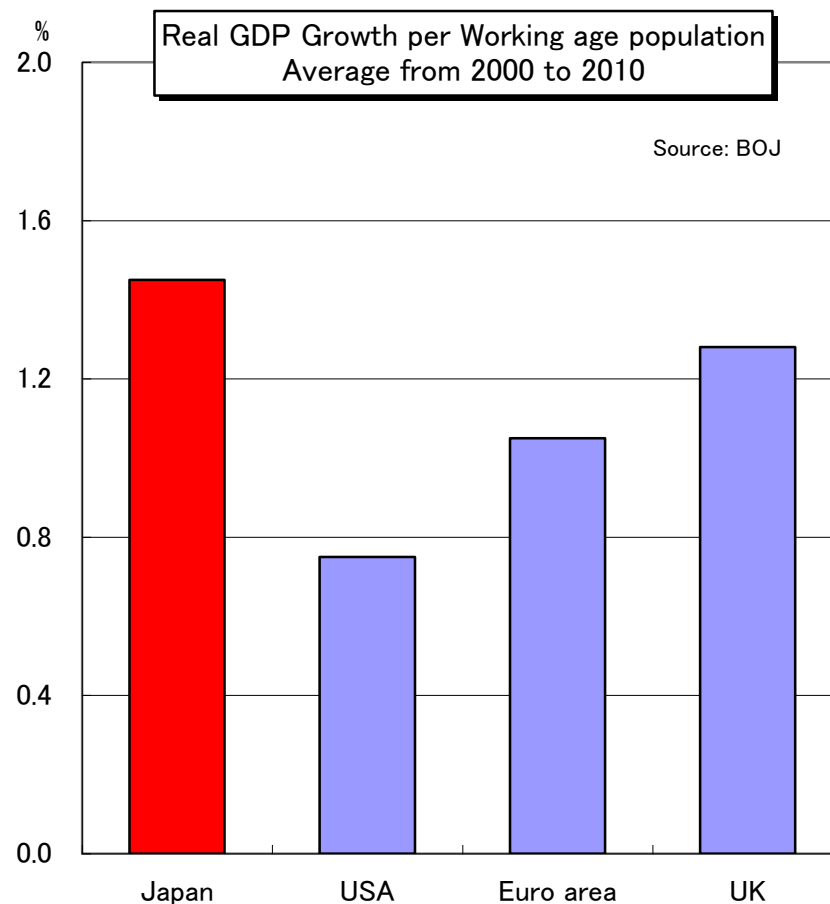
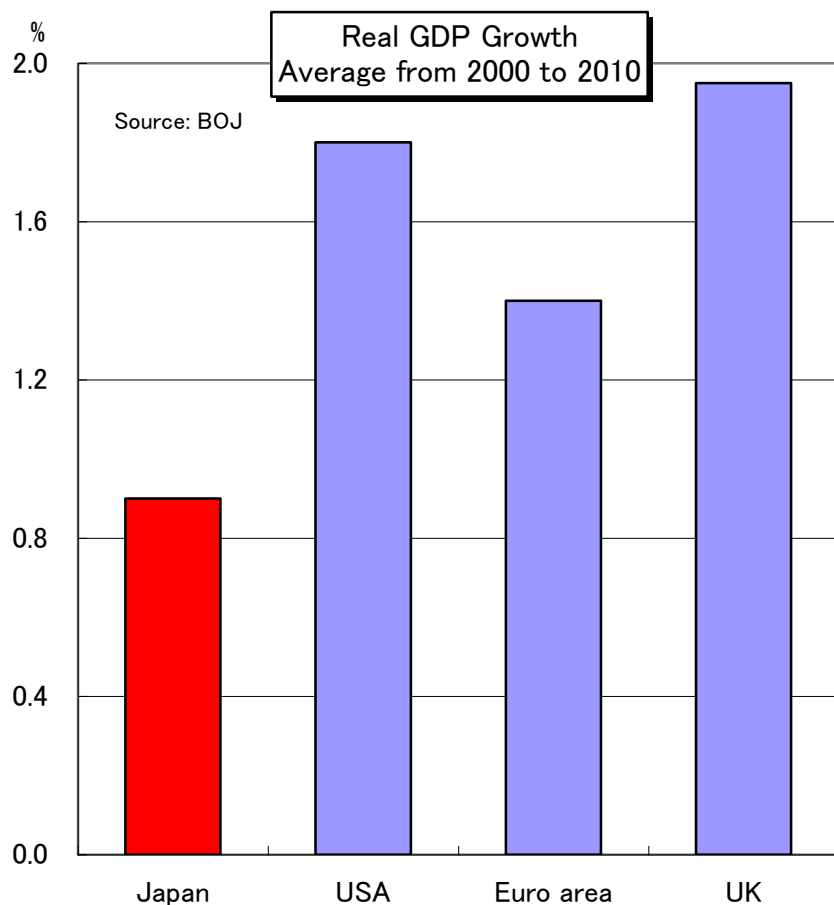




