The Future of “Old” Industry in Japan

Hollowing Out, Growing with Asia, or Switching to Services?

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Outline

- Is the world is changing too fast for an old island?
  - Japan is challenged, but part of the Asian growth story
- Domestic restructuring
  - Investment slowdown (“Lost Decades”)
  - overseas investment and cooperation
  - profitable services
- Challenges remain
  - Political “leaning against the wind”
  - Government shift to demand-side economics
  - Increasing competition in Asia

A New World …

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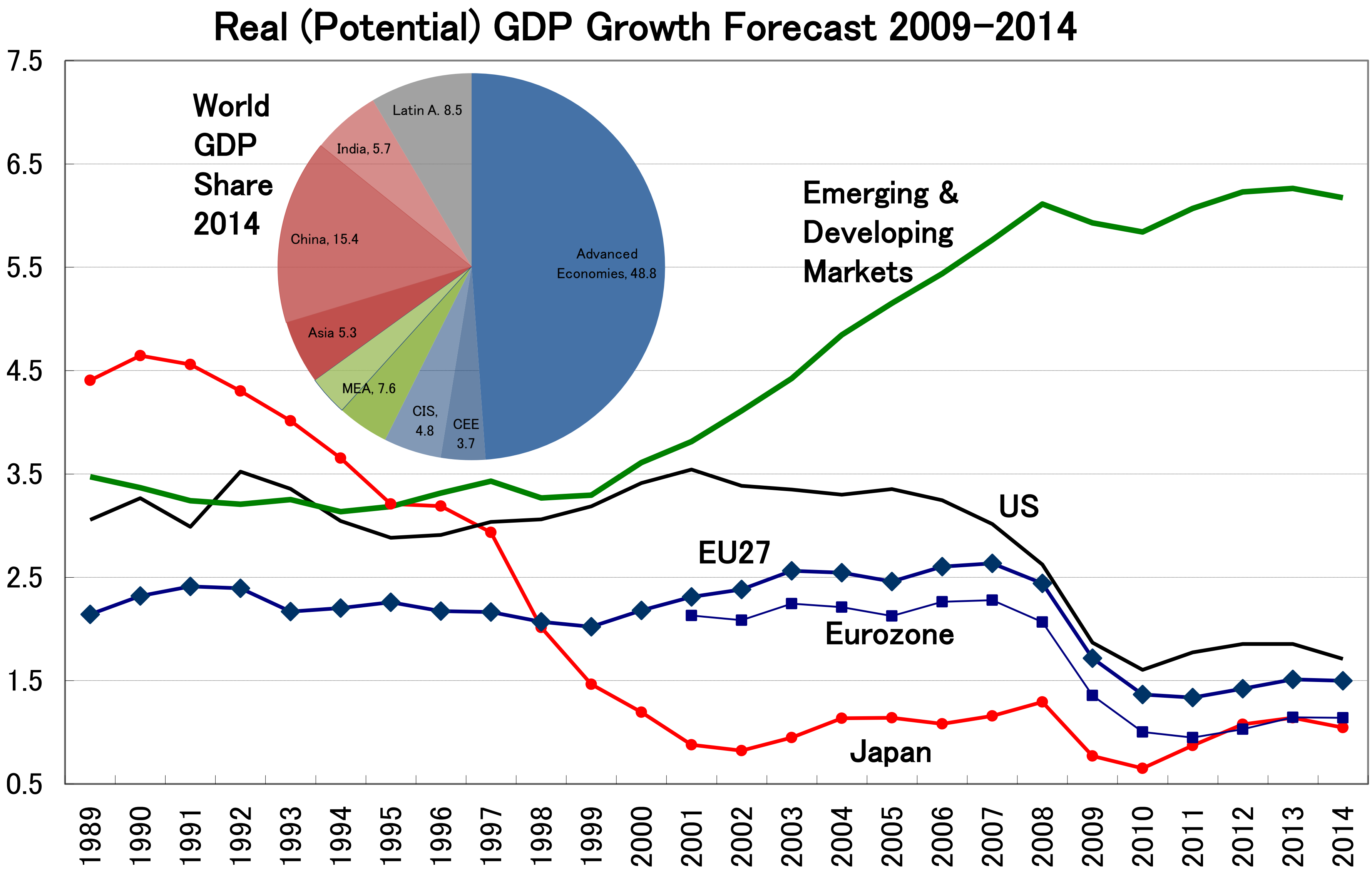

Note: 10-year moving averages roughly correspond with long-run potential output growth. Pre-Crisis data are from IMF-WEO 2008.04, post-crisis data from IMF-WEO 2009.09. Source: © FRI 2009. Data from IMF WEO.

… with Fundamental Shifts: Working Population

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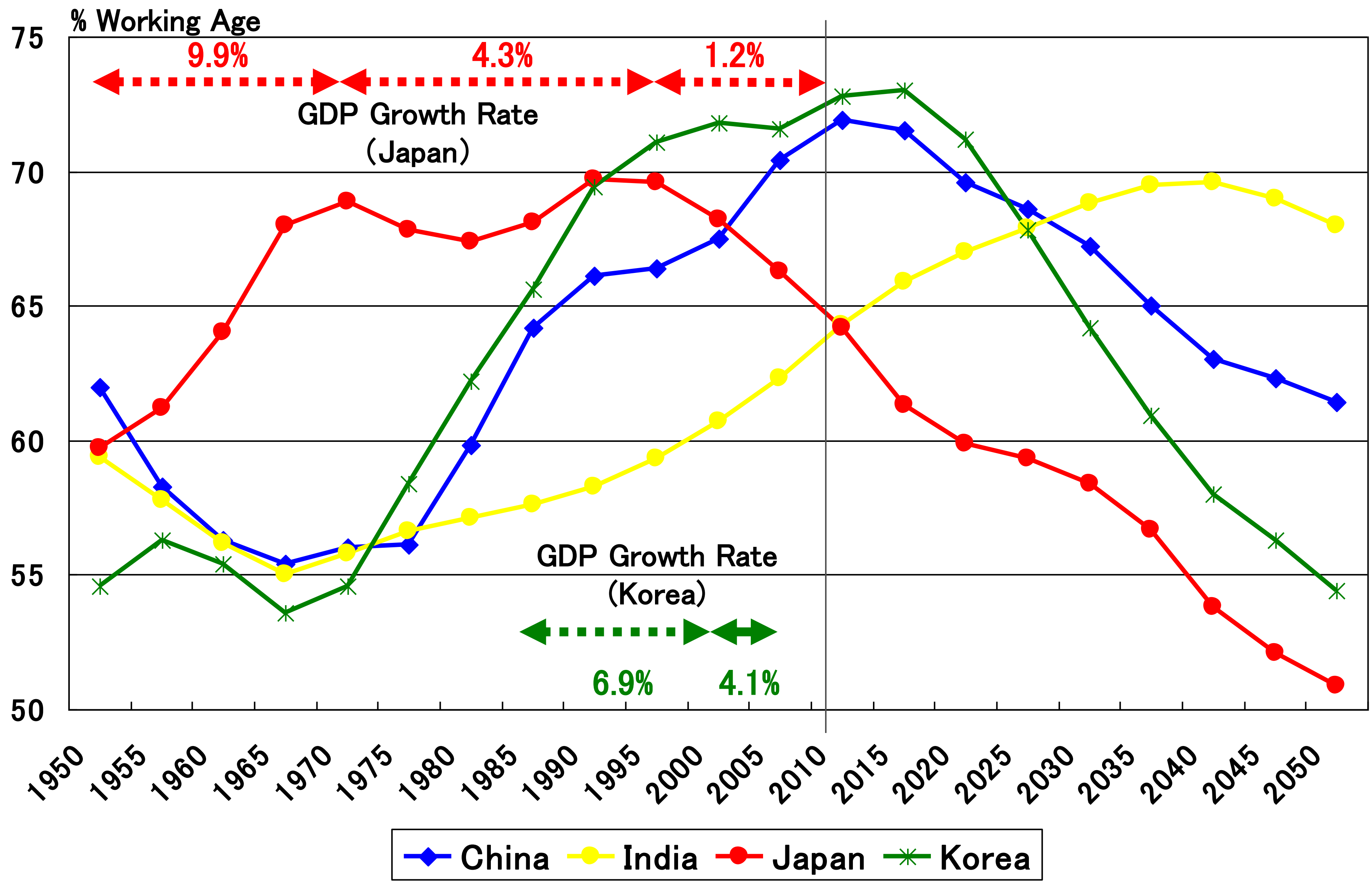

Source: © FRI 2010; Data from UN.

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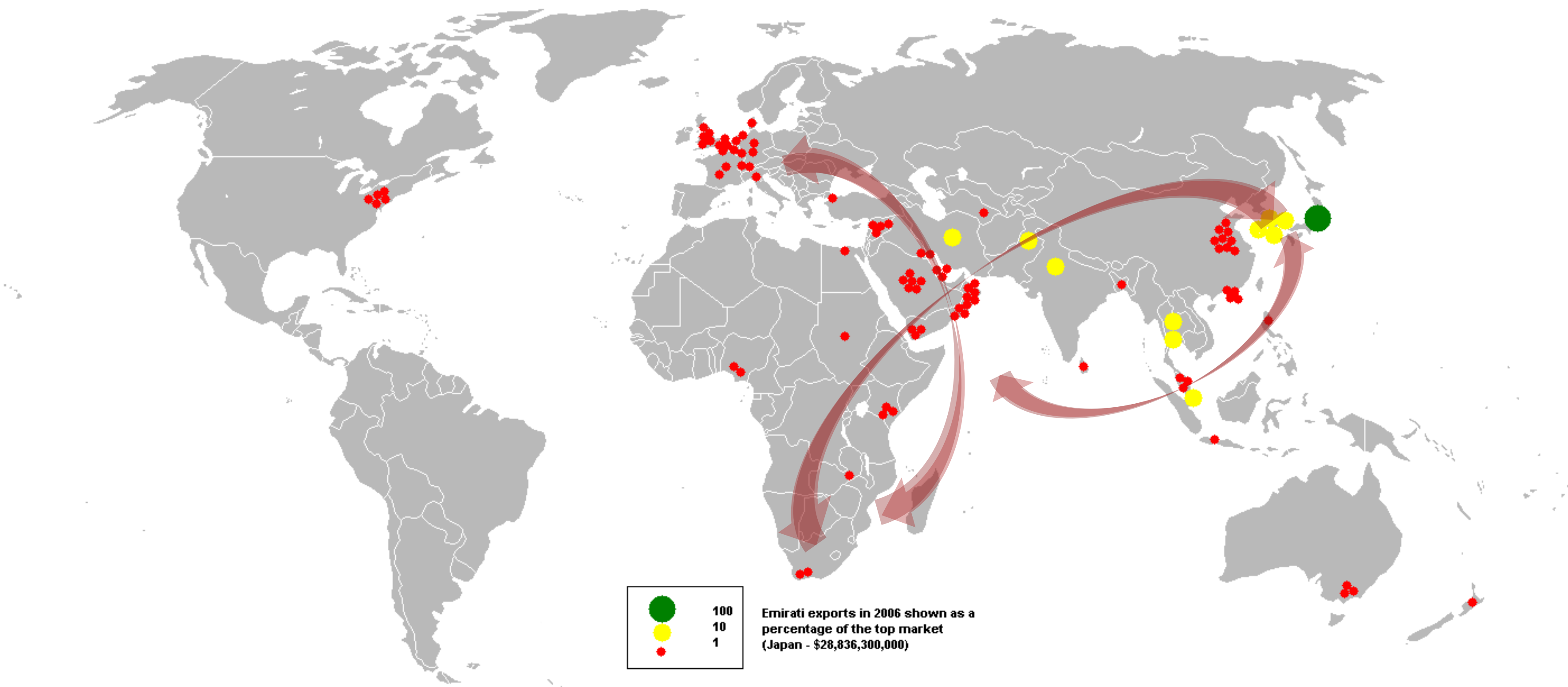
New Silk Road

- Africa Export to Asia +20% YoY from 2000 (China +50% YoY)
- New Trade Centers: Singapore, Dubai, Istanbul, Hong Kong



Source: © FRI 2010. Map: Wikipedia.

Resulting in huge Changes for Japan: New Markets

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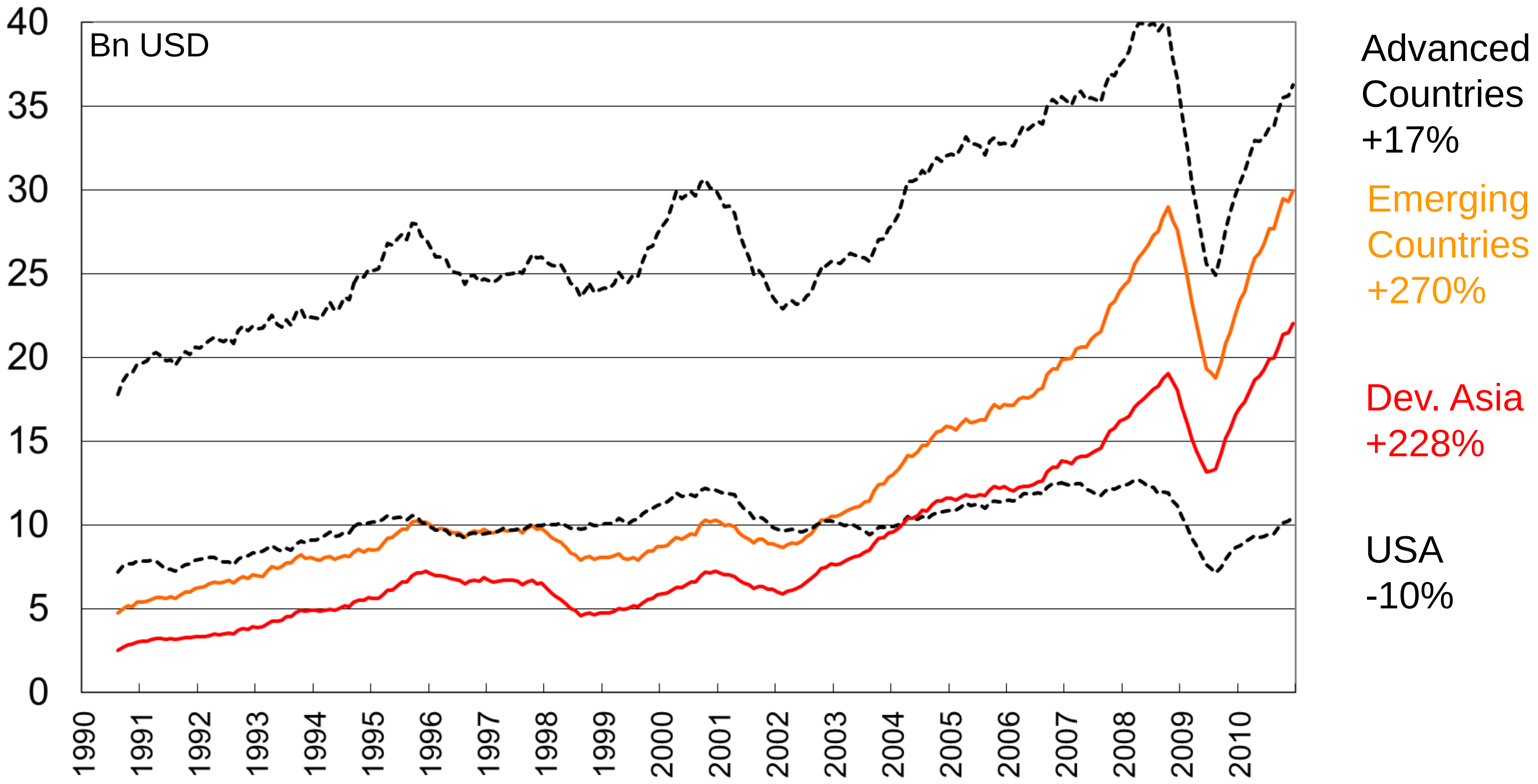
Exports (1990-2011) and Export Growth (2000-2011)



- Emerging country exports growth similar to Germany but slower than Korea's +400%

Source: © FRI 2011. Data: IMF (2011), CEIC.

