Global Economy in Transition Comments

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Deflation and Growth Rate

1995 FY	101.0	-0.1	1995 FY		504,594.3		1.8
1996 FY	101.4	0.4	1996 FY		515,943.9		2.2
1997 FY	103.5	2.0	1997 FY		521,295.4		1.0
1998 FY	103.7	0.2	1998 FY		510,919.2		-2.0
1999 FY	103.2	-0.5	1999 FY		506,599.2		-0.8
2000 FY	102.6	-0.5	2000 FY		510,834.7		0.8
2001 FY	101.5	-1.0	2001 FY		501,710.7		-1.8
2002 FY	100.9	-0.6	2002 FY		498,008.7		-0.7
2003 FY	100.7	-0.2	2003 FY		501,889.1		0.8
2004 FY	100.6	-0.1	2004 FY		502,760.8		0.2
2005 FY	100.4	-0.1	2005 FY		505,349.4		0.5
2006 FY	100.6	0.2	2006 FY		509,106.4		0.7
2007 FY	101.0	0.4	2007 FY		513,023.3		0.8
2008 FY	102.1	1.1	2008 FY		489,520.1		-4.6
2009 FY	100.4	-1.7	2009 FY		473,996.3		-3.2
2010 FY	99.9	-0.4	2010 FY		480,527.5		1.4
2011 FY	99.8	-0.1	2011 FY		474,170.5		-1.3
2012 FY	99.5	-0.3	2012 FY		474,635.4		0.1
2013 FY	100.4	0.9	2013 FY	r	483,074.4		1.8
2014 FY	103.4	2.9	2014 FY	r	490,599.0	r	1.6

Monetary and Fiscal Policy USA and Europe

1, Inflation targeting = goal 2%, Other goals ?

2, too easy monetary policy for so long period

→ high rate of inflation / bubble

3, Change in monetary policy (=interest rate)

→ Capital inflow to the USA

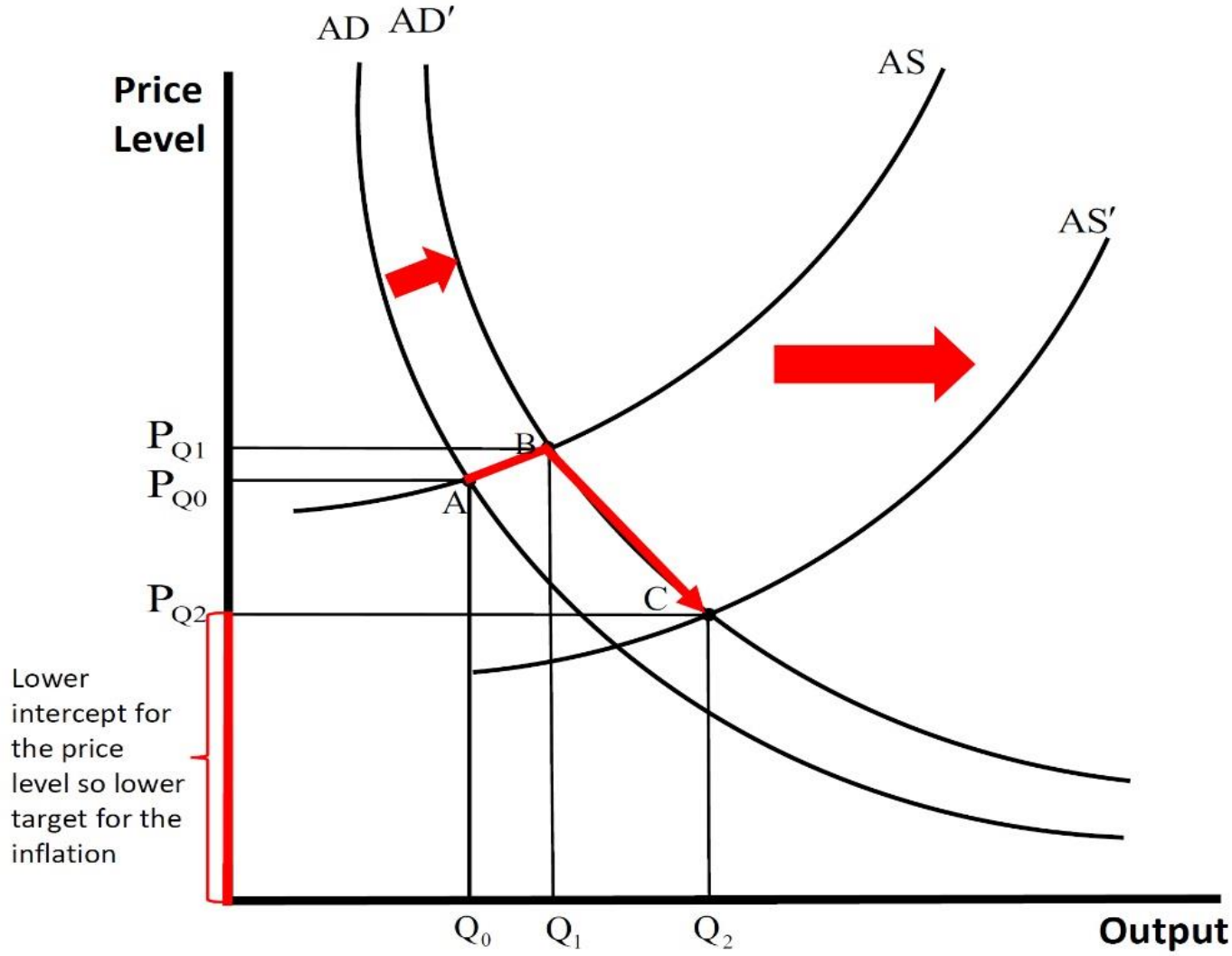
→ Capital outflow from EME

(Asian Financial Crisis of 1997)

4, Easy Monetary Policy → Structural Change

5, US QE → EM stocks go up, commodity prices

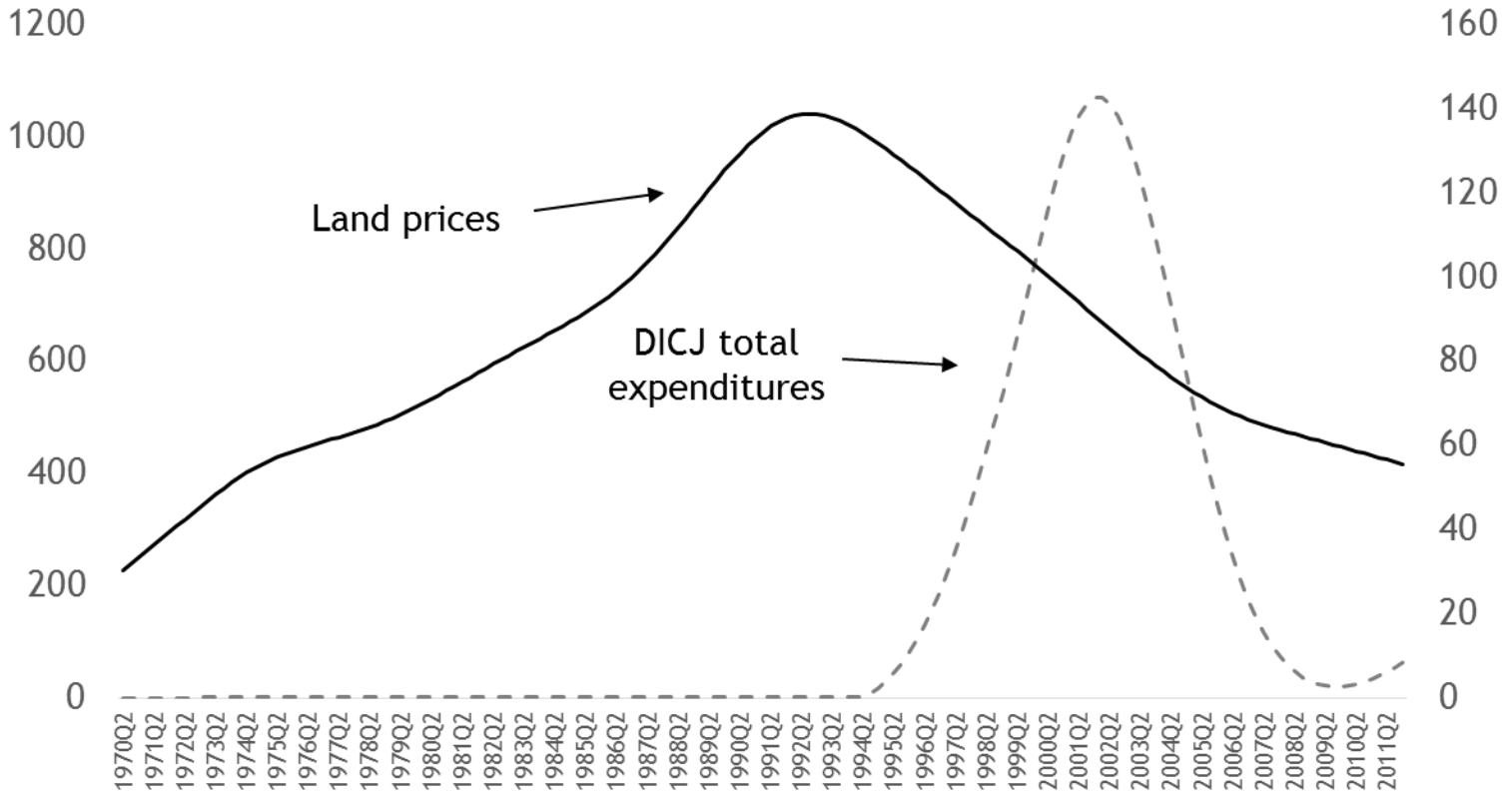
Target rate of inflation, lower oil price, 2% → lower rate