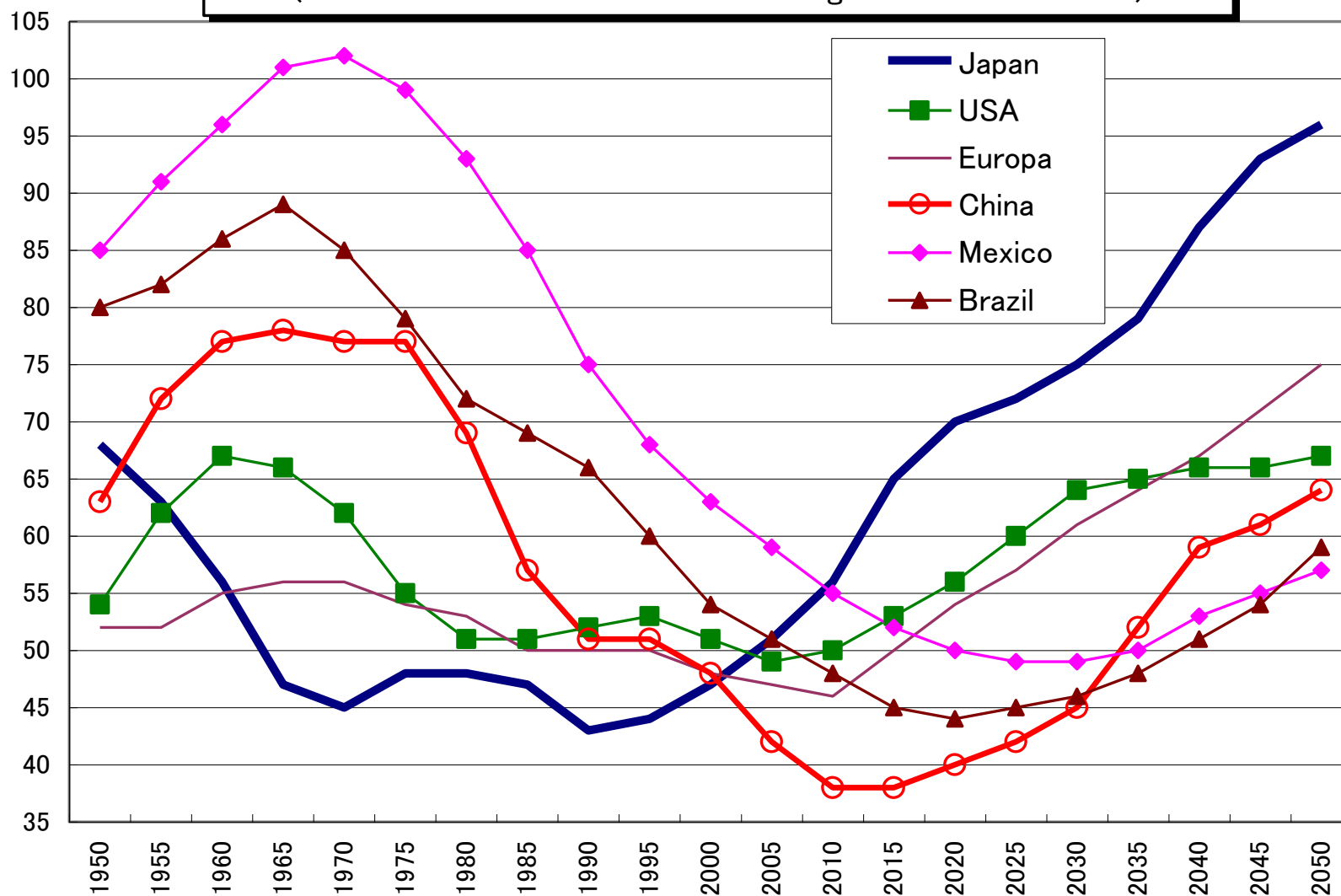
## Export price index: Yen base (BOJ)



The left graph shows the average growth rates for the period from 2000 to 2010. The growth rate of Japan is lower than those of the USA, the euro zone and the UK. But, according to the right graph showing the growth rates of GDP divided by the working age population, Japan shows higher figure than other countries.