… and Production Locations

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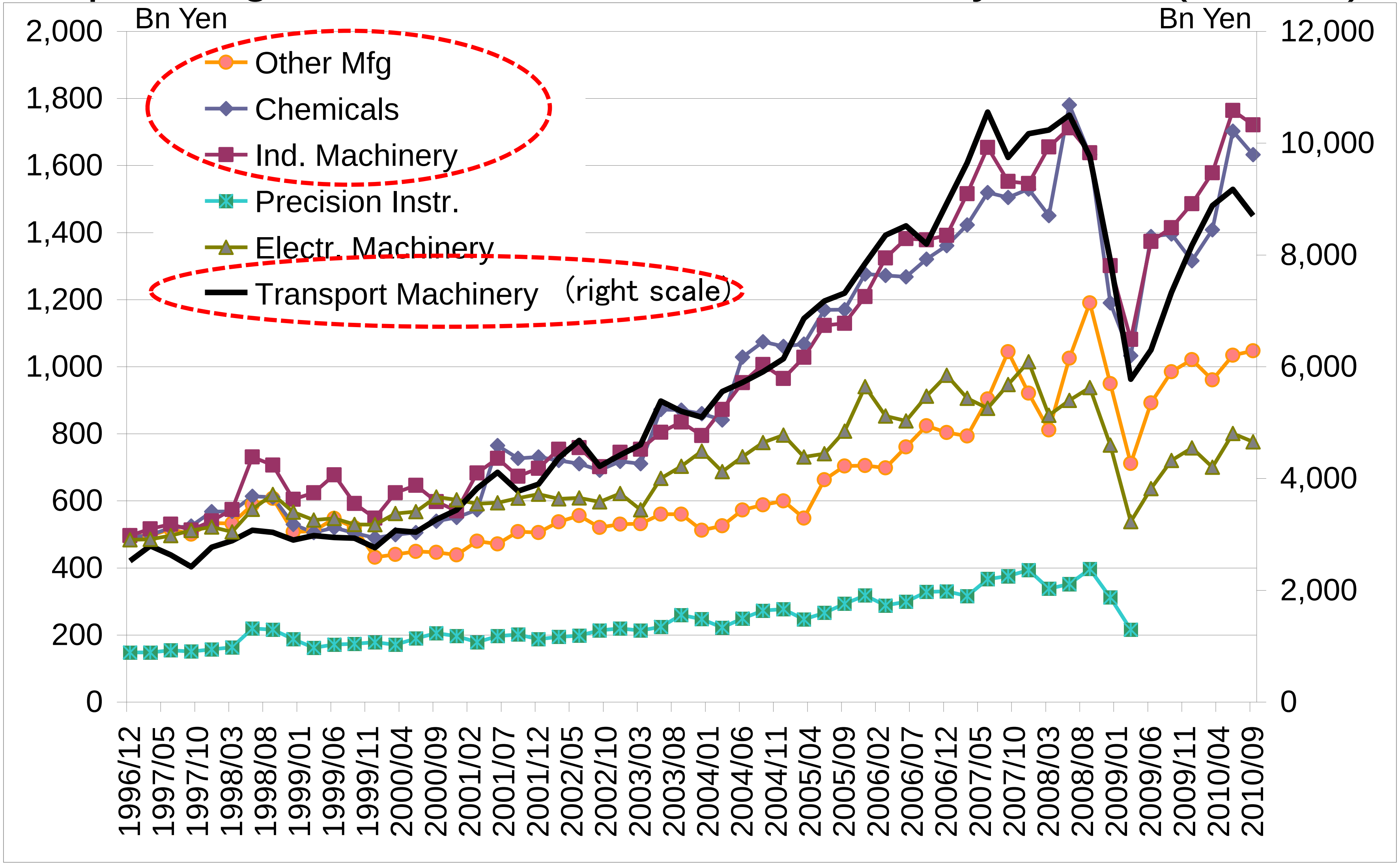
Japan Mfg Overseas Subsidiaries Sales by Sector (Bn Yen)



Source: © FRI 2011. Data from METI, CEIC.

… with a High Risk of "Hollowing Out"

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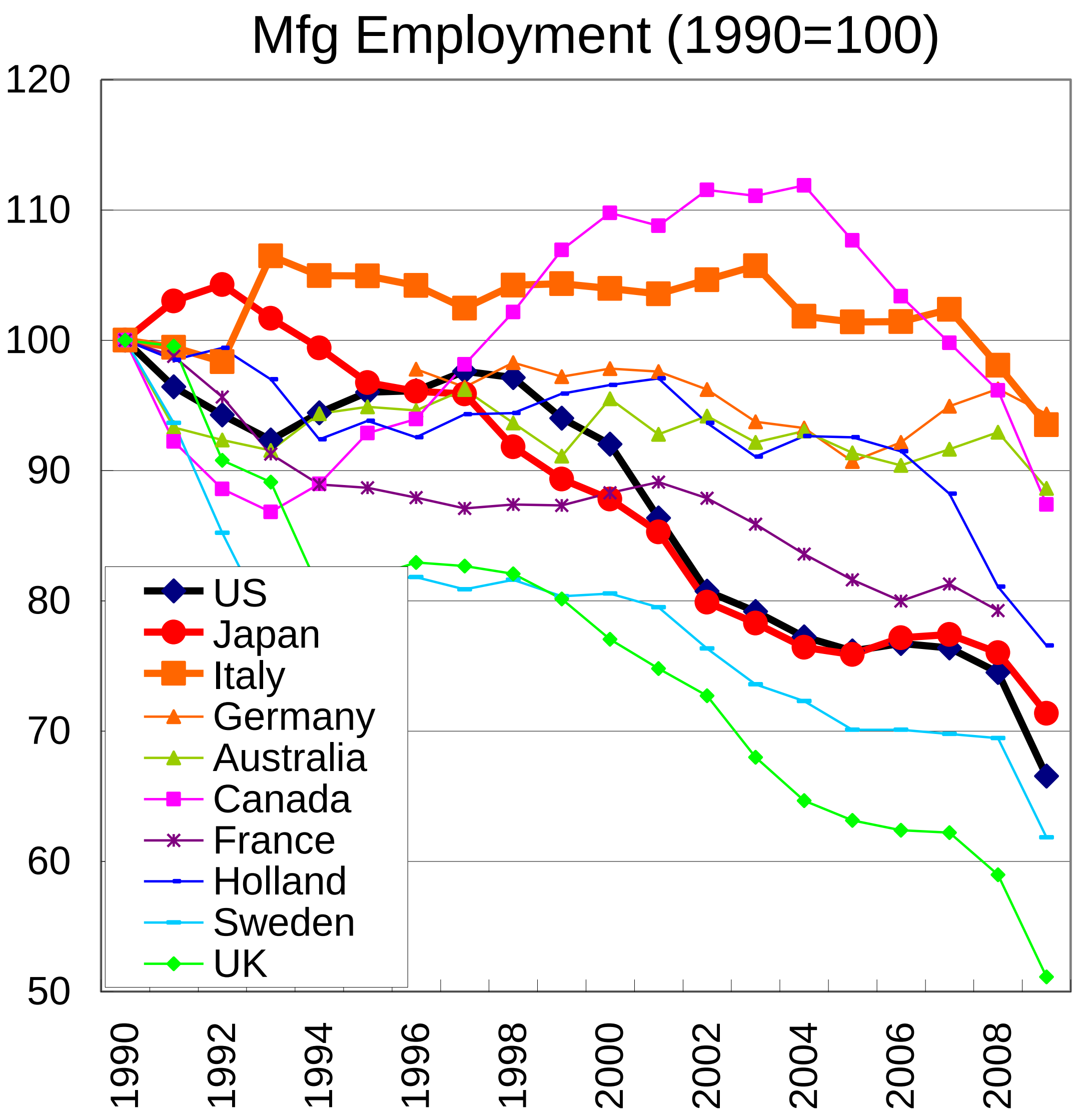


Note: Index (1990=100) based on employed persons.
Source: © FRI 2010. Data from U.S. Department of Labor, Bureau of Labor Statistics, 2010.

Mfg Employment (Percent of Total)