Asset Price Bubbles of Japan of late 1980s

Land Price of Japan

Figure: Land price and deposit insurance of Japan's (DICJ) financial assistance for banking failures



Source: Yoshino, Taghizadeh-Hesary and Nili (2013)

Local Banks start to increase real estate lending

1, Too long QE policy leads to Bubble

Real-estate loans / Total bank loans

2, USA will tighten its monetary policy in this fall.

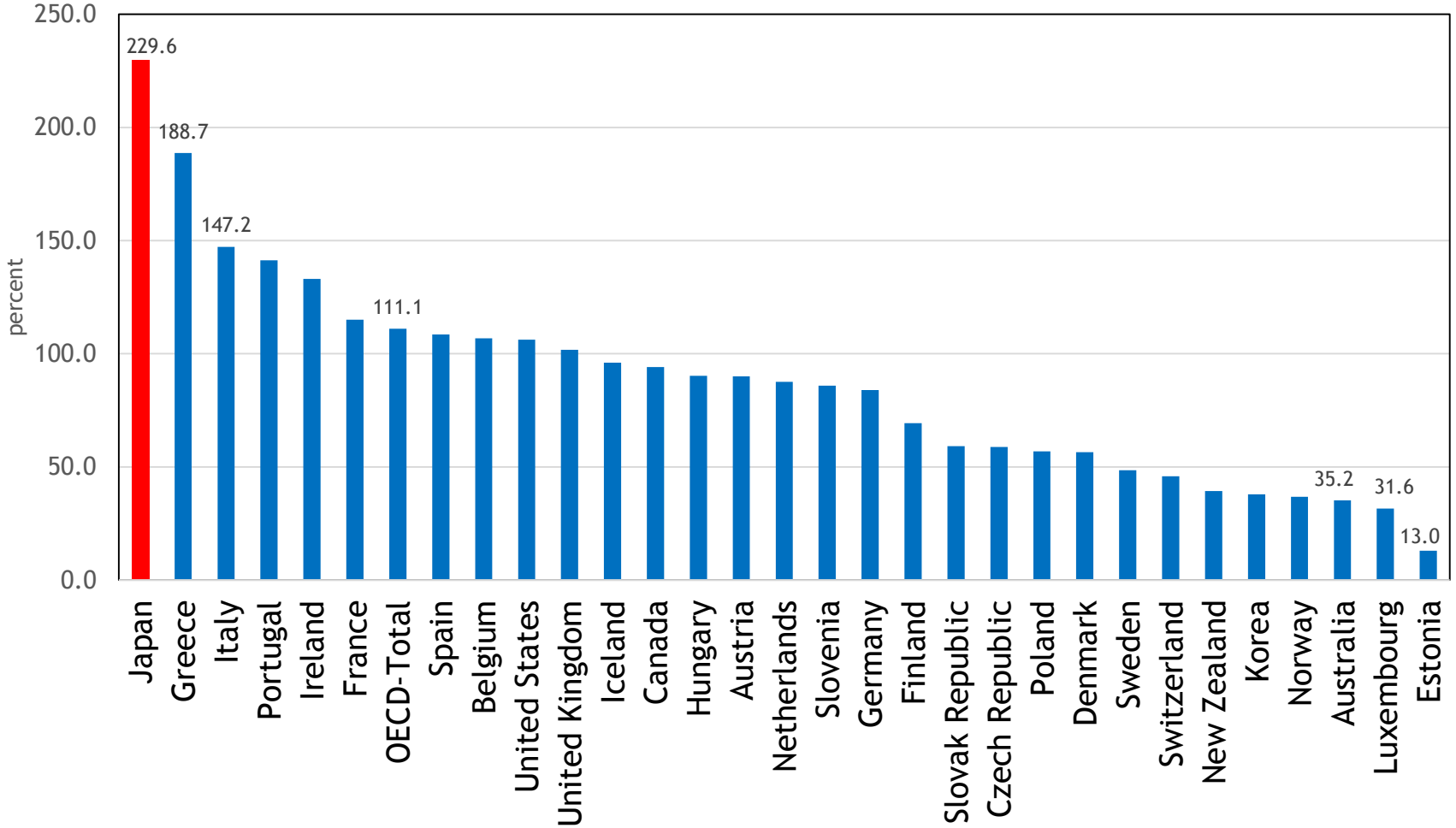
Europe should tighten monetary policy

If Europe does not,

Japan faces with trouble

3, gradual monetary tightening is needed

Gross Debt/GDP ratio, 2014
Selected OECD Countries



Source: OECD Economic

Japan's Debt /GDP Ratio

1995	2014
95.1%	229.6%

Greece Debt / GDP Ratio

1995	2014
101.2%	188.7%

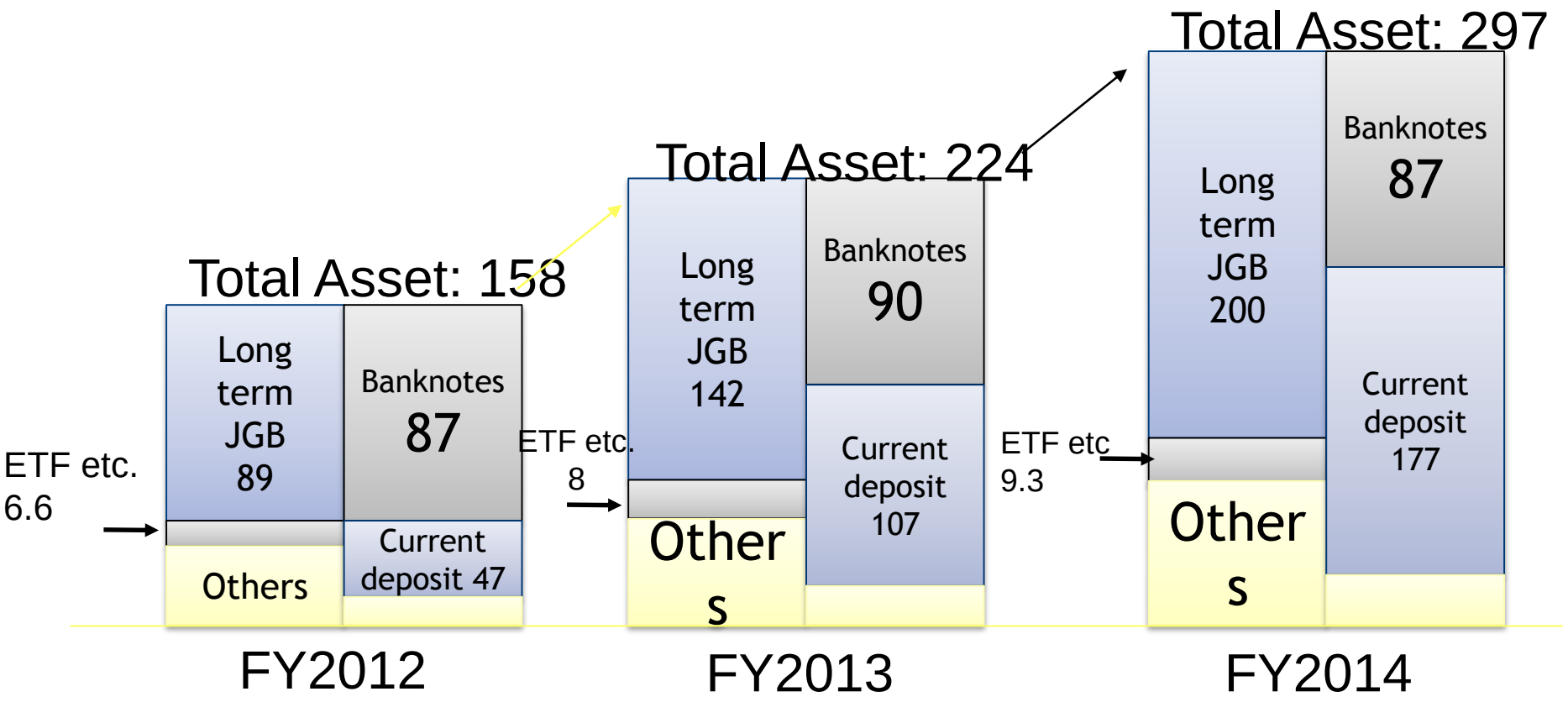
Source: OECD Economic Outlook

Holders of Government bonds

Holders of Japanese Government Bonds (JGB)	% of total	Holders of Greek Government Bonds	% of total
Banks and postal savings	45	Overseas investors	33
Life and non-life insur.	20	Domestic investors	21
Public pension funds	10	European Central Bank	18
Private pension funds	4	Bilateral Loans	14
Bank of Japan	8	Social pension funds	6
Overseas investors	5	IMF	5
Households	5	Greek domestic funds	3
Others	3		

