

The Land of the Setting Sun
January 2011

The Intrigued Trader
<http://thetailchaser.blogspot.com>



Executive Summary

- Macroeconomic factors, structural fiscal issues and worsening demographics seem to be fundamentally unsustainable
- 1980's equity and property bubbles: the can was kicked down the road and targeted the government's balance sheet
- Rapid economic development in East Asia, debt bubbles in the US and Western Europe along side a finite supply of domestic forbearance has allowed Japan to avoid economic collapse and subsist near zero economic growth for the last 16 years
- A high level of sovereign debt at low rates were sustained successfully because Japan funded approximately 95% of debt issuance domestically through a comparatively high savings rates while keeping short-term rates close to 0%
- Government policy indicates that the near term debt issuance won't subside
- Anticipated demographic issues are starting to impact growth and impact the fiscal outlook and will soon compel Japan to fund part of its debt internationally
- The severity and notion that "it can't happen" creates opportunity for a very asymmetrical trade, especially considering the on-going sovereign debt issues around the world that could possibly serve as an important catalyst both in terms of confidence and lower growth ahead

The Land of the *Setting* Sun

The Golden Times Turned Gray

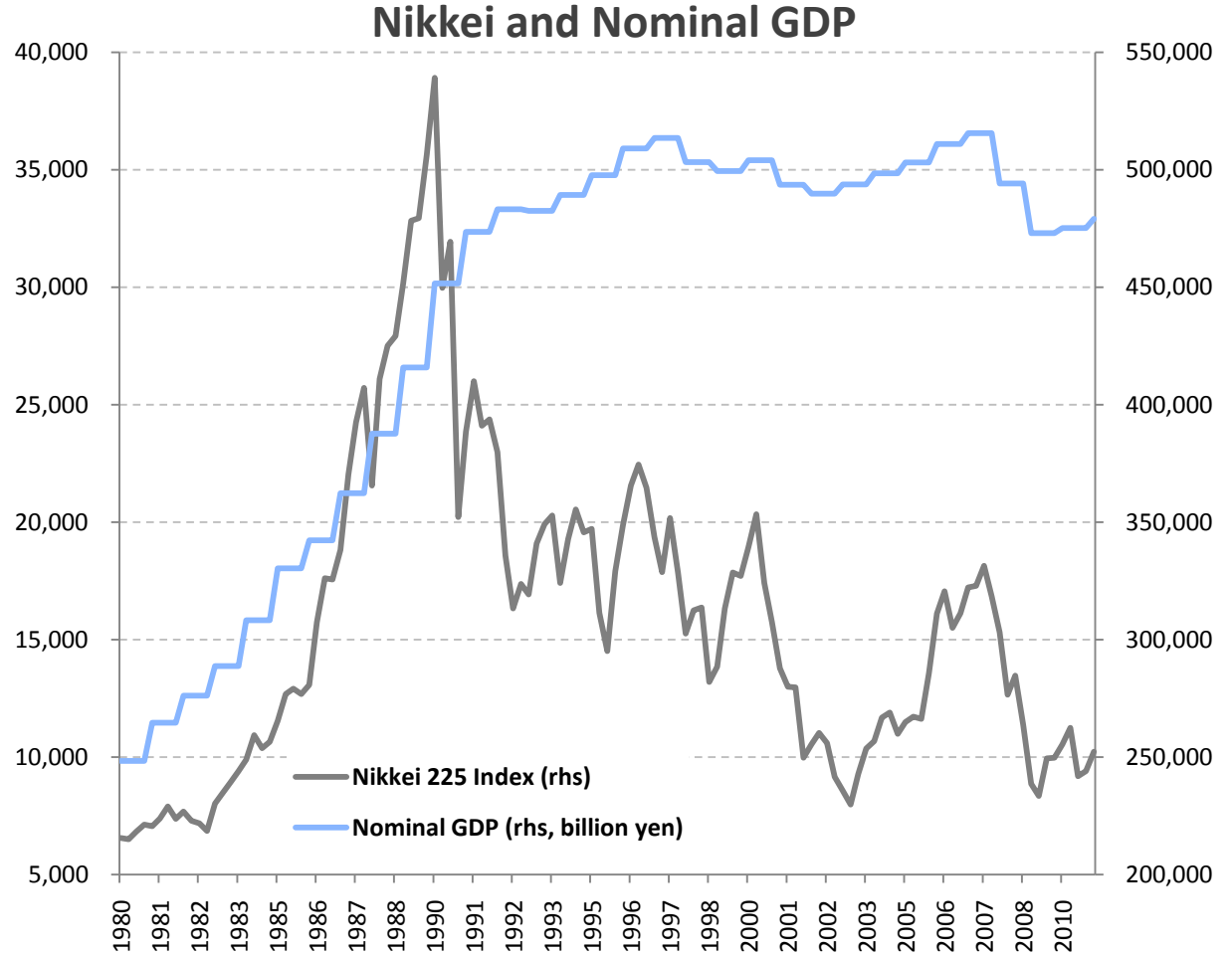
- JPY appreciated 300% against the USD from 1970 to before the crash in late 1989

- Nikkei annual returns :
 - 1970-1980: +10.5%
 - 1980-1990: +19.5%
 - 1990-2000: -6.9%
 - 1990-2011: -6.4%

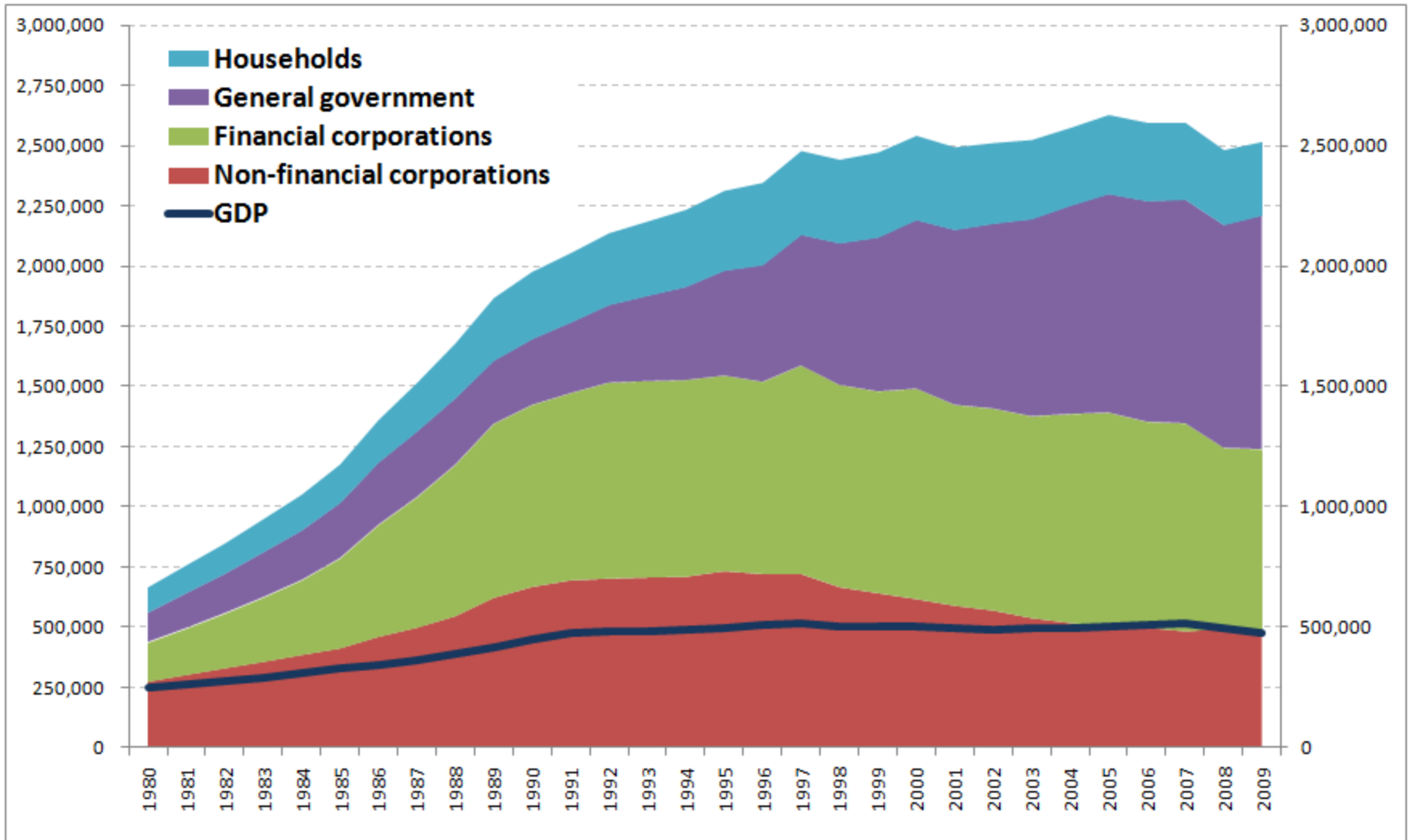
- Nominal GDP (annual):
 - 1980-1990: +6.2%
 - 1990-2000: +1.1%
 - 2000-2011: -0.5%
 - ~1990-2011: +0.3%

- Ginza district real estate market bubble:
 - 1 m² = USD 93k

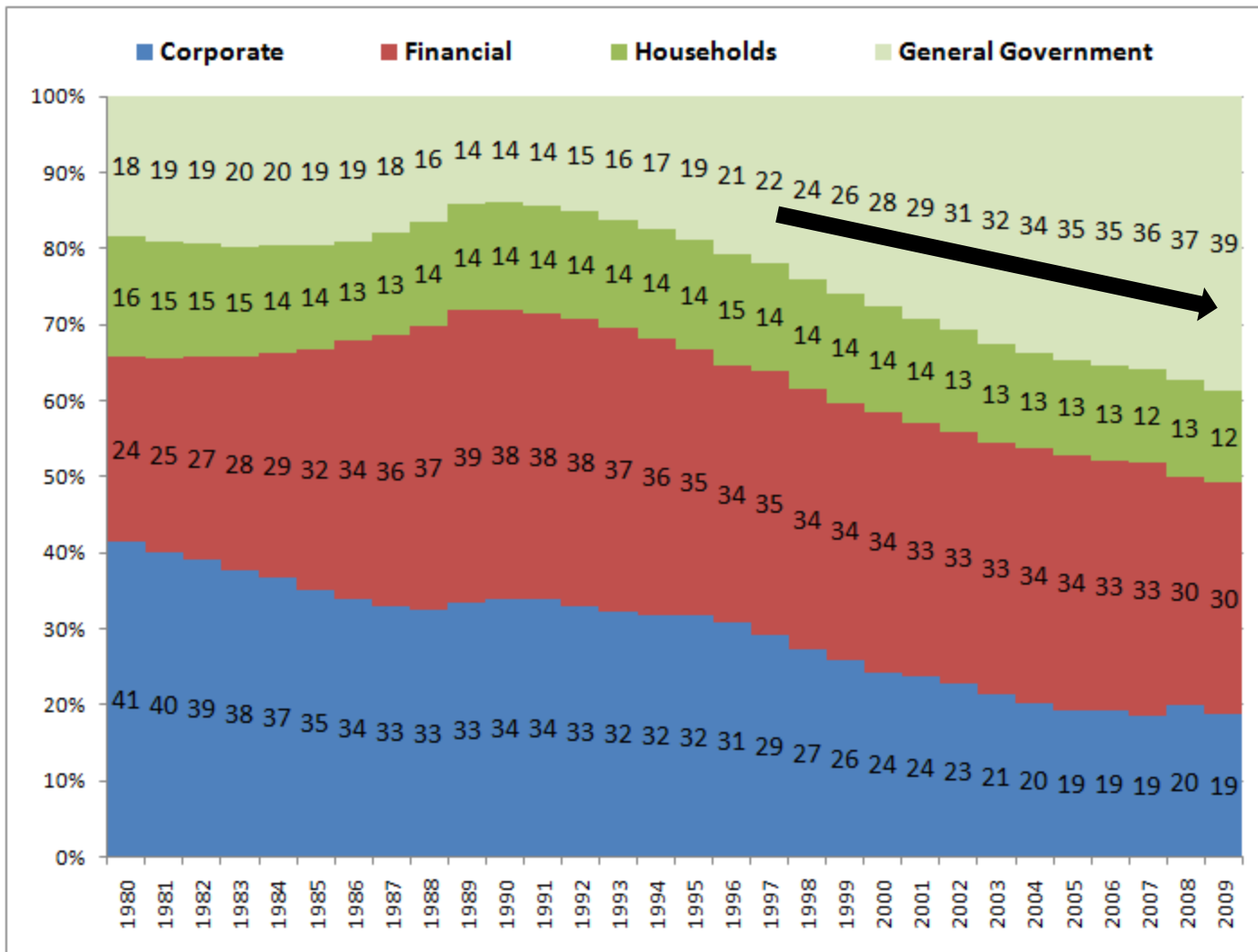
- Land of the Imperial Palace was worth more than the entire state of California



The Golden Times Turned Gray – Gross Debt Explodes

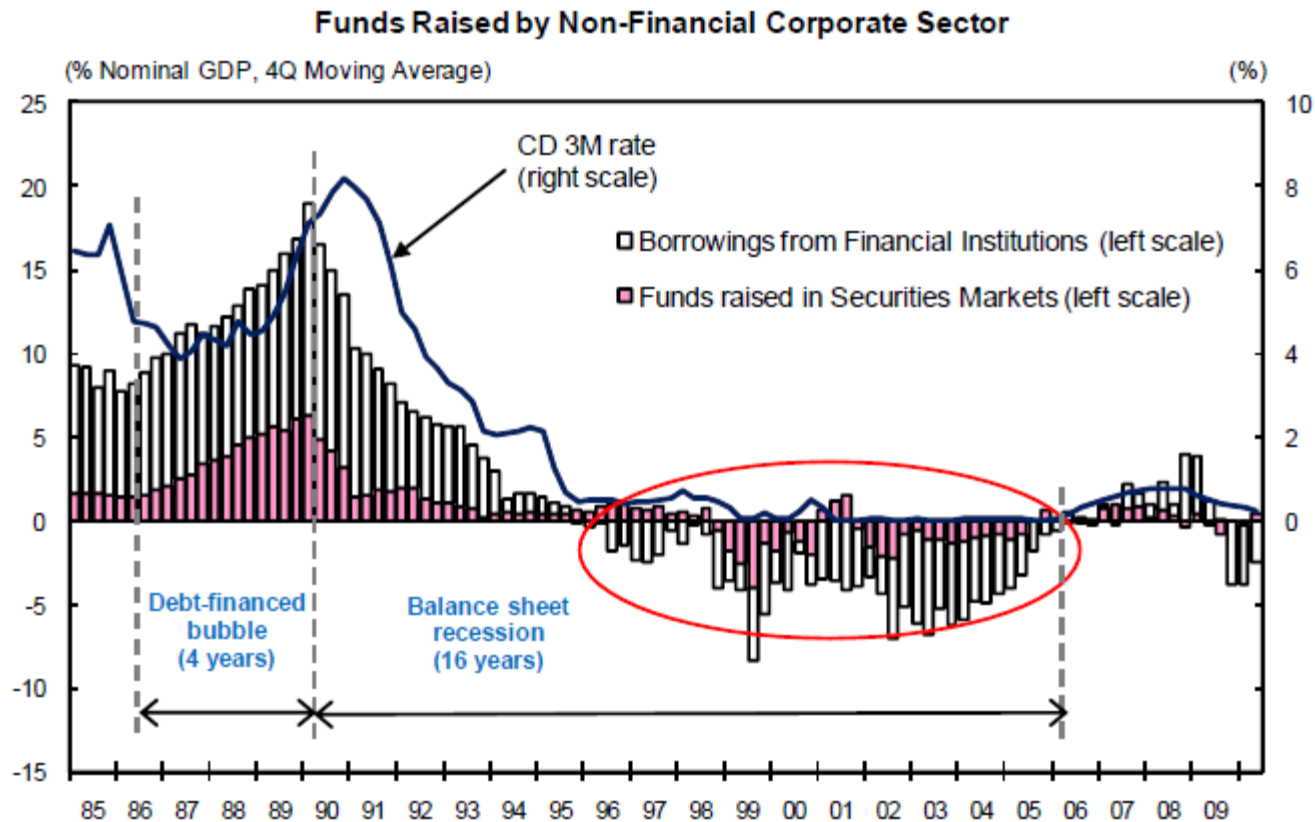


The Golden Times Turned Gray – Government Takes Over Debt



The Golden Times Turned Gray - Deleveraging

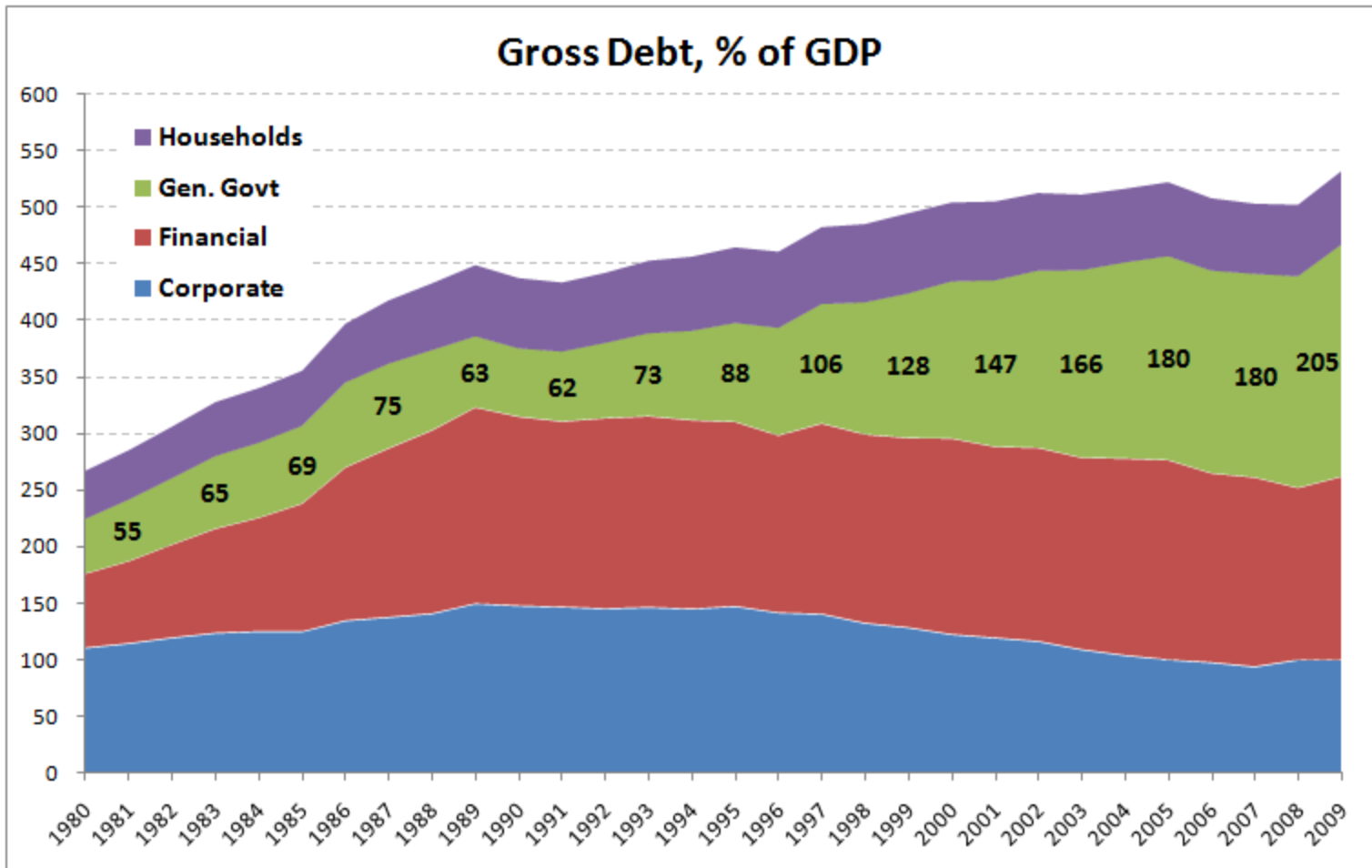
- As corporations deleverage and reduce spending after the pop the Government takes over and, while reducing interest rates, increases its debt burden



Sources: Bank of Japan, Cabinet Office, Japan

The Golden Times Turned Gray

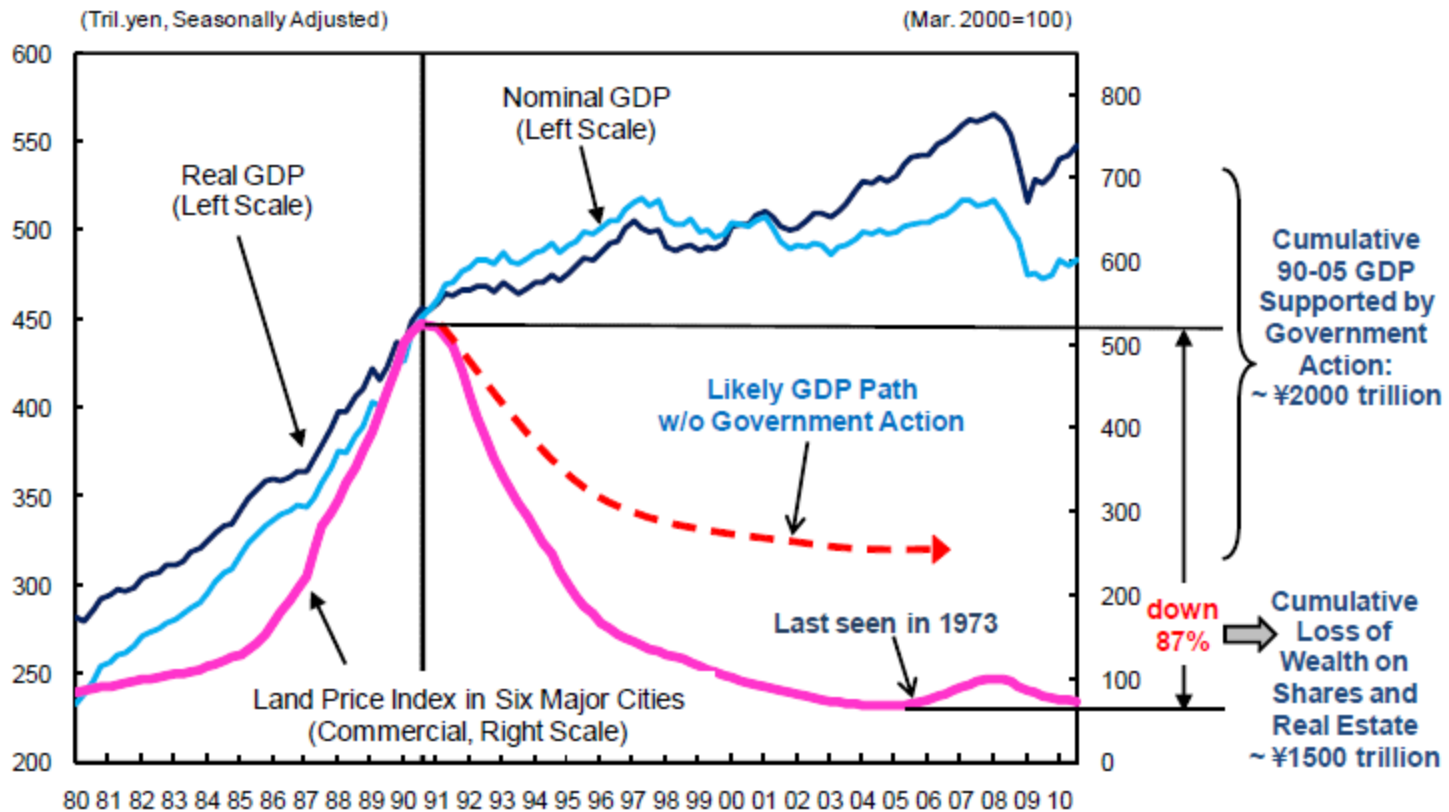
- Apparently the Government had no success as nominal GDP growth remained mediocre



The Golden Times Turned Gray

- If it didn't act Japan would have been worse off...

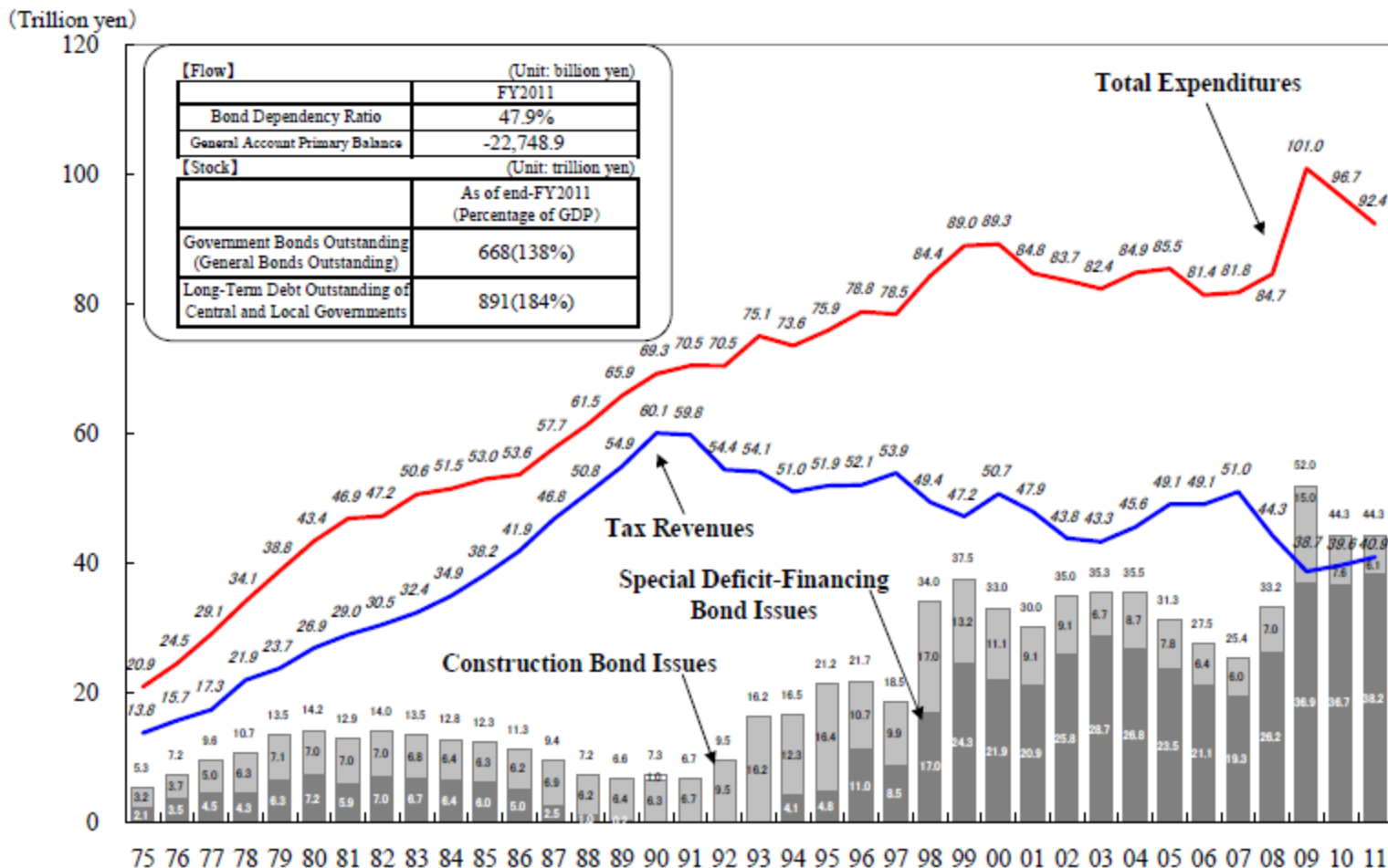
Exhibit 10. Japan's GDP Grew in spite of Massive Loss of Wealth and Private Sector De-leveraging



Sources: Cabinet Office, Japan Real Estate Institute

Fiscal Situation – Divergence in Revenues x Expenditures

- Expenditures increased while revenues are decreasing: the gap has been widening
- Debt issuance is almost 2x revenues



Can Funding Get Any Cheaper?

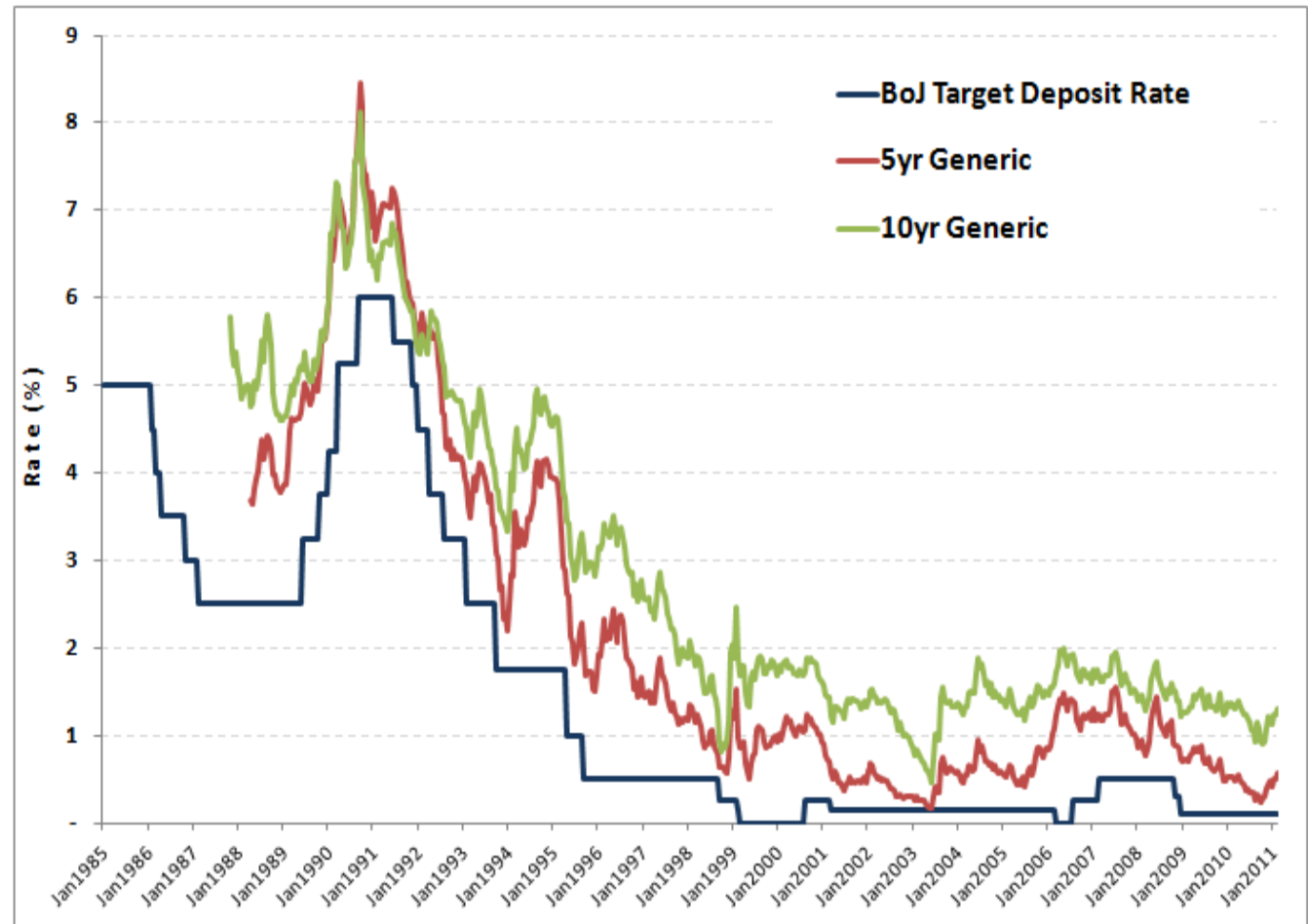
- It all started in 1991: from 6% to <1% in less than a decade...