Germany, Italy:
>20% of Workforce

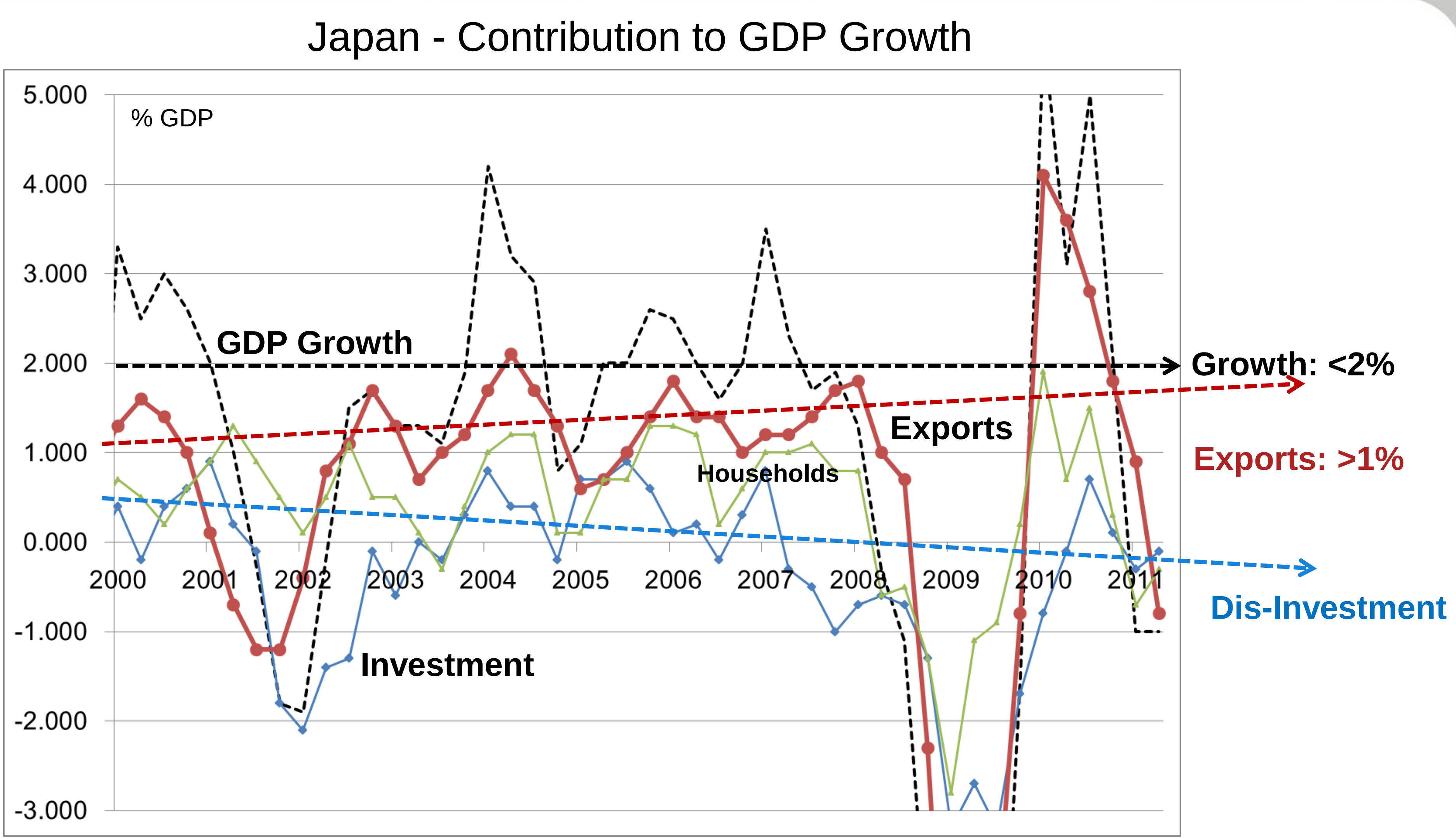
Japan:
17% of Workforce

US/UK/Australia/Canada/Holland:
>10% of Workforce

Domestic Restructuring

- The "Lost Decades" on back of an investment slowdown

Exports drive Growth in Japan



- About 50% of GDP growth in Japan comes from Exports

... although Exports are only 15% of the Economy

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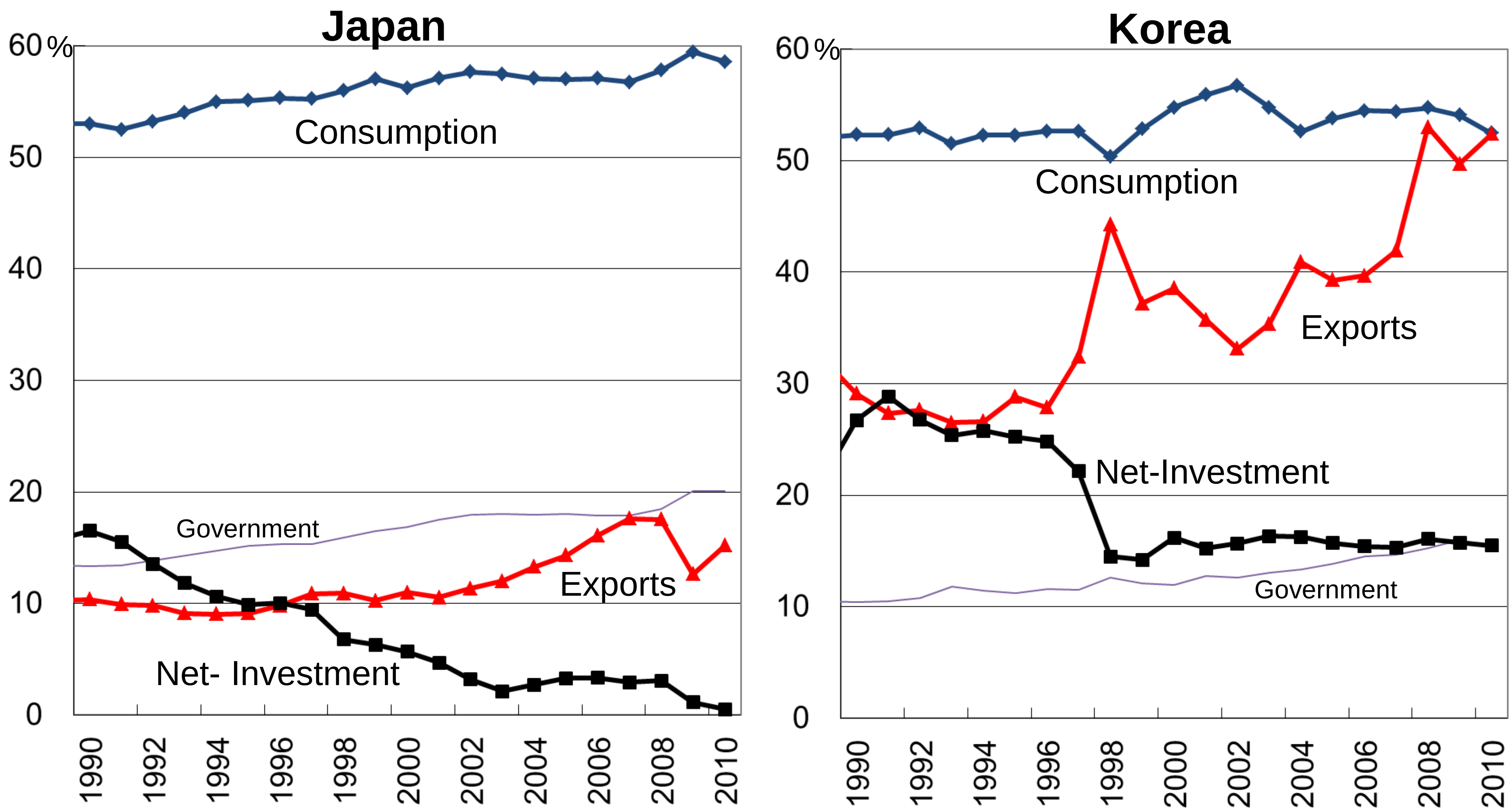
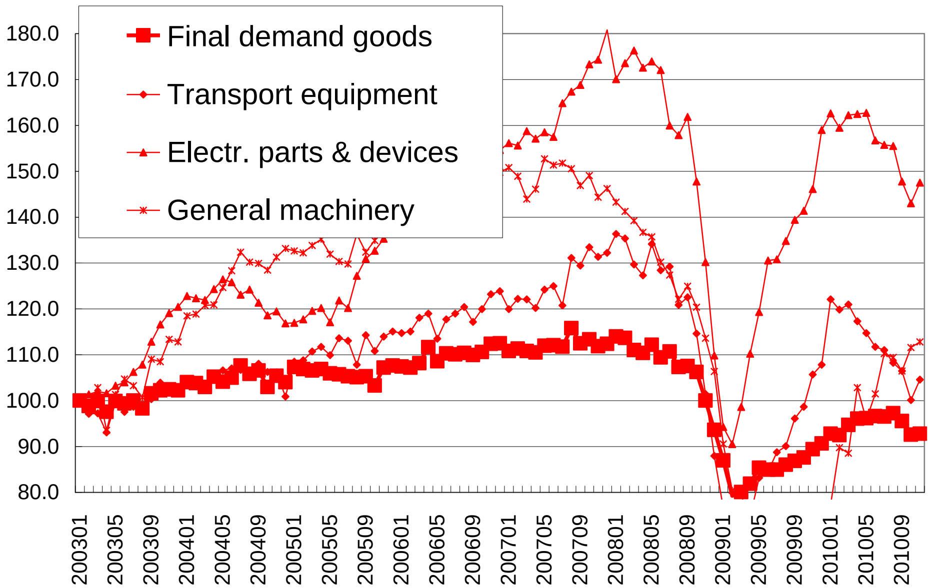
GDP Components (% GDP)



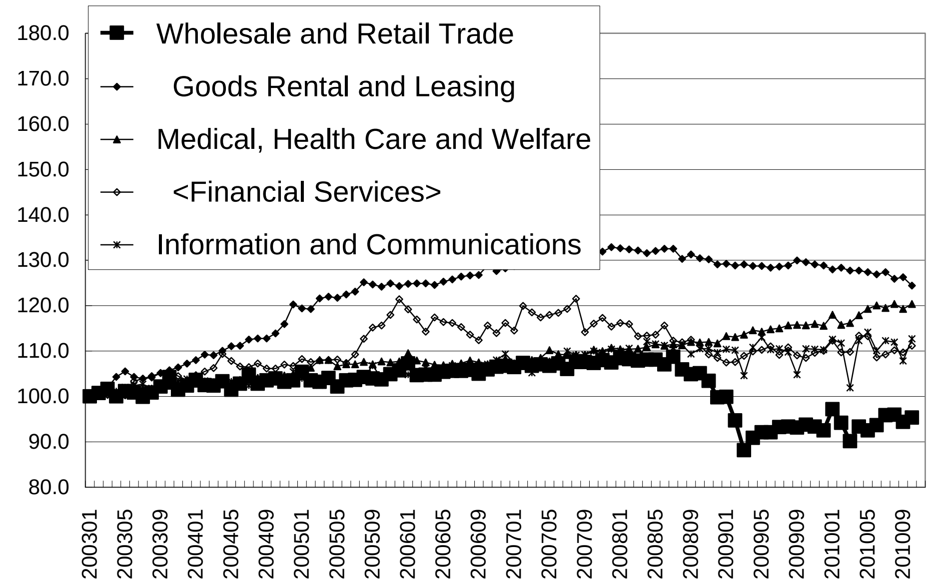
- Japan has low levels of export and net-investment

… because the Domestic Market remains Anemic

Manufacturing boosted by Export



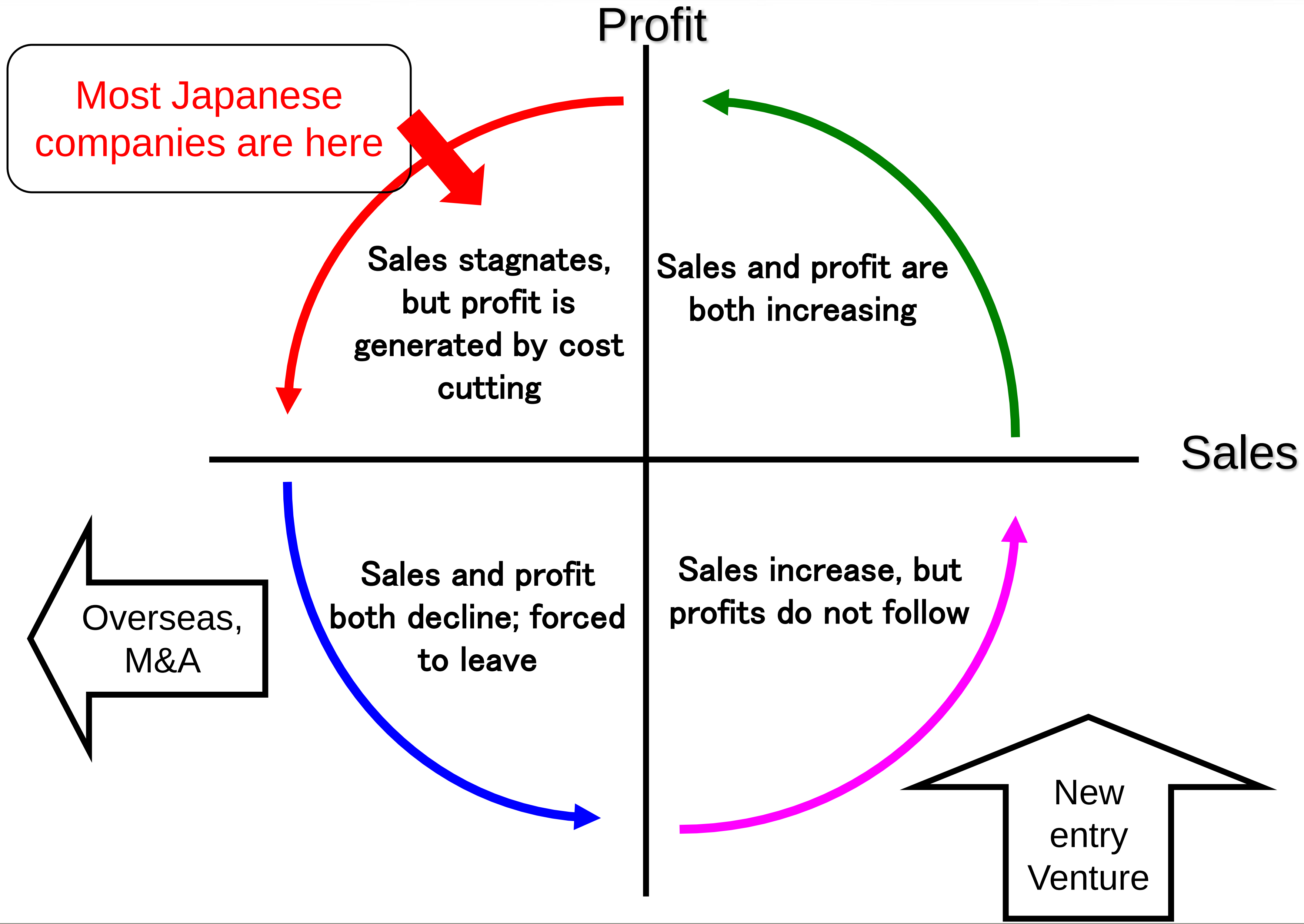
Services held back by Trade



- Ageing: Domestic goods market won't recover anytime soon
- Deflation: Companies are focusing on cost cutting, overseas investment
- Regulation: The huge service market remains highly regulated and is considered a pool for surplus labor
- Corporate Strategy: Focus on profits, niche & overseas markets

Note: Indices of Industrial Production and Tertiary Activity; reindexed 2003=100; seasonally adjusted.
Source: © FRI 2011. Data from METI (2011): Indices of Industry Activity (http://www.meti.go.jp/statistics/index.html)

… and Companies are Ageing too



The Roots of Japan's „Lost Decades"

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- Japan's underperformance after 1991 has been well-researched
  - Ageing: Low demand, slow structural change, decreasing innovation
  - Structural Change: Price level adjustment (deflation), shift from manufacturing to services, insufficient labor markets and corporate turn over (entry/exit)
  - Governance: Low profitability, low globalization, over-regulated services, local monopolies, ineffectual policy processes
- Put together, a model of a stable equilibrium on a down-trend emerges. Are we willing to believe this?
  - Maybe: Most structural explanations of Japan's malaise are convincing
  - Maybe: Policy recommendations to fix the problem have gone nowhere: money has been printed, public debt has sky-rocketed, and structural reforms have been unwanted
  - **BUT** most economists continue to think that a market economy eventually heals itself and finds a path to sustainable growth
- A fresh look at the "engine of growth" supports optimism
  - Investment is the driving force of growth, in Japan 65% of growth come from capital investment
  - But "net investment" has been falling over two decades because companies needed to adjust their high capital stocks to a mature, ageing society
  - Today, adjustment might have run its course, and recovering net investment might put some sparkle back into Japan's dormant economy

Japan's "Over-Investment" has been a Driver and a Brake

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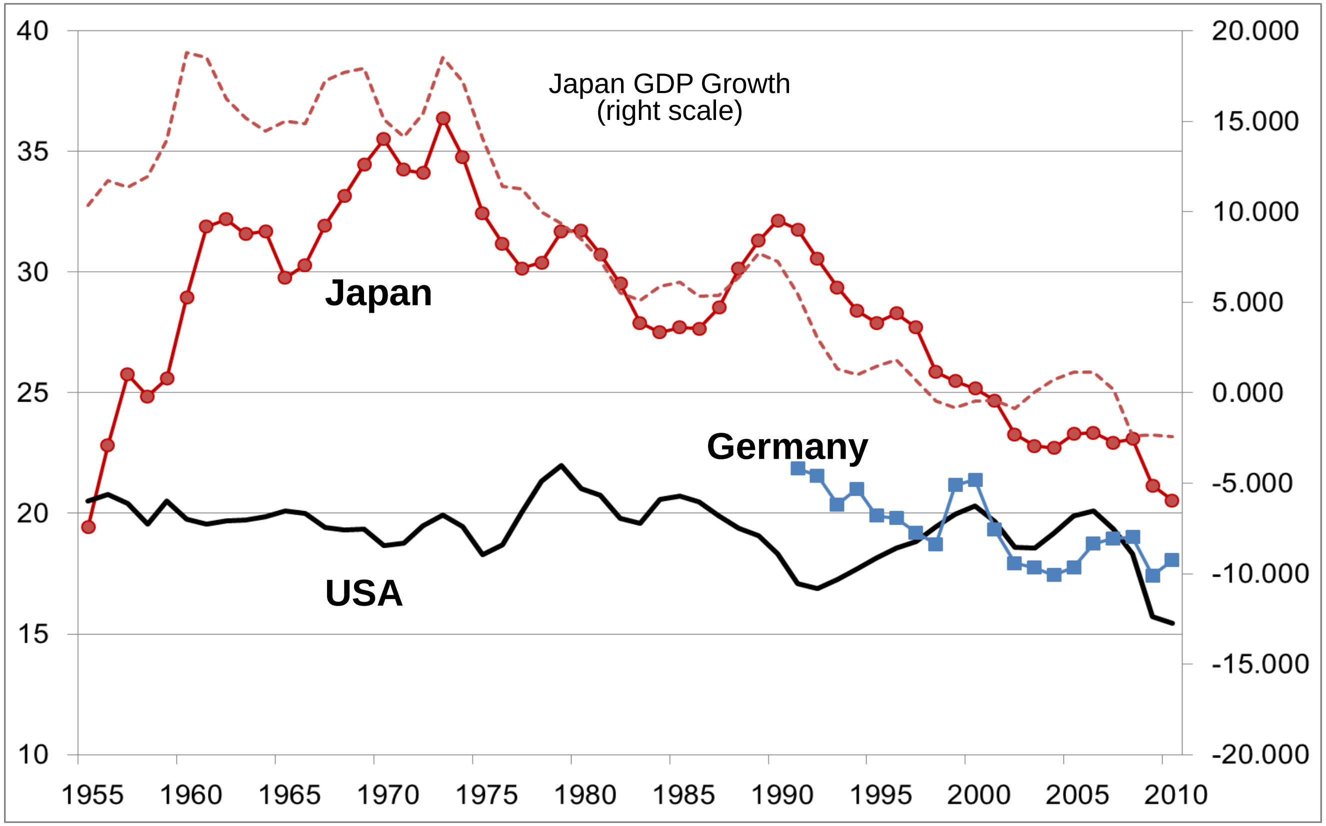
Gross Investment Rates (% GDP)



- High investment rates beyond 30% pushed growth until the 1970s
- Deleveraging after 1990 to 20% resulted in depression and deflation

Note: Ratio of Gross Fixed Capital Formation over GDP. The dotted line is the centered 3-year moving average of the GDP growth rate..

Source: © FRI 2011. Data: EU-KLEMS (2011), CEIC 2011.