Balance Sheet of BOJ

Unit: Trillion Yen



Data Source : BOJ

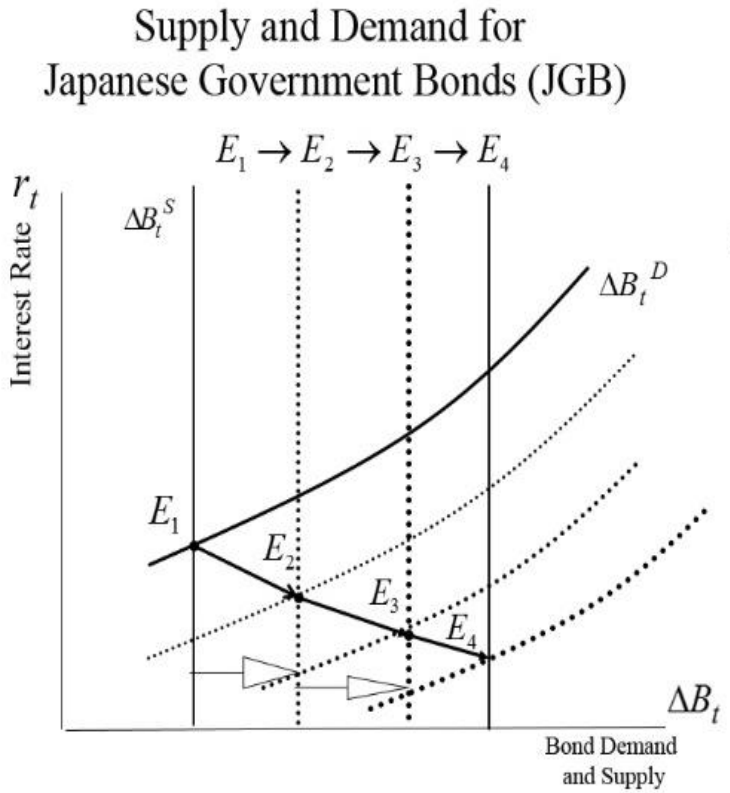
Japanese Debt, 92% are held by Domestic Investors (2014)

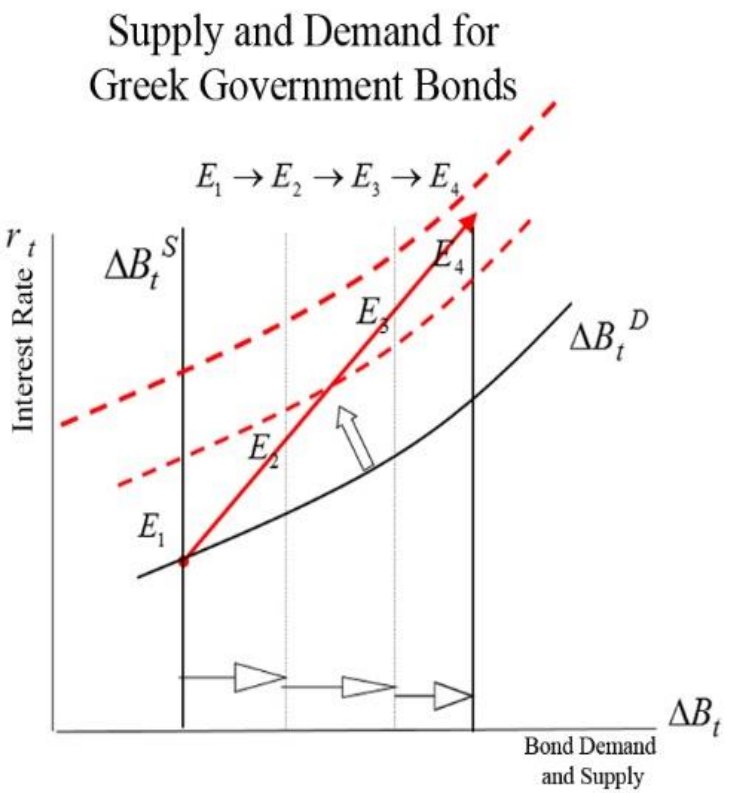
HOLDERS	%
Banks and Postal Savings	27.8%
Bank of Japan	**21.2%**
Life and Non-life Insurances	19.3%
Overseas' Investors	8.5%
Public Pension funds	6.4%
Private Pension Funds	3.4%
General Government	2.6%
Households	2%
Others	1.5%

Stable bond market of Japan

The Difference between Japan and Greece

The Government Bond Markets (Japan and Greece)





Source: Yoshino and Mizoguchi (2013).

Changes in Japan's Money Flow

High Growth Period

Households Savings → Corporate → Capital

Investment Stock

S → I → K

Recent Period

Corporate Savings → Government → **Elderly people**

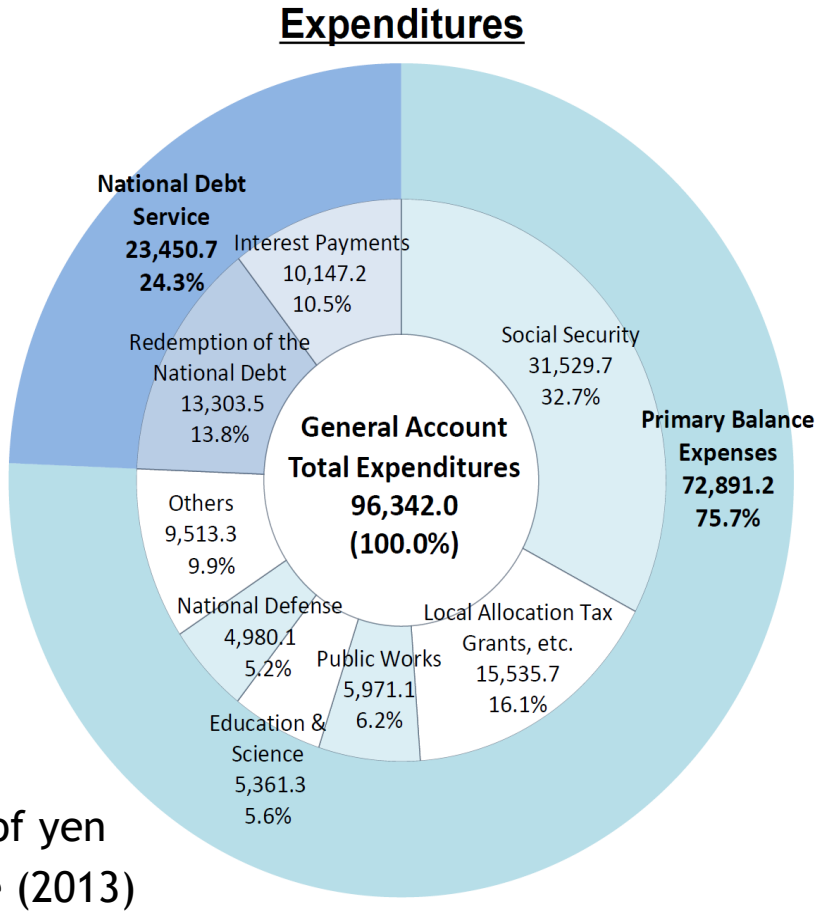
S → G → Social Welfare

Abolish Retirement Age
Increase working population
Pension payment will start 65 or later
Wage rate be based on marginal productivity
SME and Startup business finance
Hometown Investment Trust Funds