- didn't help growth surprise on the upside even though rates were kept below 1% for over a decade now...

- Bond issuance reached 145% of tax revenues:
2010 @ 118%
2011 @ 108%

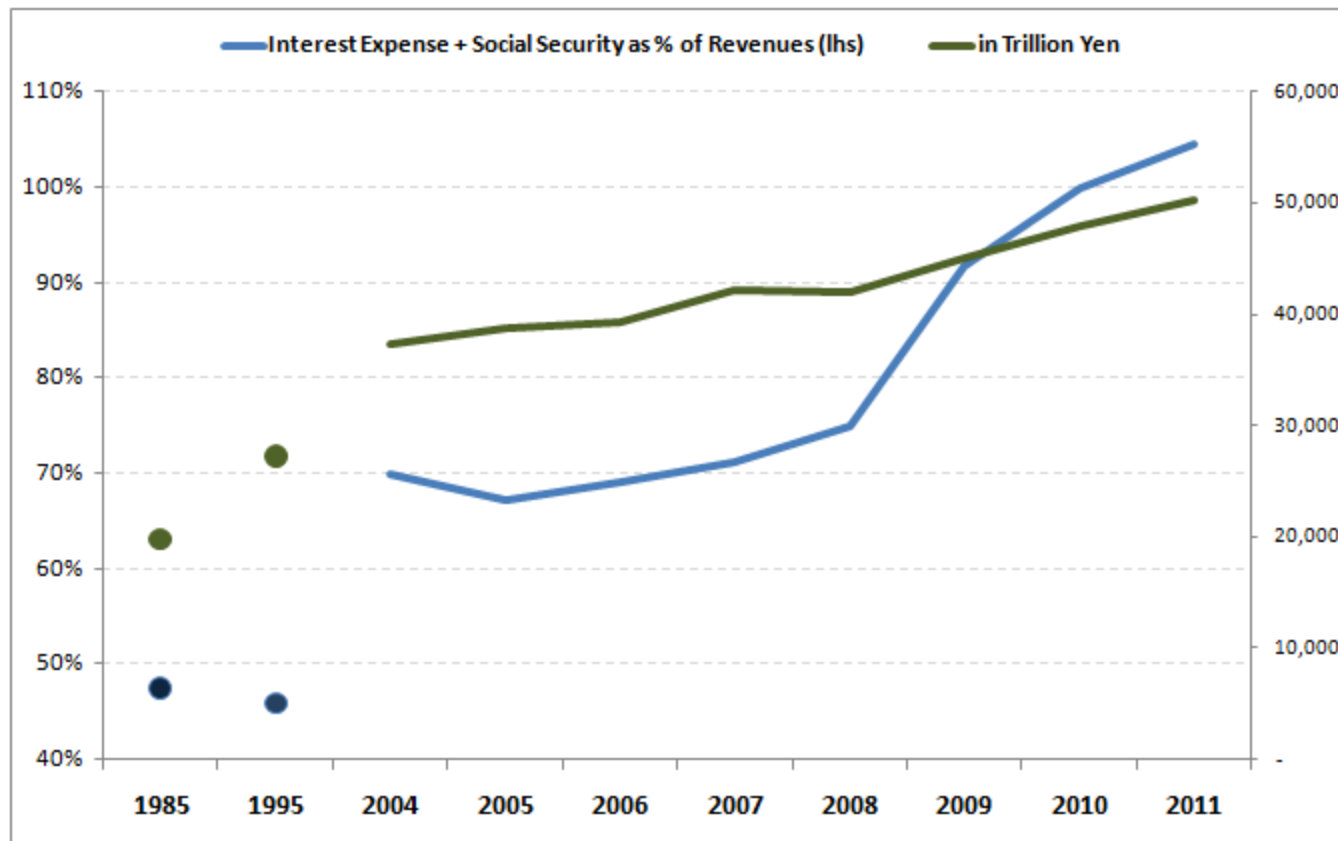
- Interest expense vs tax revenues:
2009 @ 55%
2010 @ 55%
2011E @ 53%

- With no more room to cut rates the debt stock has sky rocketed and interest expense doesn't look like going down any time soon.



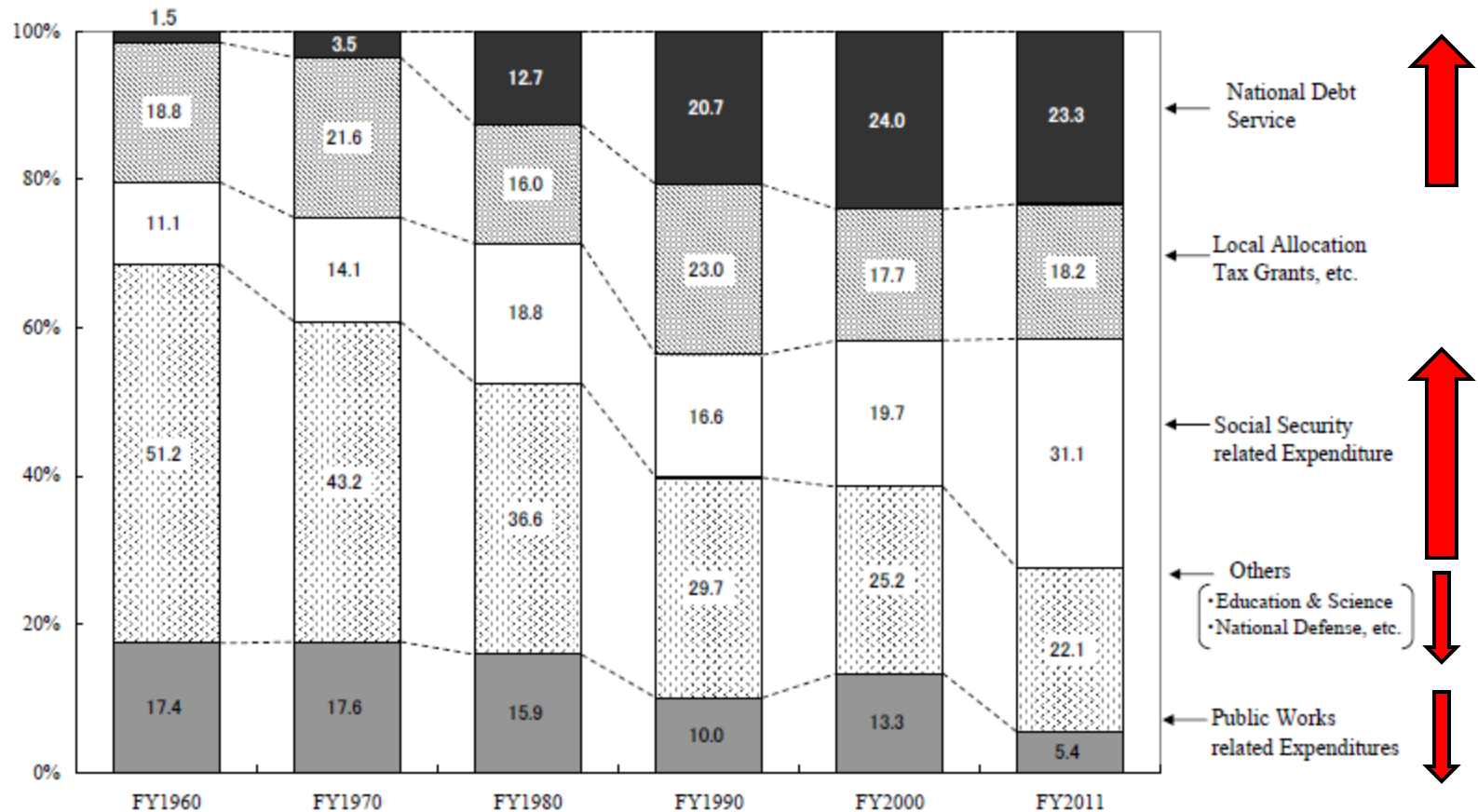
Fiscal Situation – Interest + Social Security = Japan's Taxes

- The Japanese now uses all its tax revenues to pay for its elders and its past fiscal performance (IE+SS)
- IE+SS 1995 to 2005: +3.6% per year
- IE+SS 2005 to 2011: +4.4% per year



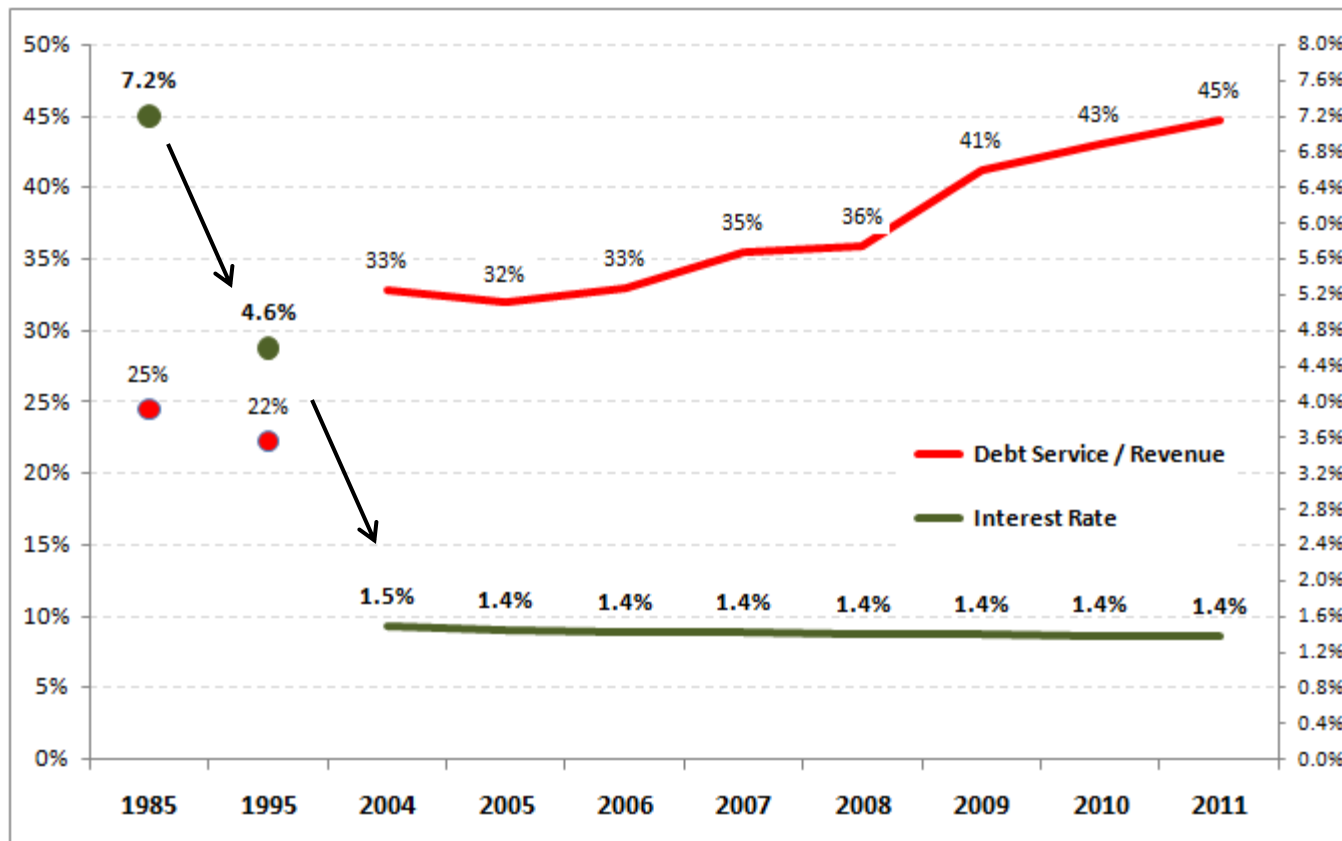
Fiscal Situation – Spending in Education, Defense, Infra?

(7) Ratio of Major Expenditure Items in the General Account



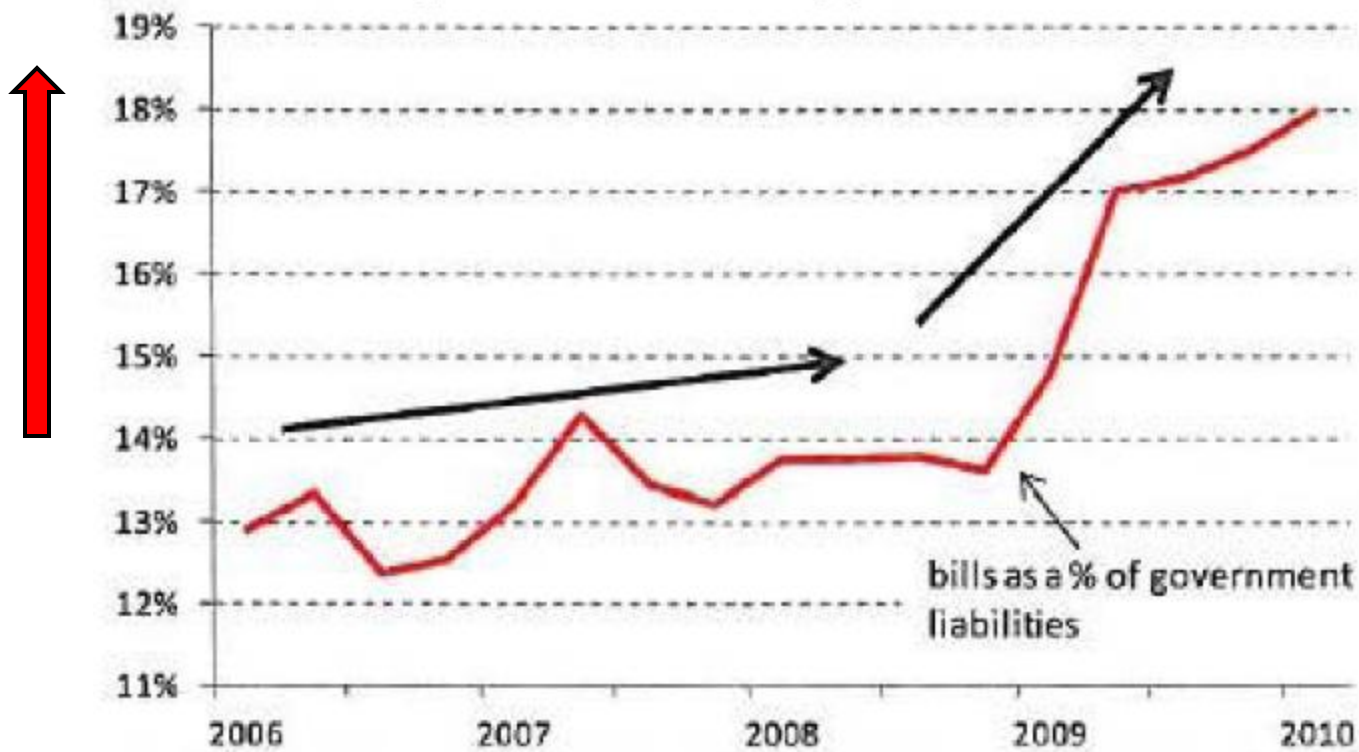
Fiscal Situation – Working to pay interest expense?

- Almost half of the Japanese tax revenues goes to covering its debt service...
- And that is while its average interest rate is very low



The Castle of Cards – Maturity

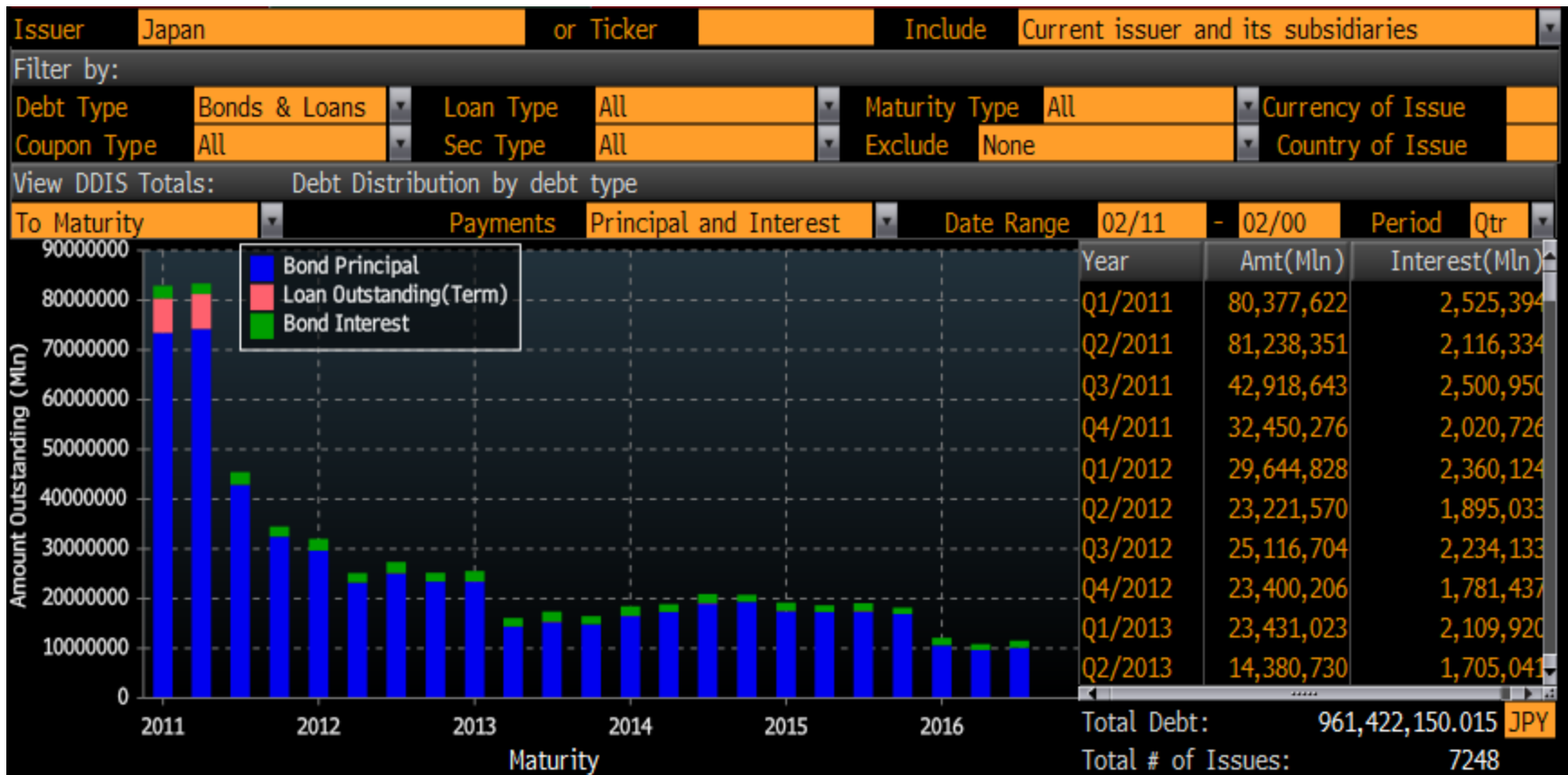
- “This Time Is Different: Eight Centuries of Financial Folly” authors Reinhart and Rogoff say that one of the early warning signals of a government funding crisis is a narrowing of the debt maturity



Source: SG Cross Asset Research, BoJ

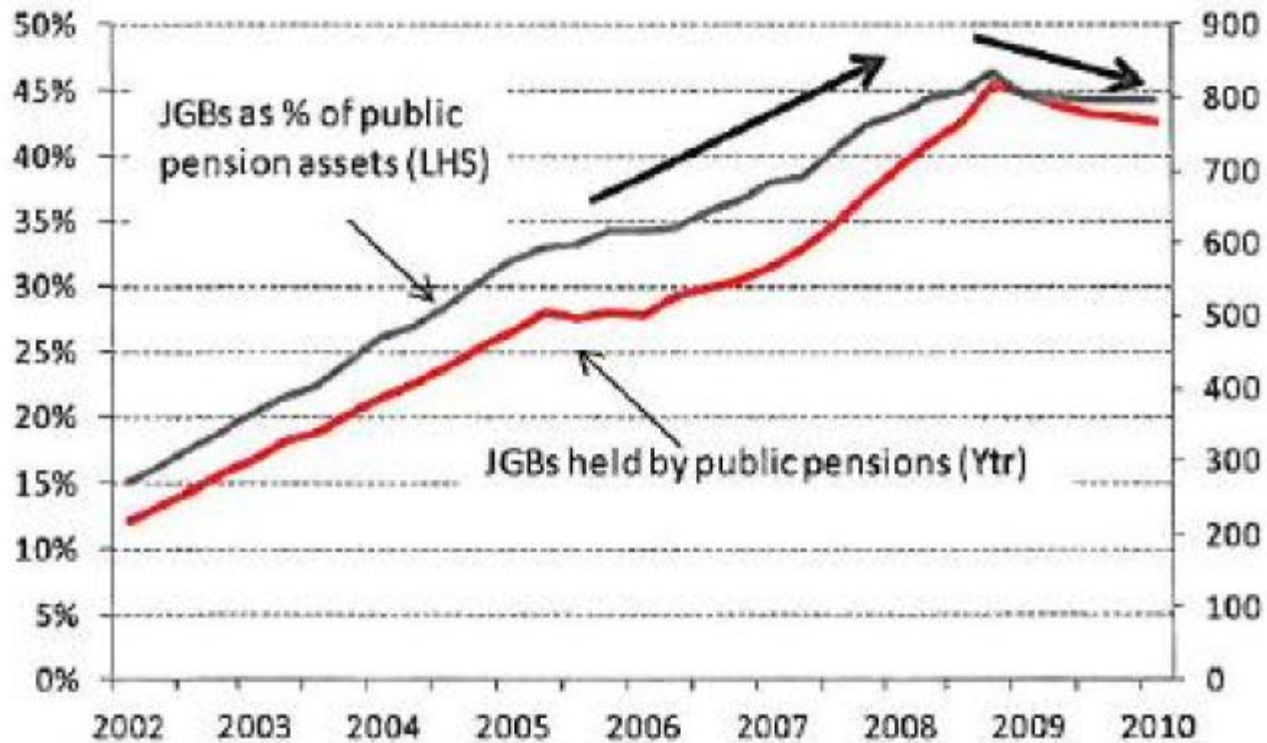
The Castle of Cards – Central Government Debt Profile

- A lot of debt to be rolled into the coming quarters
- Will this debt-roll be into longer tenors with such low current yields?
- What would happen to interest expense if debt was rolled at 2-3% yields instead of 0.10% or 1.20% (current 10yr yields)?



The Castle of Cards – Holders

- The largest holders of JGBs have started selling...

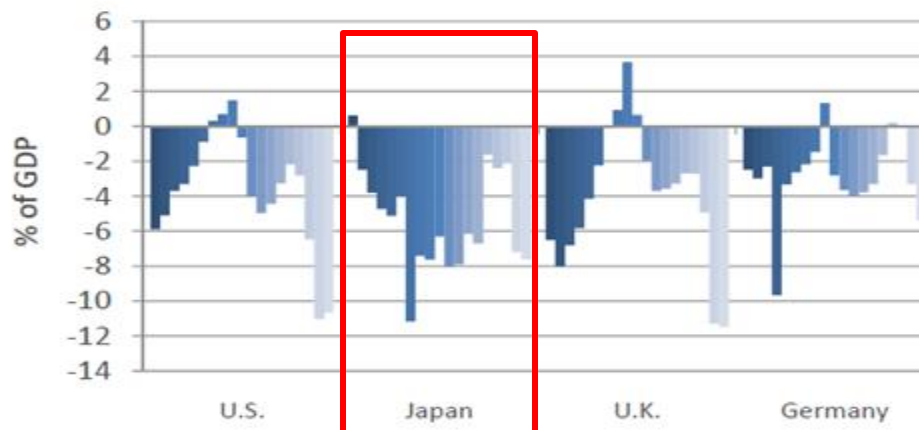


Source: SG Cross Asset Research, BoJ

Where is Japan globally speaking?



Surplus/Deficit as % of Nominal GDP (1992 – 2010).



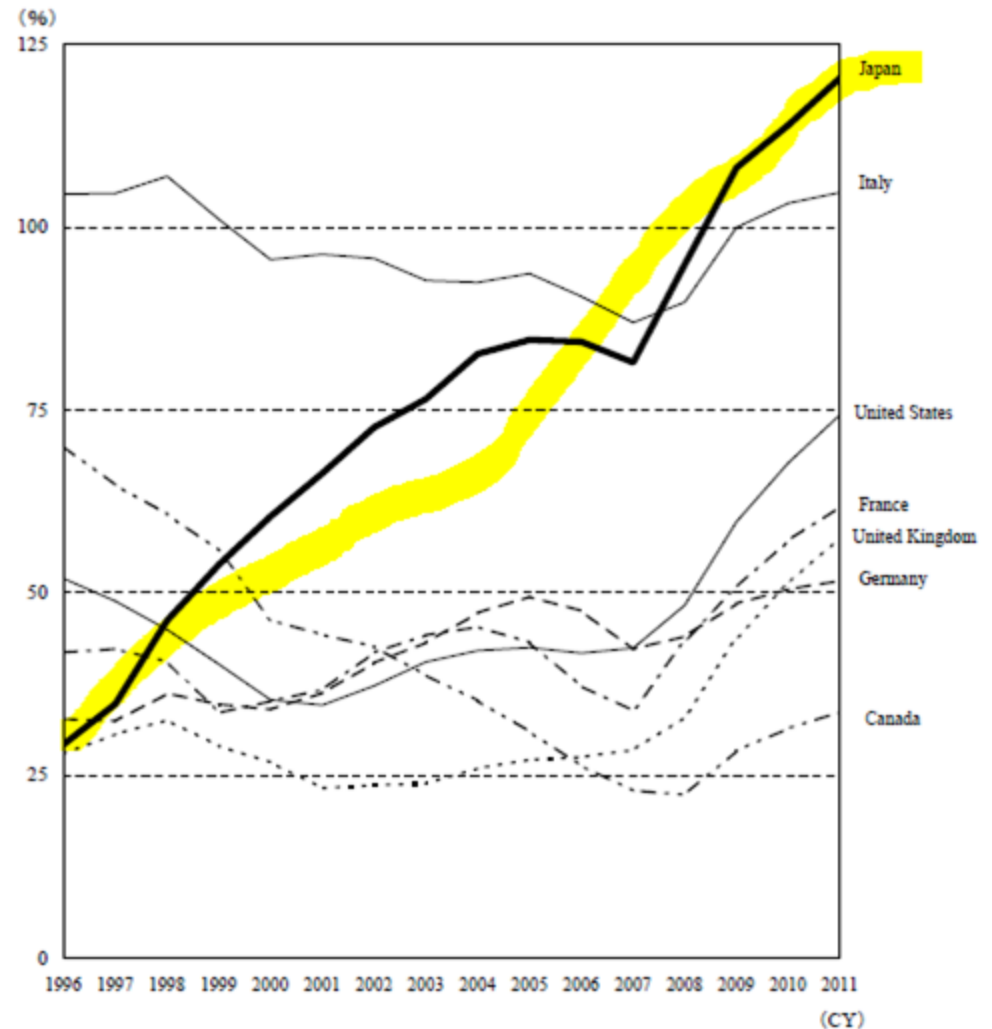
Data Source: Organization for Economic Cooperation and Development, Bloomberg financial Services.
GDP = Gross Domestic Product. The measure of an economy. The total market values of goods and services produced in a country in a given year.

Where is Japan's fiscal situation globally - Stock

(Reference 3) General Government Net Debt (International Comparison)

CY	1996	1997	1998	1999	2000	2001	2002	2003
Japan	29.2	34.8	46.2	53.8	60.4	66.3	72.6	76.5
U.S.	51.9	48.8	44.9	40.2	35.3	34.6	37.2	40.5
U.K.	27.9	30.6	32.6	29.0	26.8	23.2	23.7	23.9
Germany	32.7	32.4	36.2	34.7	34.0	36.3	40.4	43.2
France	41.8	42.3	40.5	33.5	35.1	36.7	41.8	44.2
Italy	104.5	104.6	107.0	101.1	95.6	96.3	95.7	92.7
Canada	70.0	64.7	60.8	55.8	46.2	44.3	42.6	38.7

CY	2004	2005	2006	2007	2008	2009	2010	2011
Japan	82.7	84.6	84.3	81.5	94.9	108.2	114.0	120.4
U.S.	42.1	42.5	41.7	42.4	48.3	59.7	67.8	74.3
U.K.	25.9	27.1	27.5	28.5	33.0	43.8	51.3	57.6
Germany	47.2	49.5	47.5	42.2	44.0	48.5	50.5	51.6
France	45.3	43.2	37.2	33.8	43.4	50.8	57.1	61.8
Italy	92.5	93.7	90.5	87.0	89.7	100.0	103.3	104.7
Canada	35.2	31.0	26.3	22.9	22.4	28.4	31.4	33.7



(Source) OECD "Economic Outlook 88" (December, 2010)

(Note 1) Figures represent the general government-based data (including the central/local governments and the social security funds).

(Note 2) FY2010 draft budget is not reflected in the above data.

Where is Japan's fiscal situation globally - Flow

(Reference 1) General Government Financial Balances (International Comparison)

	(%)							
CY	1996	1997	1998	1999	2000	2001	2002	2003
Japan	-6.9	-5.8	-7.2	-8.5	-8.2	-6.5	-7.9	-8.0
U.S.	-3.2	-1.9	-0.9	-0.7	-0.1	-2.2	-5.5	-6.3
U.K.	-4.2	-2.2	-0.1	0.9	3.7	0.6	-2.0	-3.7
Germany	-3.3	-2.6	-2.2	-1.5	1.3	-2.8	-3.6	-4.0
France	-4.0	-3.3	-2.6	-1.8	-1.5	-1.6	-3.2	-4.1
Italy	-7.0	-2.7	-3.1	-1.8	-0.9	-3.1	-3.0	-3.5
Canada	-2.8	0.2	0.1	1.6	2.9	0.7	-0.1	-0.1

CY	2004	2005	2006	2007	2008	2009	2010	2011
Japan	-6.6	-5.2	-3.5	-2.8	-3.4	-8.3	-8.1	-7.3
U.S.	-5.8	-4.6	-3.6	-4.3	-7.6	-12.1	-11.1	-9.6
U.K.	-3.6	-3.3	-2.7	-2.8	-4.8	-11.0	-9.6	-8.1
Germany	-3.8	-3.3	-1.6	0.3	0.1	-3.0	-4.0	-2.9
France	-3.6	-3.0	-2.3	-2.7	-3.3	-7.6	-7.4	-6.1
Italy	-3.6	-4.4	-3.3	-1.5	-2.7	-5.2	-5.0	-3.9
Canada	0.9	1.5	1.6	1.4	0.0	-5.5	-4.9	-3.4

(Source) OECD "Economic Outlook 88" (December, 2010)

(Note) Figures represent the general government-based data (including the central/local governments and the social security funds), except for Japan and the U.S. where the figures of the social security funds are excluded.