The ratio of dependent population against the working age population  
(The United Nations' estimates using the medium variant)



## Median age ( United Nations, Medium variant)

	Japan	USA	UK	Germany	China	India	Brazil
1950	22.3	30.0	34.9	35.3	23.7	21.3	19.2
1955	23.6	30.1	35.1	34.4	22.0	20.8	18.9
1960	25.5	29.6	35.5	34.8	21.3	20.3	18.6
1965	27.3	28.5	35.0	34.4	19.8	19.6	18.2
1970	28.9	28.2	34.2	34.1	19.4	19.3	18.6
1975	30.4	28.9	33.9	35.4	20.5	19.7	19.4
1980	32.6	30.1	34.4	36.7	22.1	20.2	20.3
1985	35.1	31.5	35.3	37.2	23.6	20.7	21.3
1990	37.4	32.9	35.8	37.7	24.8	21.3	22.5
1995	39.6	34.1	36.5	38.3	26.9	22.1	23.9
2000	41.3	35.3	37.6	39.9	29.6	23.0	25.3
2005	43.0	36.2	38.7	42.0	32.2	24.1	27.0
2010	44.9	37.1	39.8	44.3	34.6	25.5	29.0
2015	46.5	37.7	40.5	46.3	36.0	26.9	31.3
2020	48.3	38.2	40.9	47.6	37.7	28.4	33.6
2025	50.2	38.9	41.6	48.4	39.6	29.9	35.8
2030	51.6	39.5	42.3	49.1	42.1	31.3	37.9
2035	52.5	40.1	43.0	50.0	44.4	32.8	39.9
2040	53.1	40.4	43.3	51.0	45.9	34.1	41.9
2045	53.4	40.5	43.3	51.4	46.4	35.4	43.8
2050	53.4	40.6	43.3	51.5	46.3	36.7	45.6

## BOJ's Balance sheet at the end of the year estimated by the Totan Research

trillion yen

	Actual		Forecast		
	2012	2013	2014	2015	2016
JGBs	89.2	141.6	203	283	363
CPs	2.1	2.2	2.2	2.2	2.2
Corporate Bonds	2.9	3.2	3.2	3.2	3.2
ETFs	1.5	2.5	3.8	6.8	9.8
J-REITs	0.1	0.14	0.18	0.27	0.35
Loan Suport programs	3.5	8.5	23.6	29.6	36.6
Funds-Supplying Operations	26.9	18.1	6.4	4.6	4.6
T-bills	24.5	39.8	50.5	46.3	39.3
Purchases	9.6	24.2	39	34.3	27.3
Underwritings	14.9	15.6	11.5	12	12
others	7.7	8.2	7.5	7.5	7.5
Total Assets	158.4	224.2	300	383	467
Monetary Base	138.5	201.8	275	355	436
Current Account Balances	47.2	107.1	177	255	334
Banknotes	86.7	90.1	93	95	97
Coins	4.6	4.6	4.6	4.6	4.6

# If the BOJ strats to taper the QQE in January in 2017...

trillion yen

	2016	2017	Change
JGBs	363	376	13
CPs	2.2	0	-2.2
Corporate Bonds	3.2	2	-1.2
ETFs	9.8	10.3	0.5
J-REITs	0.35	0.35	0
Loan Suport programs	36.6	28.3	-8.3
Funds-Supplying Operations	4.6	4	-0.6
T-bills	39.3	13	-26.3
Purchses	27.3	1	-26.3
Underwritings	12	12	0
others	7.5	7.5	0
Total Assets	467	441	-26

Monetary Base	436	411	-25
Current Account Balances	334	307	-27
Banknotes	97	99	2
Coins	4.6	4.6	0