Increase of Social Welfare Spending

Transfers from central to local governments

Figure: General Account Budget for FY 2015

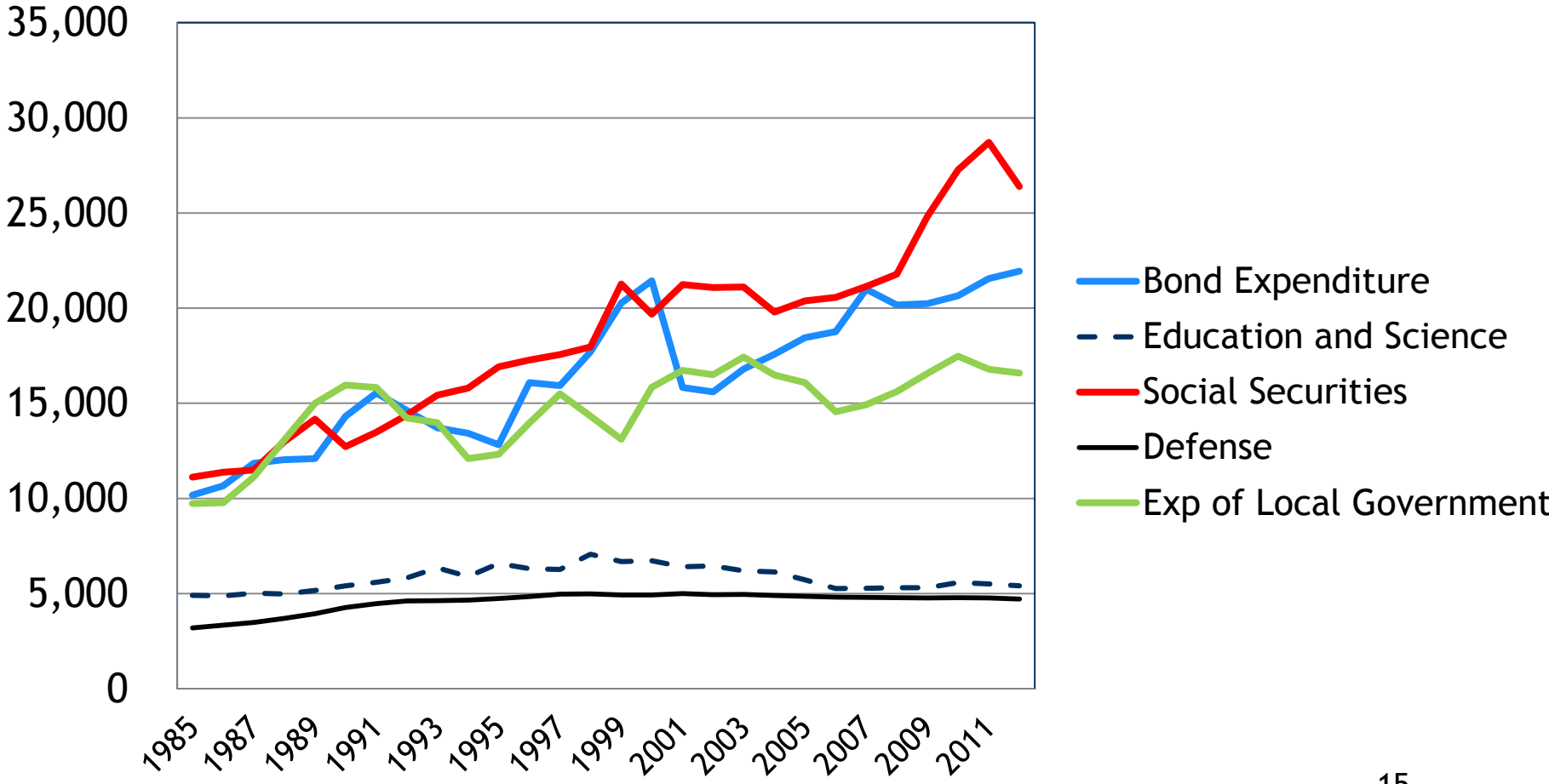


Note: Units are in billions of yen

Source: Ministry of Finance (2013)

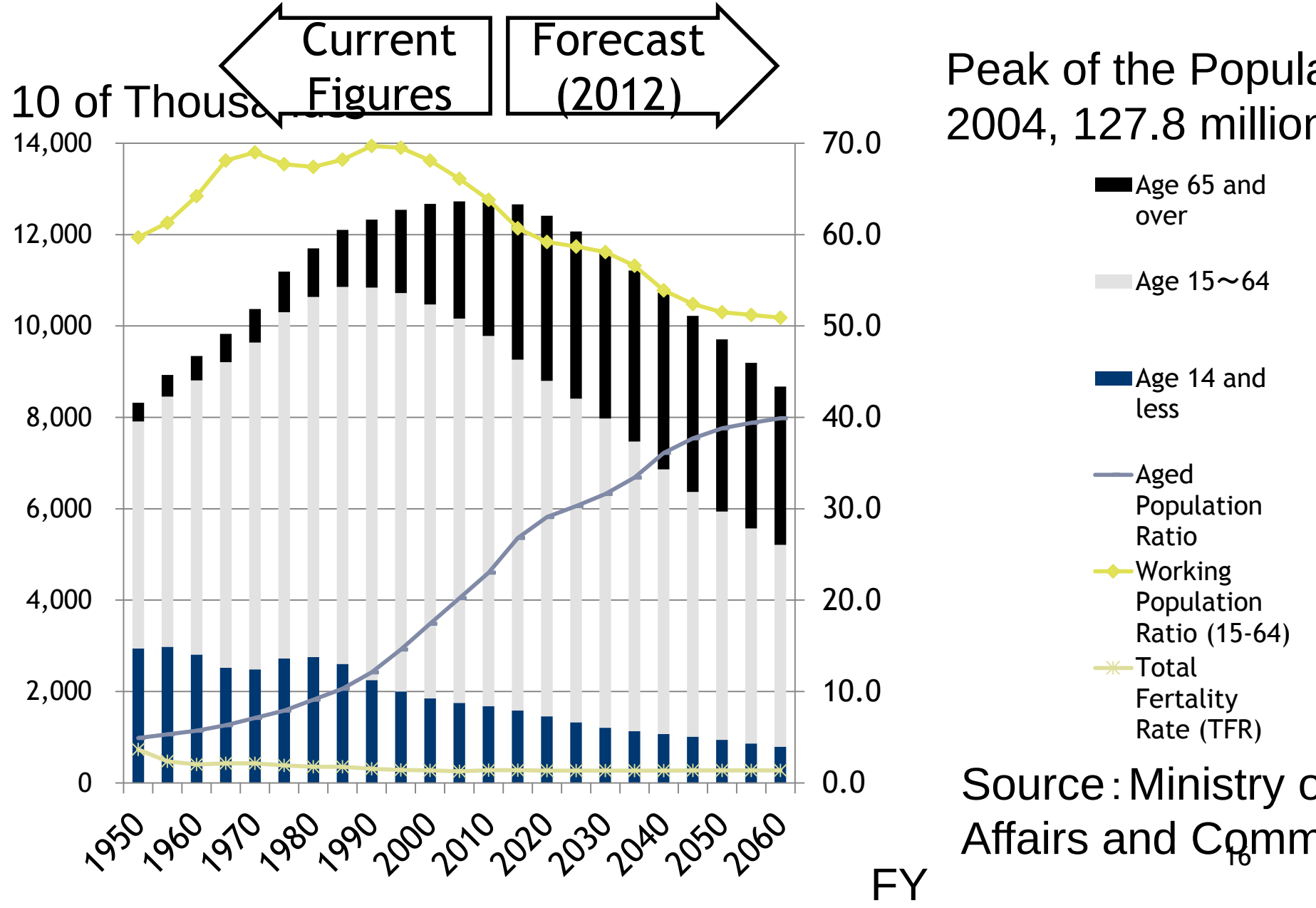
Increase of Social Welfare Spending

Figure: Budget Allocation of Central Government (Japan, 1985-2012)



Source: MOF Unit=billion yen

Population Aging of Japan



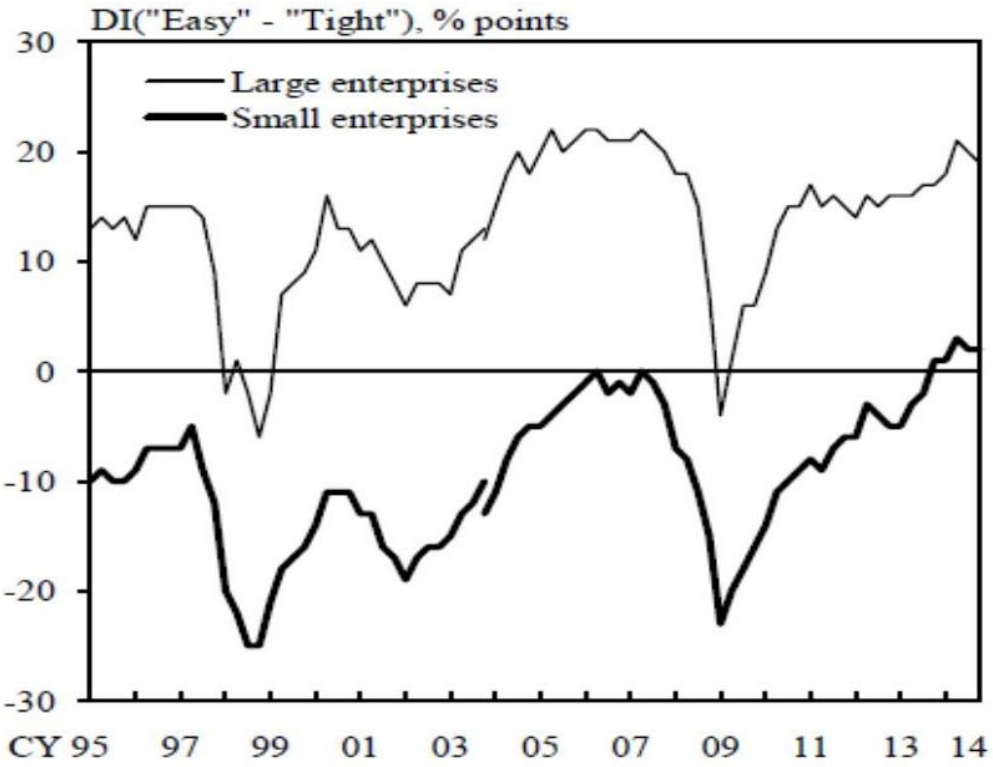
Peak of the Populatio
2004, 127.8 million