The following figures include social security.

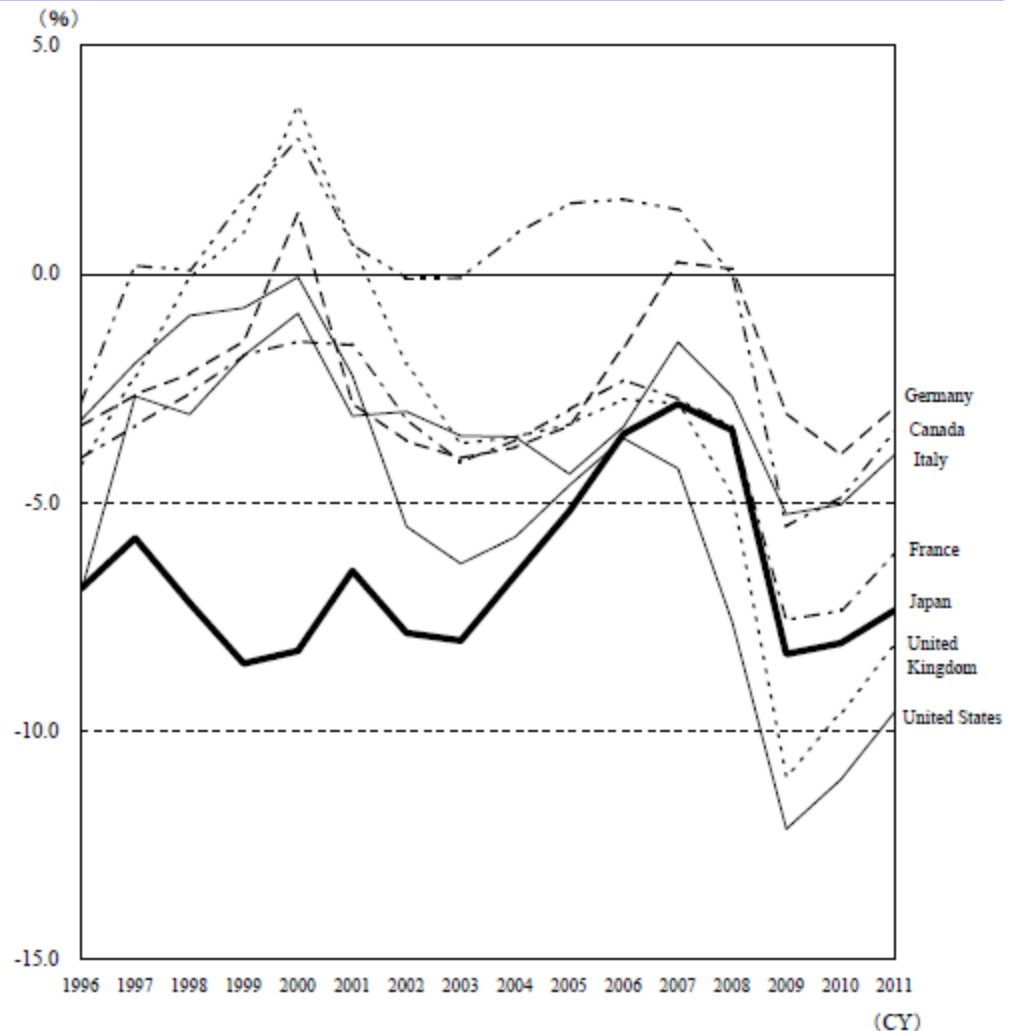
	(%)							
CY	1996	1997	1998	1999	2000	2001	2002	2003
Japan	-5.1	-4.0	-5.8	-7.4	-7.6	-6.3	-8.0	-7.9
U.S.	-2.3	-0.9	0.3	0.7	1.5	-0.6	-4.0	-5.0

CY	2004	2005	2006	2007	2008	2009	2010	2011
Japan	-6.2	-4.8	-3.4	-3.0	-3.8	-8.9	-8.8	-8.2
U.S.	-4.4	-3.3	-2.2	-2.9	-6.3	-11.3	-10.5	-8.8

(Source) OECD "Economic Outlook 88" (December, 2010)

(Note 1) FY2011 draft budget is not reflected in the above data.

(Note 2) Figures for Japan are adjusted to exclude special factors.

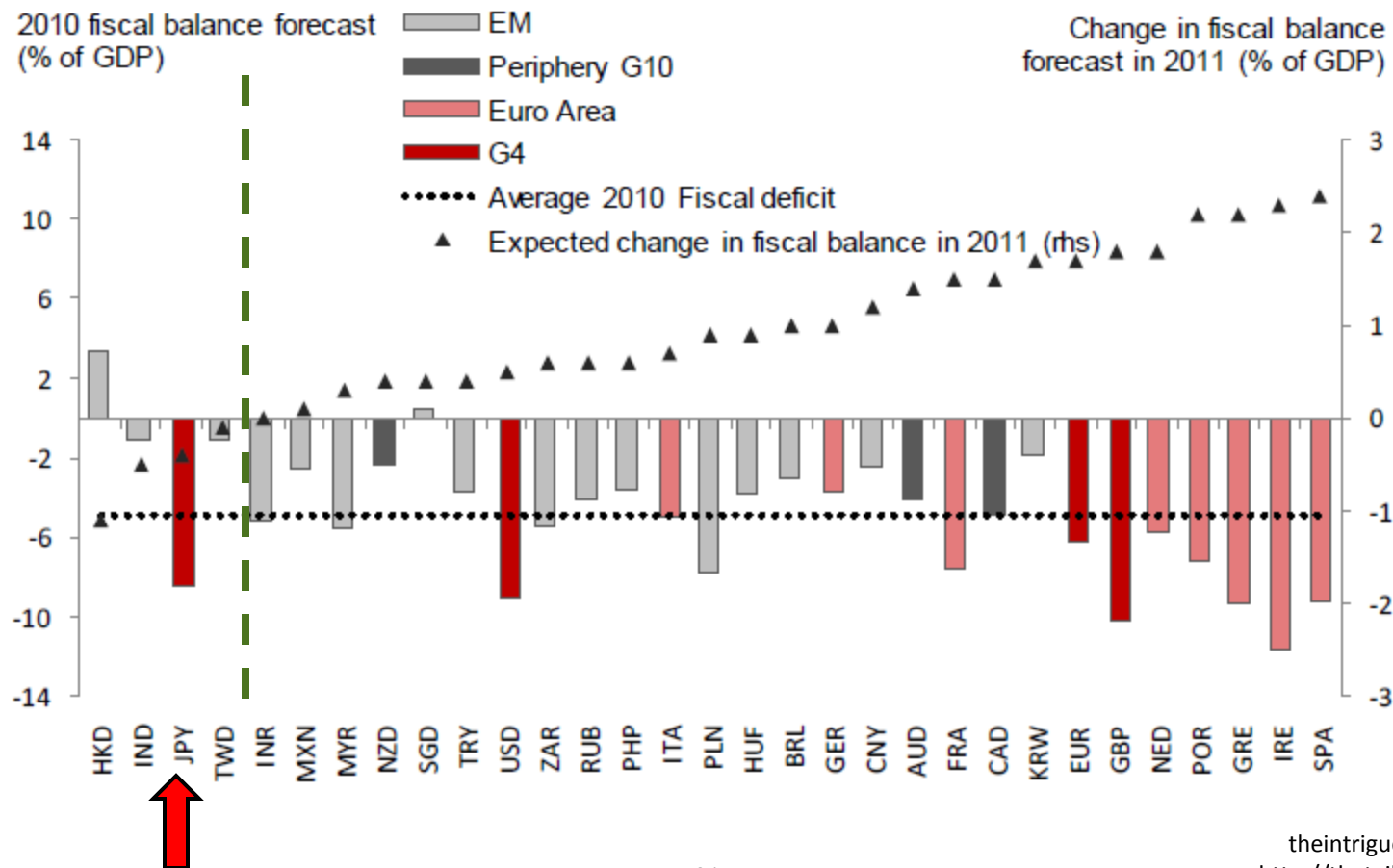


Where is Japan fiscal situation globally - Relative Flow

- Japan is going against the austerity tide along side few other countries while still having a huge fiscal deficit
- Japan cannot afford fiscal austerity right now as its growth is still anemic

Chart of the week

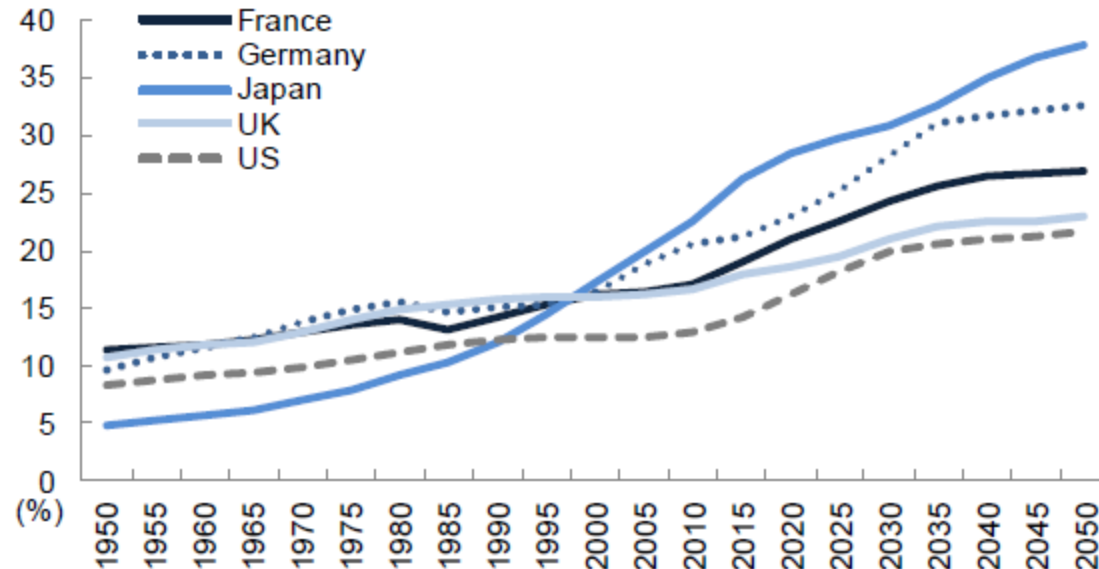
Wednesday: Credit differentiation a theme for 2011



Where is Japan globally - Demographics

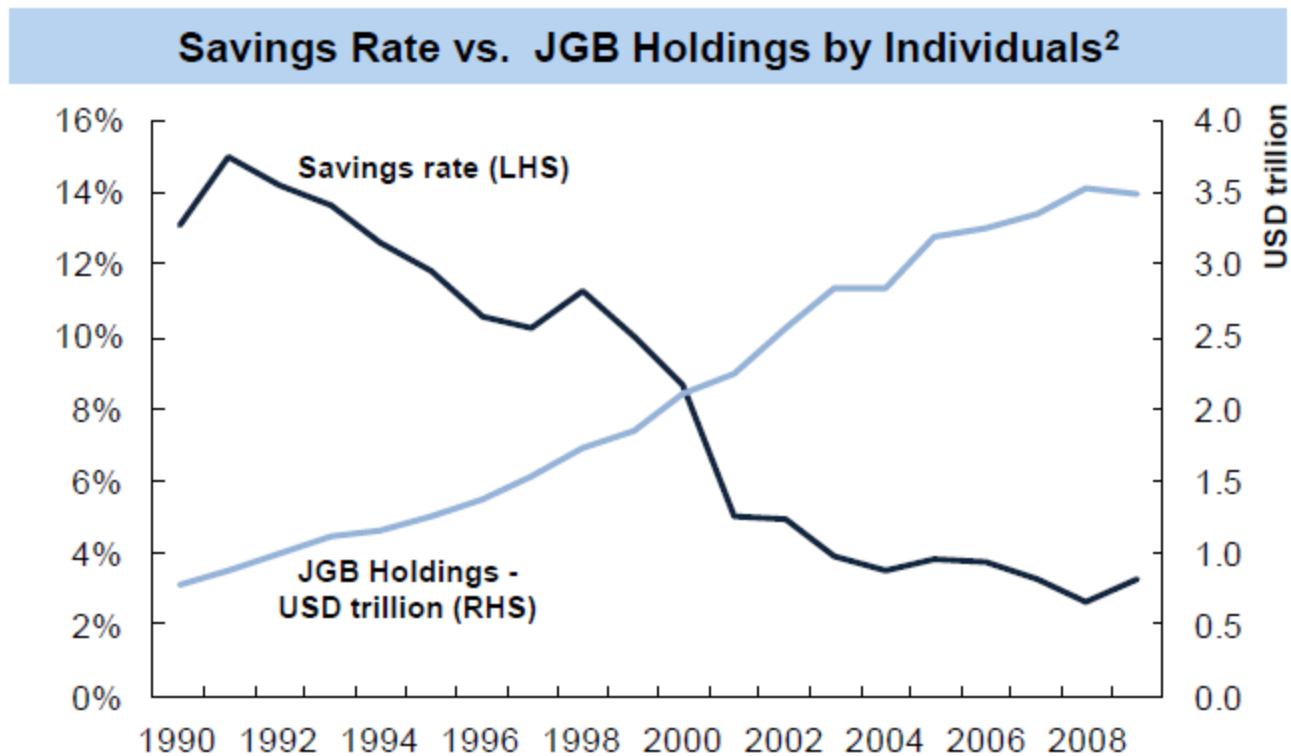
- The Japanese population, according to the National Institute of Population and Social Security Research, peaked in 2004 at roughly 128 million people and is now in a long-term secular decline
- Japanese population aged 65 or older is estimated to be 22.8%: 1.8x that of the U.S., 3x that of the world
- OECD estimates this number will grow higher over time

Ratio of People Aged 65 and Over to Total Population¹



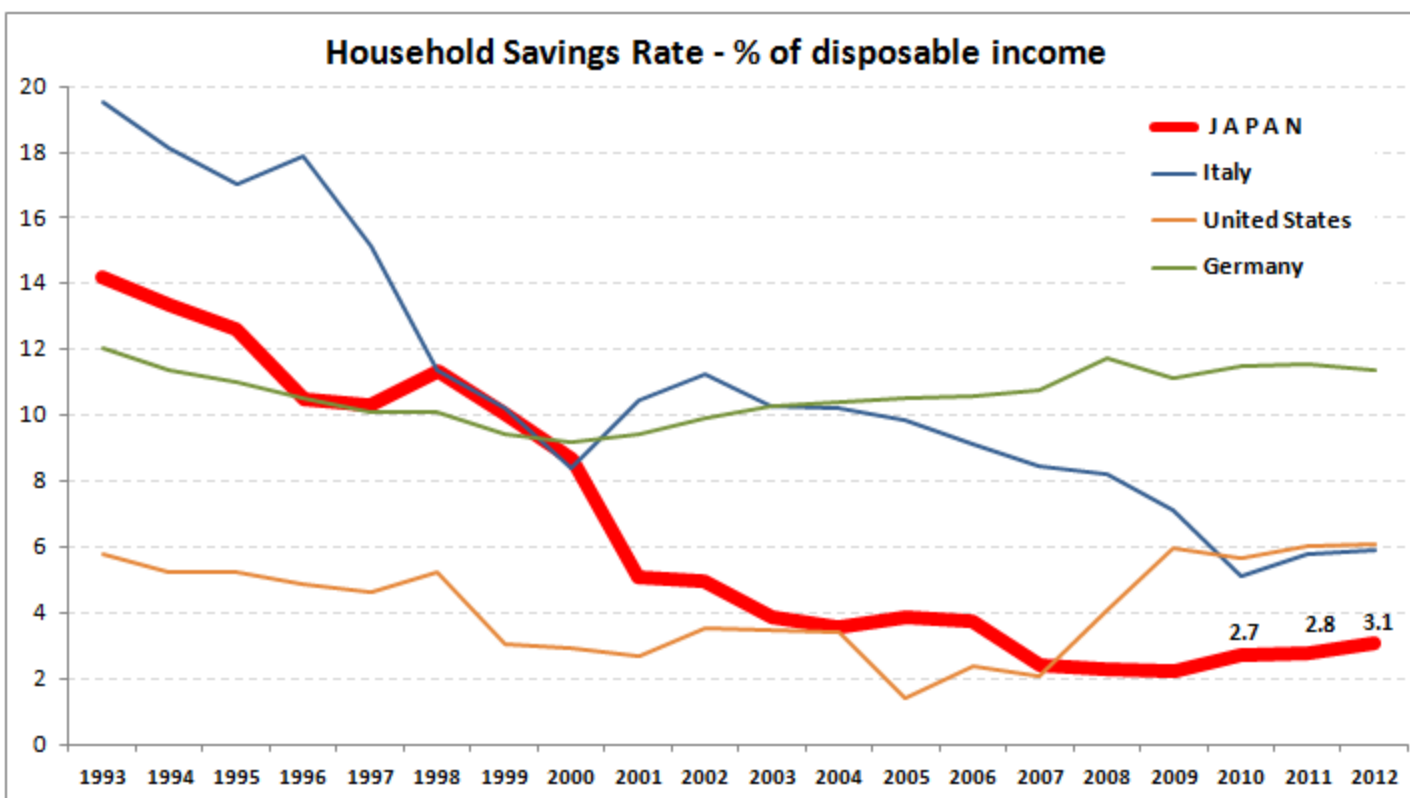
Where is Japan globally – Composition of Savings

- How much more JGBs can Japanese individuals purchase at these absolute yields, at these relative yields and with that level of holdings?
- Has this level of JGB holding peaked?



How About Growth Prospects? – Savings

- High Household Savings is a characteristic of the past
- And among other developed nations it doesn't look good either
- It cannot be used to boost growth much further
- The question now has changed to “Will it finance the government’s low-growth strategies at these yields?”

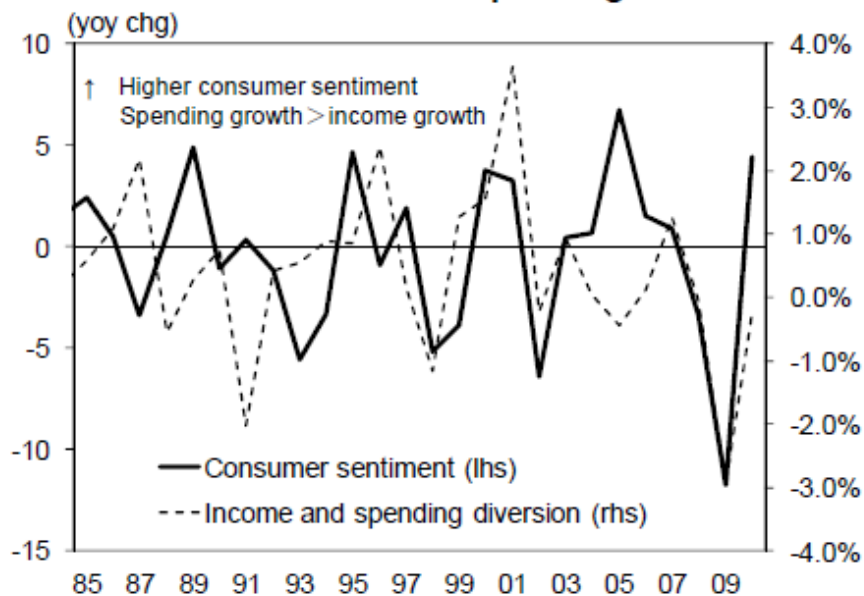


How About Growth Prospects? – Savings

- Savings edged up in 2009 and some people predict it will increase, but...
- 2009's growth was due to the sharp decrease in consumer sentiment: lower spending
- Fiscal boosts (eco-points + car) boosted consumption even though income growth was muted
- Unfavorable demographics still at play: high dependency-ratio and negative population growth

Exhibit 4: Decline in consumer sentiment contributed to higher savings rate

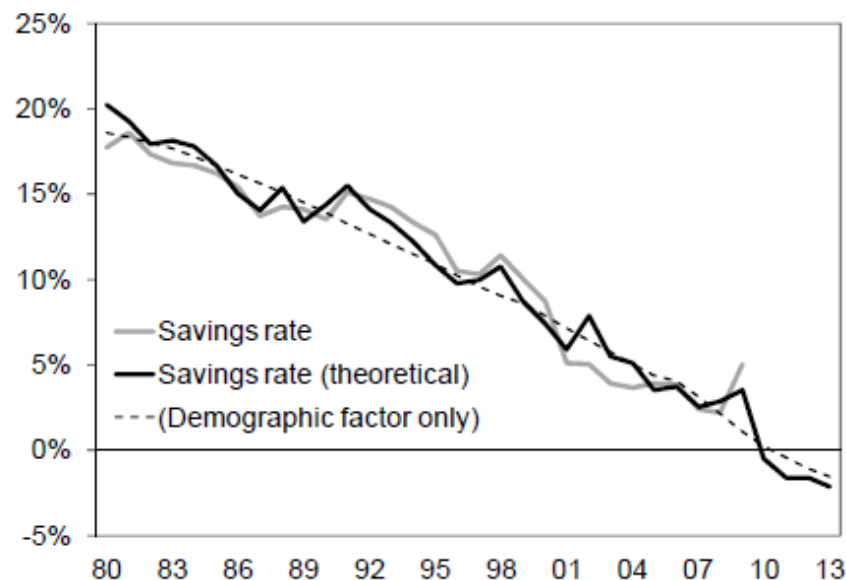
Consumer sentiment and relative growth between income and spending



Source: Cabinet Office.

Exhibit 5: Savings rate expected to decline going forward

Savings rate: Actual vs. theoretical



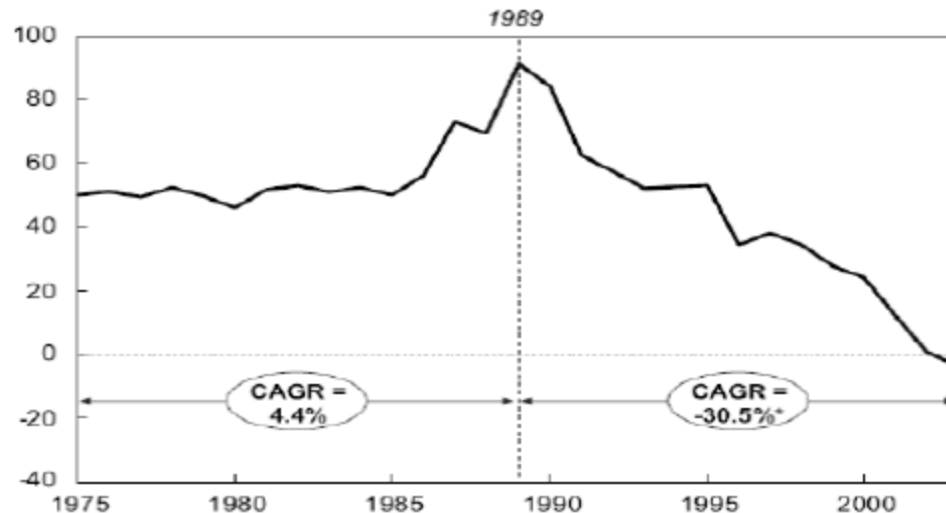
Source: Cabinet Office, GS Global ECS Research.

How About Growth Prospects? – Savings

- Savings edged up in 2009 and some people predict it will increase, but...
- 2009's growth was due to the sharp decrease in consumer sentiment: lower spending
- Fiscal boosts (eco-points + car) boosted consumption even though income growth was muted
- Unfavorable demographics still at play: high dependency-ratio and negative population growth

Net Acquisition Of Financial Assets By Households²

¥ Trillions, 2000



* CAGR is 1989-2002 as net acquisition is negative in 2003
Source: Bank of Japan; ESRI, Cabinet Office, Government of Japan

How About Growth Prospects? – Corporate Investments

- Can Japan boost investments by reducing its tax rates when its fiscal situation doesn't look 'too' rosy...
- And while competitor countries have much lower corporate rates and cheaper labor?

World's Highest Tax Rates



(%)	Country	Sub Region	(%)	Country	Sub Region
1	55 Emirates	Western Asia	26	30 New Zealand	Australia and New Zealand
2	41 Japan	Eastern Asia	27	30 Costa Rica	Central America
3	40 United States	North America	28	30 Mexico	Central America
4	40 Libya	Northern Africa	29	30 Tanzania	Eastern Africa
5	35 Netherlands Antilles	Caribbean	30	30 Papua New Guinea	Melanesia
6	35 Zambia	Eastern Africa	31	30 Tunisia	Northern Africa
7	35 Angola	Middle Africa	32	30 Peru	South America
8	35 Argentina	South America	33	30 Philippines	South Eastern Asia
9	35 Pakistan	South Central Asia	34	30 Thailand	South Eastern Asia
10	35 Sri Lanka	South Central Asia	35	30 Spain	Southern Europe
11	35 South Africa	Southern Africa	36	30 Nigeria	Western Africa
12	35 Malta	Southern Europe	37	29 Germany	Western Europe
13	35 Yemen	Western Asia	38	29 Luxembourg	Western Europe
14	34 Brazil	South America	39	28 Fiji	Australia and New Zealand
15	34 Venezuela	South America	40	28 Aruba	Caribbean
16	34 India	South Central Asia	41	28 Panama	Central America
17	34 Belgium	Western Europe	42	28 Zimbabwe	Eastern Africa
18	33 Jamaica	Caribbean	43	28 Syria	Eastern Asia
19	33 Colombia	South America	44	28 Norway	Northern Europe
20	33 France	Western Europe	45	28 Bangladesh	South Central Asia
21	32 Mozambique	Eastern Africa	46	28 United Kingdom	Western Europe
22	31 Guatemala	Central America	47	27 Samoa	Poynesia
23	31 Canada	North America	48	26 Finland	Northern Europe
24	31 Italy	Southern Europe	49	26 Sweden	Northern Europe
25	30 Australia	Australia and New Zealand	50	26 Netherlands	Western Europe

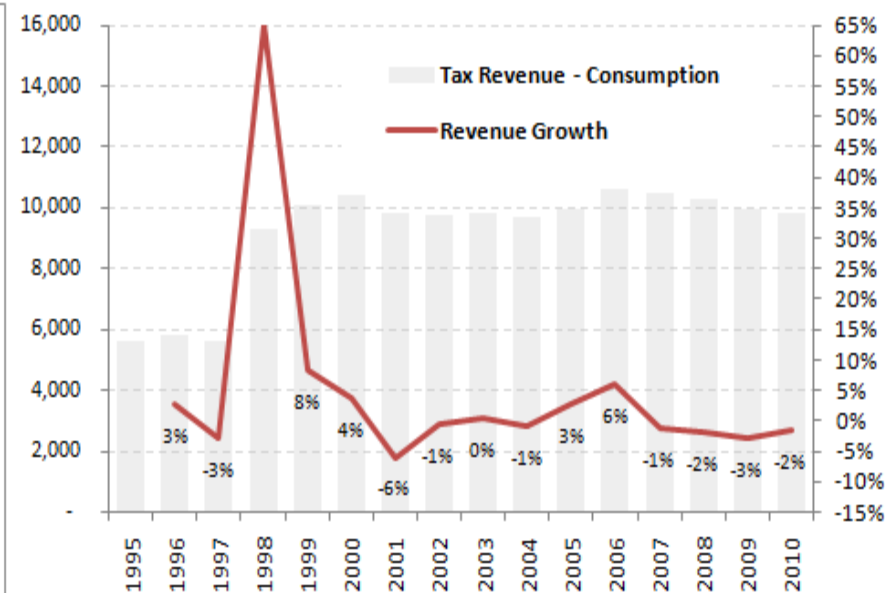
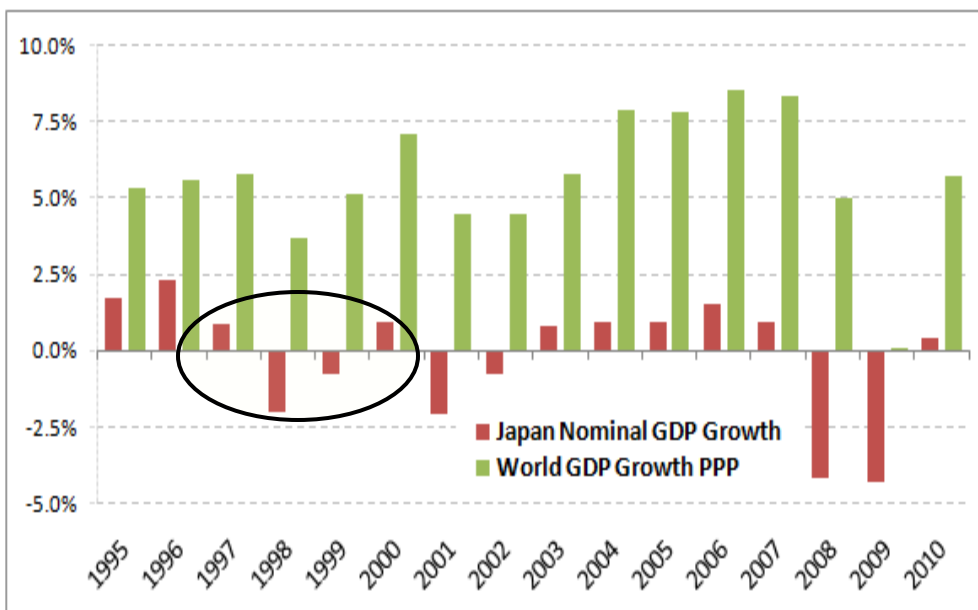