Investment is the true „Engine of Growth“

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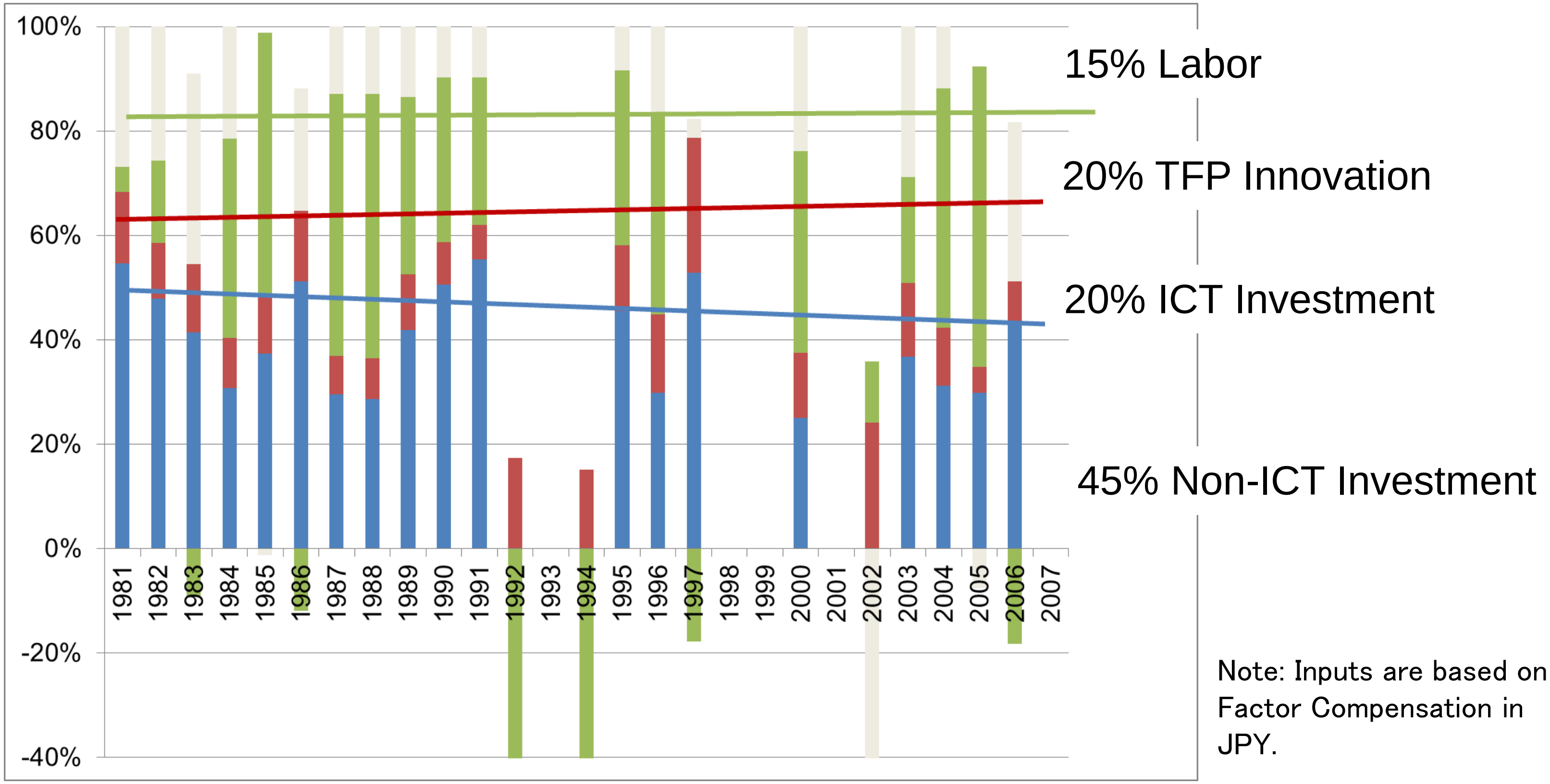
Contribution to VA Growth (Japan 1980-2006)



Note: Inputs are based on Factor Compensation in JPY.

- In Japan, investment contributes about 65% to (value added) economic growth, labor contribution is often negative and averages at only 15%, innovation (TFP) contributes 20%
- In the US, investment contributes about 50%, labor 40%, and innovation 10%
- **Investment is the true "engine of growth," if it falls economies falter**

Source: © FRI 2011. Data: KLEMS (2011)

Falling "Net" Investment due to Capital Depreciation

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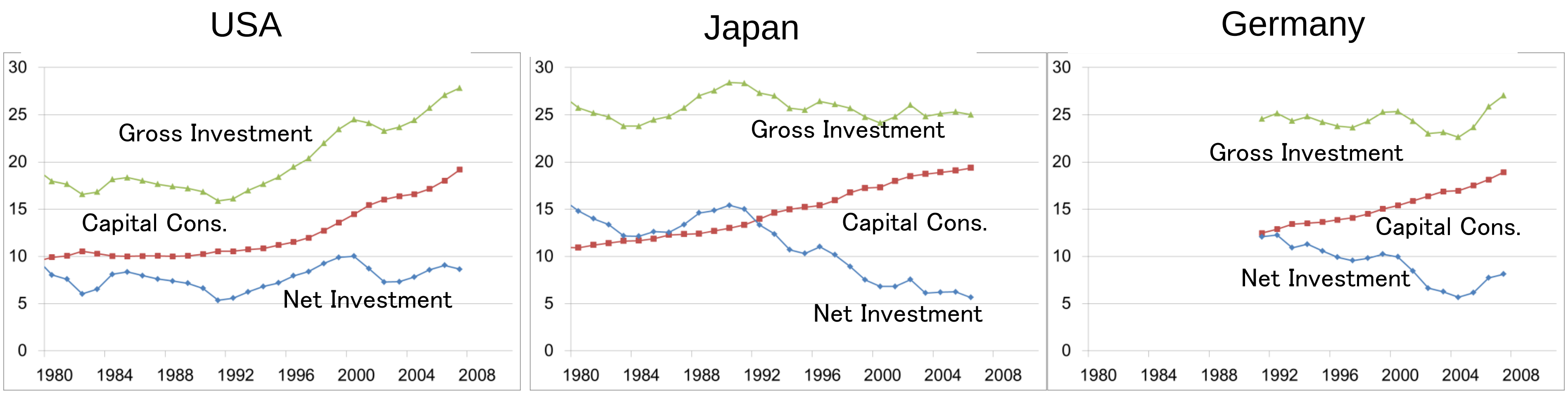
Real Fixed Investment (%GDP)



- The two "industrial" economies Japan and Germany are well-known for their high levels of investment (of about 25% GDP)
- But the historically accumulated capital stock also led to high capital consumption (costs), which dragged the economies through depreciation
- "Net" real investment, which is an indicator for quality adjusted "new" investment, has been falling from the 90s
- "Maintenance" of an ageing capital stock dominated "future" investment

Note: Investment as Real Gross Fixed Capital Formation (RGFCF). Deflated by 1995 asset prices.

Source: © FRI 2011. Data: KLEMS (2011)

Why is Japan's Net-Investment falling?

- During structural change, depreciation can over-shoot lastingly
  - Depreciation of the capital stock can last up to 30 years (for buildings, which constitute 50% of Japan's capital stock)
  - New (gross) investment is used to "maintain" and restructure the existing capital stock; i.e. "writing off" a venture requires downsizing investment
  - New (net) investment into ventures becomes a function of what is left after downsizing and maintenance requirements

- In ageing economies, slowing demand and deflation become an additional drag
  - Restructuring of the capital stock (cost cutting) becomes the engine of growth
  - Price dumping, to keep the existing capital stock employed, reduces incentives for investment in "new" ventures
  - Deflation becomes as much a consequence as a cause of (net) disinvestment

Investment Cycle: Where are we now?

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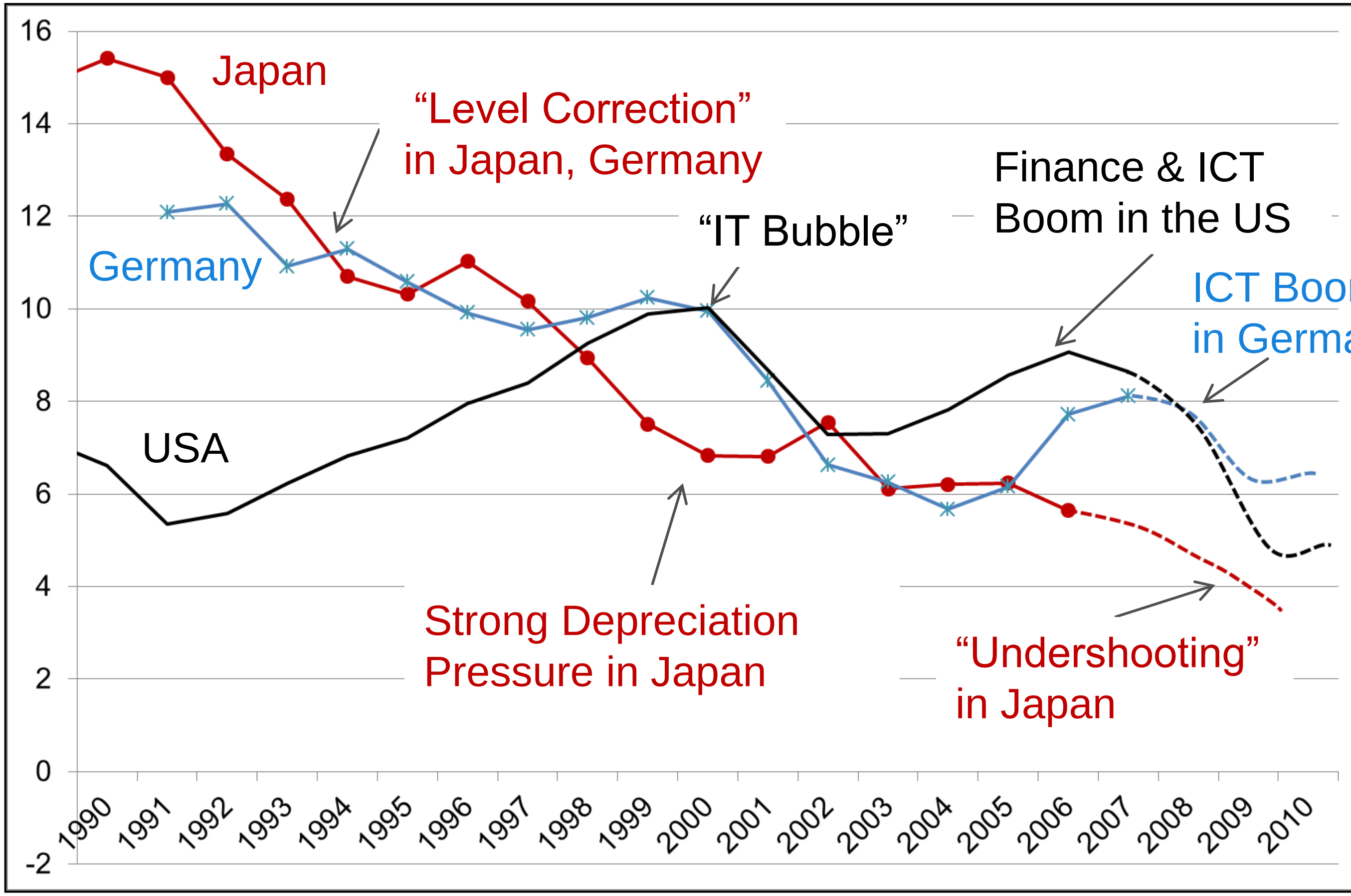
Real Net Investment (% GDP)



Capital investment deceleration from "high growth"

Bubbles

Is 5% the "Bottom Out" level of investment in mature economies?

Note: Real net fixed capital formation. Forecasts from 2007 (J: 2006), based on SNA93 statistics.

- Investment "bubbles" in the US, currently below historical lows
- Bottoming out in Germany, driven by strong ICT investment
- Bottoming out in Japan below historical "bottom levels" of 5%?

Source: © FRI 2011. Data: KLEMS (2011), CEIC 2011.

Domestic Restructuring

- Investment recovery?

Capital Efficiency has already recovered…

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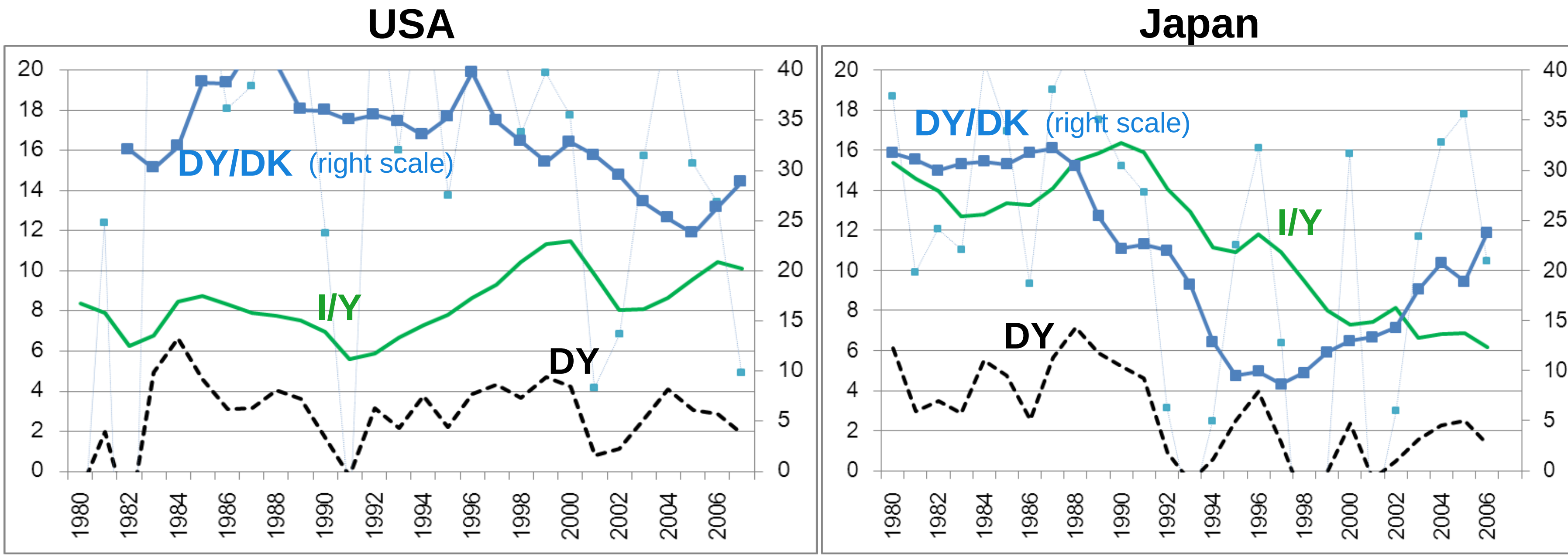
Investment Rate (I/Y) vs. Marginal Capital Efficiency (DY/DK) (%)