Source：Ministry of I
Affairs and Commun

SMEs' and Start ups difficulty to raise money

Bank Lending to SMEs

Figure: Access to Finance by SMEs and Large Firms in Japan

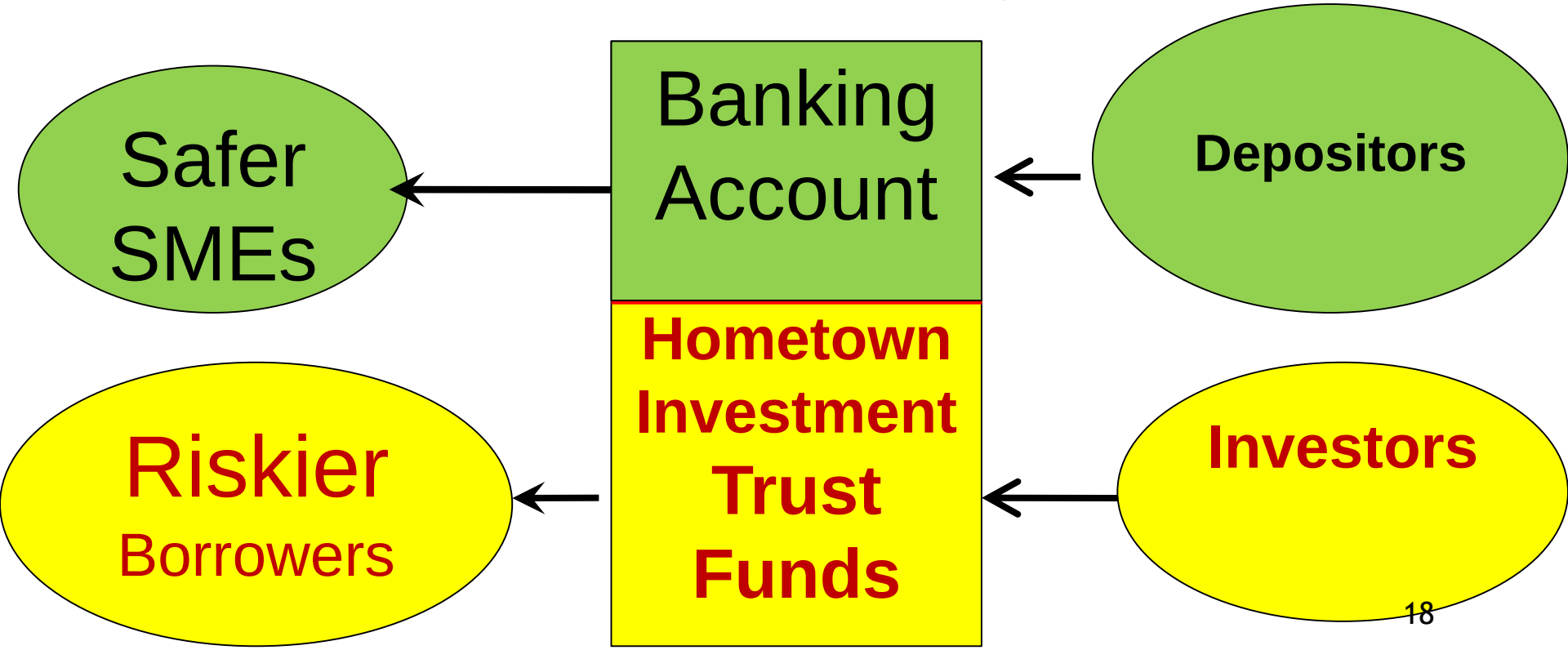


Notes: DI = Diffusion index, CY = Commercial year
Source: Yoshino and Taghizadeh-Hesary (ADBI WP, Lost Decade of Japan, 2015)

Bank-based SME financing and regional financing to riskier borrowers

1. Bank Loans to relatively safer borrower
2. Hometown Investment Trust Funds/

E-Finance, Internet financing



Investment in SMEs and start up businesses

Agricultural Funds

Beans and Wine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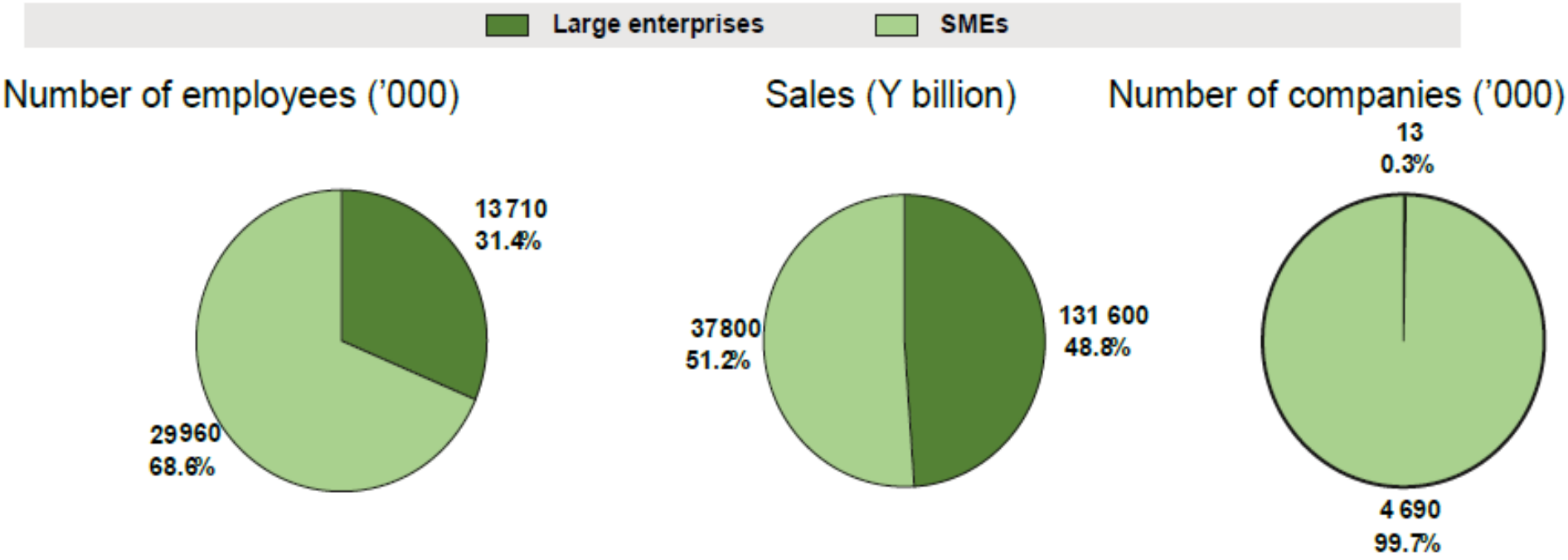
ANALYTICAL FRAMEWORK ON CREDIT RISKS FOR FINANCING SMALL AND MEDIUM-SIZED ENTERPRISES IN ASIA