Source: KPMG Corporate and Indirect Tax Survey 2010

How About Growth Prospects? – Personal Consumption

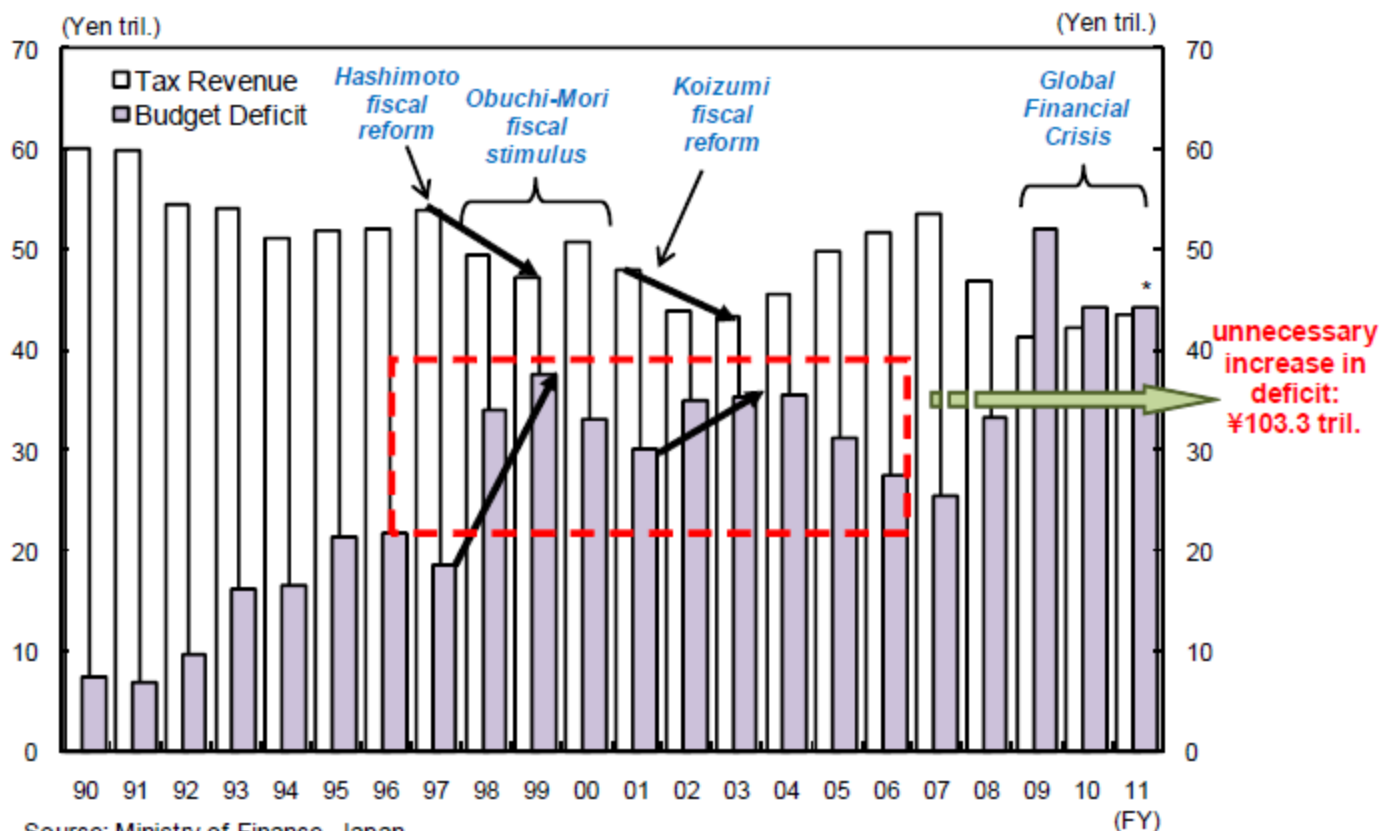
- Can Japan boost revenues by increasing its tax rates when its domestic consumption growth situation doesn't look 'too' rosy?
- 1989: Prime Minister Noboru Takeshita introduced consumption taxes at 3%
- 1997: Prime Minister Ryutaro Hashimoto increased this tax rate to the now current 5%
- Both were ousted after the country was impacted by ongoing recession in the 2 following years

- The current Prime Minister is trying to pass legislation to increase consumption tax rate to 10%



How About Growth Prospects? – Consumption Taxes

Exhibit 12. Premature Fiscal Reforms in 1997 and 2001 Weakened Economy, Reduced Tax Revenue and *Increased* Deficit

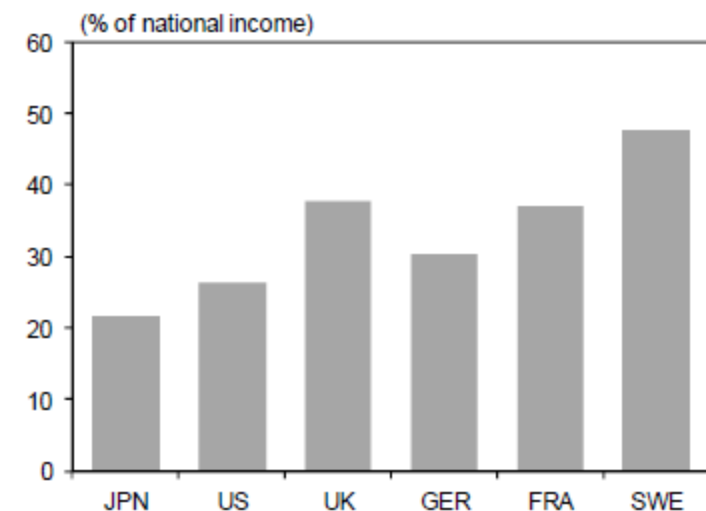


Source: Ministry of Finance, Japan
 *: estimated by MOF

How About Growth Prospects? – Tax Burden / Fiscal Changes

- Even with a relative low taxation the country couldn't grow...
- But will growth pick-up? It hasn't in the past 20 years...
- Will this (unlikely) fiscal program even help improve the country's finances?

Exhibit 13: Tax burden still low
Tax burden in various countries



Source: MOF.

Exhibit 15: Japanese government moving in the right direction, though very slowly

FY2011 tax plan a positive for companies, negative for individuals

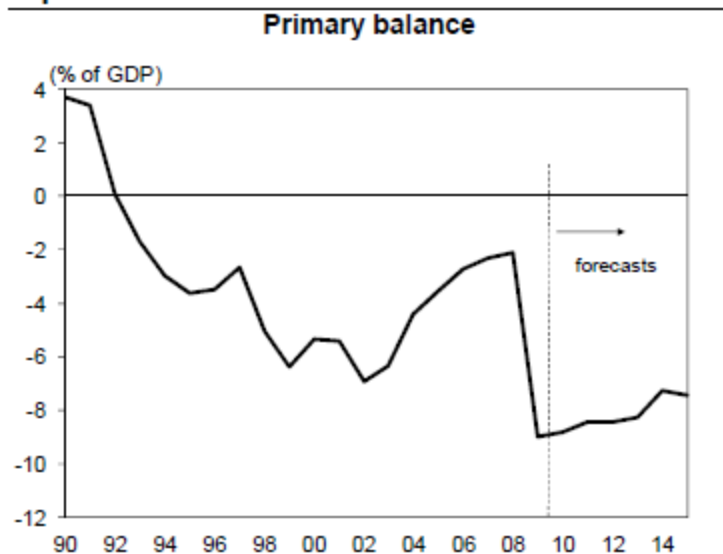
	(¥ bn)
Individuals	490
Increase in inheritance tax	290
Smaller deductions from wage income	120
Smaller deductions for adult dependents	80
Revisions to retirement payout taxation	10
Reduction in gift tax	-10
Companies	-580
5% cut in effective corporate tax rate	-1350
3% cut in the special SME income tax rate	-70
Tax incentives for job creation, others	-70
Changes to the depreciation system	650
Introduction of an environment tax	240
Revisions to special SME tax measures	20
Total	-90

Source: MOF.

How About Fiscal Prospects? – Primary Balance and Funding

- The primary balance outlook doesn't get any better for a long, long time...
- While household savings into foreign-denominated investments increase...
- While domestic growth is low and real returns at home are close to negative.

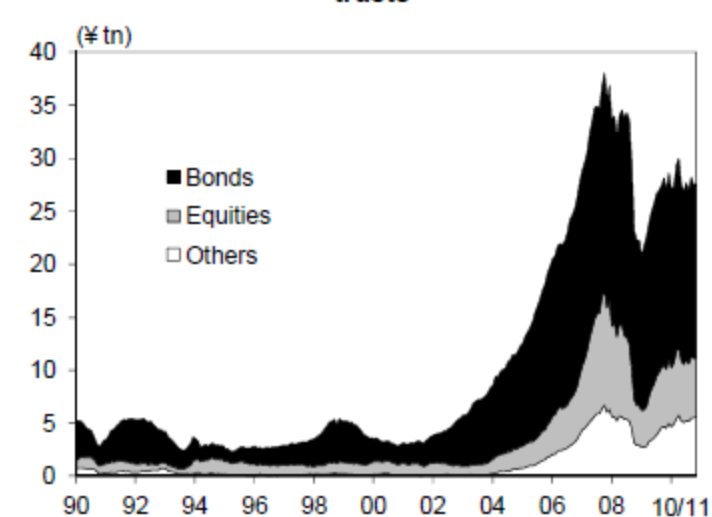
Exhibit 11: Primary balance a long way from equilibrium



Source: Cabinet Office, GS Global ECS Research.

Exhibit 14: Meanwhile, there has been a shift in household investments overseas

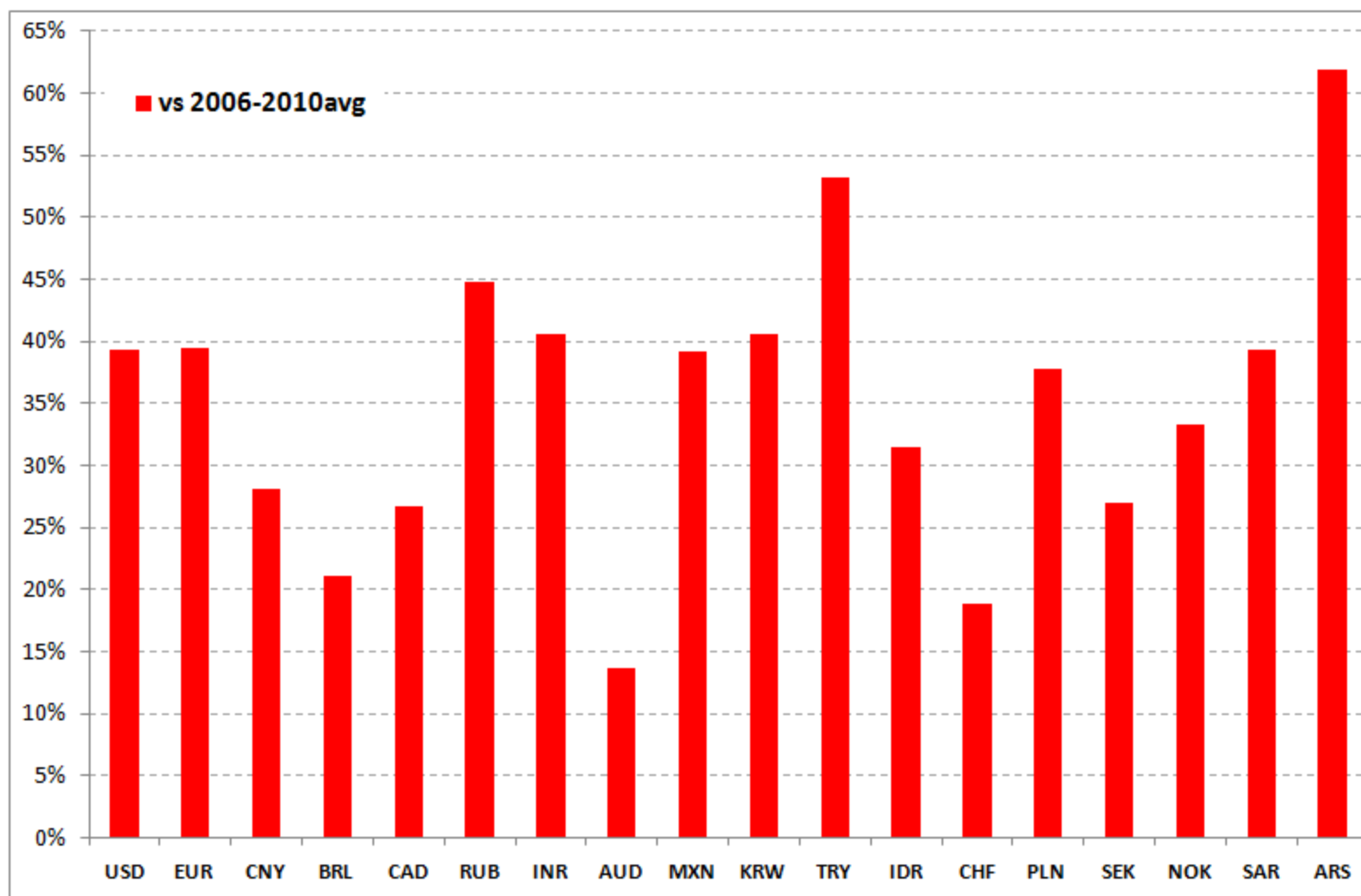
Household foreign currency-denominated investment trusts



Source: The Investment Trust Association.

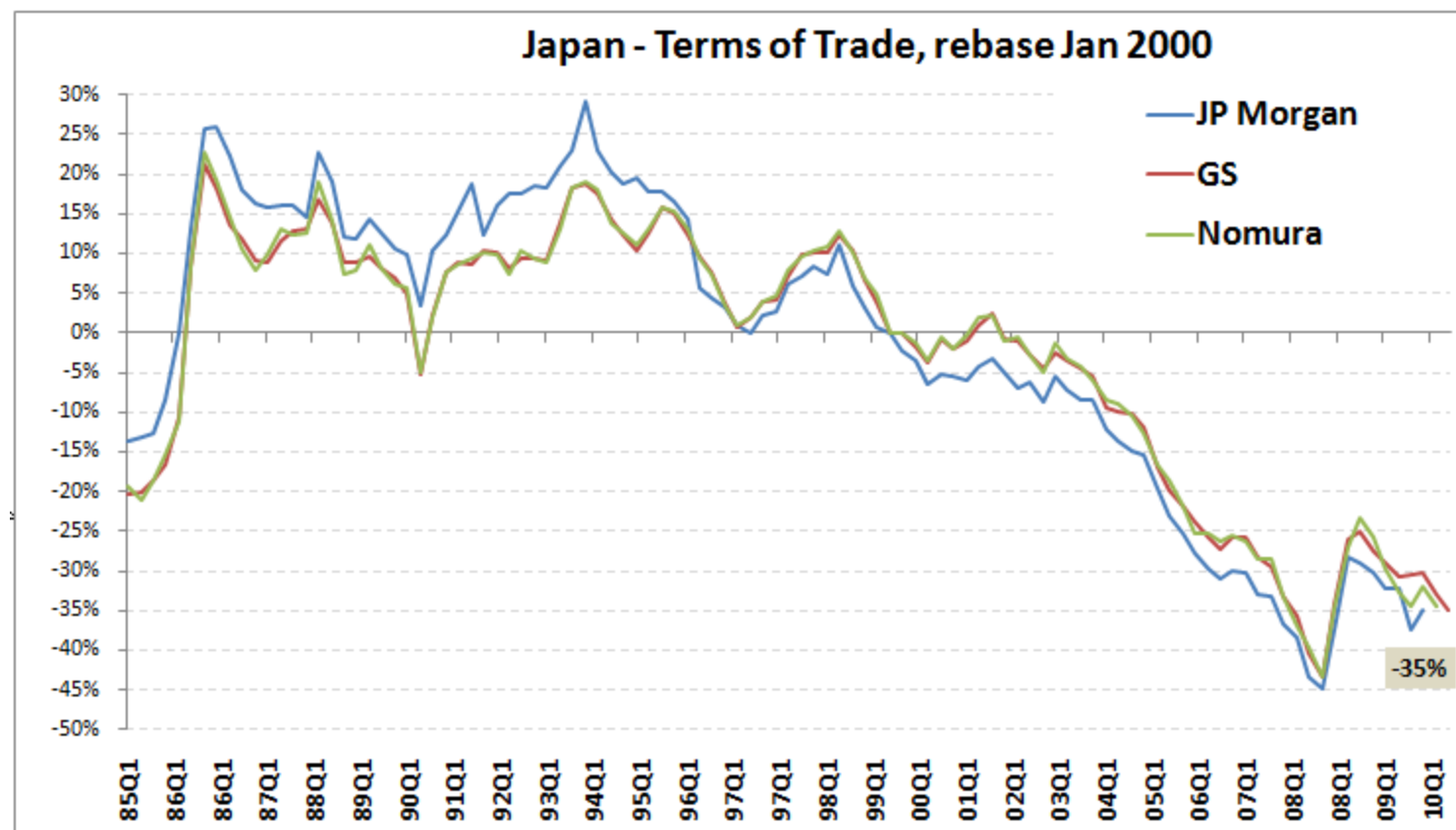
How About Growth Prospects? – Currency Strength

- The Japanese Yen has been very strong against all the major trading partners and large economies in the past years



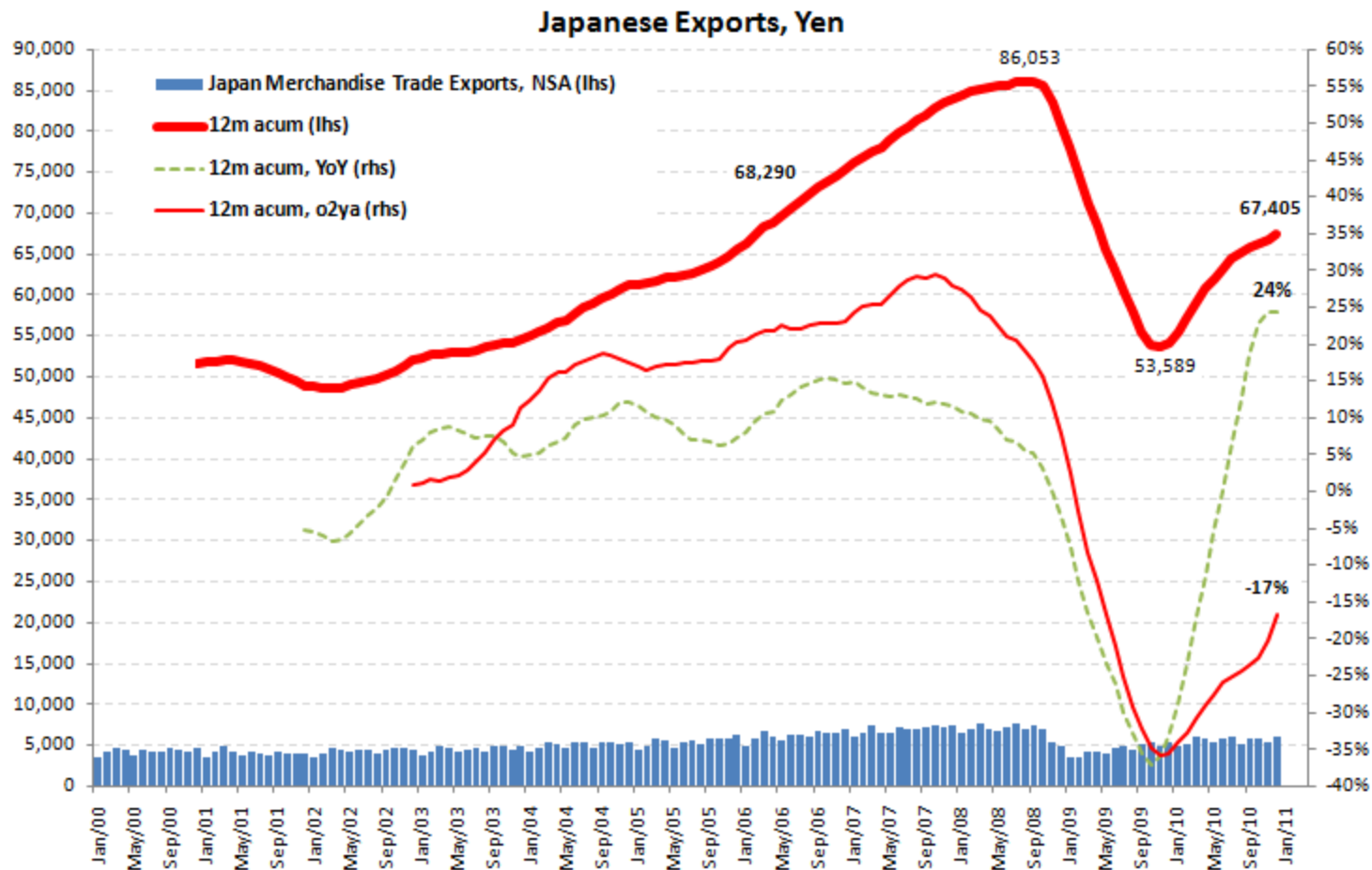
How About Growth Prospects? – Terms of Trade

- Poor in natural resources and with global technology catching up...
- And with a strong currency...
- the Terms of Trade have deteriorated considerably in the past 15 years
- Since its best moment in the mid 90s the Japanese ToT has deteriorated a lot and it is now close to the bottom of the range of the last 25 years



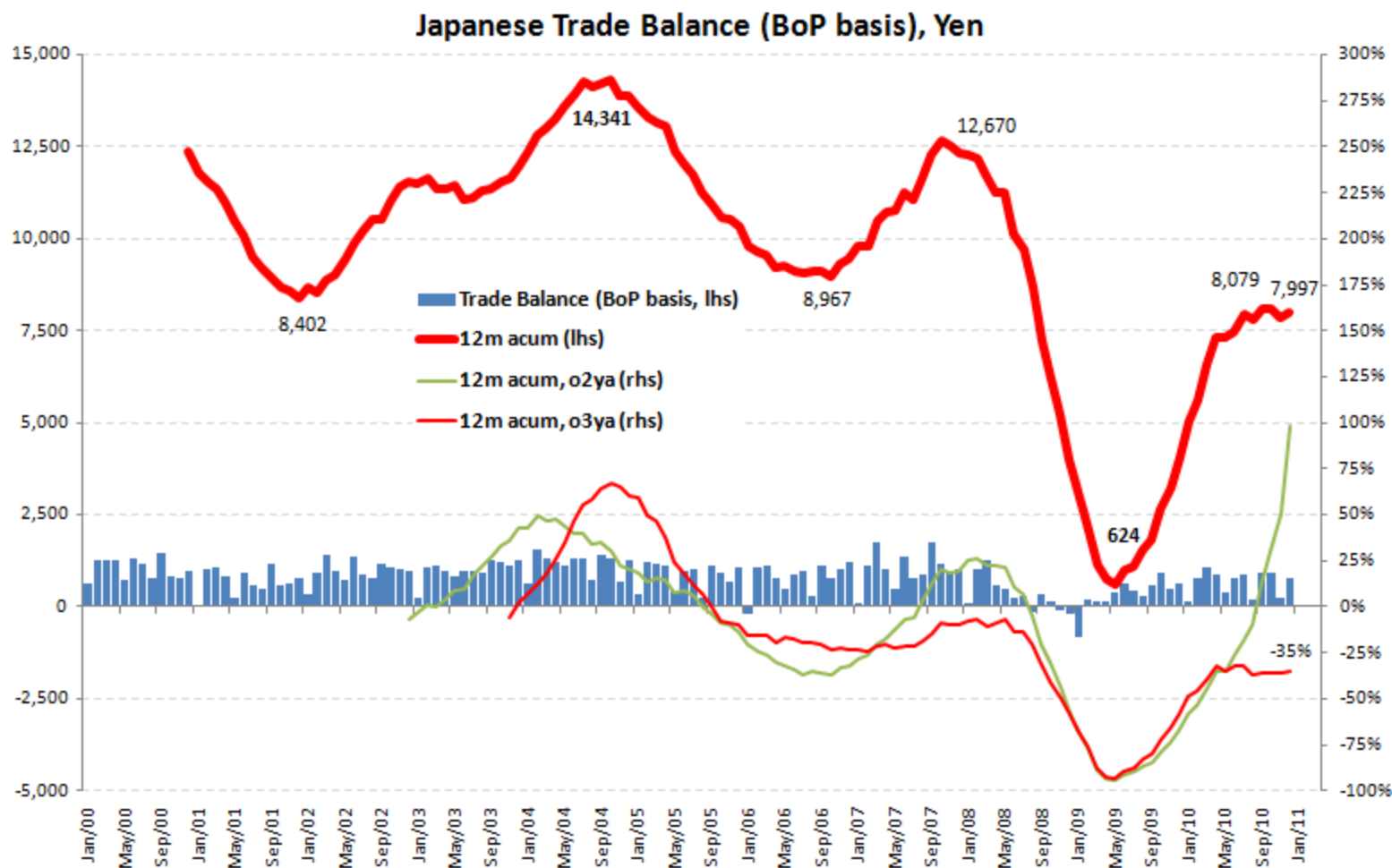
How About Growth Prospects? – Exports

- Exports, which have a considerable effect throughout the Japanese economy, have yet recover
- They've just reached 2006 levels



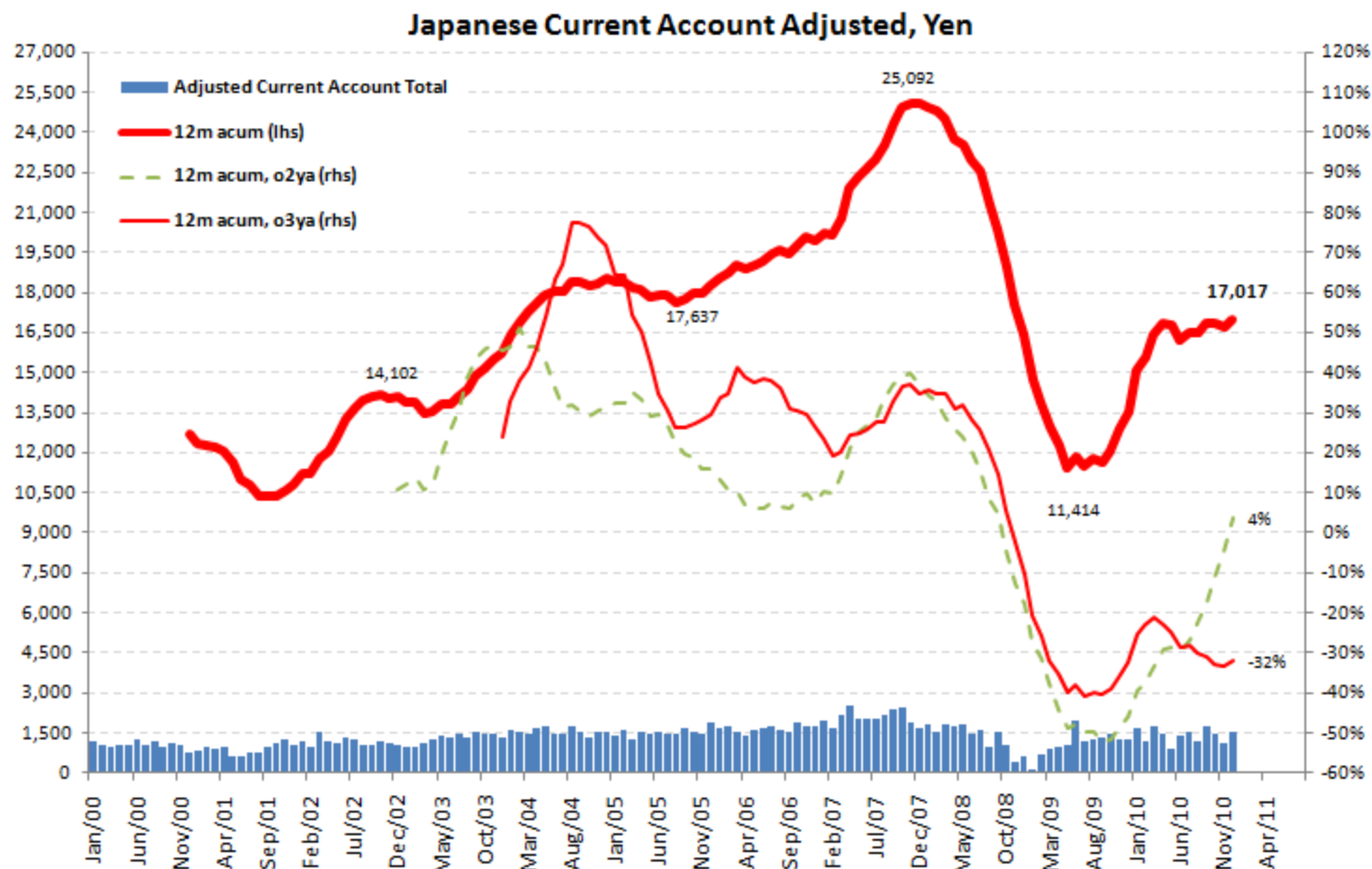
How About Growth Prospects? – Trade Balance

- With the yen's strength, the rise in raw material prices and a minor catch-up in competitor's technology will the Trade Balance recover?