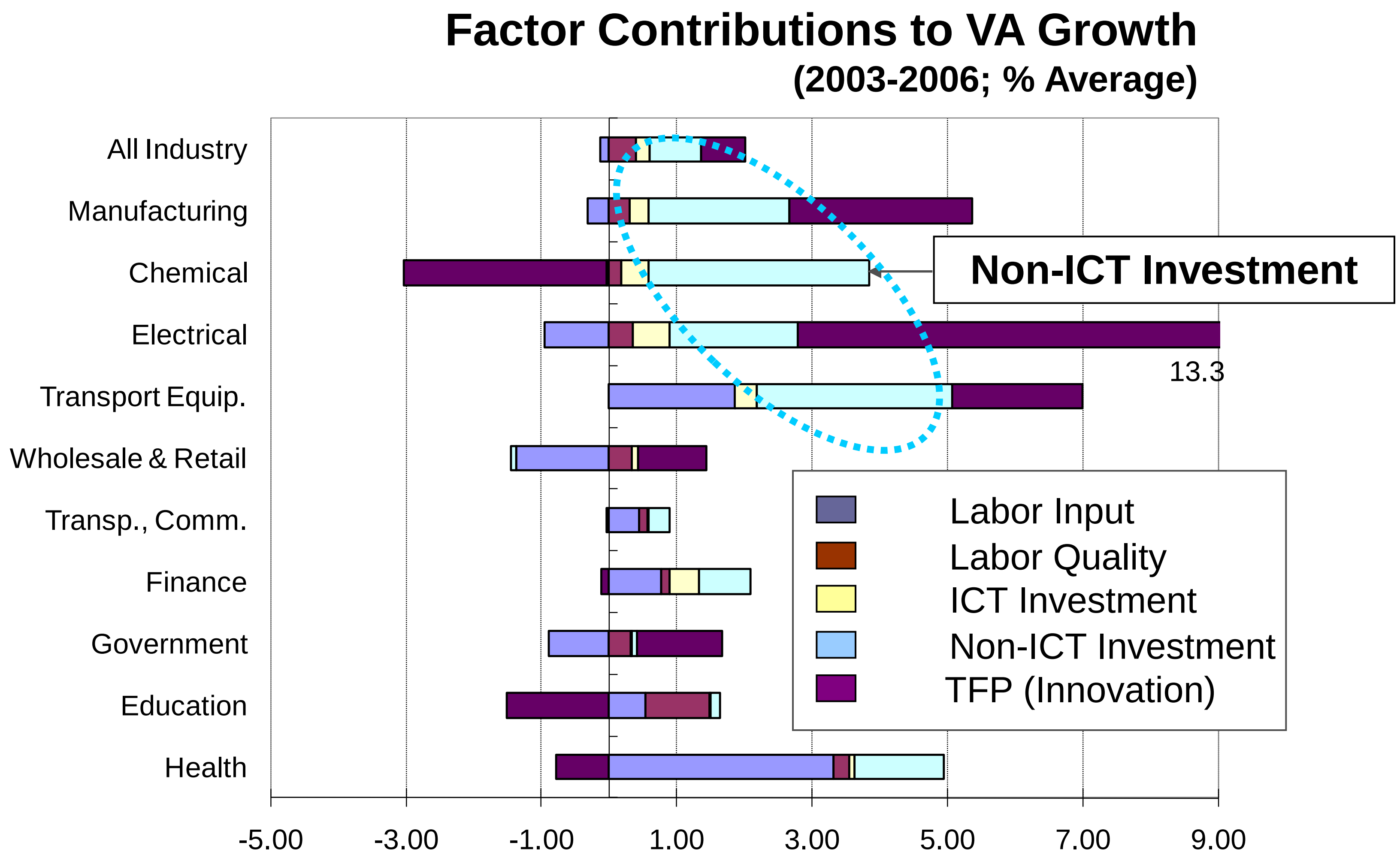


- Economic growth is determined by the rate of investment and the efficiency of capital DY = I/Y ∗ DY/DK
- While investment rates are bottoming out, capital efficiency has already recovered on strong cost-cutting
- Increasing investment on basis of high capital efficiency would provide a major boost to growth

Note: DY/DK is the ratio of yearly growth of value added (production) over capital input growth; I/Y is the ratio of yearly change in capital stock (investment) over value added; DY is the yearly change of value added. All ratios in percent..

Source: © FRI 2011. Data: EU-KLEMS (2011)

… so Investment drives Growth again



- **Non-ICT Investment is the driving force in "Old Industry"**

  Japan's "Old Industry" increases productivity by investing in production processes

Source: © FRI 2011, Data from EU KLEMS Database.

… resulting in Global Outperformance

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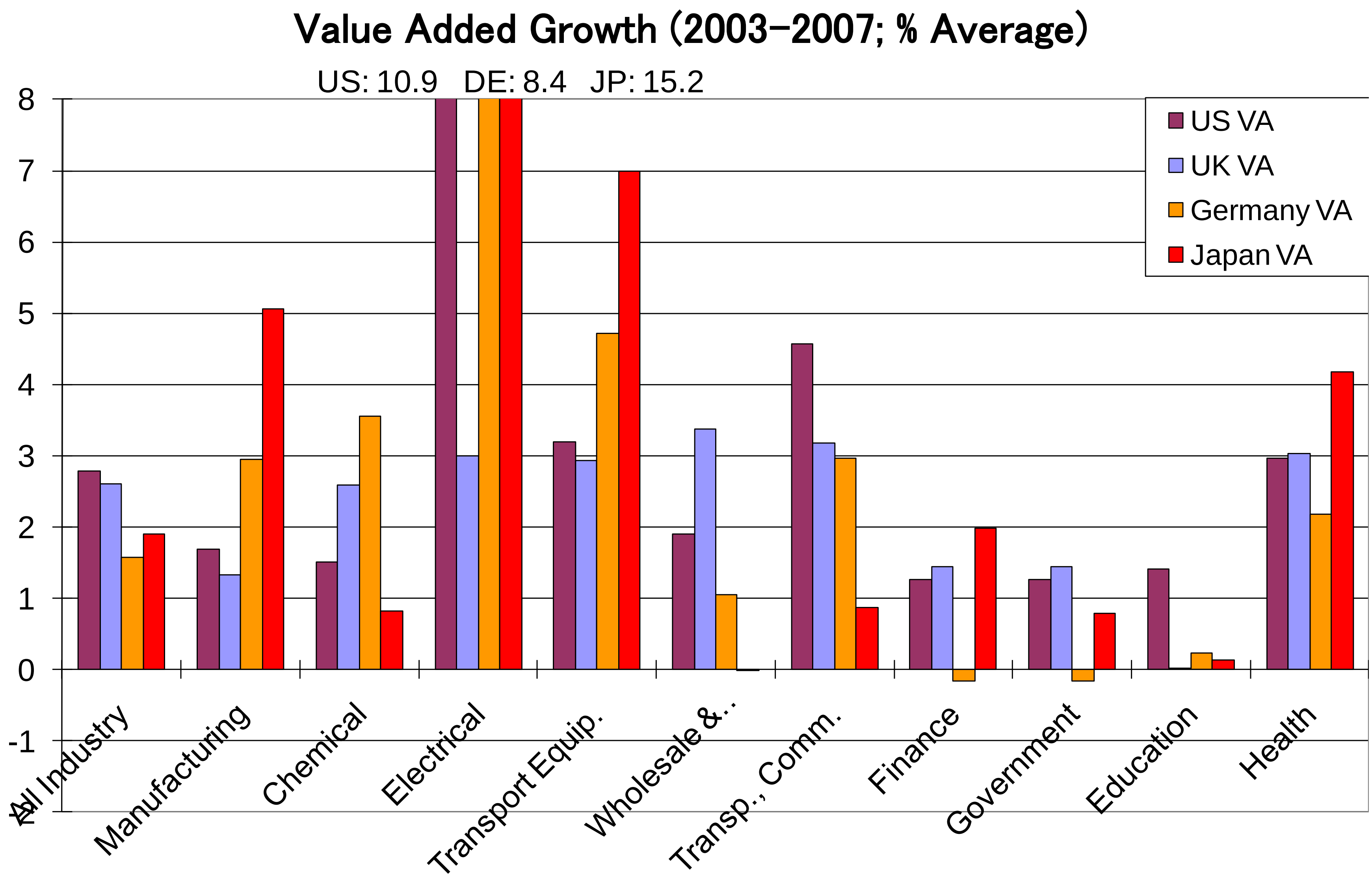
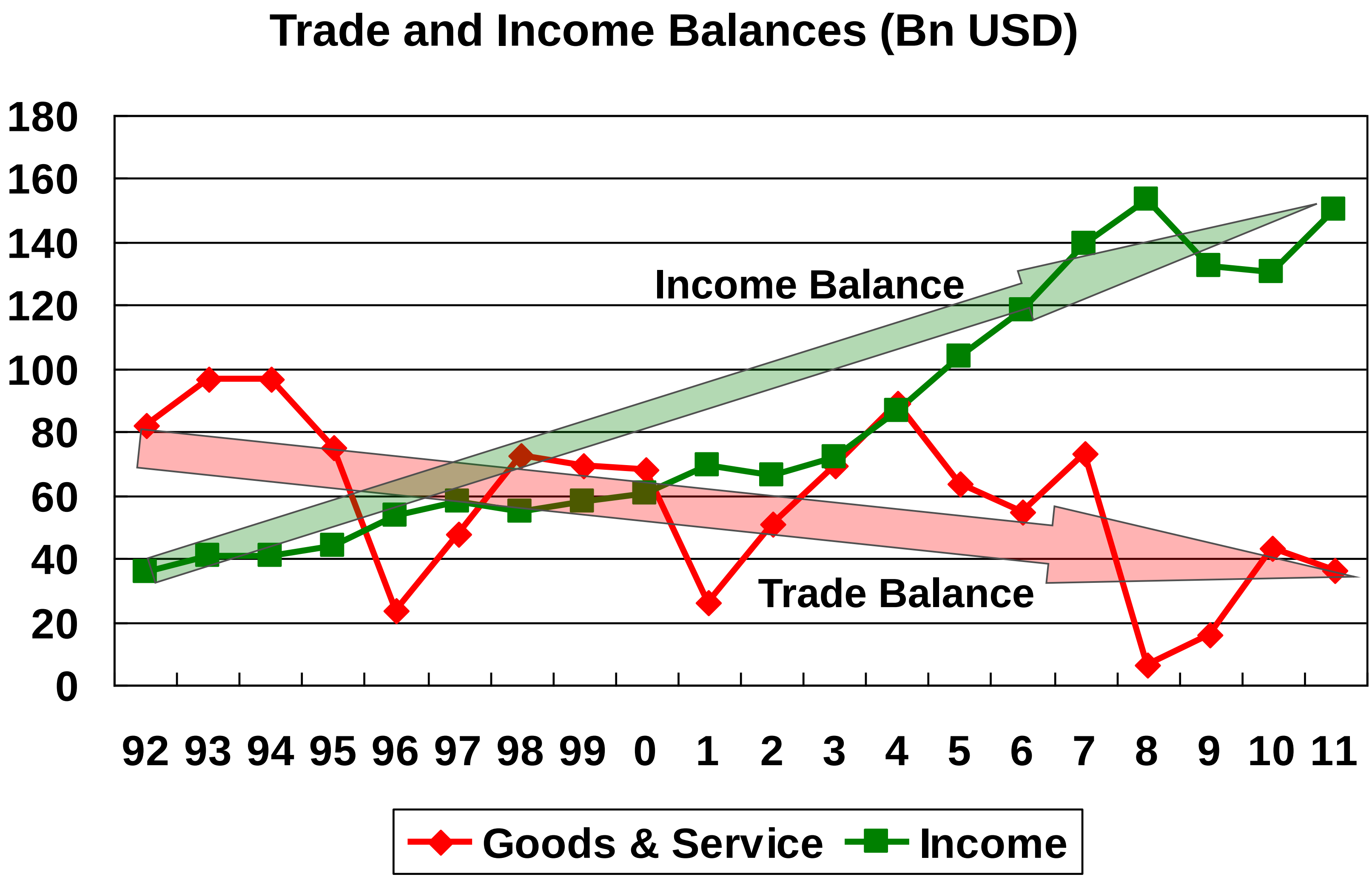


Source: © FRI 2010, Data from EU KLEMS Database. Note: Data for Japan only 2003–2006.

Investment initially flows Abroad



Note: Billion USD. Source: © FRI 2010.Data from OECD Economic Outlook.

…with the main Wave of Overseas Investment still coming

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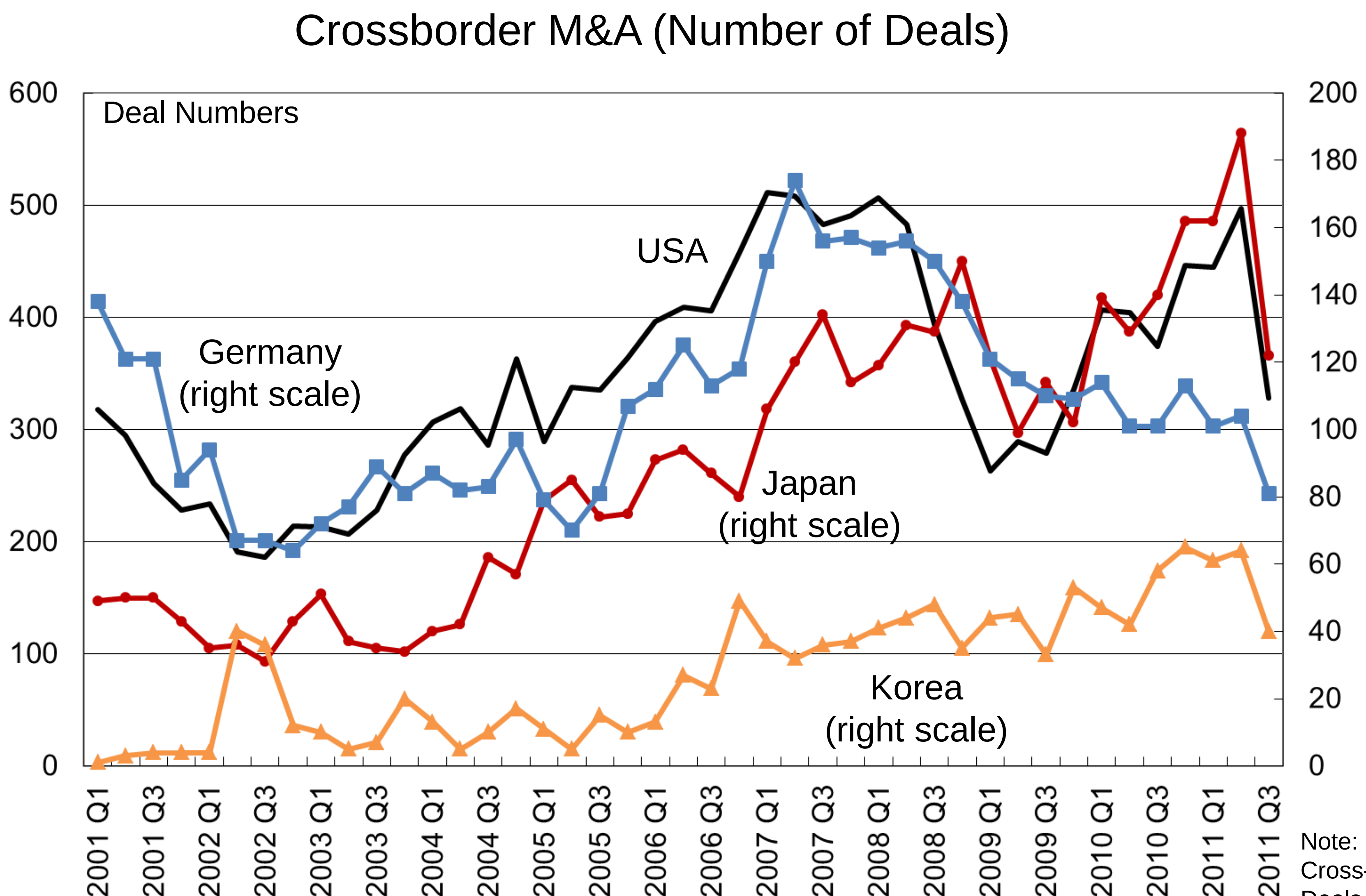
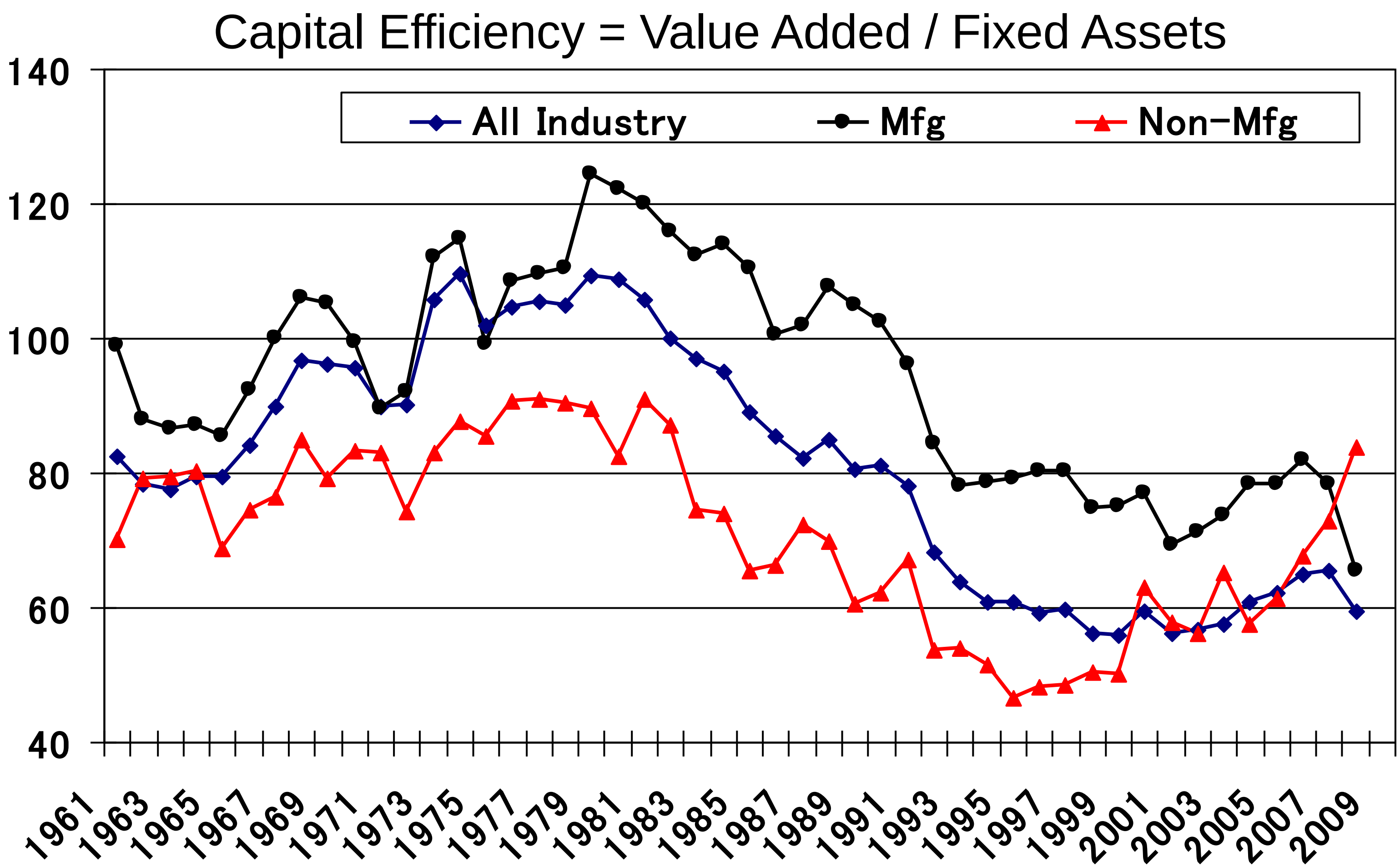