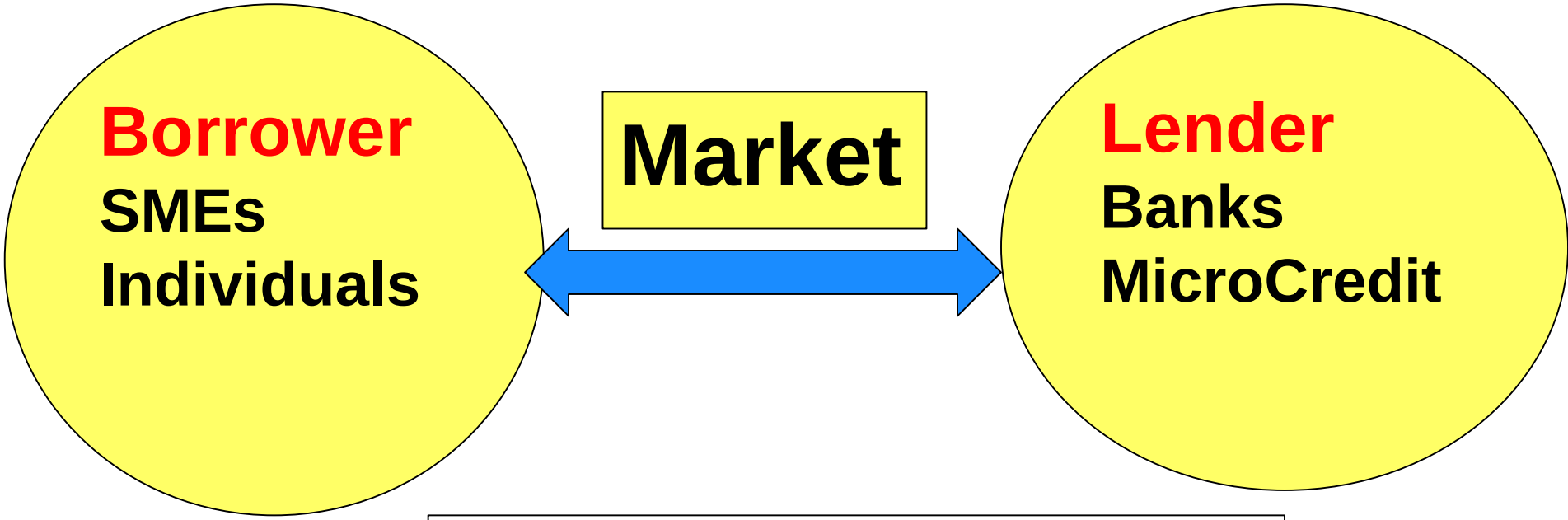
*Naoyuki Yoshino and Farhad Taghizadeh-Hesary**

SMEs in Japan



Source: White Paper on SMEs, Japanese Government, METI, 2011.

Borrower, Lender and Market



Information Asymmetry
Especially SME market

Four Accounts by SME

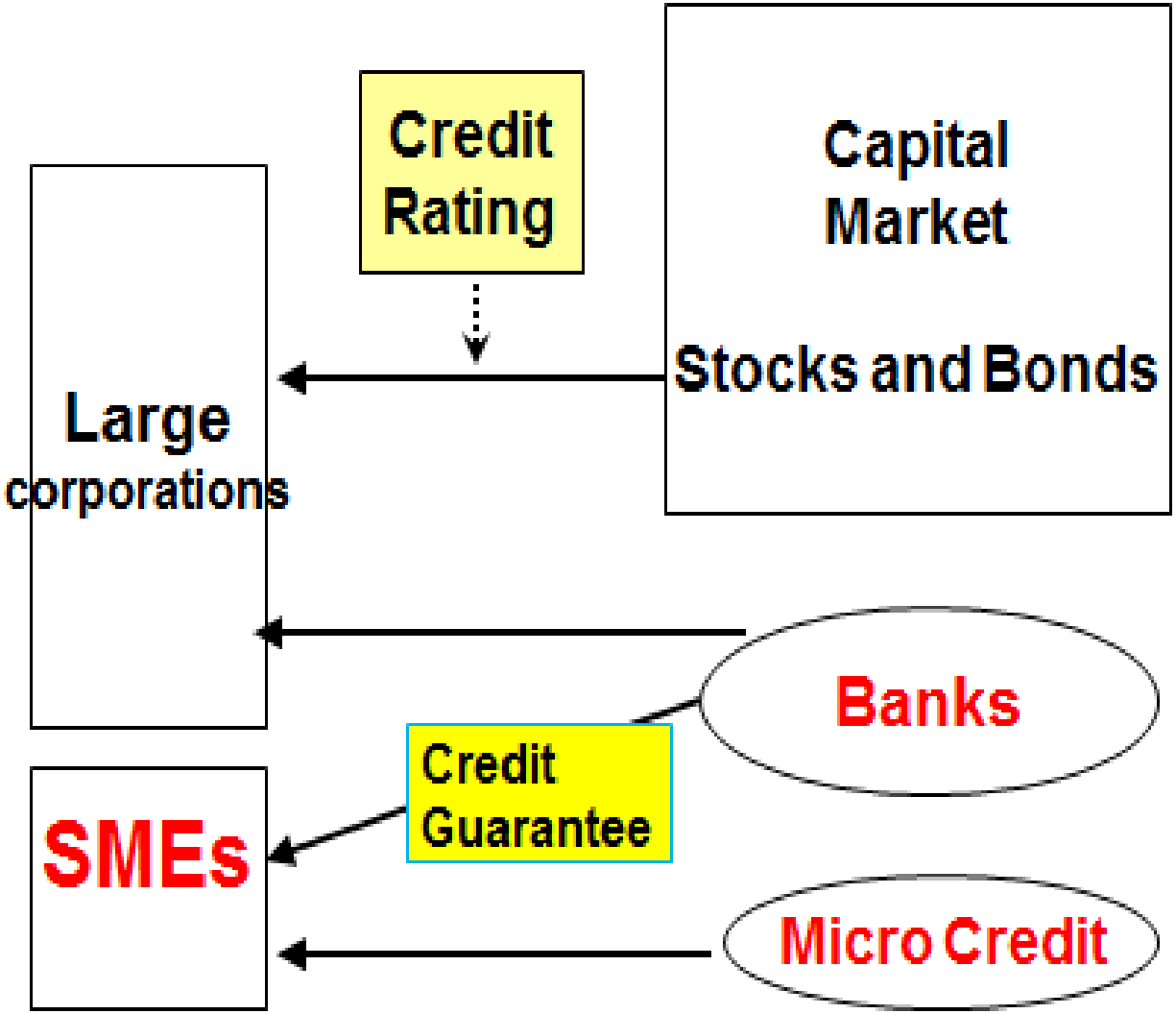
1, Account to show **Banks**

2, Account to show **tax authority**

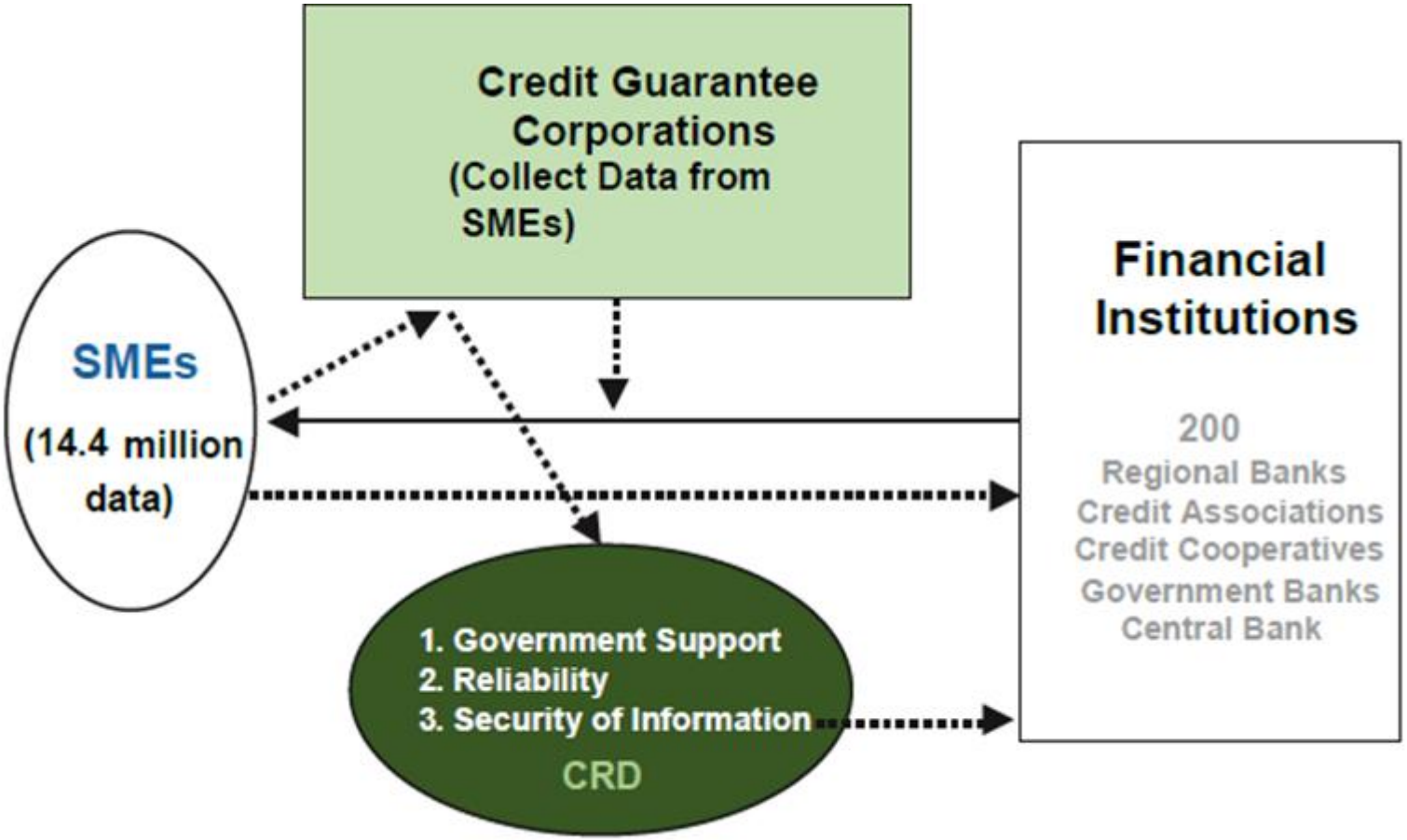
3, His own account

4, Account to show **his wife**

Lack of Data for SMEs



5.B Credit Risk Database of Credit Guarantee



Source: Yoshino (2012).