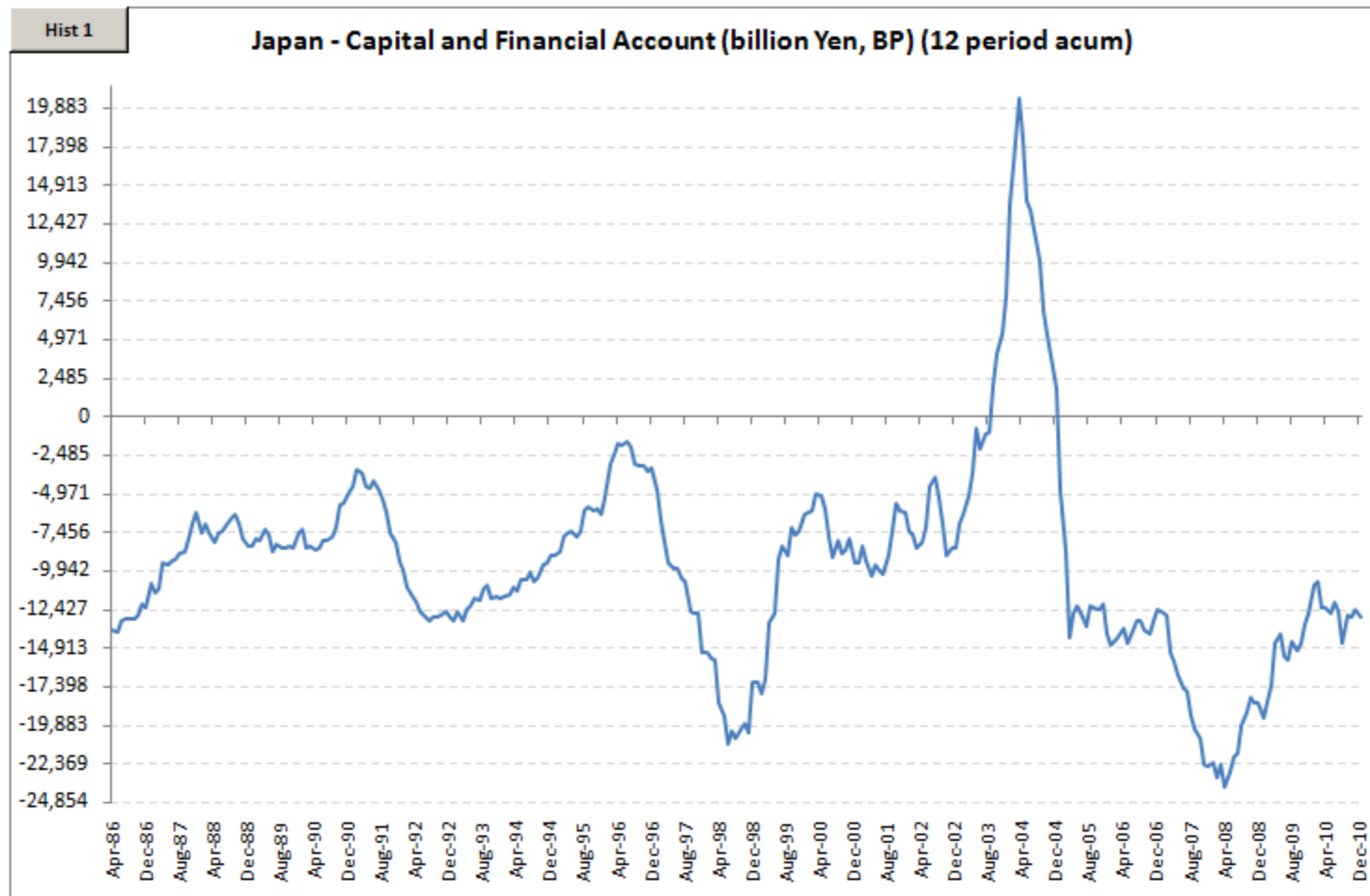


How About External Financing? – Current Account

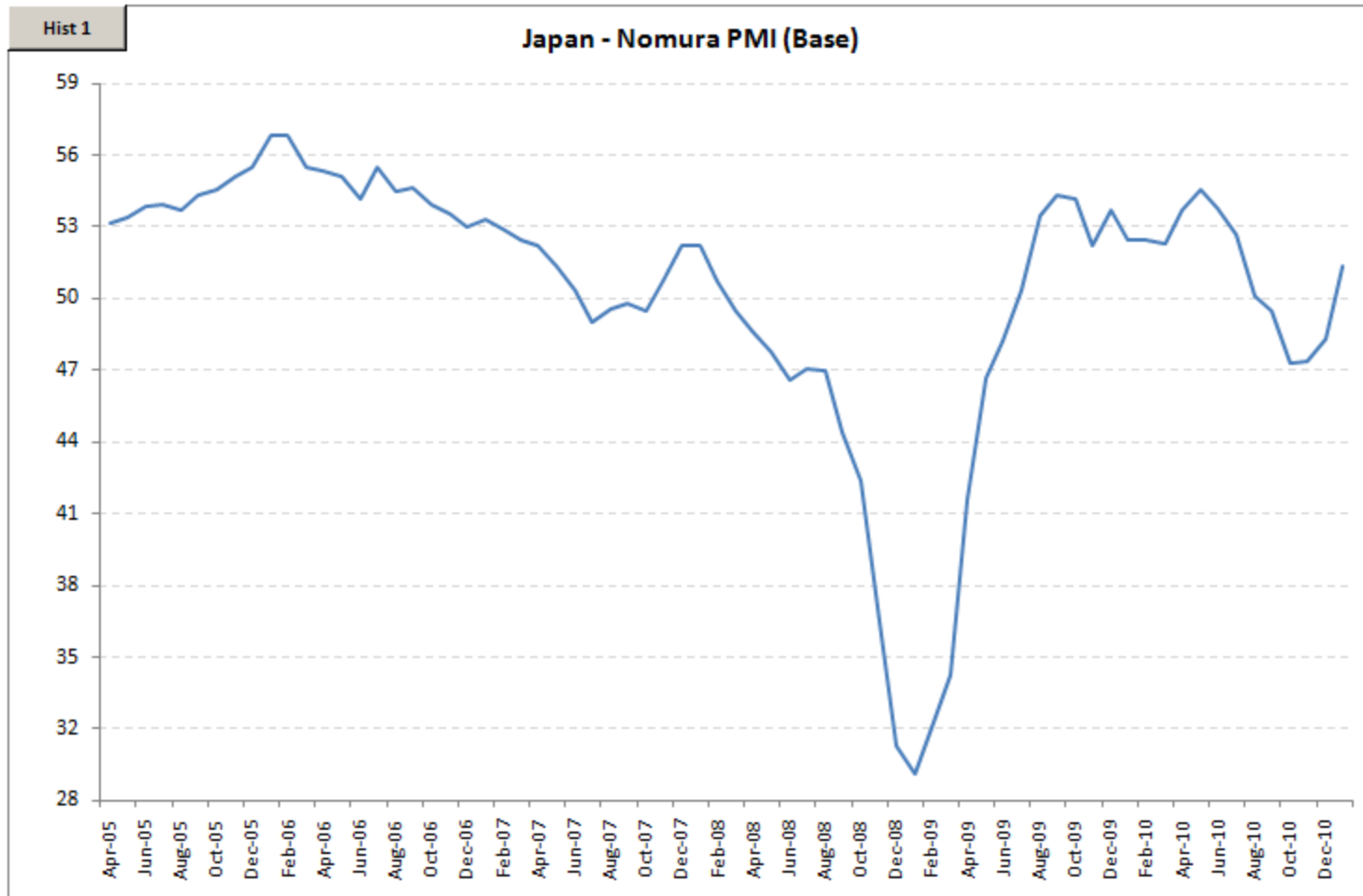
- The global recovery hasn't yet translated into a powerful bounce in the Japanese current account



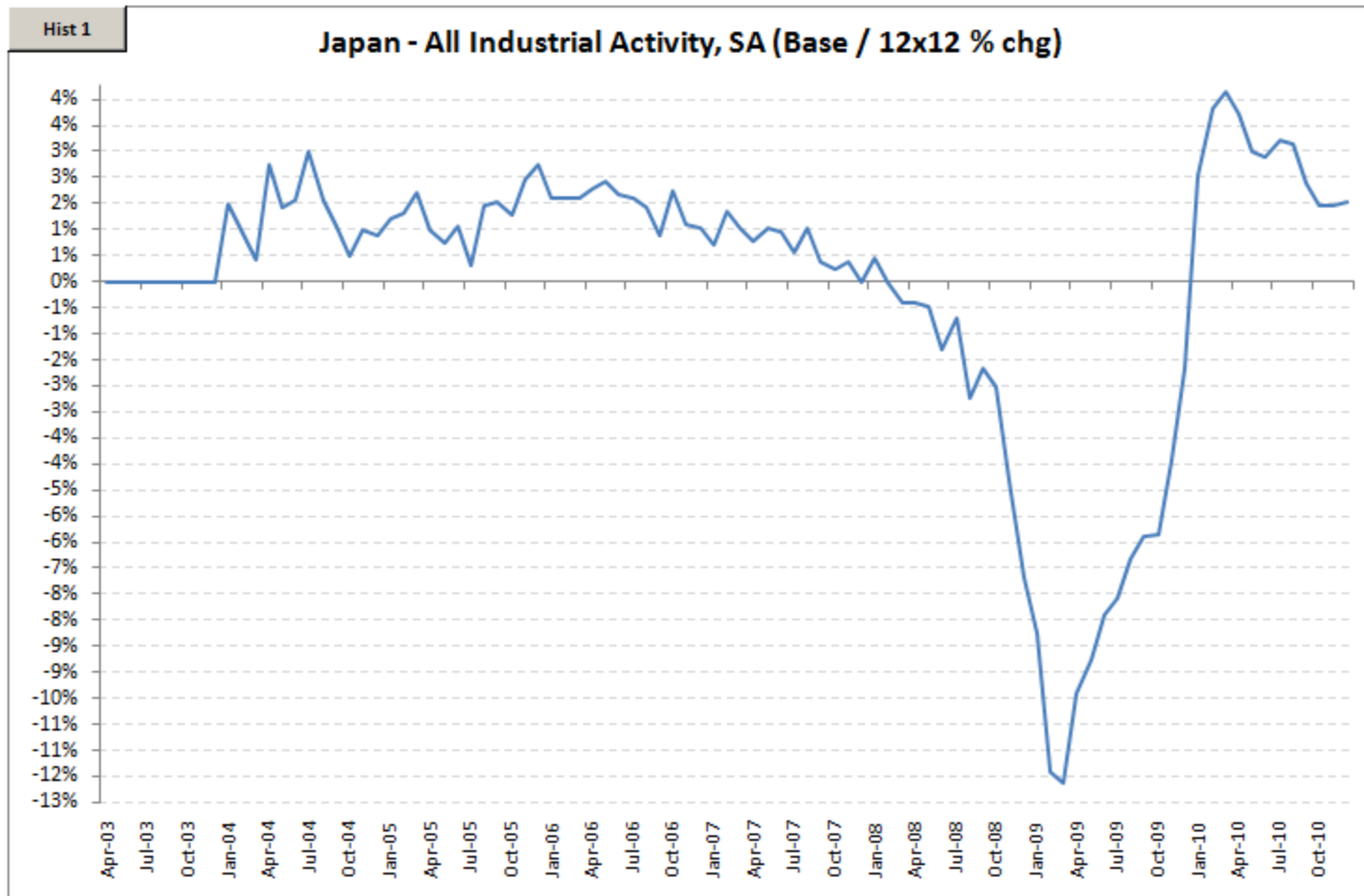
How About External Financing? – Capital and Financial Account



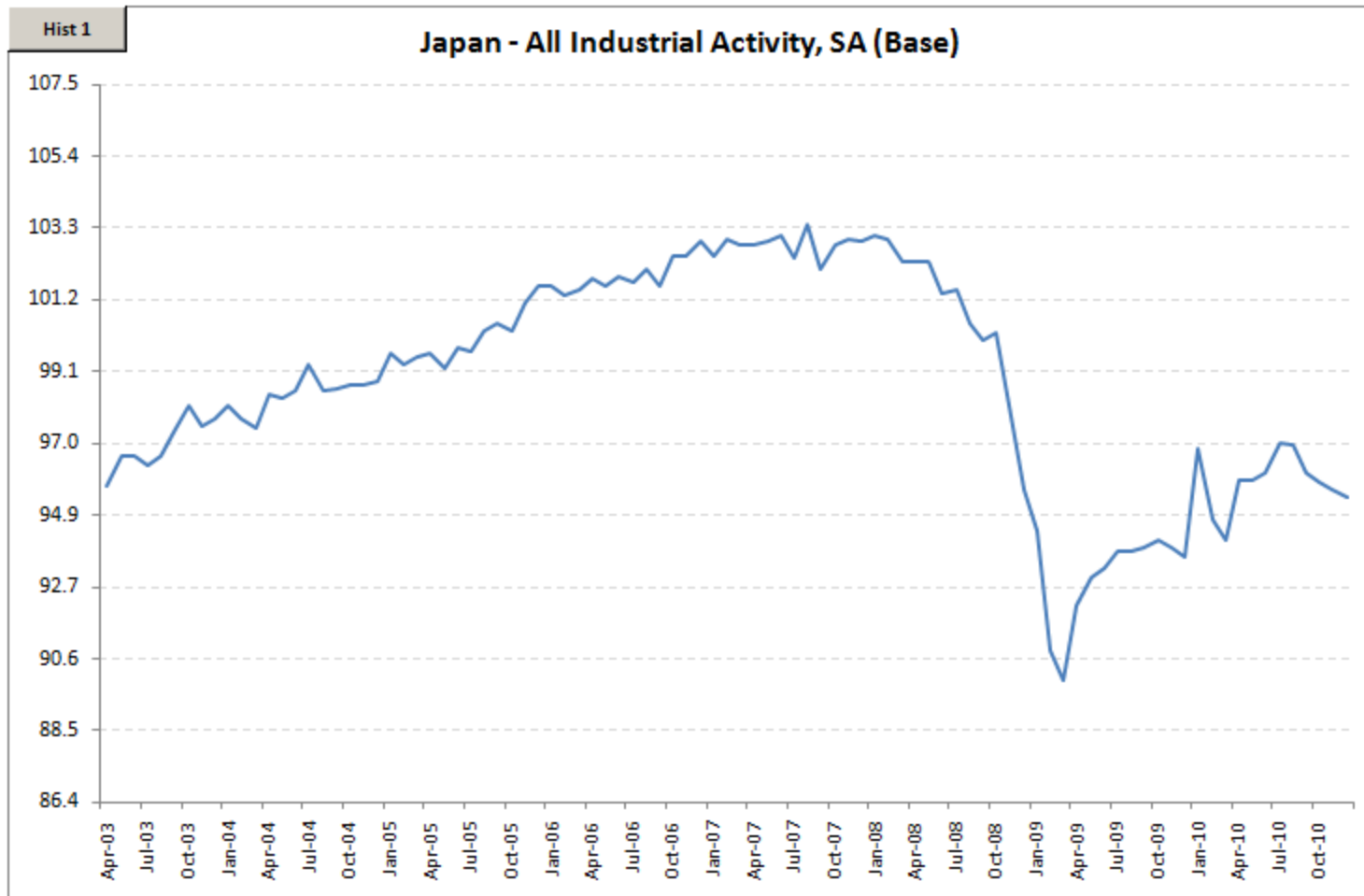
Activity – Nomura PMI



Activity – All Industry

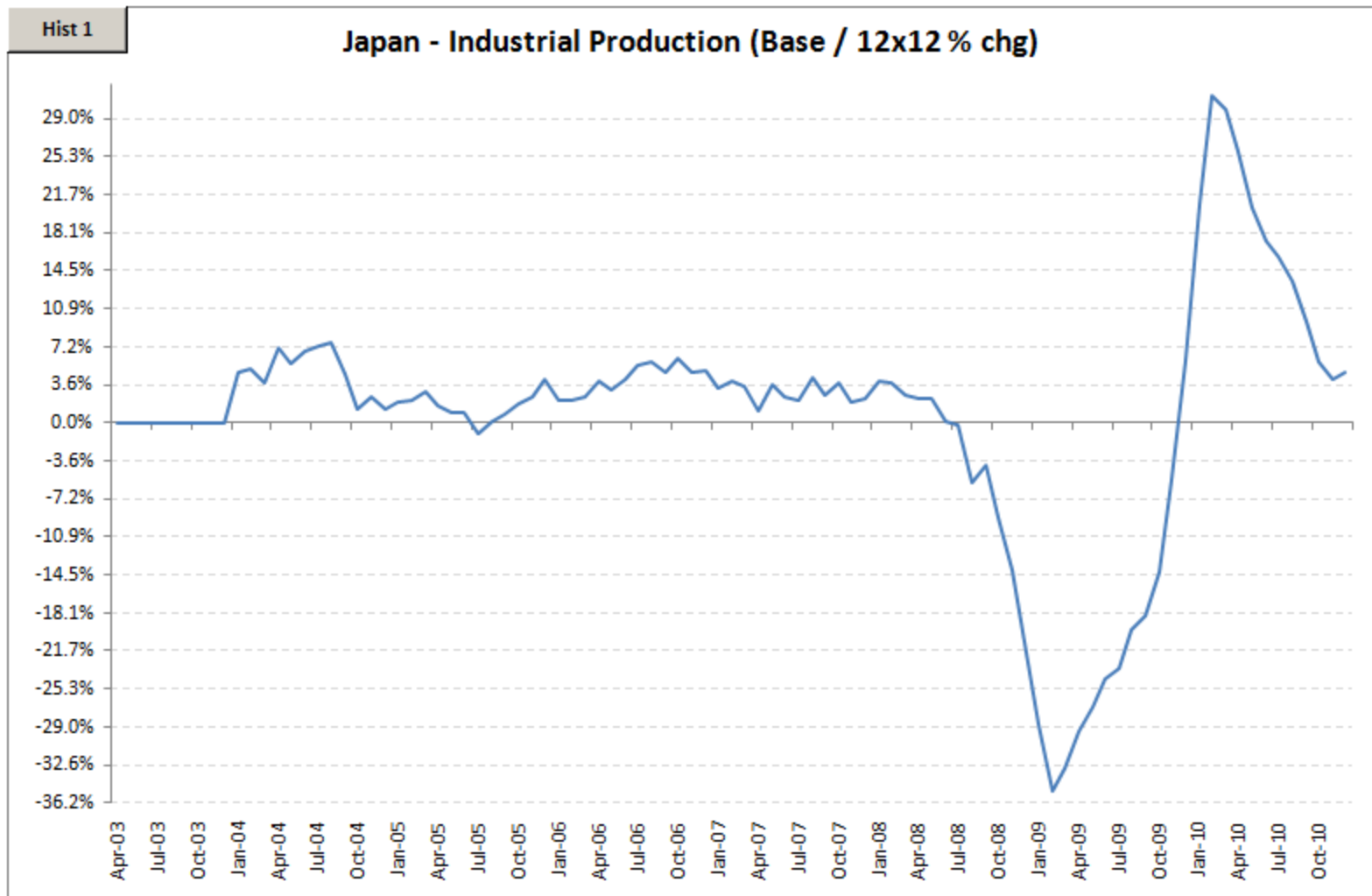


Activity – All Industry



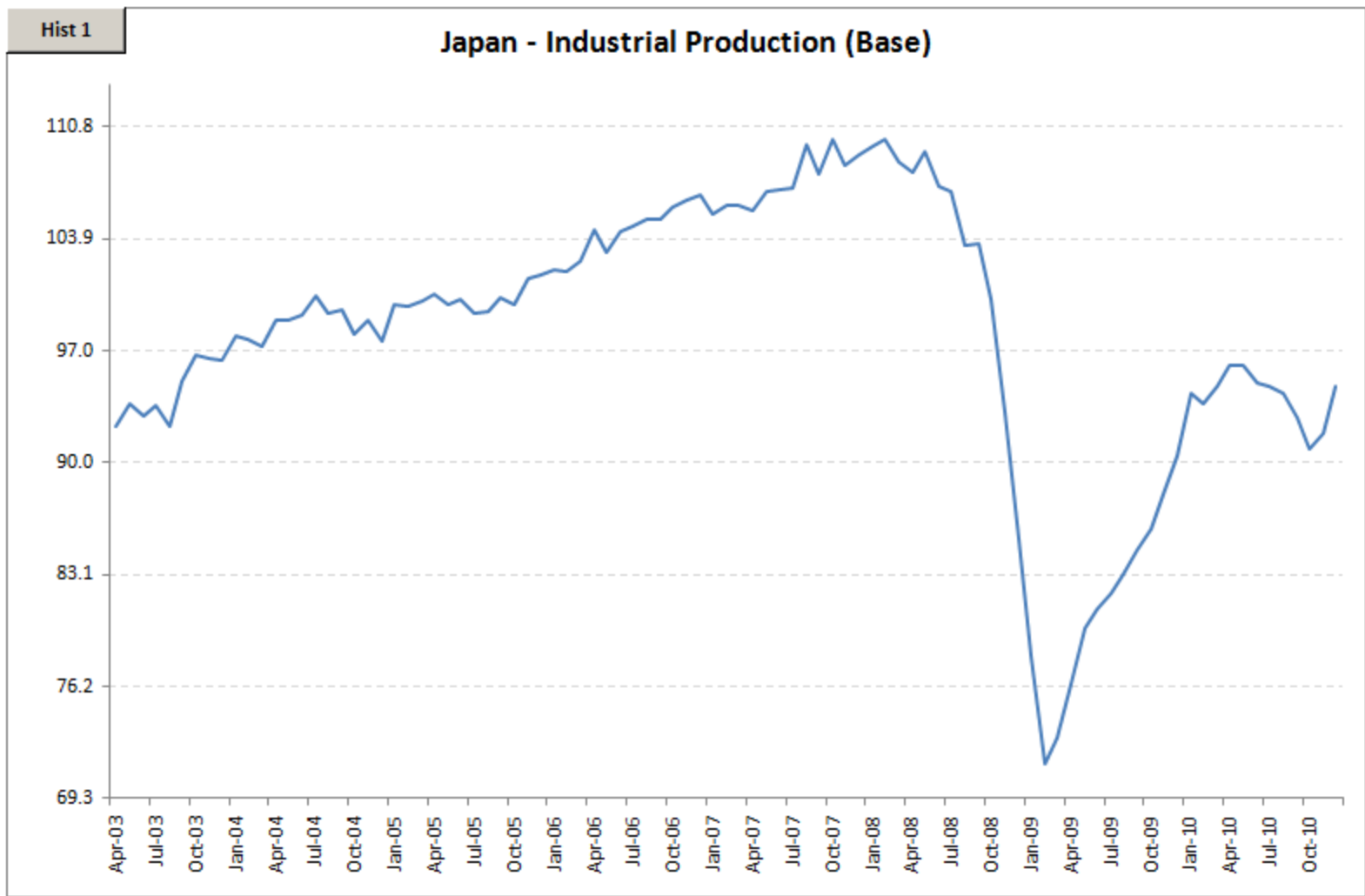
Activity – Industrial Production

- YoY Growth doesn't look too bad...



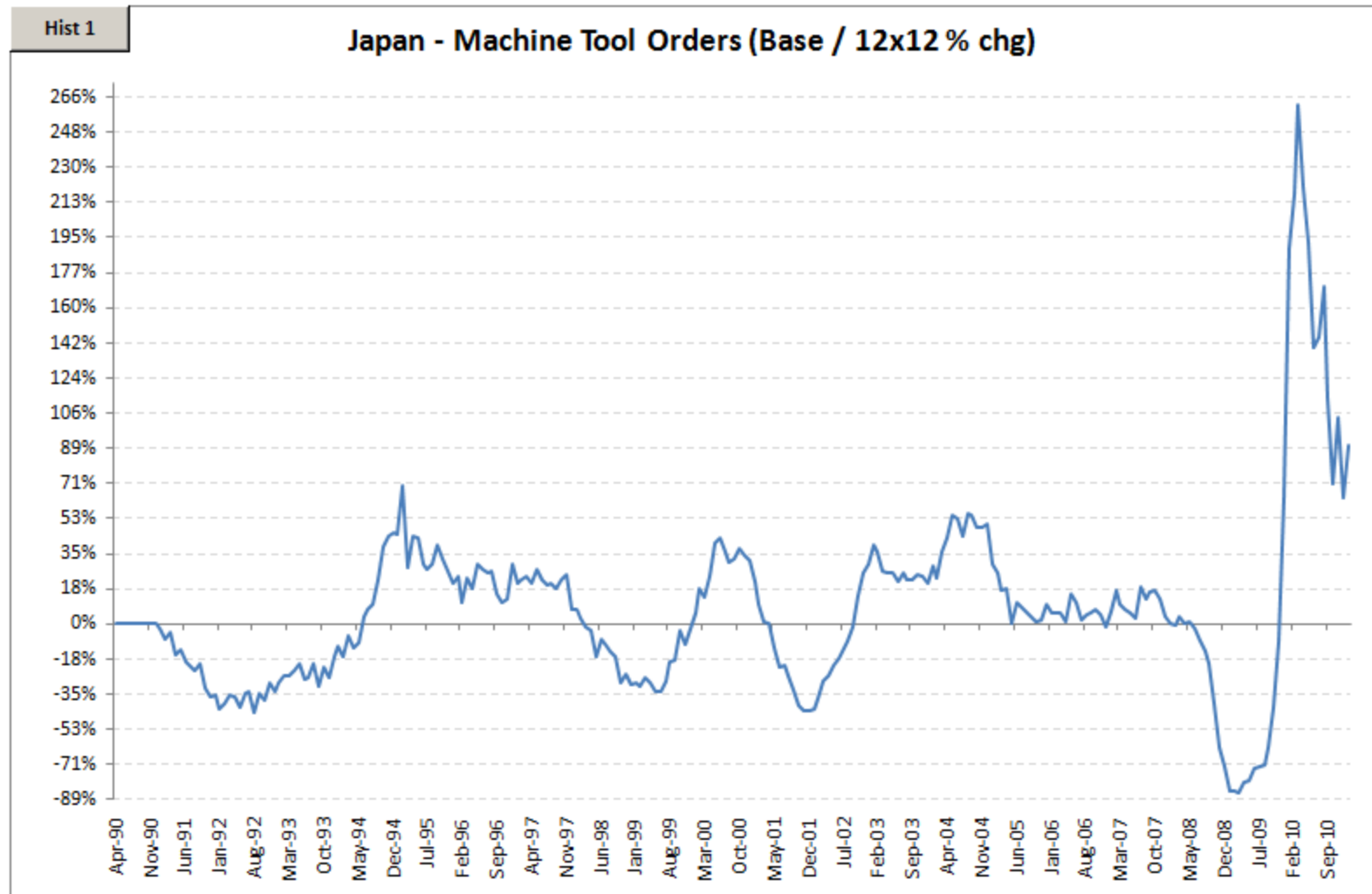
Activity – Industrial Production

- If it wasn't for being at 2003's level



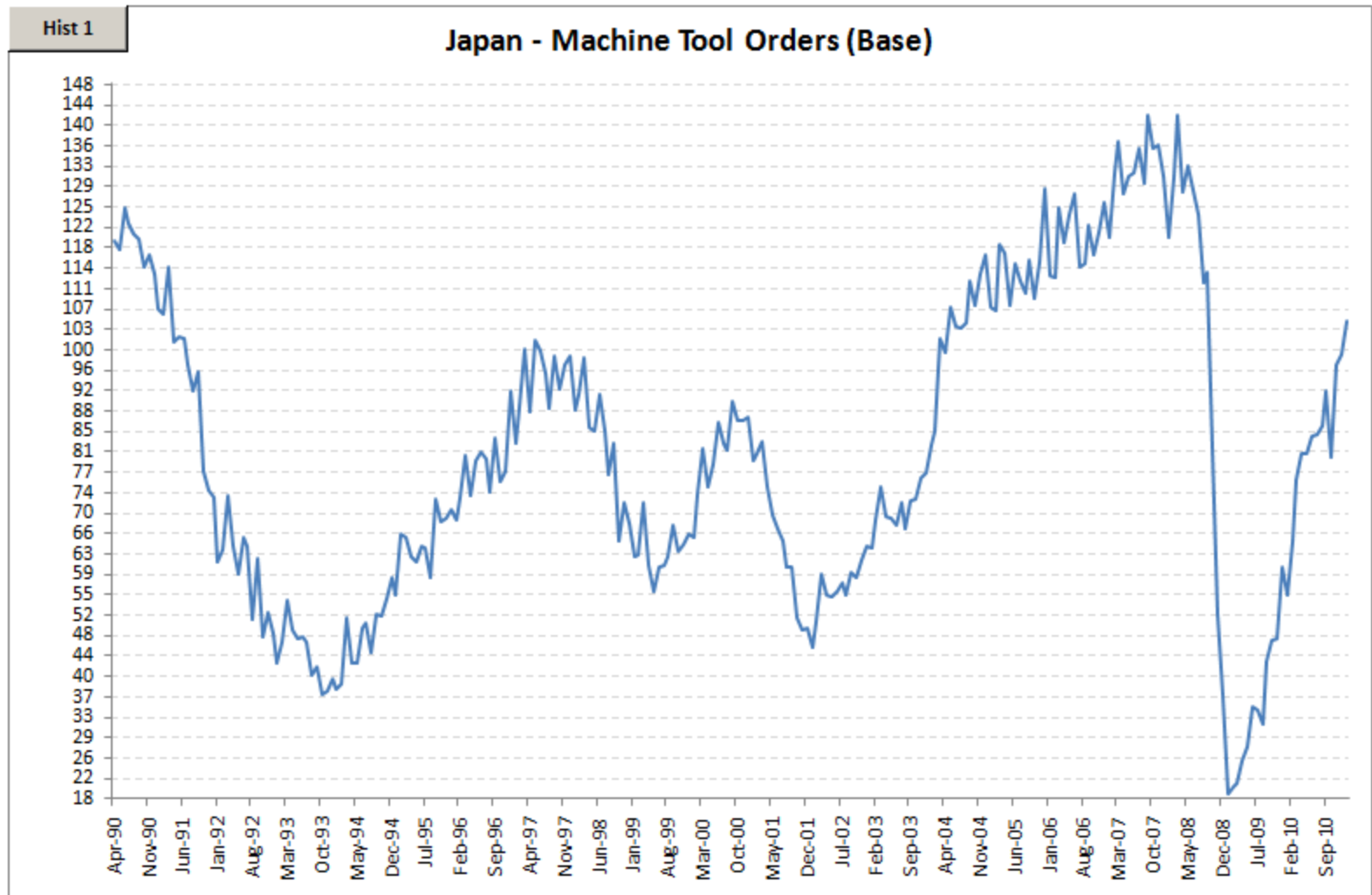
Activity – Machine Tool Orders

- YoY Growth looks good here too...