Note: US Cross-border Deals exclude North America.

Source: © FRI 2011. Data from Bloomberg.

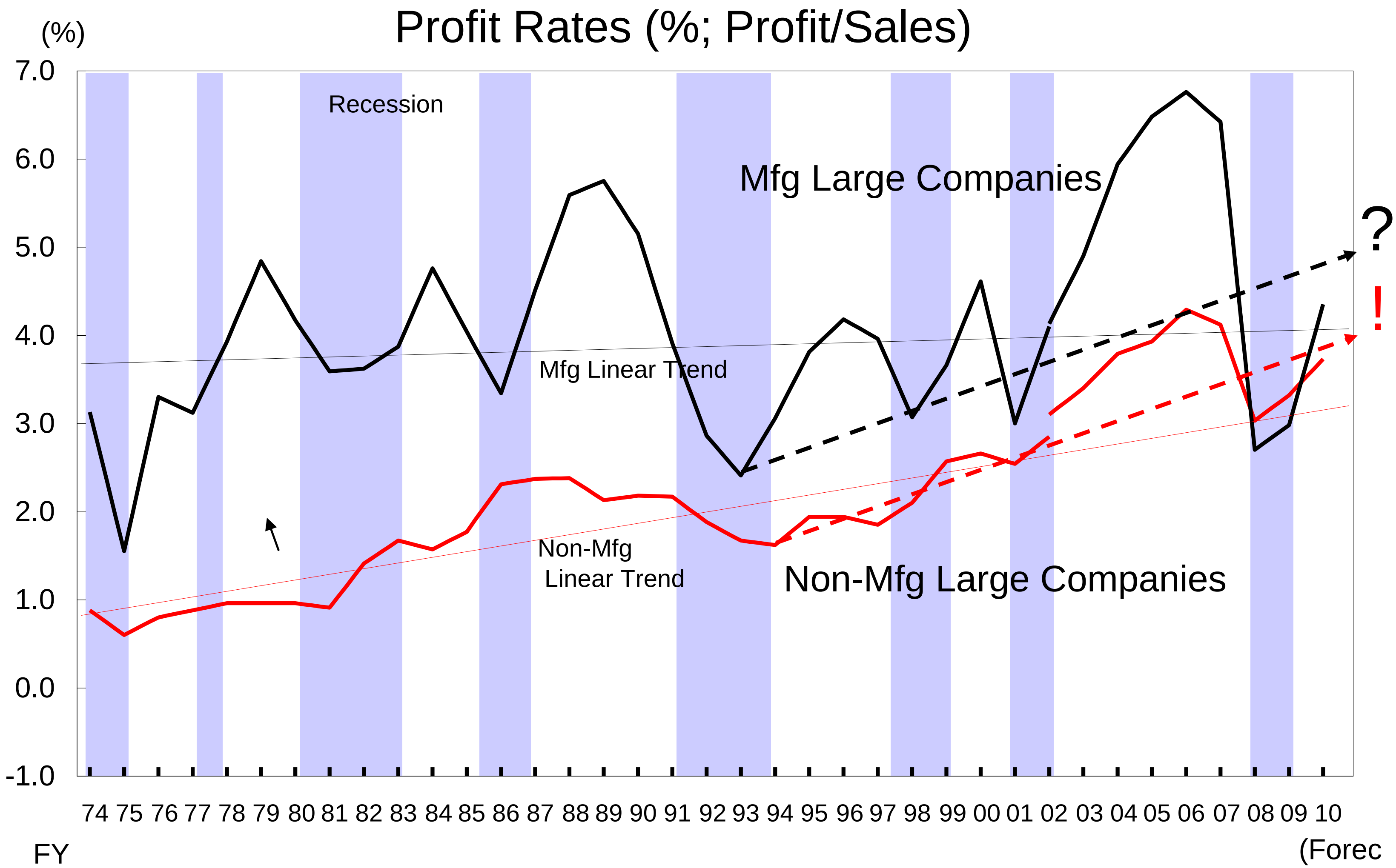
The next Investment Target: Services



- Due to a relatively lower capital stock, capital efficiency in services has been recovering faster than in manufacturing
- Services are now a prime target for investment in Japan

Source © FRI 2011. Data from Financial Statement Statistics.

… where Profits start to surpass traditional Manufacturing



- Service profits have converged, producing opportunities in business services, health care, retail, …

Source: © FRI 2011. Data from BOJ Tankan Survey.

Services already dominate the Topix Profitability Ranking

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	ROE	Profit Margin	ROA	Earning Margin	ROI	Firms
Automobiles & Components	23	6	8	14	13	5
Capital Goods	17	10	10	20	14	10
Commercial & Professional Services	26	8	13	14	18	5
Consumer Durables & Apparel	23	12	13	16	16	4
Consumer Services	21	7	10	19	14	7
Energy	31	12	12	21	23	2
Food & Staples Retailing	16	6	7	16	14	4
Health Care Equipment & Services	18	16	13	29	16	3
Household & Personal Products	25	13	19	26	23	2
Materials	17	9	9	20	12	7
Media	15	4	11	15	18	1
Pharmaceuticals, Biotechnology & Life Sciences	14	13	9	25	12	8
Real Estate	25	8	8	11	13	3
Retailing	25	10	10	18	15	10
Semiconductors & Semiconductor Equipment	19	13	11	20	14	3
Software & Services	22	14	14	28	19	17
Technology Hardware & Equipment	16	10	9	125	13	9
Telecommunication Services	35	7	4	31	9	1
Average	20	11	11	30	15	101

Note: Topix Top 100, selected by weighted profit indicators.

Source: © FRI 2011. Data from Bloomberg.

Bottom Line

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- During the two "lost decades," capital adjustment, depreciation and maintenance of Japan's high capital stock was holding companies back
- A shrinking domestic market has turned companies into efficient investors – "cost cutting" has become their second nature
- "Bottoming out" of net (new) investment would revive growth
- Investment recovery would enhance Japan's role as a global exporter and investor
- Investment recovery gains from profit growth in the huge service sector

Challenges

- Restructuring without government support
- Shift to demand-side economics

Government tried to "Buffer" Restructuring

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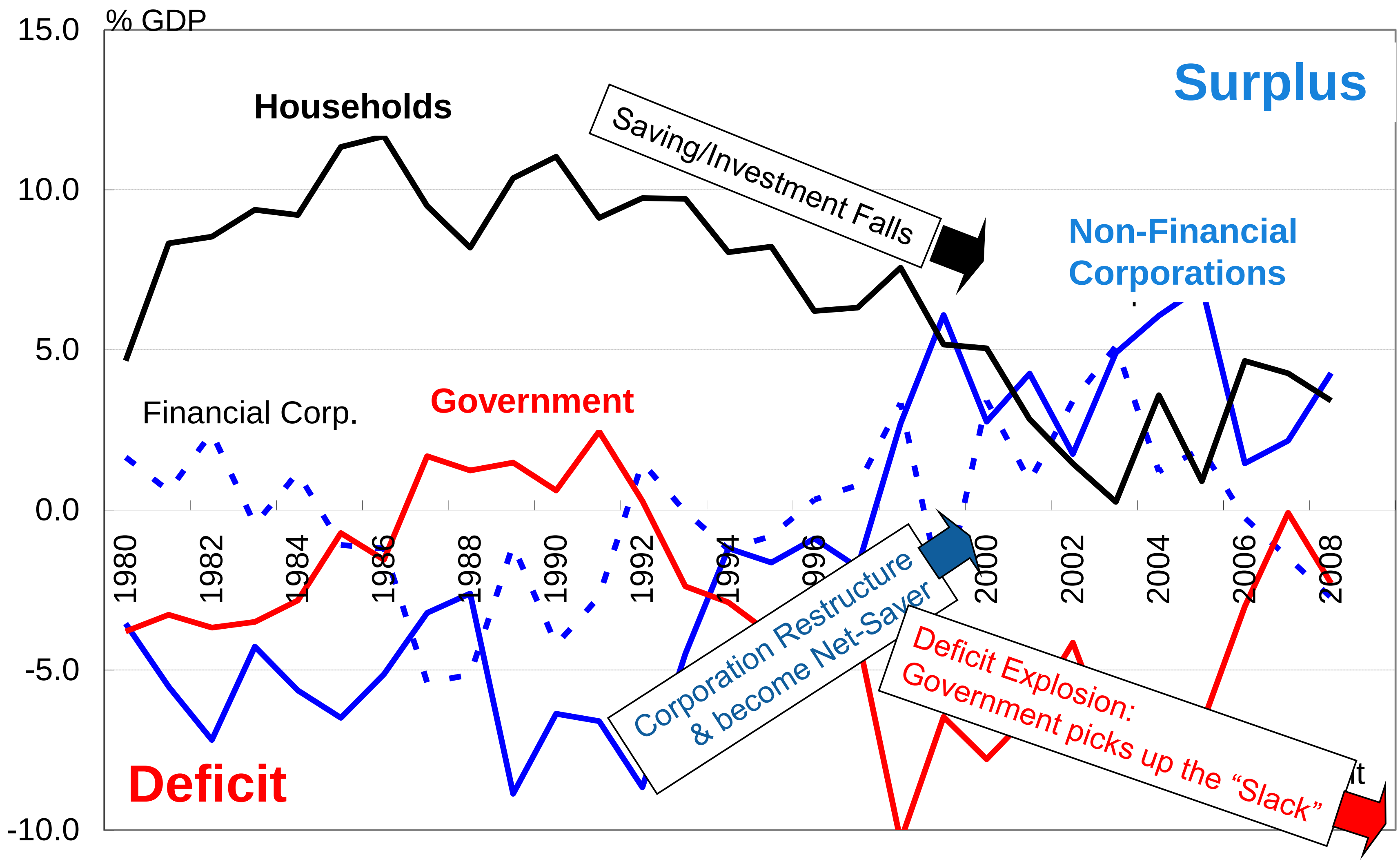
Financial Surplus & Deficit by Sector as % of GDP (Saving-Investment Balances)



Note: Aggregates based on 2000 prices.

Source: © FRI 2011. Data: National Accounts; SNA93.

…resulting in unsustainable Government Debt Levels

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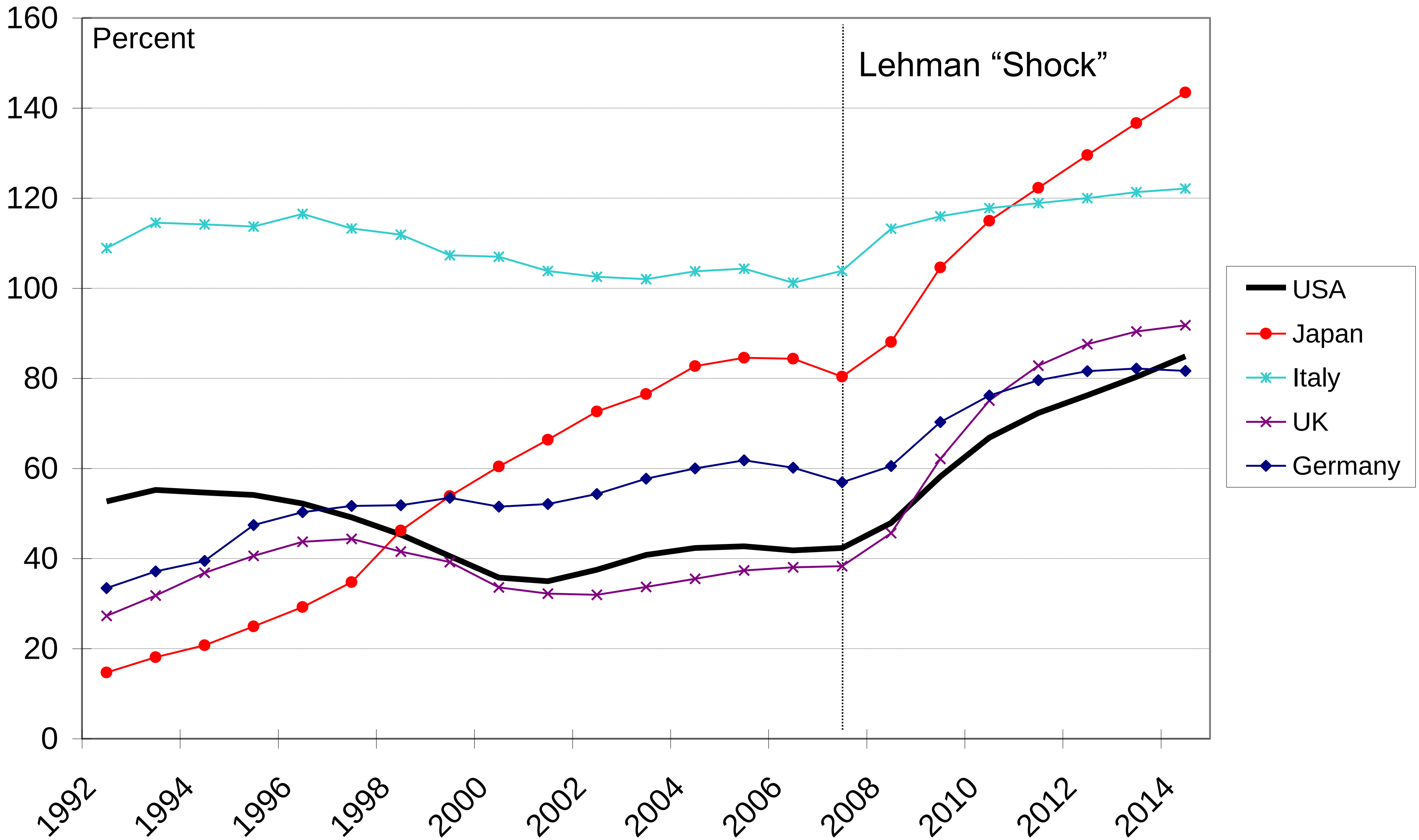
Government Net Debt (% of GDP) of Major Countries



Note: Government Net Debt as Percent of GDP. Source: © FRI 2010. Data: IMF (Bloomberg).