Analysis of SME credit risk using Asian data

- Selection of the variables
- Principal Component Analysis
- Cluster Analysis

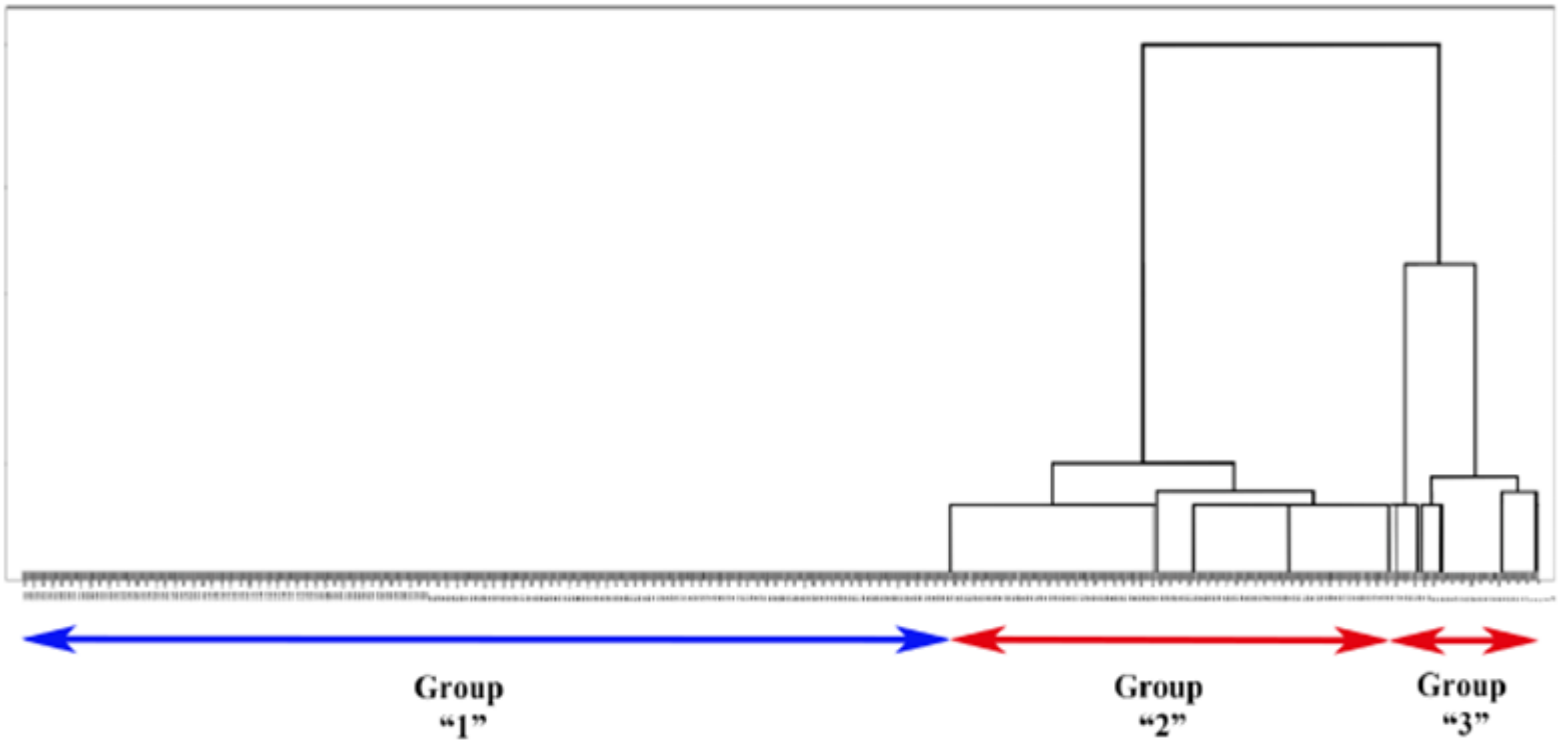
Examined Variable

No.	Symbol	Definition	Category
1	Equity_TL	Equity (book value)/total liabilities	Leverage
2	TL_Tassets	Total liabilities/total assets	
3	Cash_Tassets	Cash/total assets	Liquidity
4	WoC_Tassets	Working capital/total assets	
5	Cash_Sales	Cash/net sales	
6	EBIT_Sales	Ebit/sales	Profitability
7	Rinc_Tassets	Retained earnings/total assets	
8	Ninc_Sales	Net income/sales	
9	EBIT_IE	Ebit/interest expenses	Coverage
10	AP_Sales	Account payable/sales	Activity
11	AR_TL	Account receivable/total liabilities	

Note: Retained earnings = the percentage of net earnings not paid out as dividends, but retained by the company to be reinvested in its core business or to pay debt. It is recorded under shareholders' equity in the balance sheet. Ebit = earnings before interest and taxes. Account payable = an accounting entry that represents an entity's obligation to pay off a short-term debt to its creditors. The accounts payable entry is found on a balance sheet under current liabilities. Account receivable = money owed by customers (individuals or corporations) to another entity in exchange for goods or services that have been delivered or used, but not yet paid for. Receivables usually come in the form of operating lines of credit and are usually due within a relatively short time period, ranging from a few days to a year.

Cluster analysis: the average linkage method

Dendogram Using Average Linkage



Factor Loadings of Financial Variables after Direct Oblimin Rotation

Variables (Financial Ratios)	Component			
	Z1	Z2	Z3	Z4
Equity_TL	0.009	0.068	0.113	**0.705**
TL_Tassets	-0.032	**-0.878**	0.069	-0.034
Cash_Tassets	-0.034	-0.061	**0.811**	0.098
WoC_Tassets	-0.05	**0.762**	0.044	0.179
Cash_Sales	**-0.937**	0.021	0.083	0.009
EBIT_Sales	**0.962**	0.008	0.024	-0.004
Rinc_Tassets	0.014	**0.877**	0.015	-0.178
Ninc_Sales	**0.971**	-0.012	0.015	0.014
EBIT_IE	0.035	0.045	**0.766**	-0.098
AP_Sales	**-0.731**	-0.017	-0.037	-0.016
AR_TL	0.009	-0.041	-0.104	**0.725**

Note: The extraction method was principal component analysis, The rotation method was direct oblimin with Kaiser normalization.