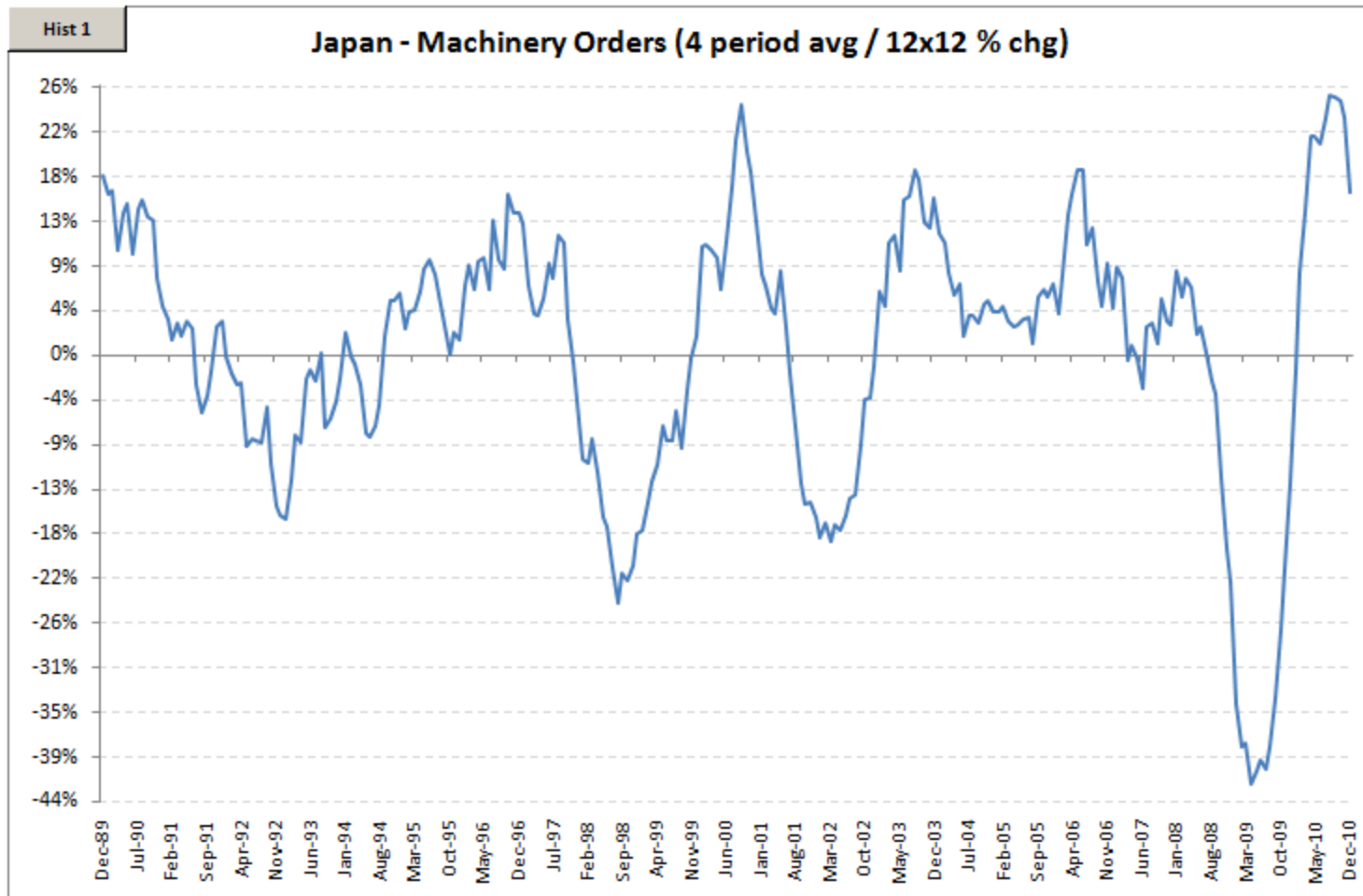


Activity – Machine Tool Orders

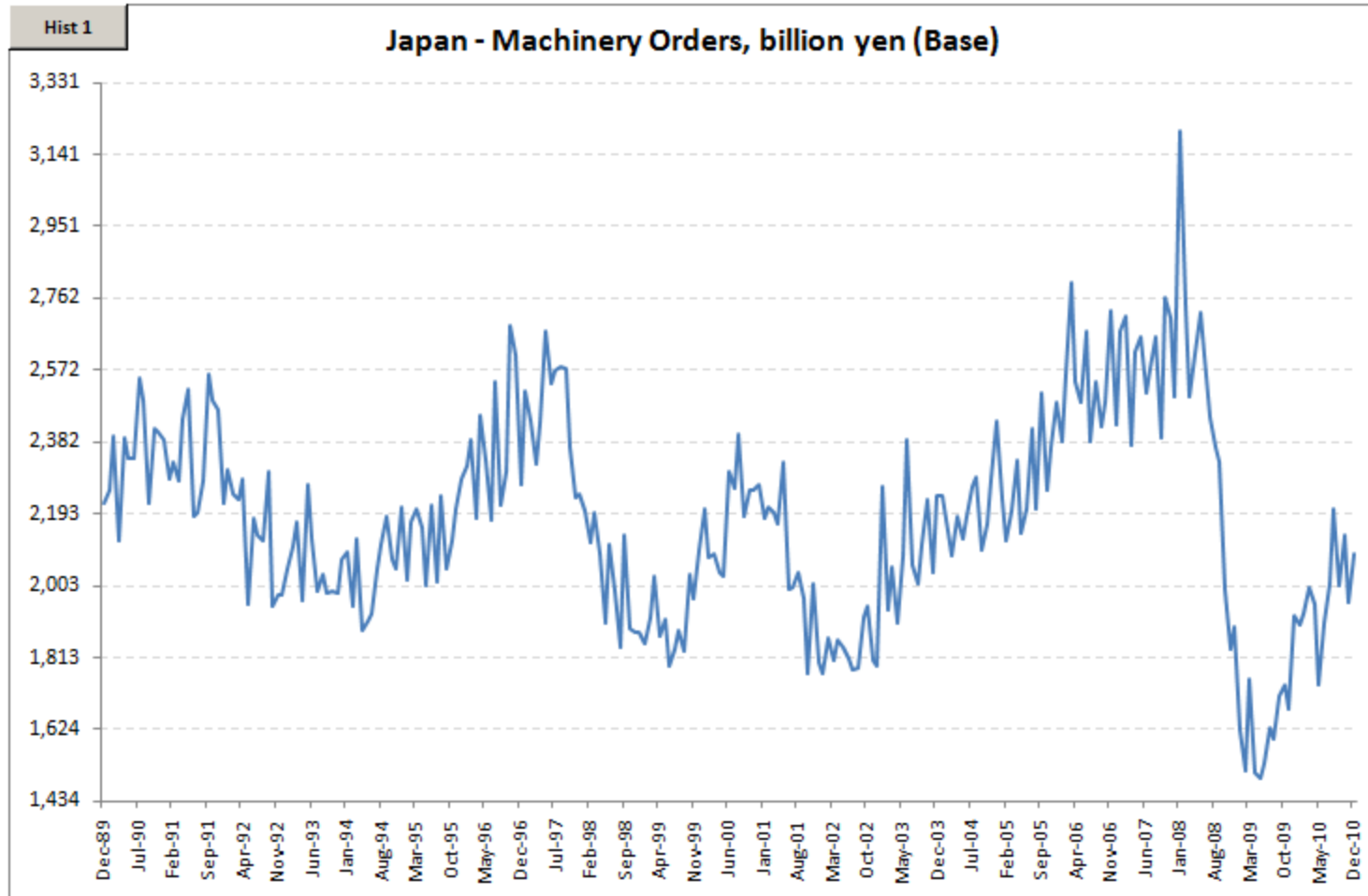
- If it wasn't for being at 2004's level



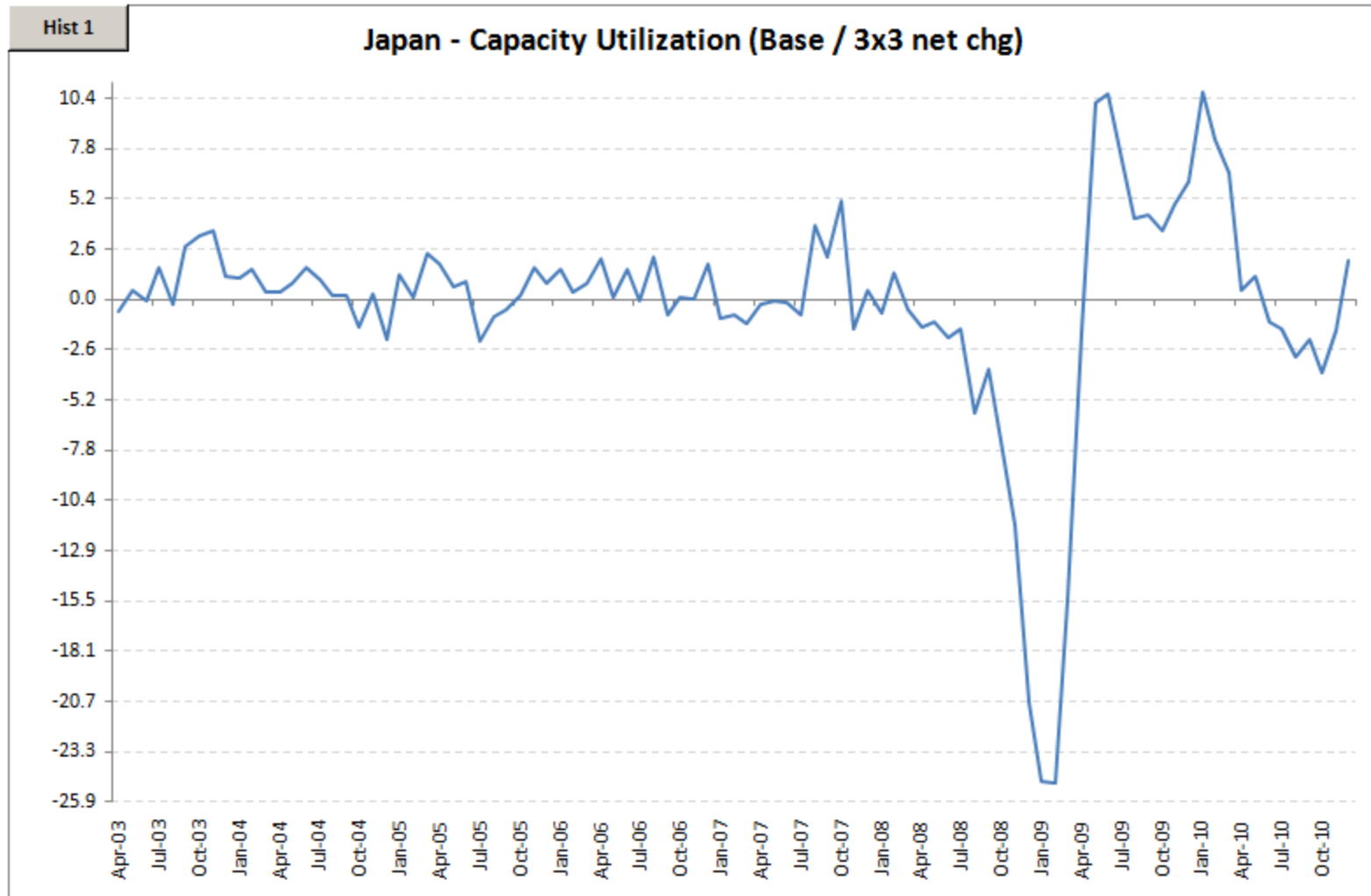
Activity – Machinery Orders



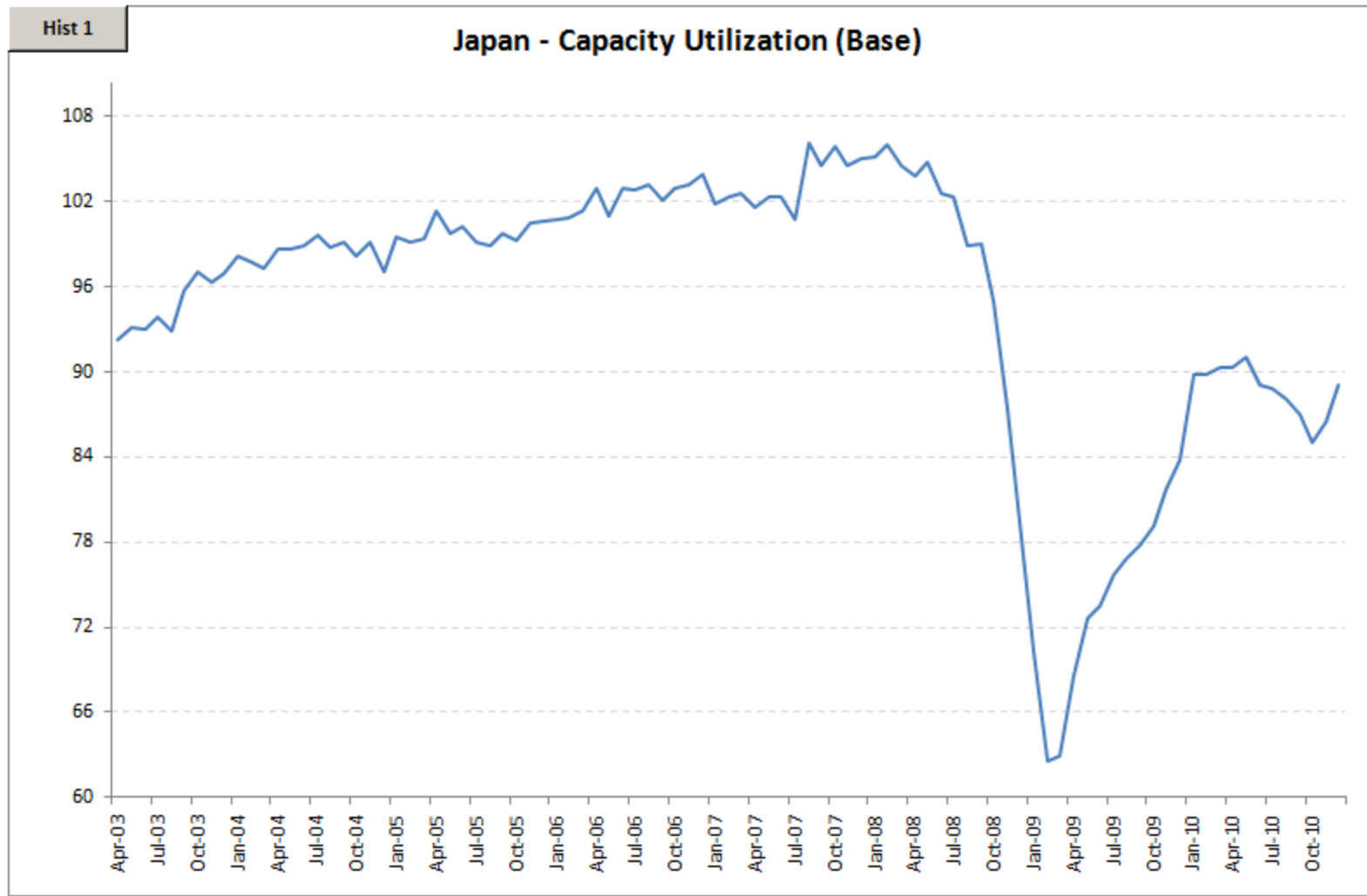
Activity – Machinery Orders



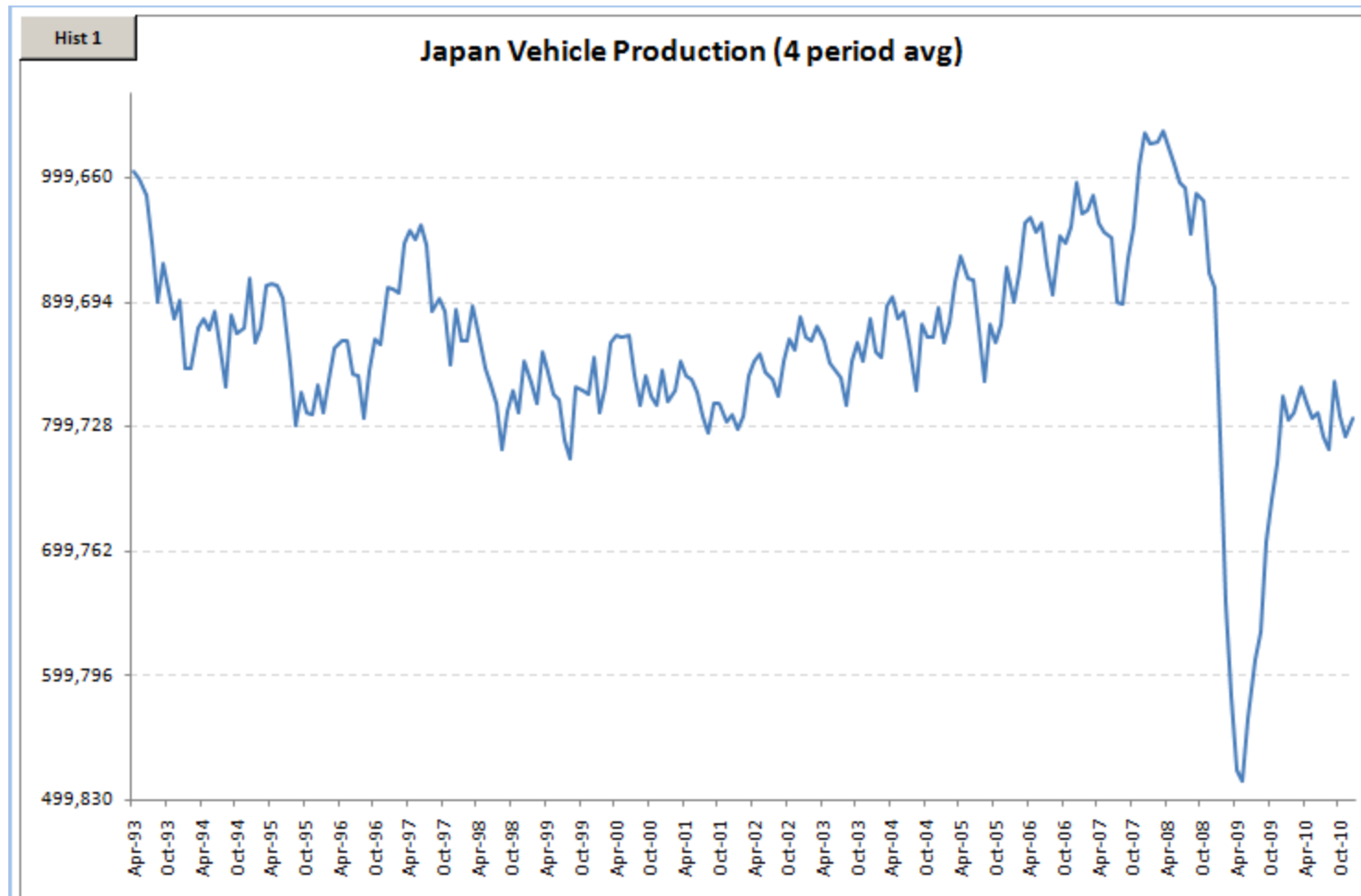
Activity – Capacity Utilization



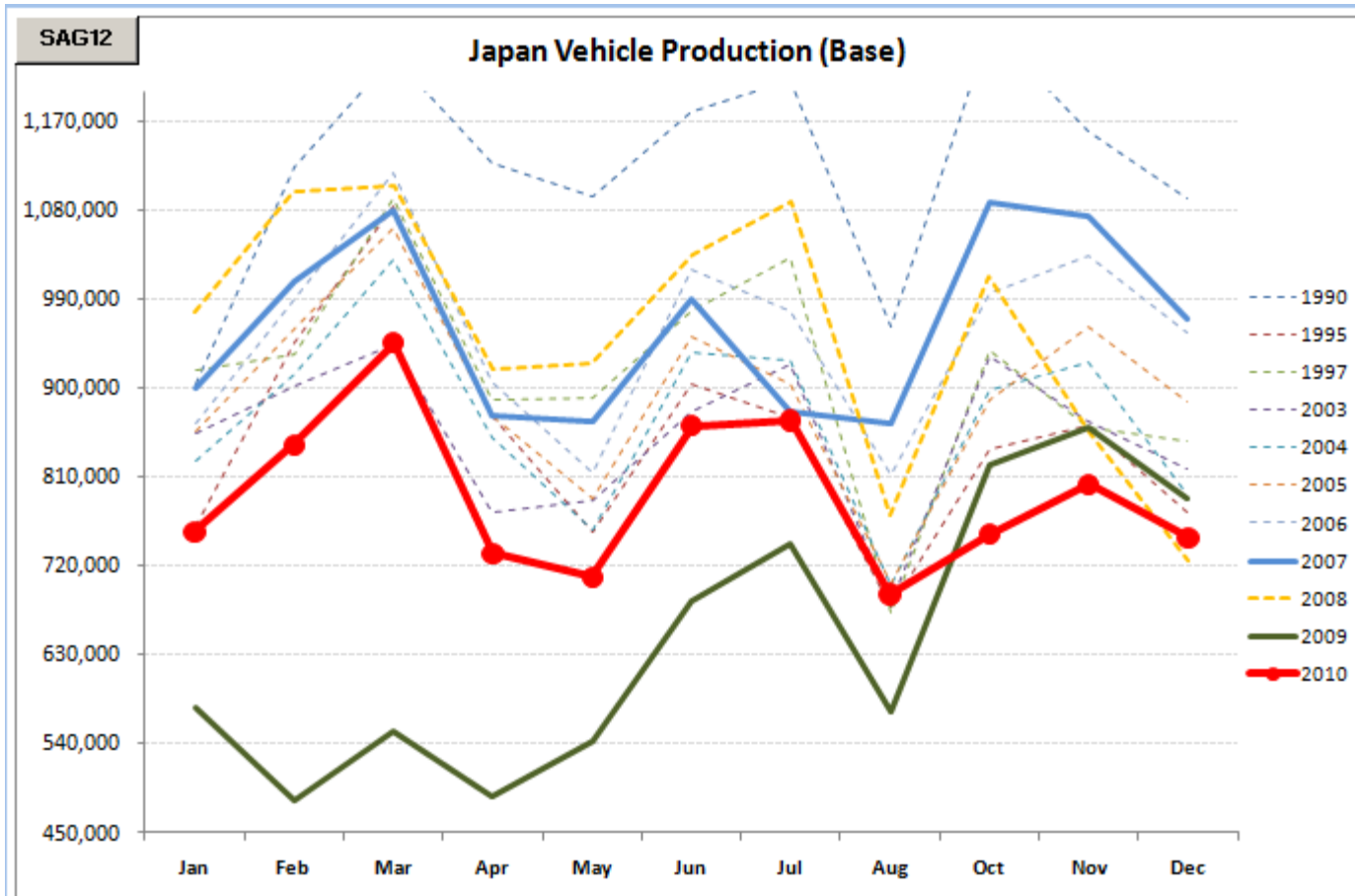
Activity – Capacity Utilization



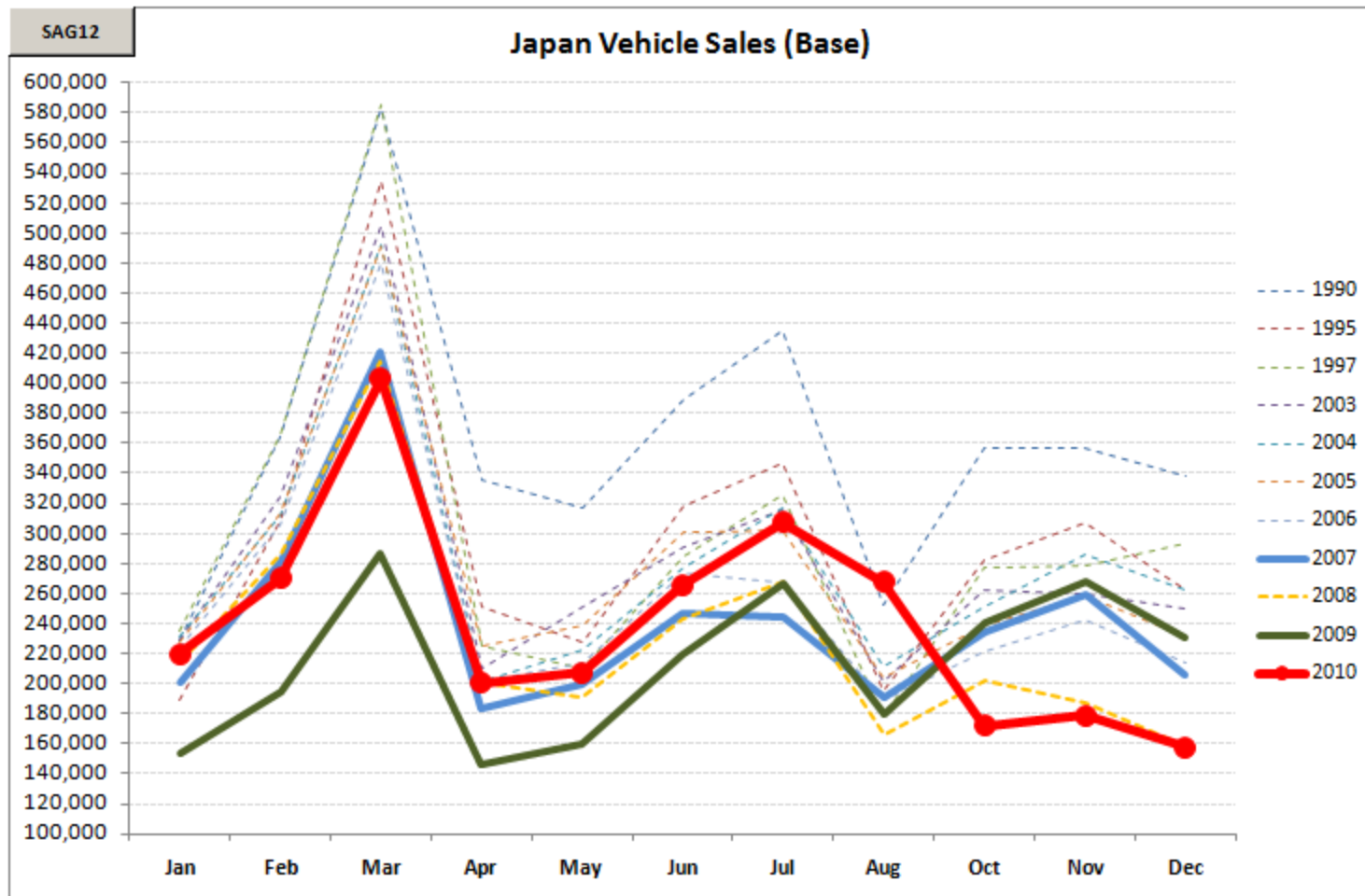
Activity – Vehicle Production (4 month average)