International comparison of fiscal conditions (2010)

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	Gross debt /GDP	Net debt /GDP	Annual deficit /GDP	Interest payment /GDP	Interest rate of national bond	Current account /GDP	Inflation rate
Japan	199.7	116.3	5.7	1.4	1.1	3.6	-0.7
USA	93.6	67.3	8.5	1.6	3.2	-3.2	1.6
UK	82.4	56.3	8.3	2.6	3.6	-2.5	3.3
Germany	87.0	50.1	1.3	2.0	2.7	5.6	1.2
France	94.1	56.6	5.4	2.3	3.1	-2.2	1.7
Spain	66.1	40.2	7.9	1.5	4.2	-4.5	2.0
Italy	126.8	99.1	3.0	4.2	4.0	-3.5	1.6
Greece	147.3	114.2	11.6	5.3	9.1	-10.4	4.7
Portugal	103.1	68.8	6.4	3.0	5.4	-9.7	1.4

出所：OECD Economic Outlook

Public Burden per GDP is sure to Grow further

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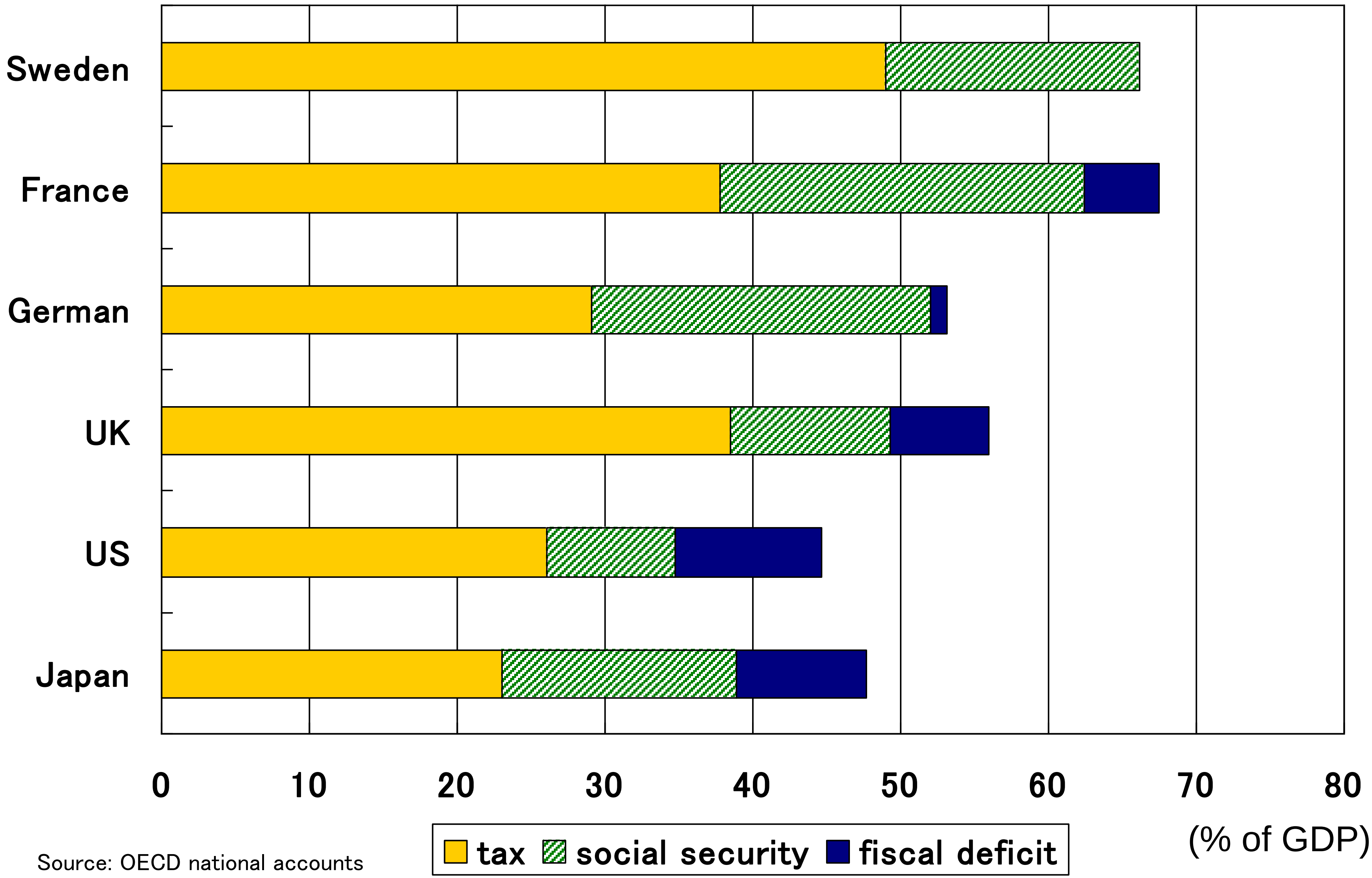

Source: OECD national accounts

DPJ vs. LDP Policy

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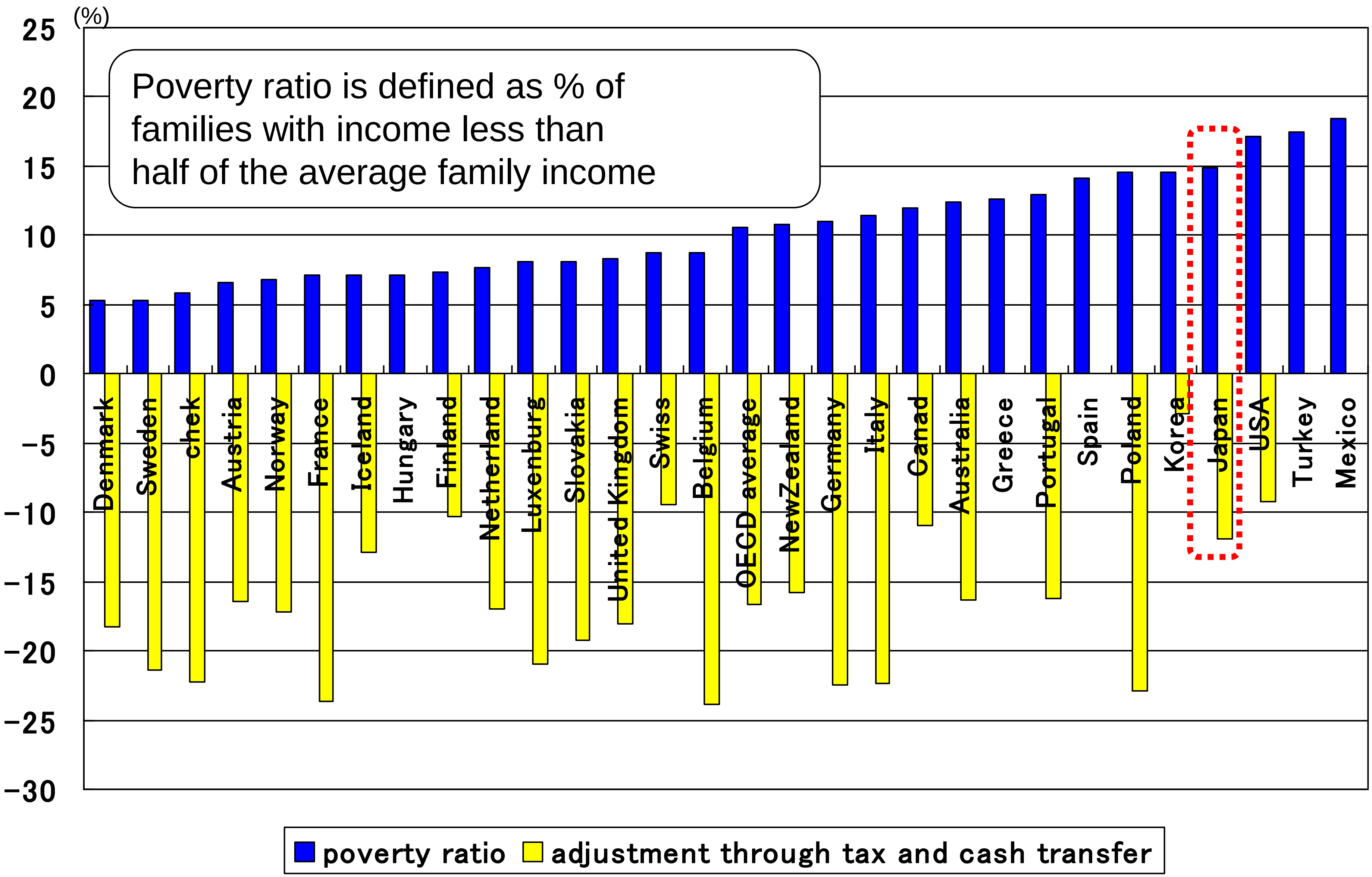
DPJ	LDP
Consumer (demand side)	Producer (supply side)
Big government (if they could increase taxes)	Small government (low consumption, high investment)
Consumer, NPO, Unions	Industry Association, Companies
Distribution	Growth (status quo)
Environment	Growth (status quo)
Protectionism (->Free Trade)	Free trade (->Protectionism)

Second highest Poverty Ratio after the US



Public Expenditure on Education of OECD Countries

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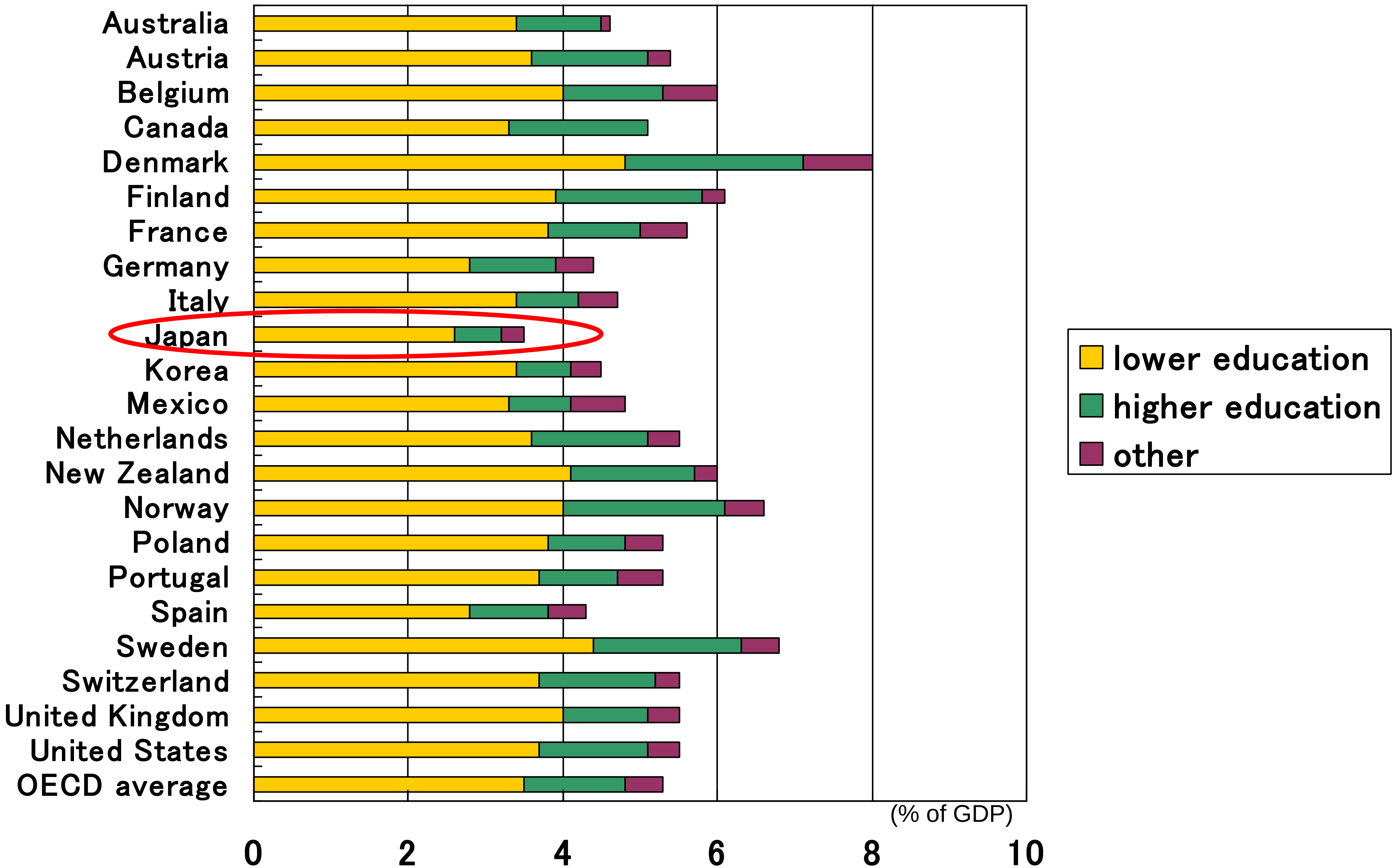