Financial Education for SMEs
Education Program and Textbooks

1, Financial Planners Association

Individual Borrowing

2, Central Bank of Japan

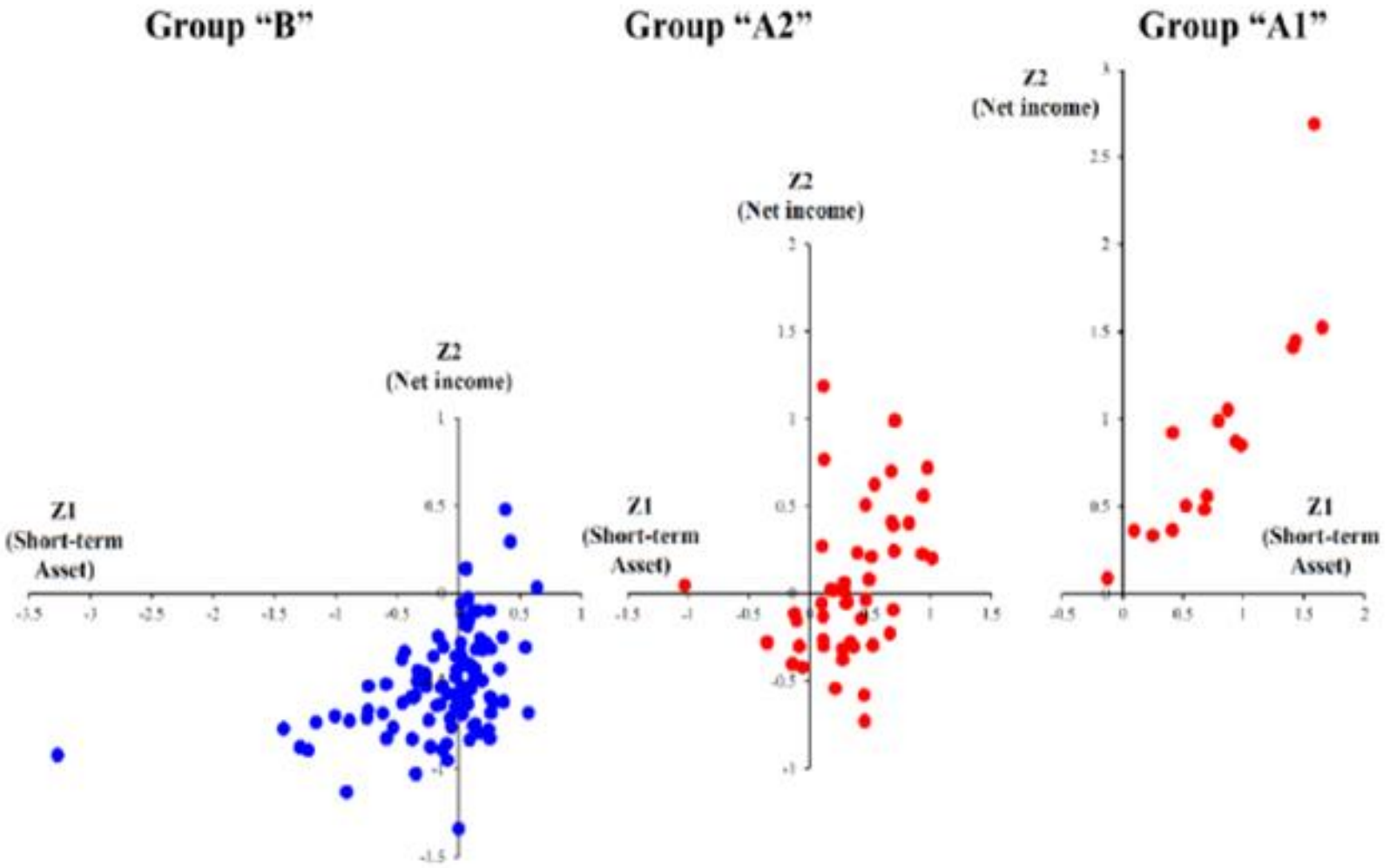
Text books, Educate School teachers

Regional Education Program

3, Various Financial Associations

Bankers Association, Stock Exchange

Grouping Based on Principal Component (Z1-Z2) and Cluster Analysis



Credit Rating for SMEs
by Use of SME Database

1, Credit Rating is only applicable to large companies

2, Credit Rating for SMEs based on SME Data

3, Three ranking of SMEs (Asian country)
Five ranking of SMEs (Japan's case)

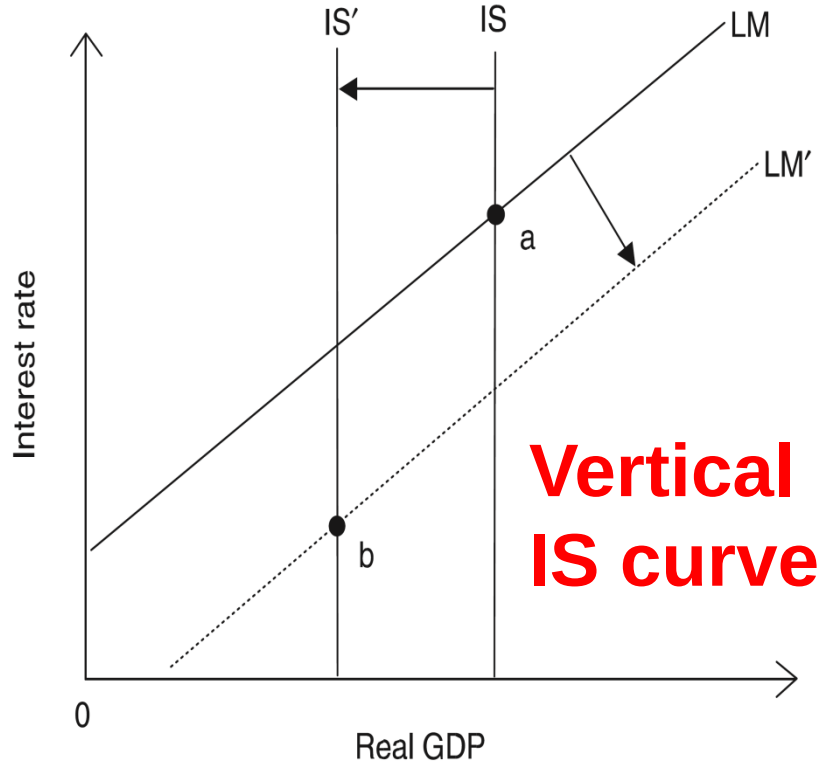
4, SME data can produce default risk ratio

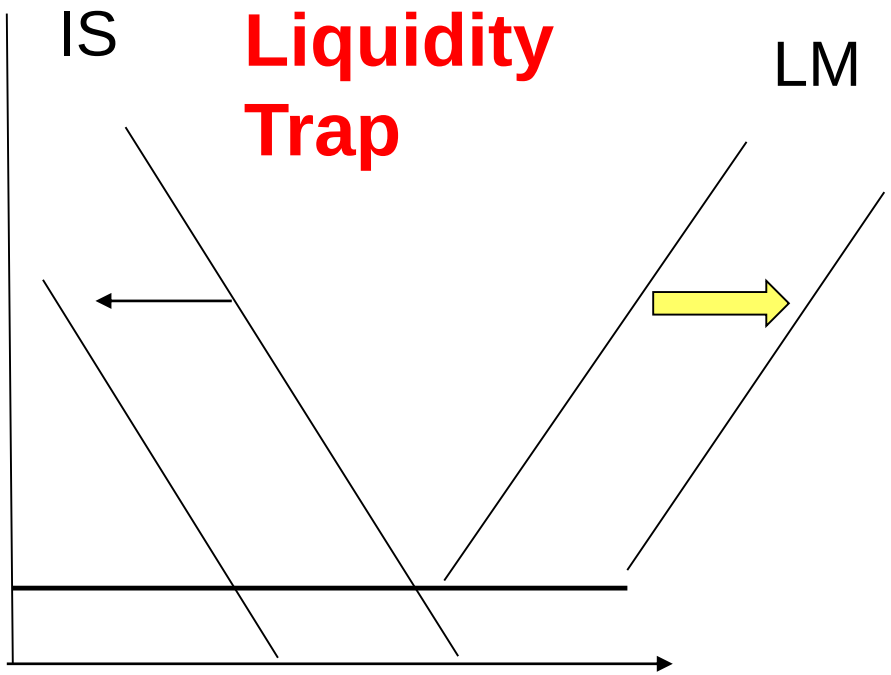
5, Risk based Interest rate

Causes of Japan's long-term recession

Problem of **Vertical IS curve** rather than **Liquidity trap**

Figure: The ineffectiveness of Monetary Policy in Japan





Source: Yoshino and Sakakibara (2002).

Vertical IS curve

$$y = \alpha - \sigma(i - p) + u_{is} \quad \text{(IS equation)}$$

$$m - p = \beta + \phi y - \lambda i + u_{lm} \quad \text{(LM equation)}$$

Table 5. Empirical result

Sample: 1990Q2-2013Q4

Eq.	Dependent variable	Explanatory Variable	Coefficient	Std. Error	t-Statistic	Prob.
IS	y_t	α	-0.16	0.08	-1.98*	0.049
		$(i-p)_t$	-0.0002	0.0004	-0.53	0.60
		y_{t-1}	1.01	0.007	147.63**	0.00
	R-squared= 0.99, adjusted R-squared=0.99, Durbin-Watson Stat.=1.70, **Std. Error** of regression=0.01					
LM	$(m-p)_t$	β	0.02	0.19	0.11	0.91
		y_t	0.70	0.26	2.67**	0.008
		i_t	-0.025	0.009	-2.72**	0.007
		$(m-p)_{t-1}$	0.99	0.006	171.06**	0.00
	R-squared= 0.99, adjusted R-squared=0.99, Durbin-Watson Stat.=1.93, **Std. Error** of regression=0.03					

Note: Estimation Method: Iterative Seemingly Unrelated Regression, IS stands for "investment-saving", LM is "liquidity preference–money supply", Std. Error is Standard error, Prob. is the probability

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