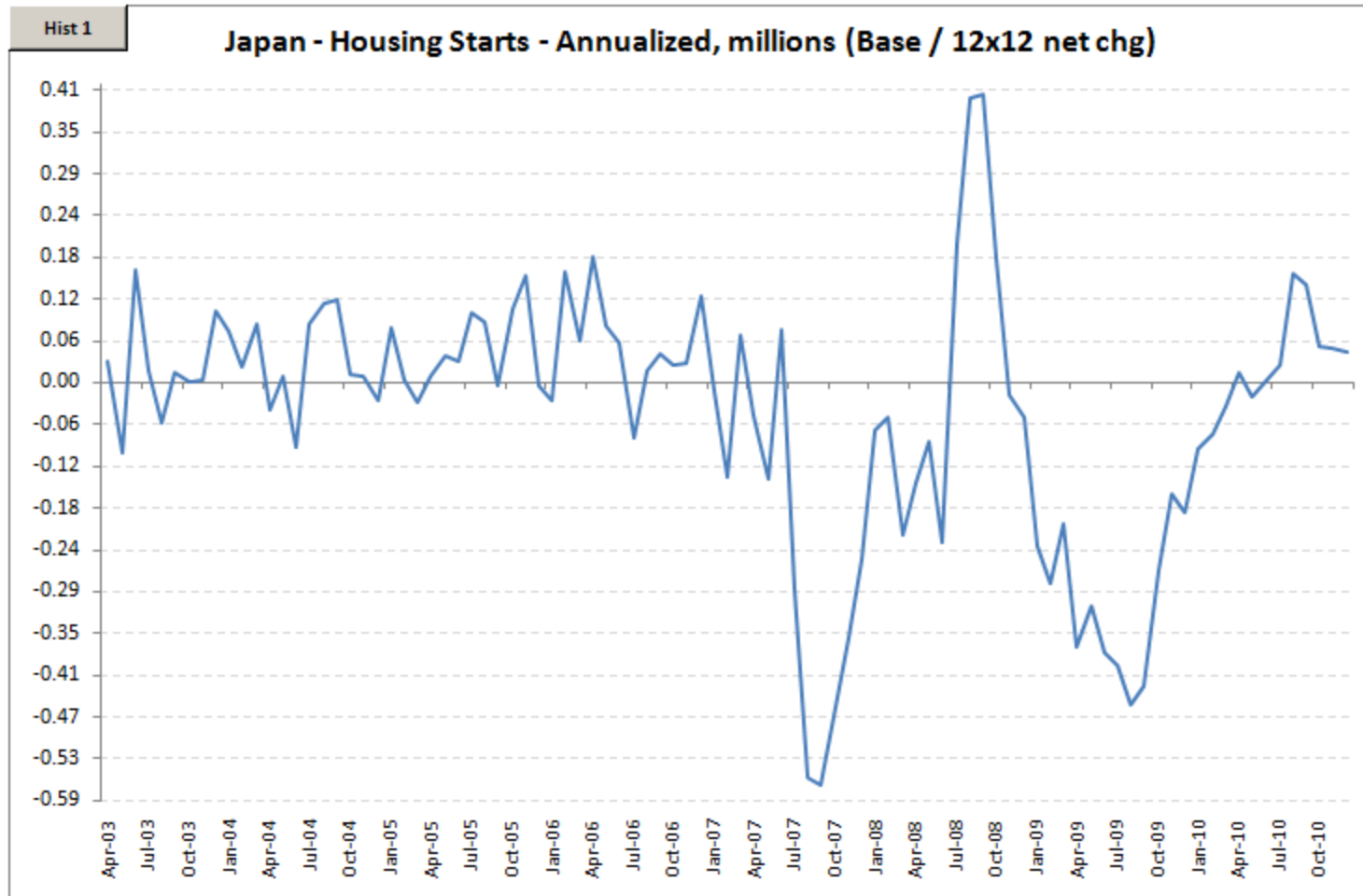
Activity – Vehicle Production



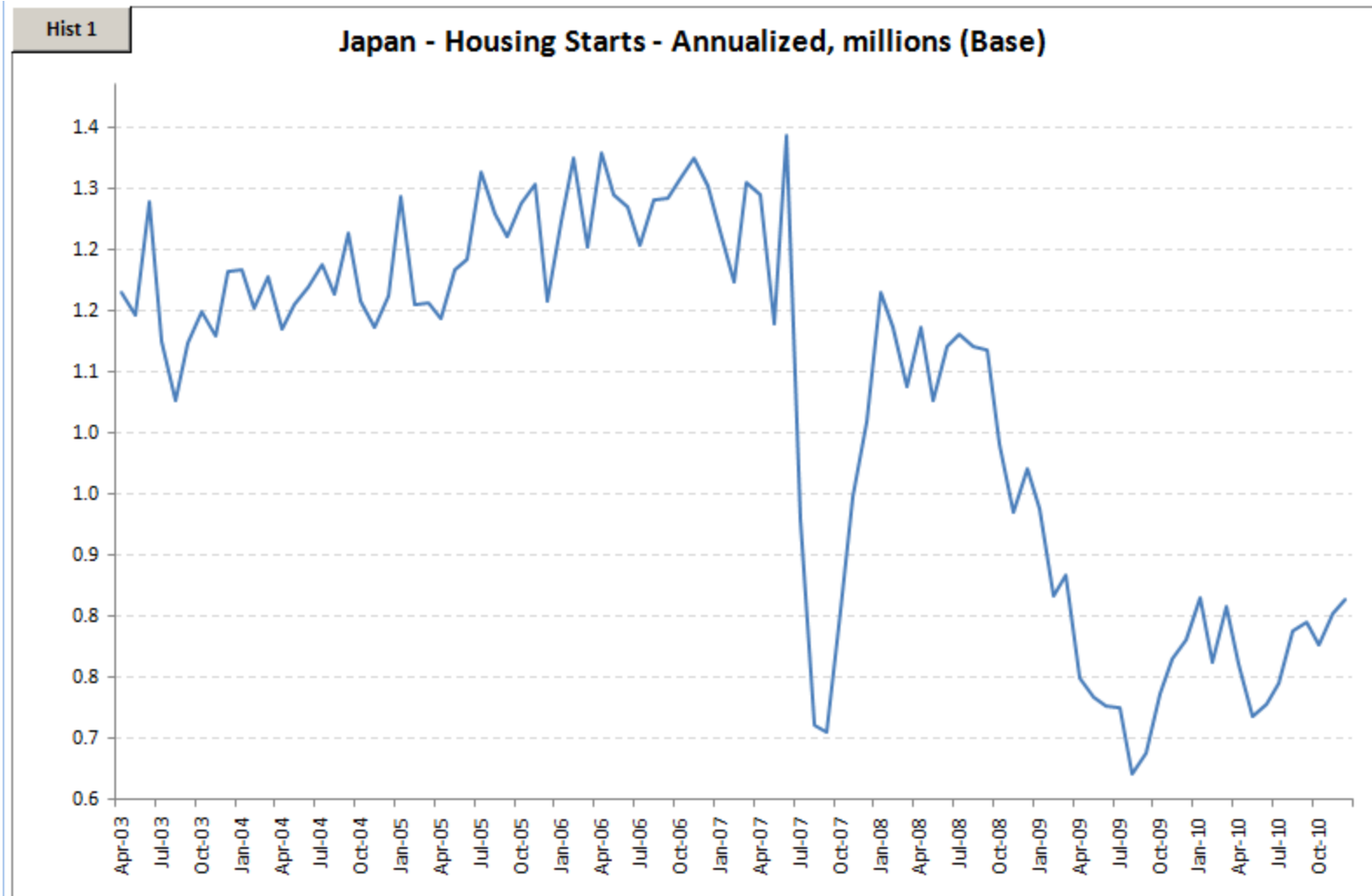
Activity – Vehicle Sales



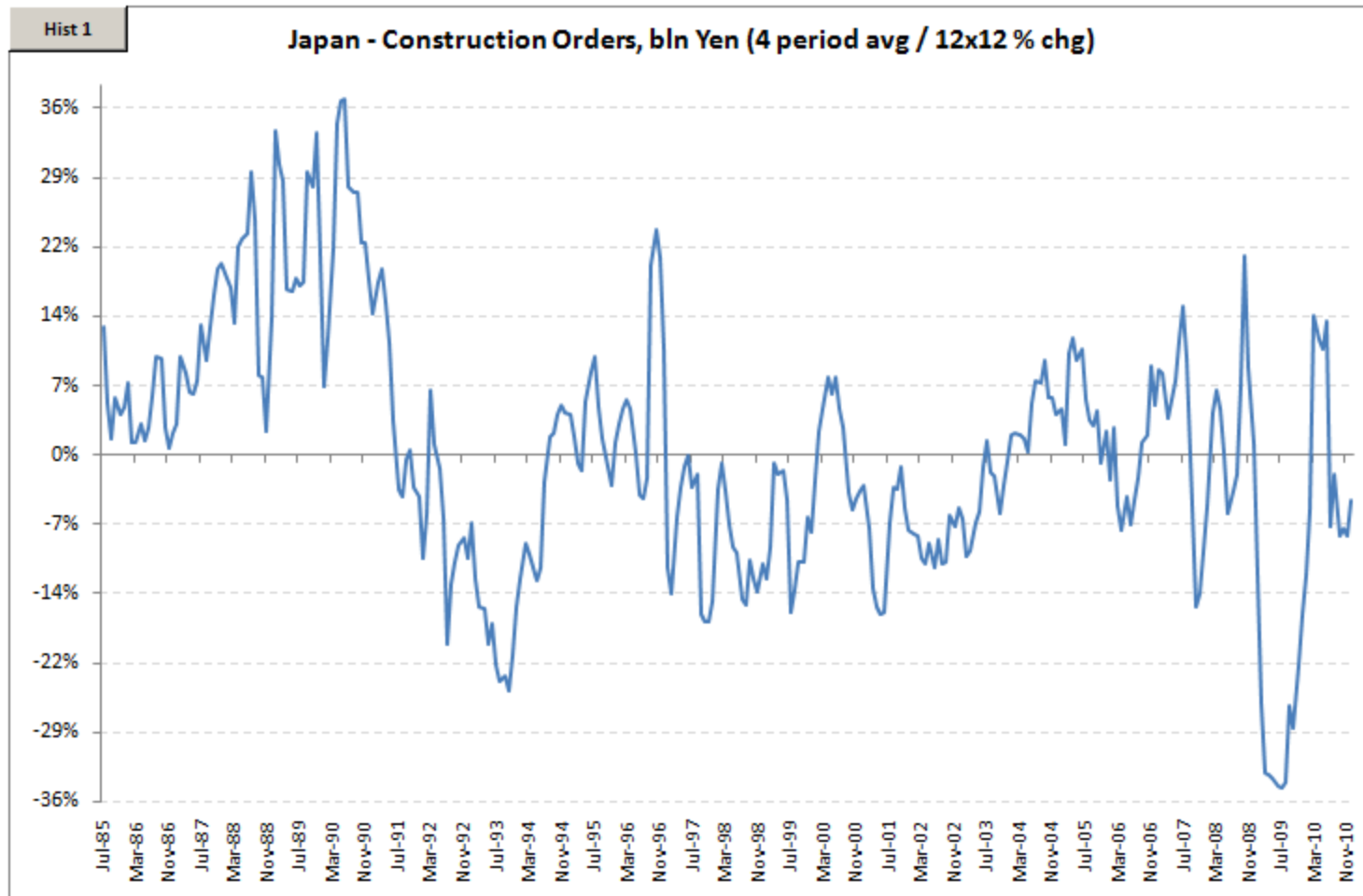
Activity – Housing Starts



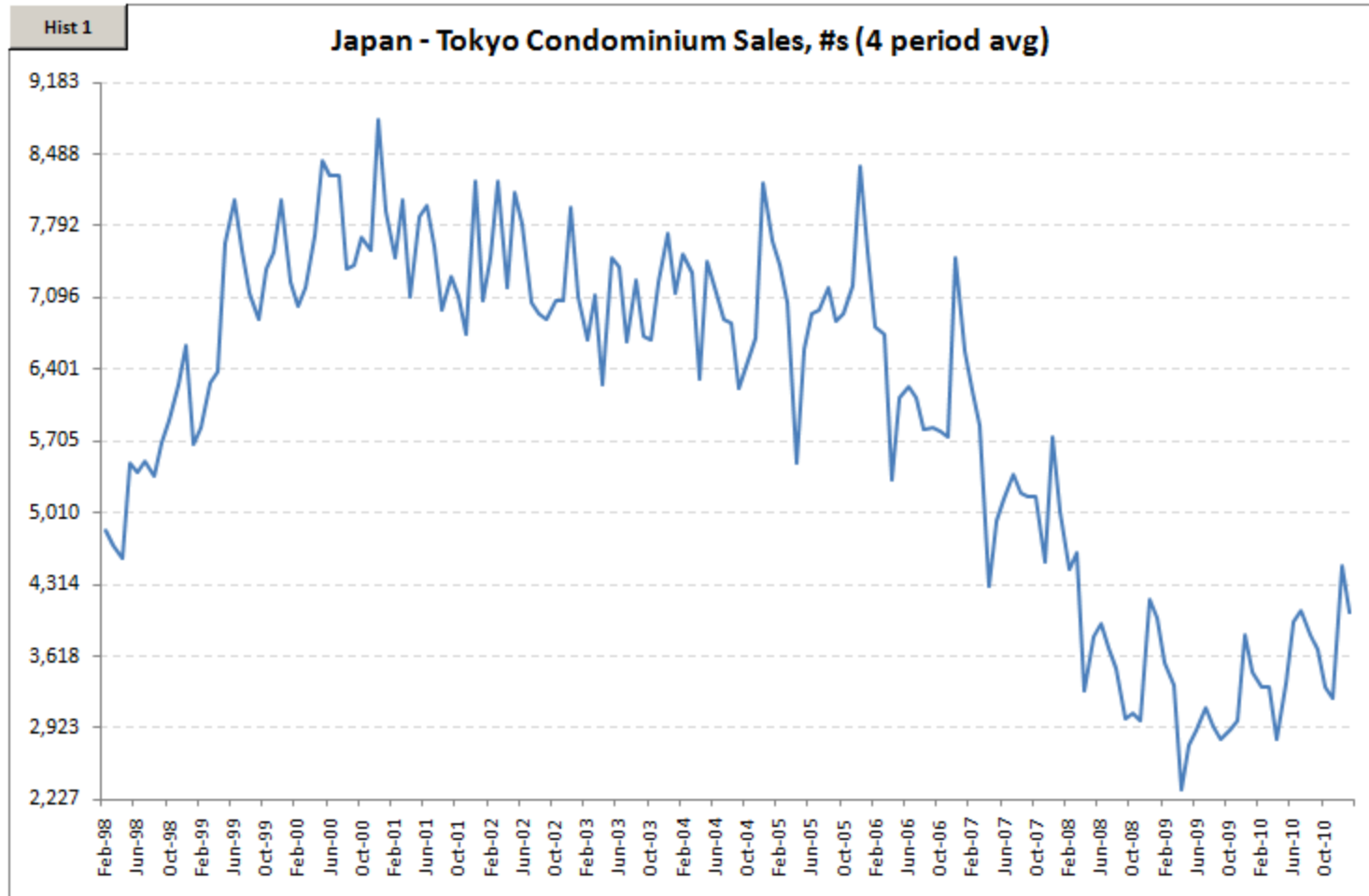
Activity – Housing Starts



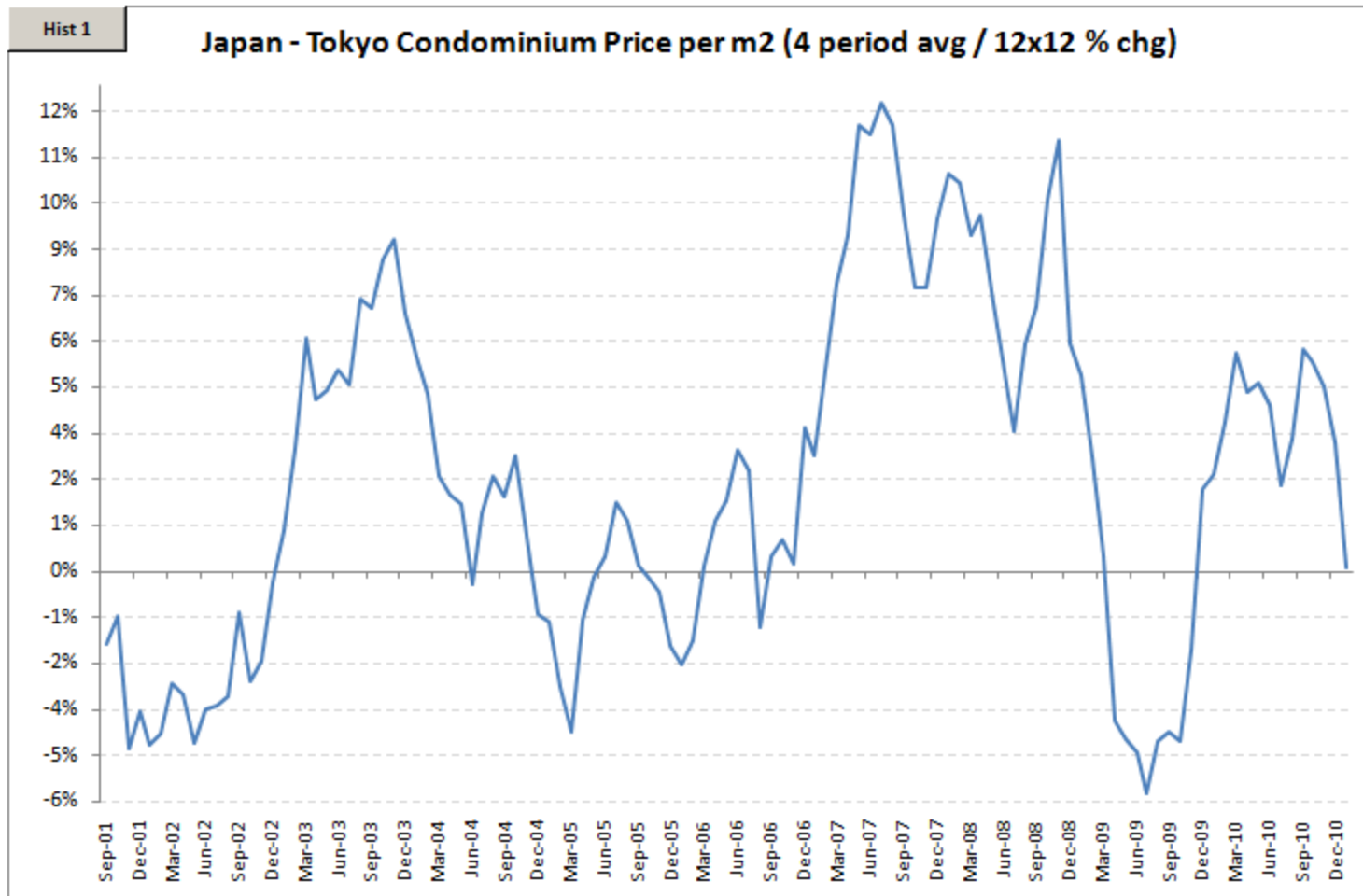
Activity – Construction Orders



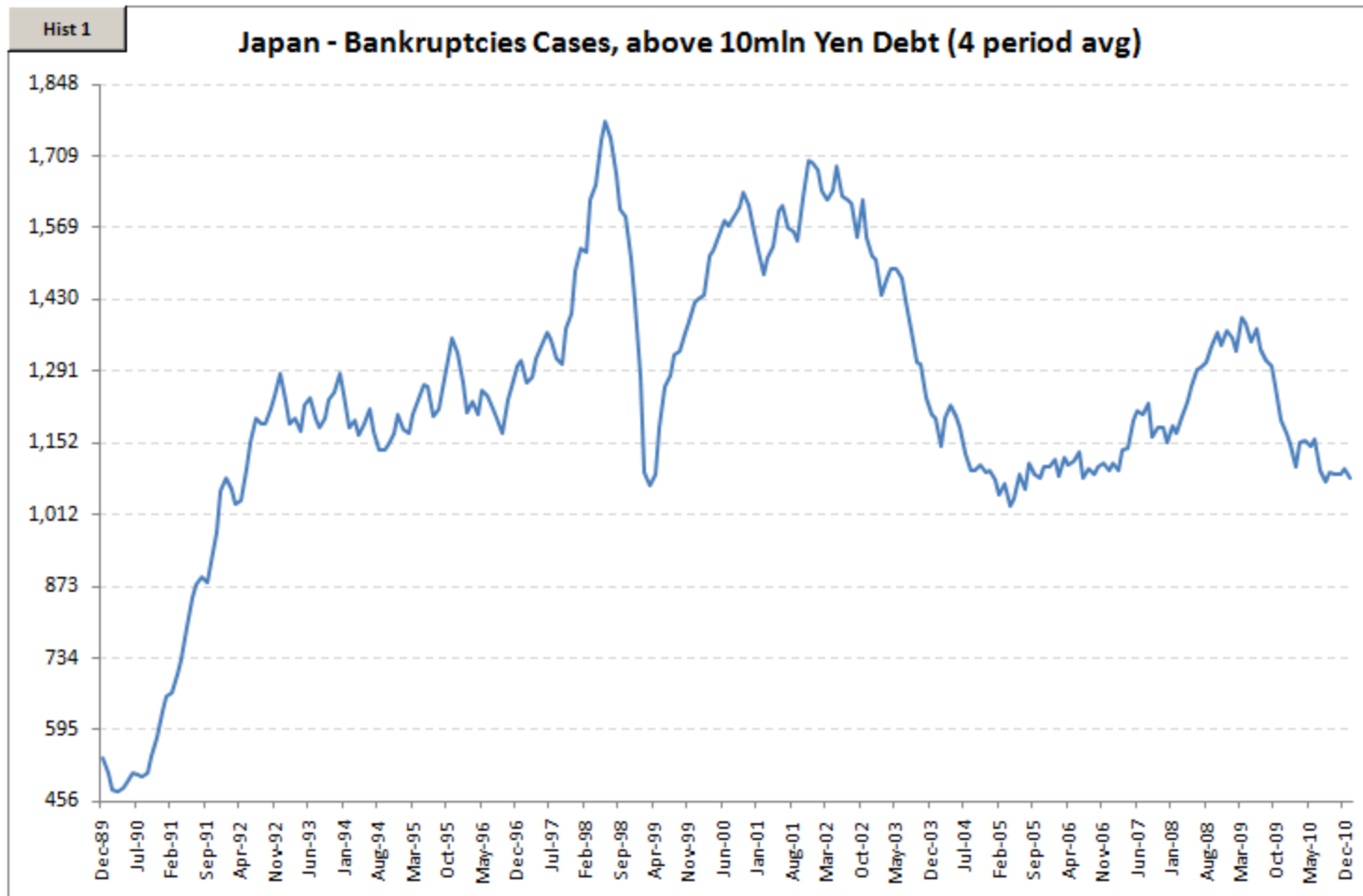
Activity – Tokyo Condo Sales



Activity – Tokyo Condo Sales – Prices

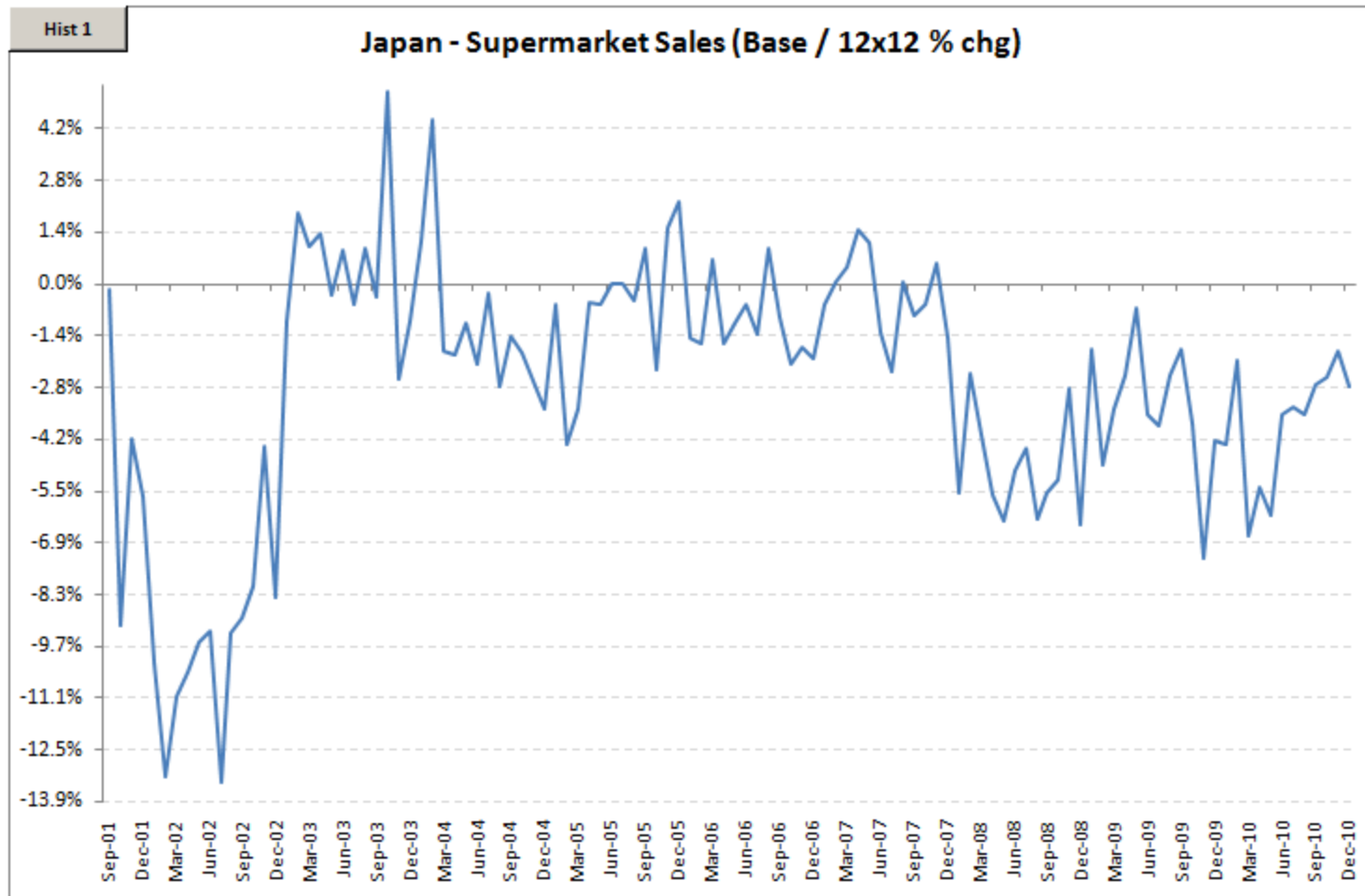


Activity – Bankruptcies, above 10mIn Yen

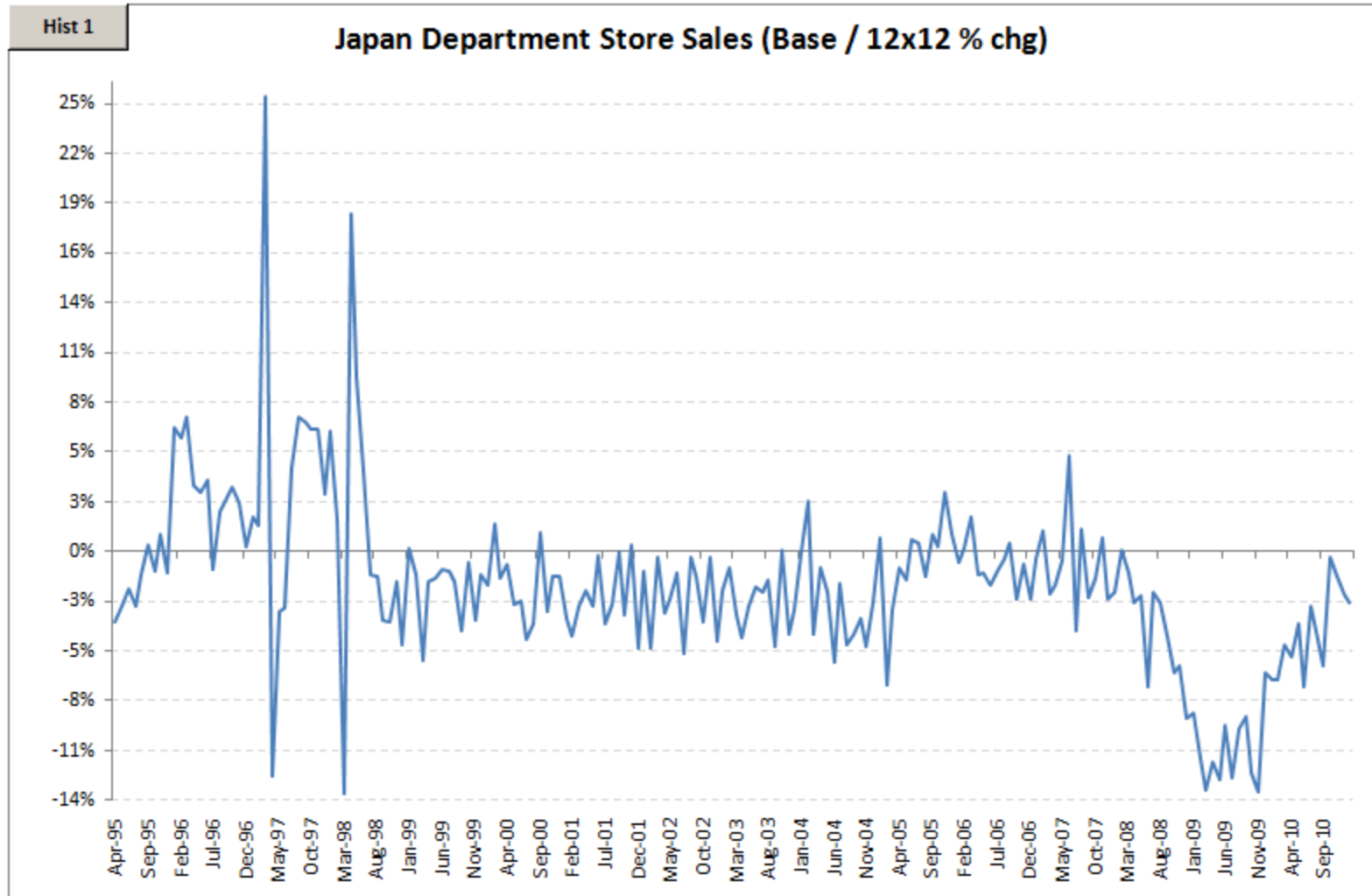


Activity – Supermarket Sales

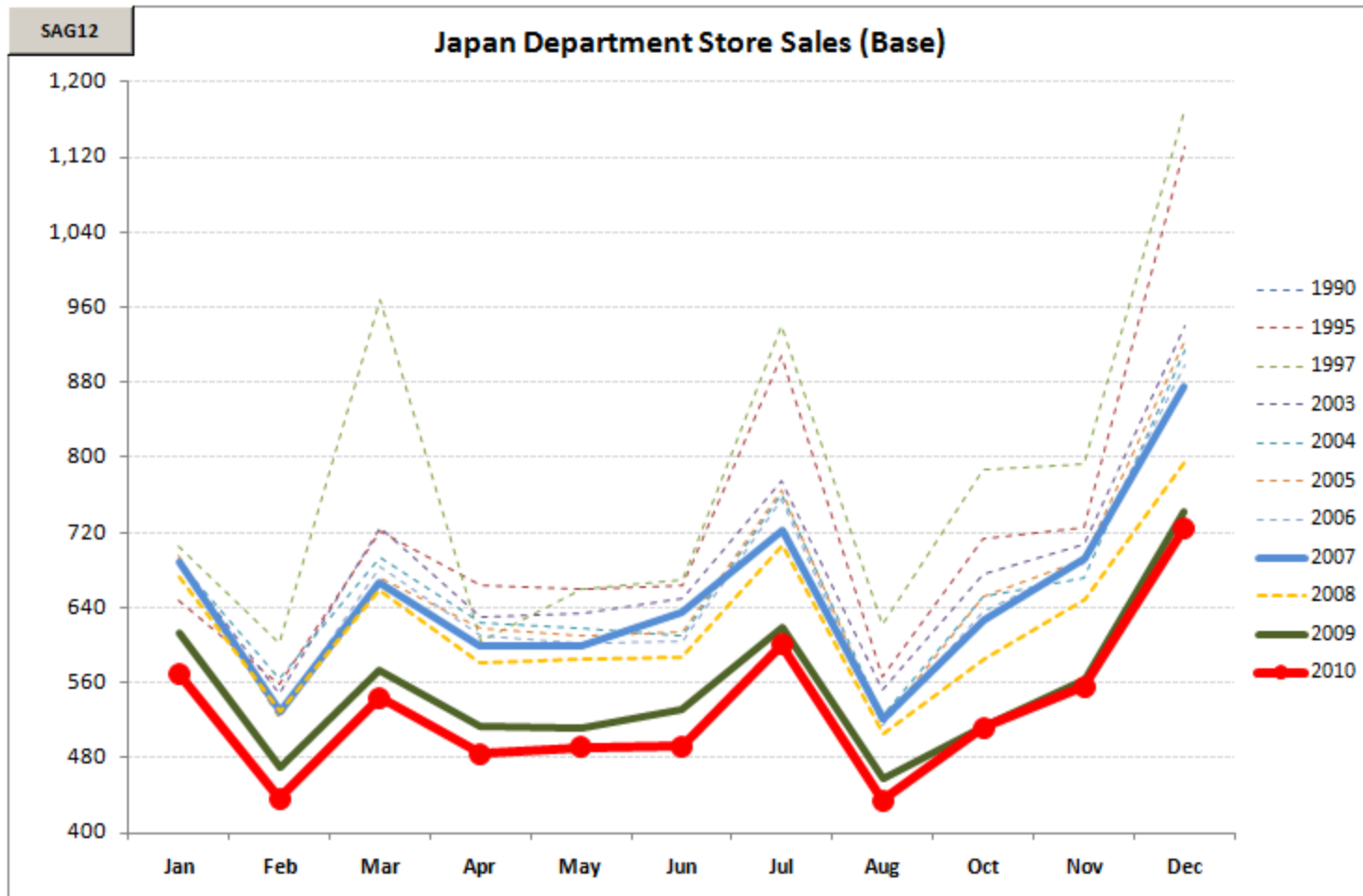
- Supermarket Sales finished 2010 seasonally lower than 2006, 2007, 2008, 2009...
- Deflation is at -0.60% YoY while Supermarket Sales dropped almost 3% vs 2009
- Despite many stimulus measures (eco-points)