Source: OECD Education Outlook

Family Assistance in the OECD

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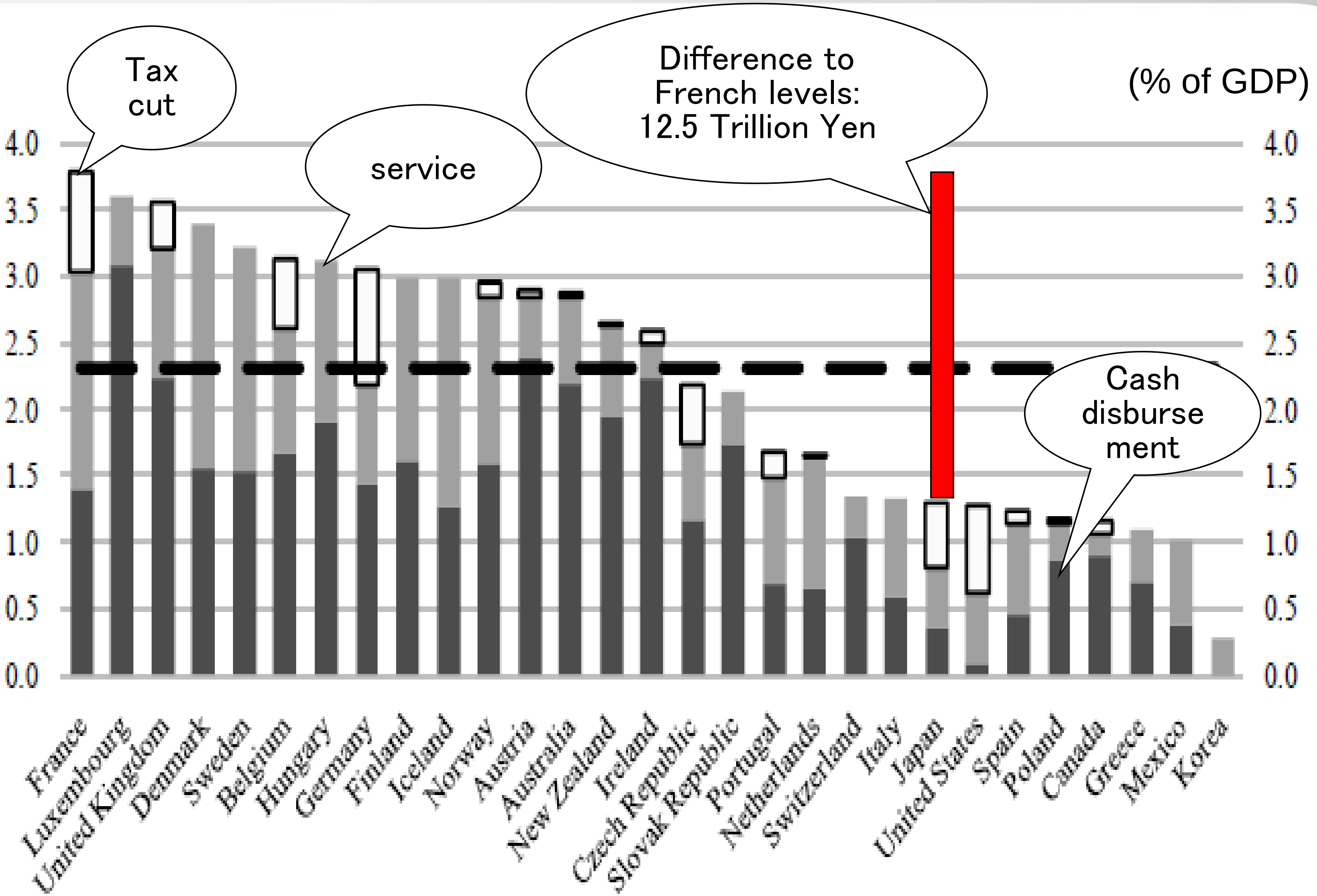

Challenges

- Tricky Asian integration
- Increasing Asian competition

Japan’s East Asia “Integration” is a huge Challenge

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1. Japan remains slow in pushing Asia Integration
   Japan is not opening its agriculture and labor market
2. Competing ideas for an East Asia Economic Community
   No specifics of DPJ East Asia Community Proposals
   Prospects for FTAs with China, Korea, Australia, NZ and India are not good
3. Asia remains skeptical about Japan’s role
   1. Which East Asia Community?
      - Japan, China, Korea + ASEAN 10 (EAFTA)
      - Japan, China, Korea + ASEAN 10 + India, Australia, NZ (CEPEA)
      - APEC / TPP
   2. Which Content?
      - Free Trade Agreement (FTA)
      - Cooperation projects (global warning, monetary cooperation, HRD, Infrastructure)
      - Coordination of economic policies
      - Creation of a new international organization (OECD of East Asia)
   3. Problems
      - Legally binding framework like EU is unfeasible
      - Region-wide FTA like NAFTA (TPP?) is a distant possibility
      - No common value (market economy, democracy, religion)
      - Leadership vacuum
      - What is the US up to?

ASEAN is an Inefficient Hub of bilateral FTAs

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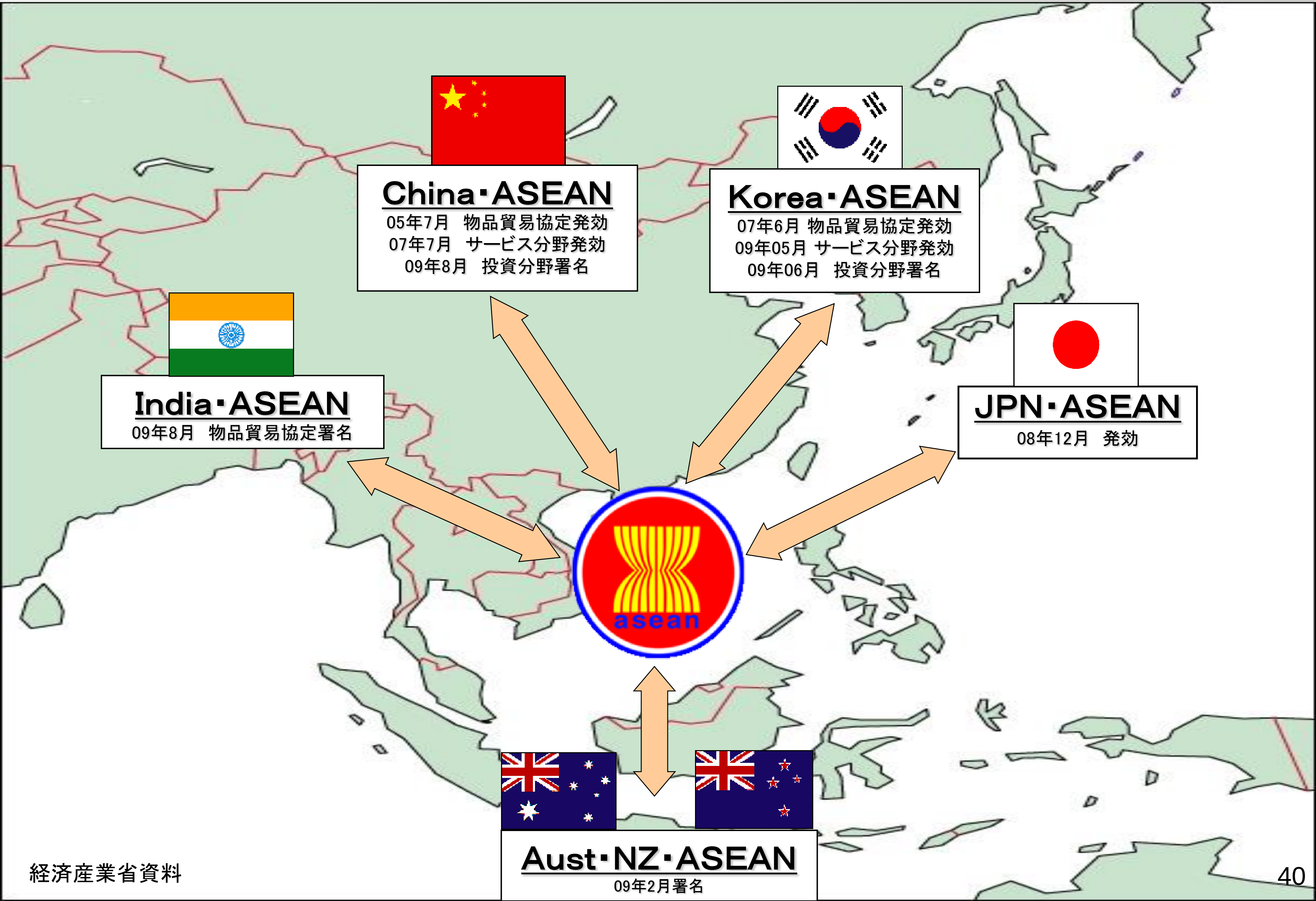

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China Competition Heating Up in Machinery, Vehicles

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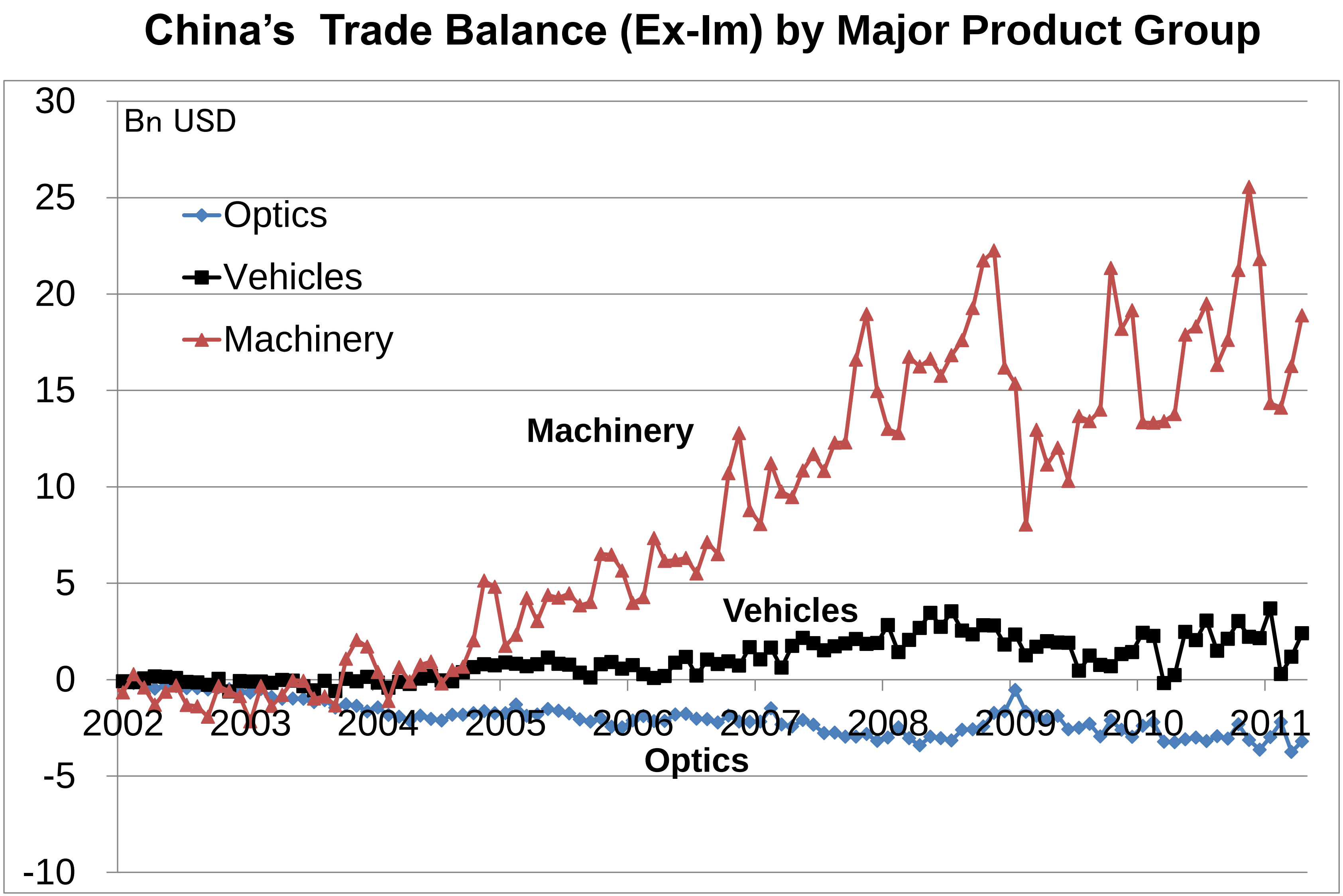
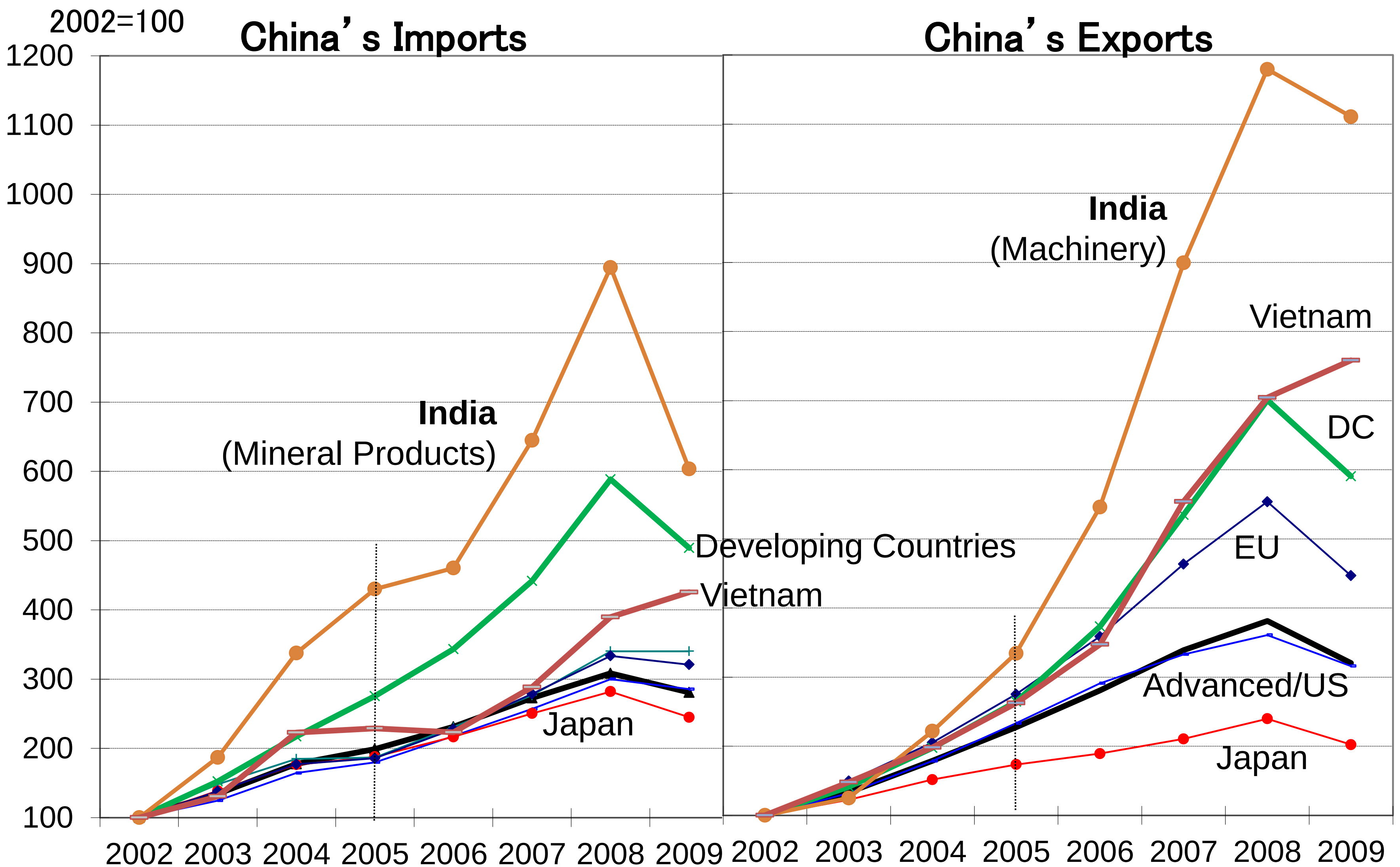


Source: © FRI 2011. Data: CEIC

China becomes a tremendous Competitor in Asia



Source: © FRI 2010. Data: CEIC

Bottom Line

- “Lost” decades are almost done
- Japan is increasingly becoming part of the Asian growth story
- Business, not least in services, becomes profitable again
- Policy remains to be a drag
- Asian markets change from “everybody gains” (from trade with China) to “fierce competition”

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