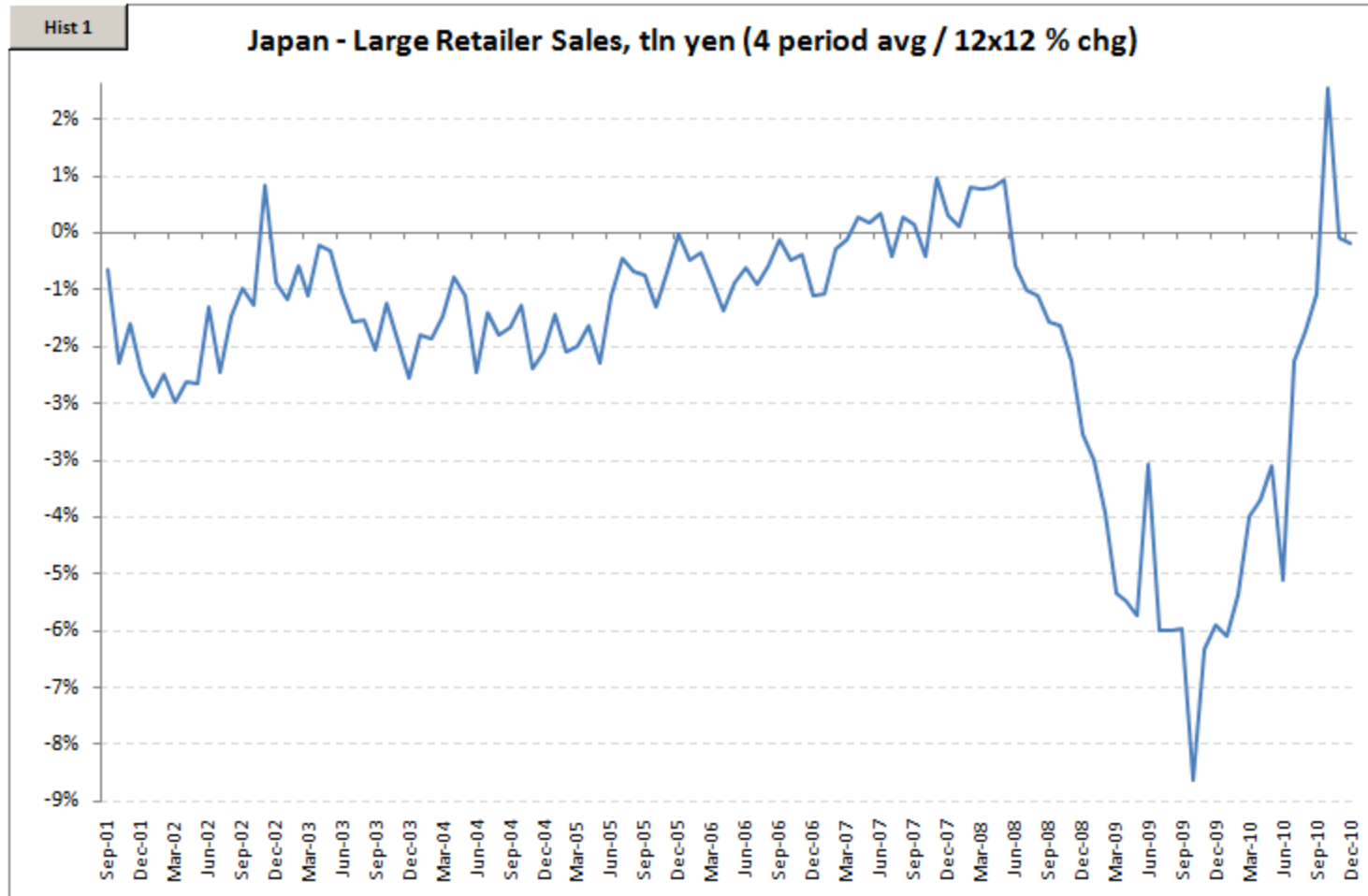
Activity – Department Store Sales



Activity – Department Store Sales

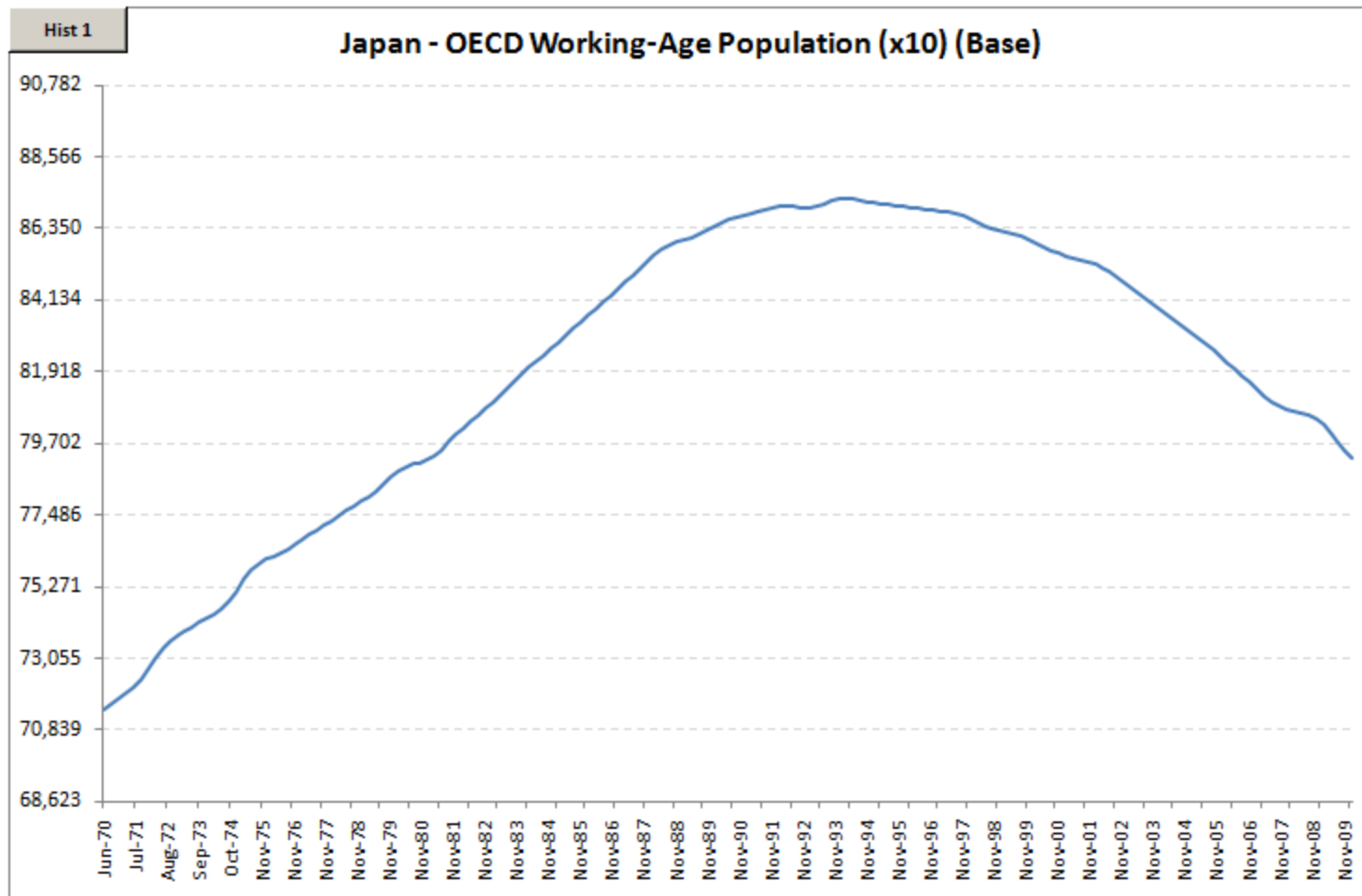


Activity – Large-Retailers Sales



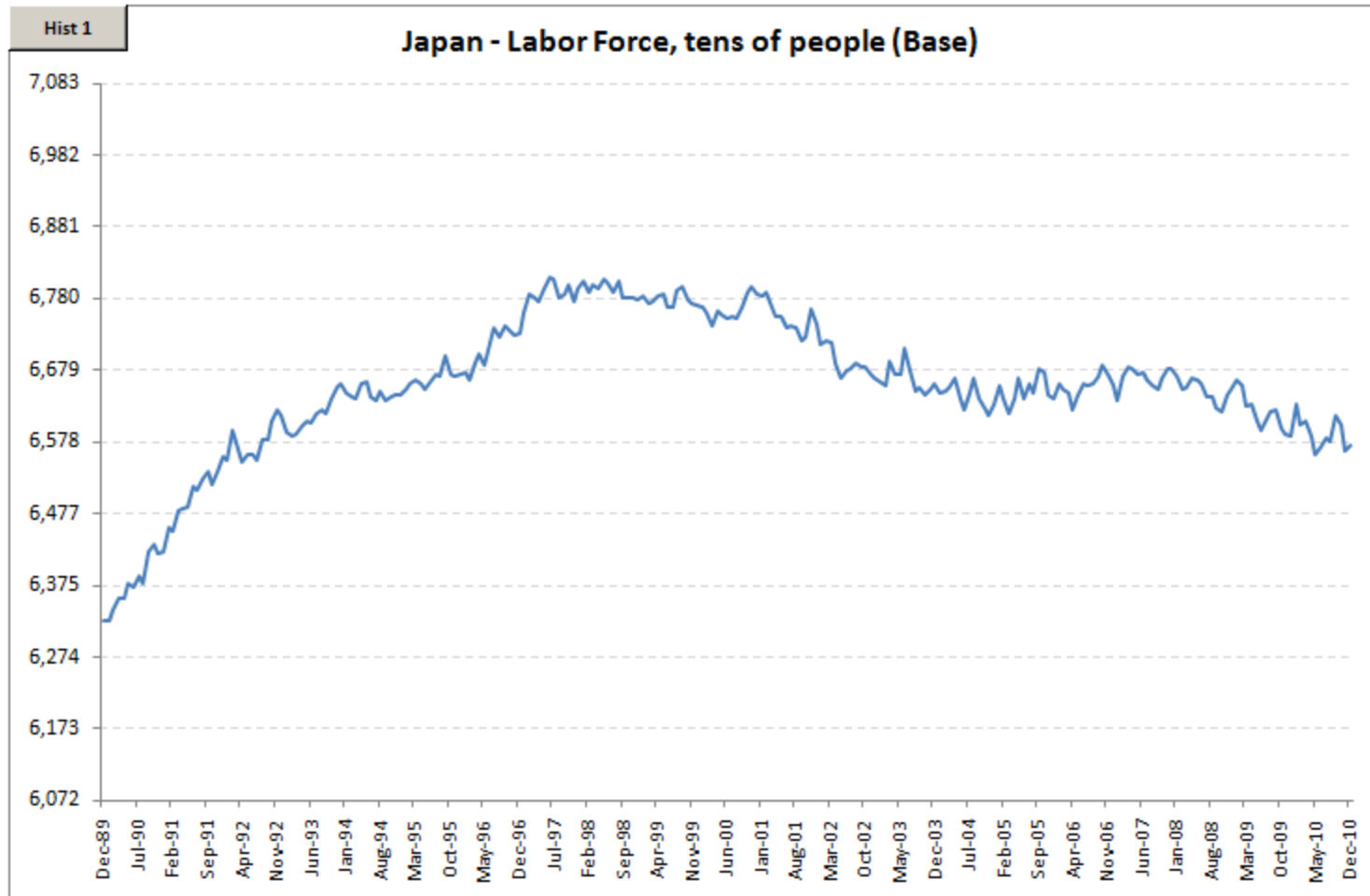
Activity – OECD Working-age Population through 2012

- Working-Age population in Japan has been decreasing by a rate of around 0.50%/year
- OECD projects this decrease to be around 1.3%/year in December 2012

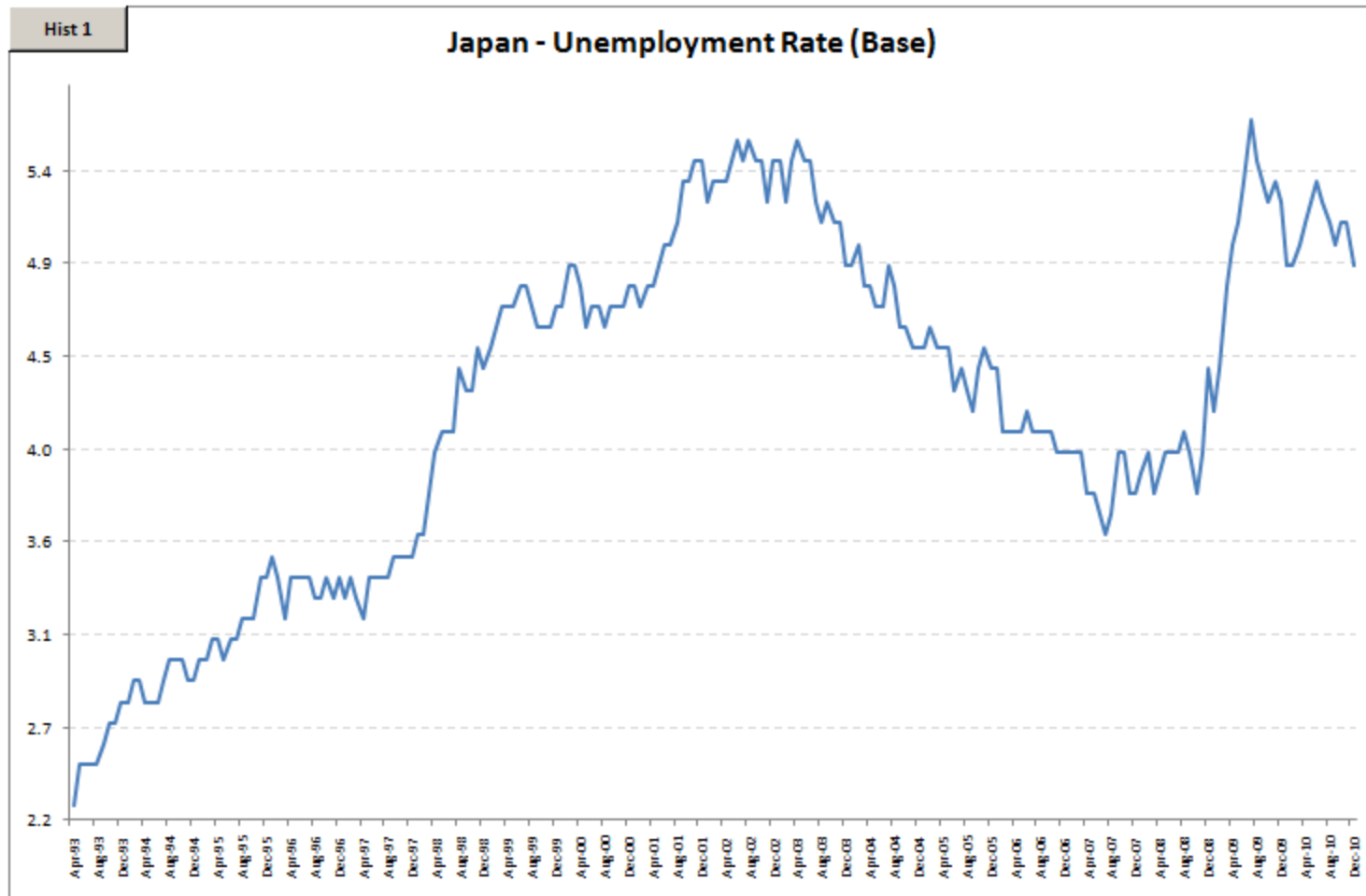


Activity – Current Labor Force, x10

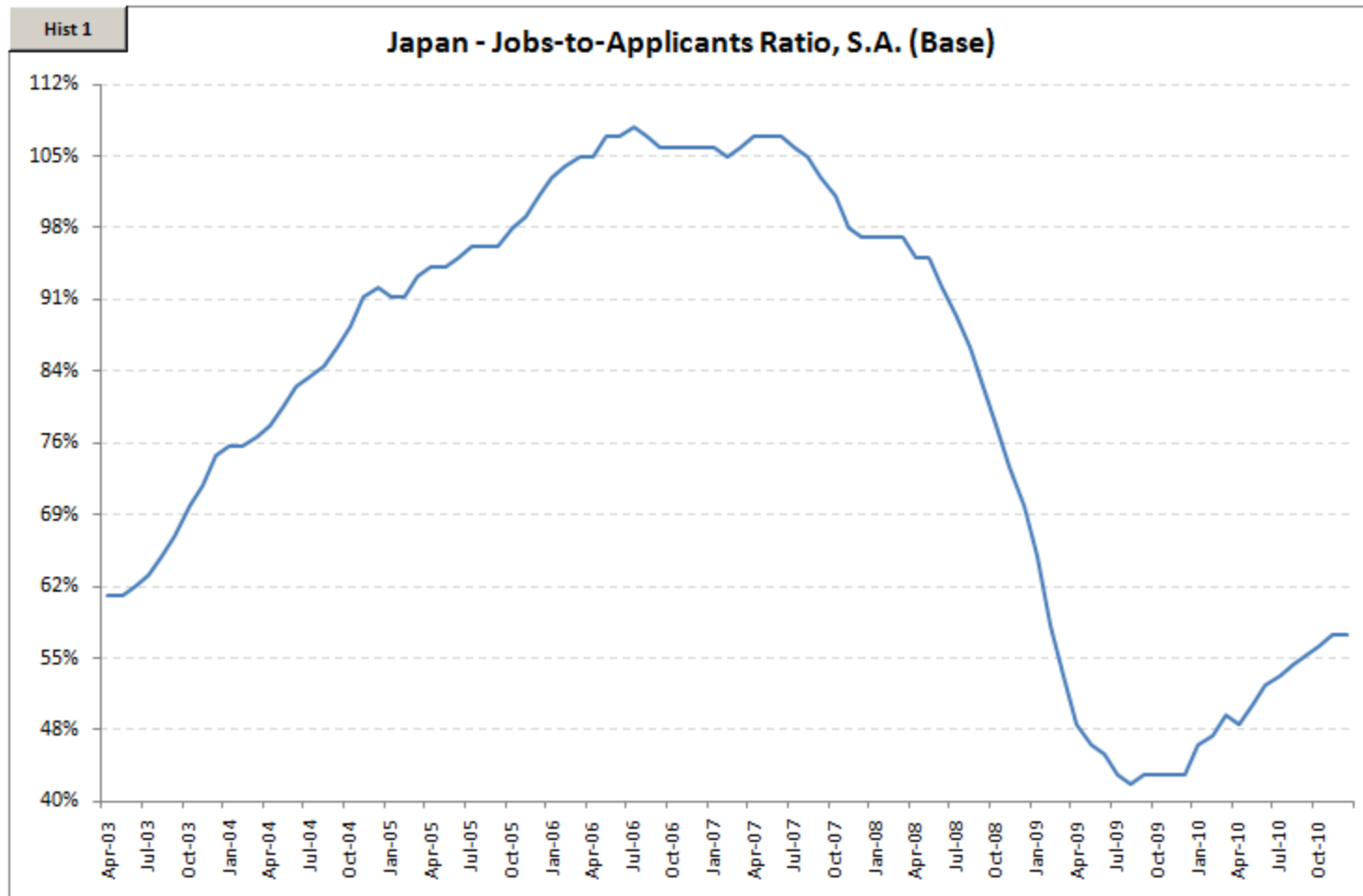
- The size of the current labor force, by the Ministry of Internal Affairs, is the same as it was in 1992



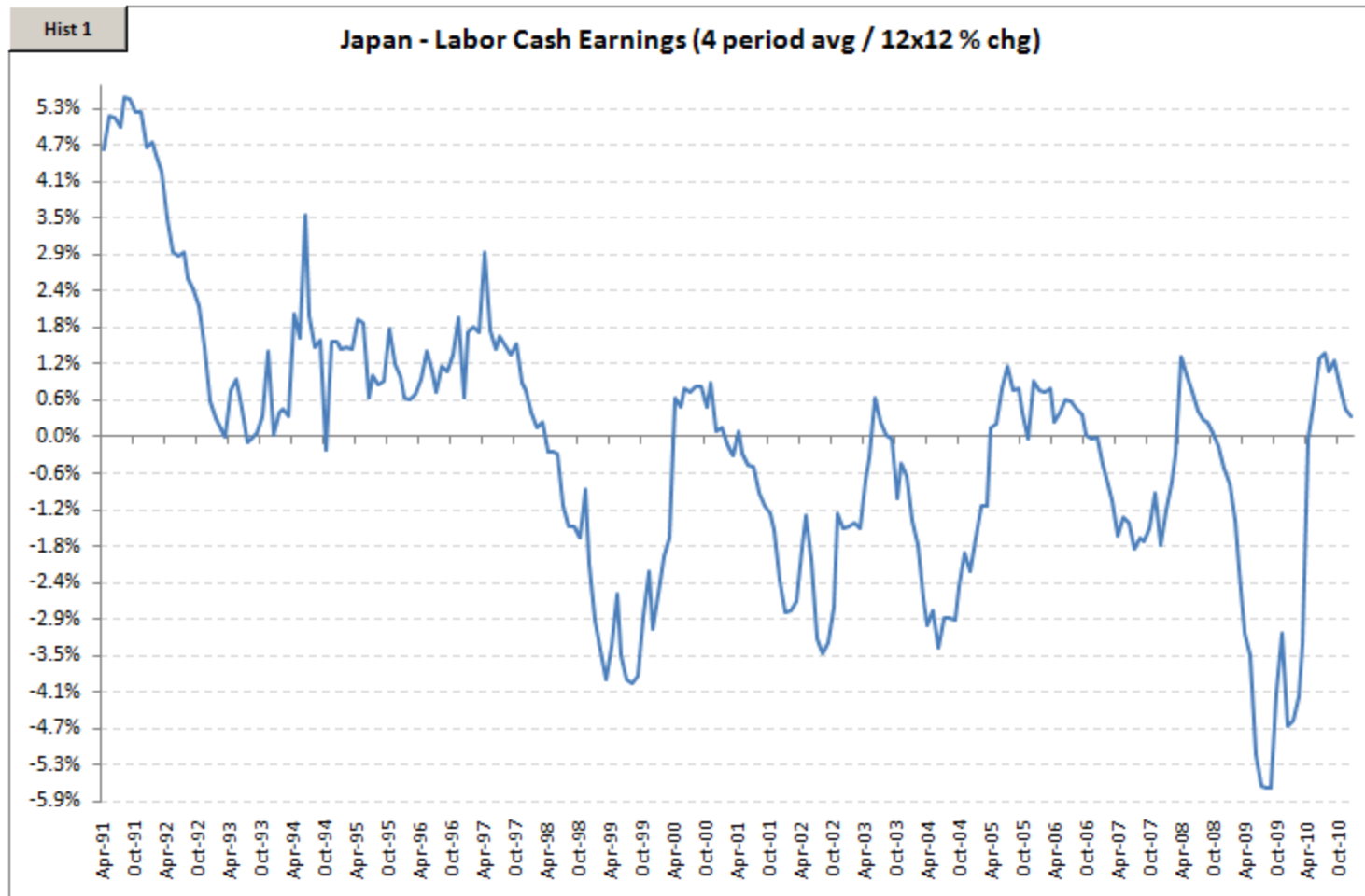
Activity – Still High Unemployment



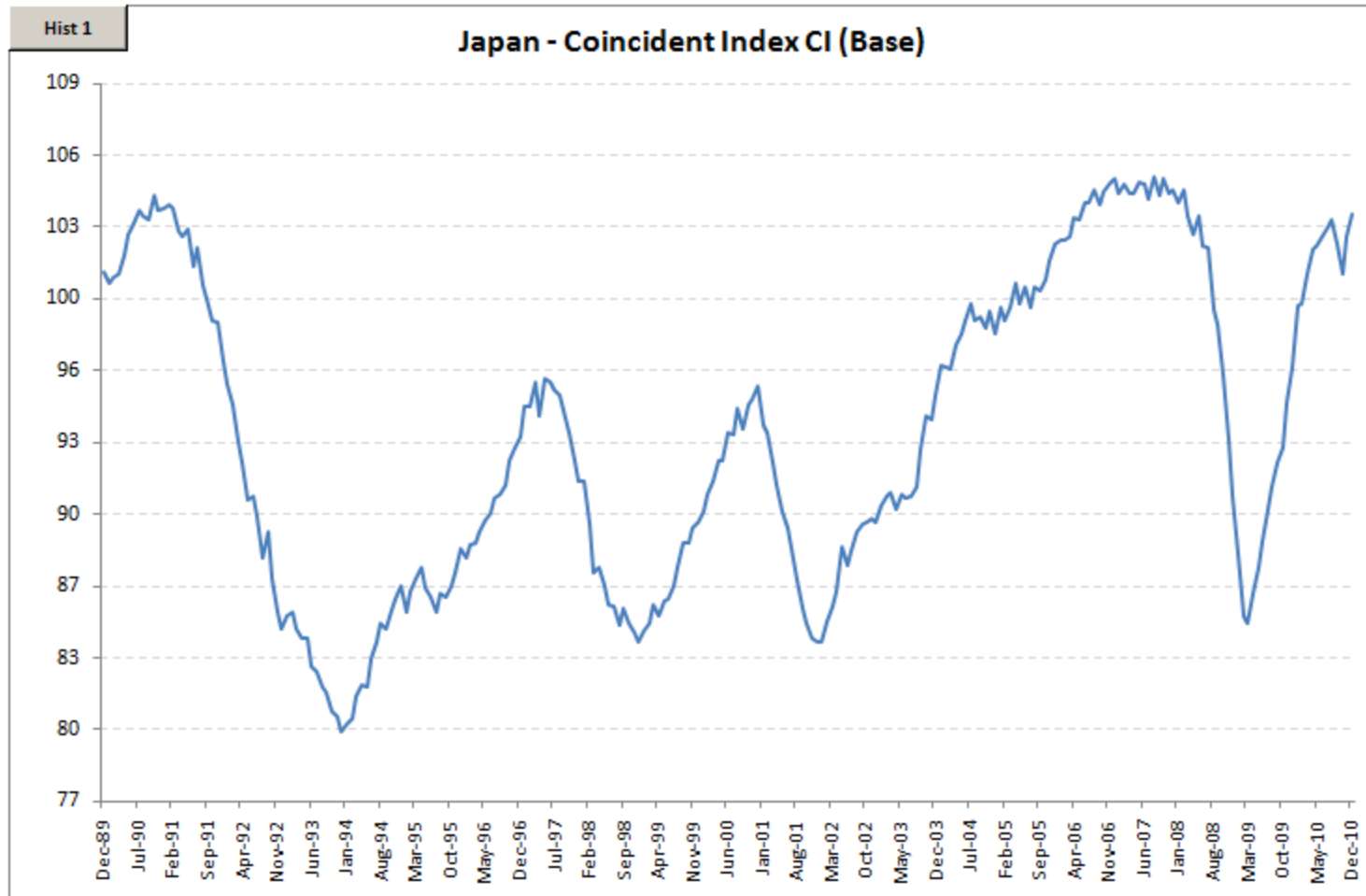
Activity – Jobs-to-Applicants Ratio



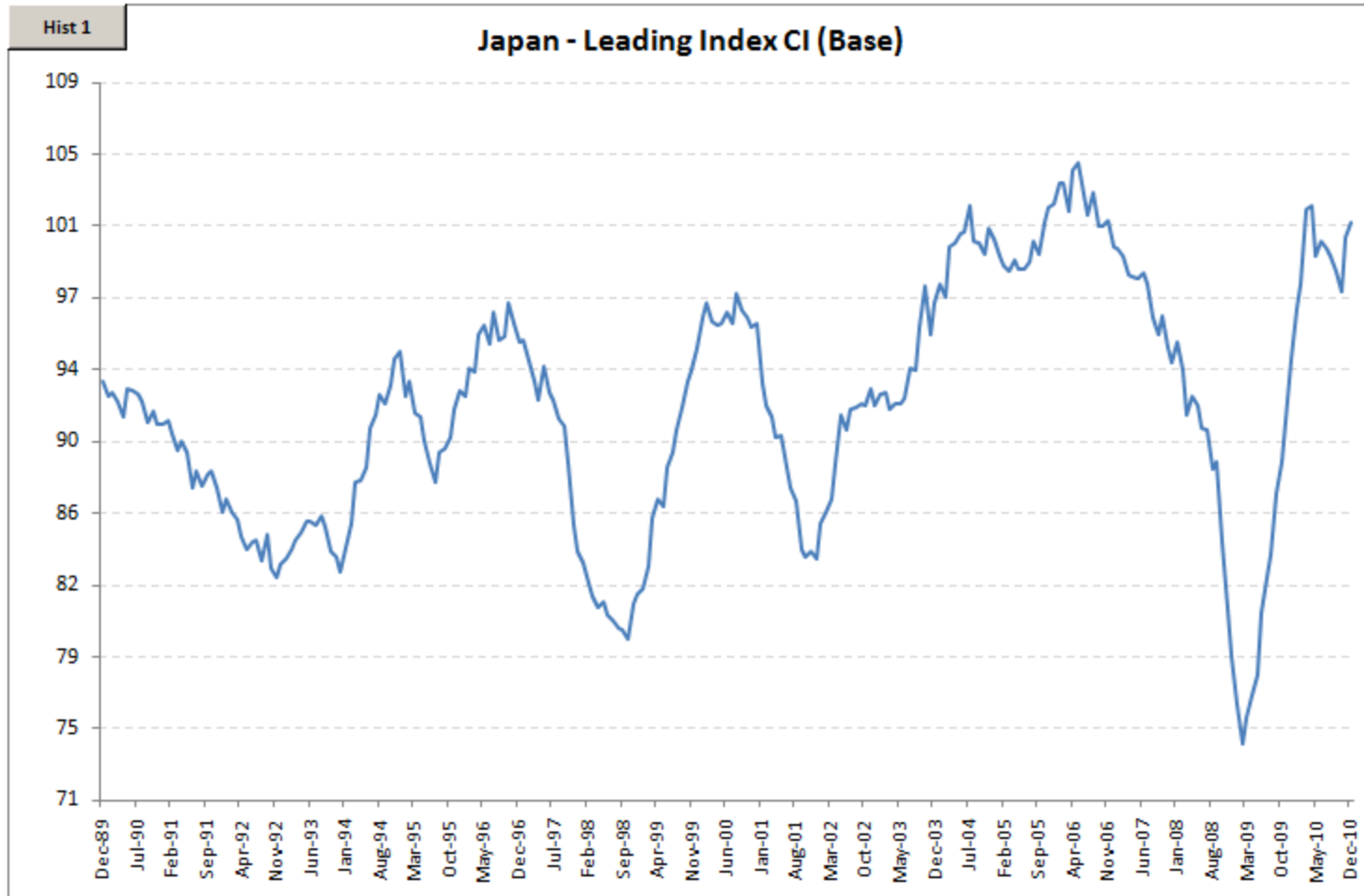
Activity – Labor Cash Earnings, YoY



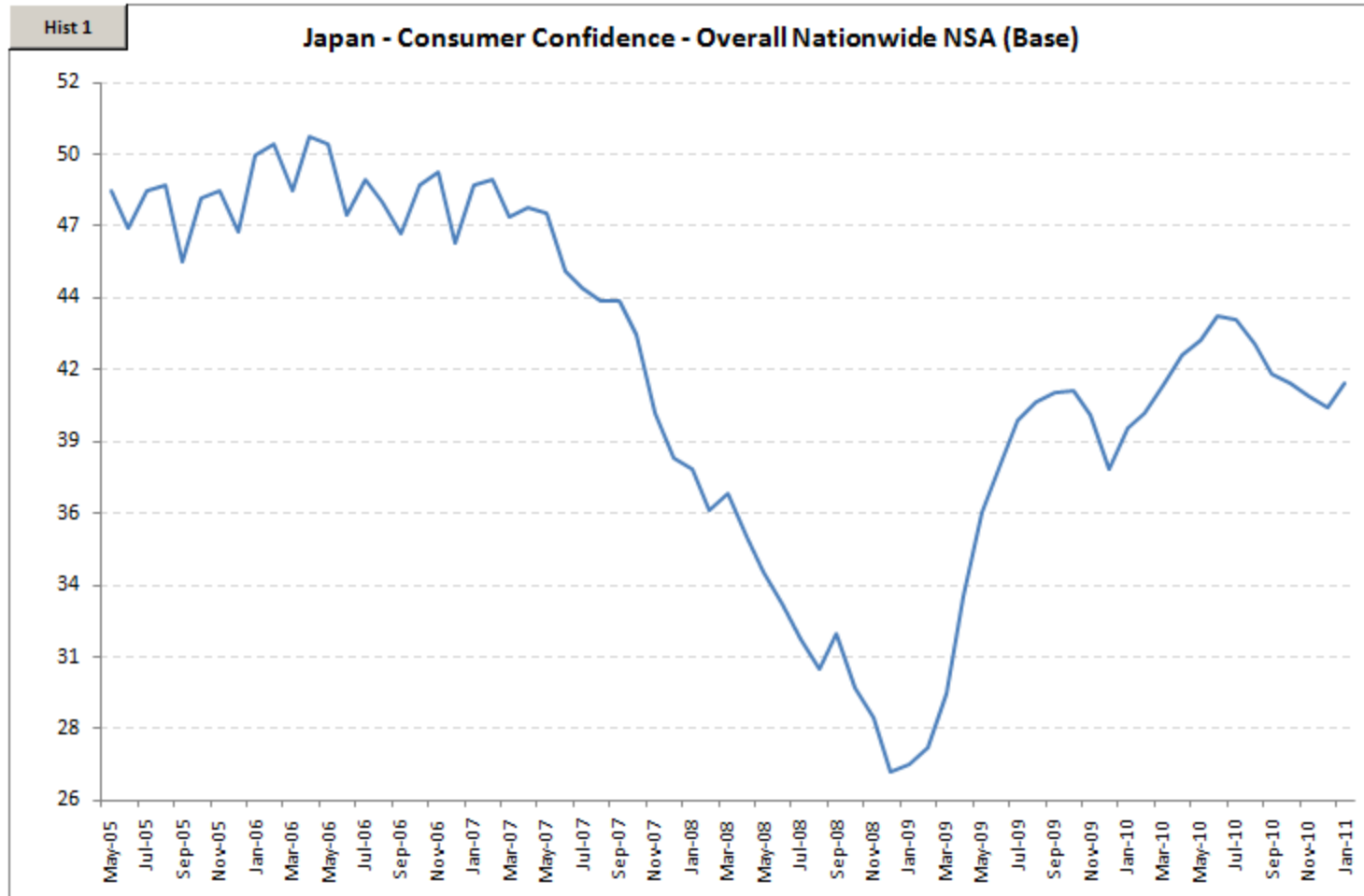
Activity – Coincident Indicator



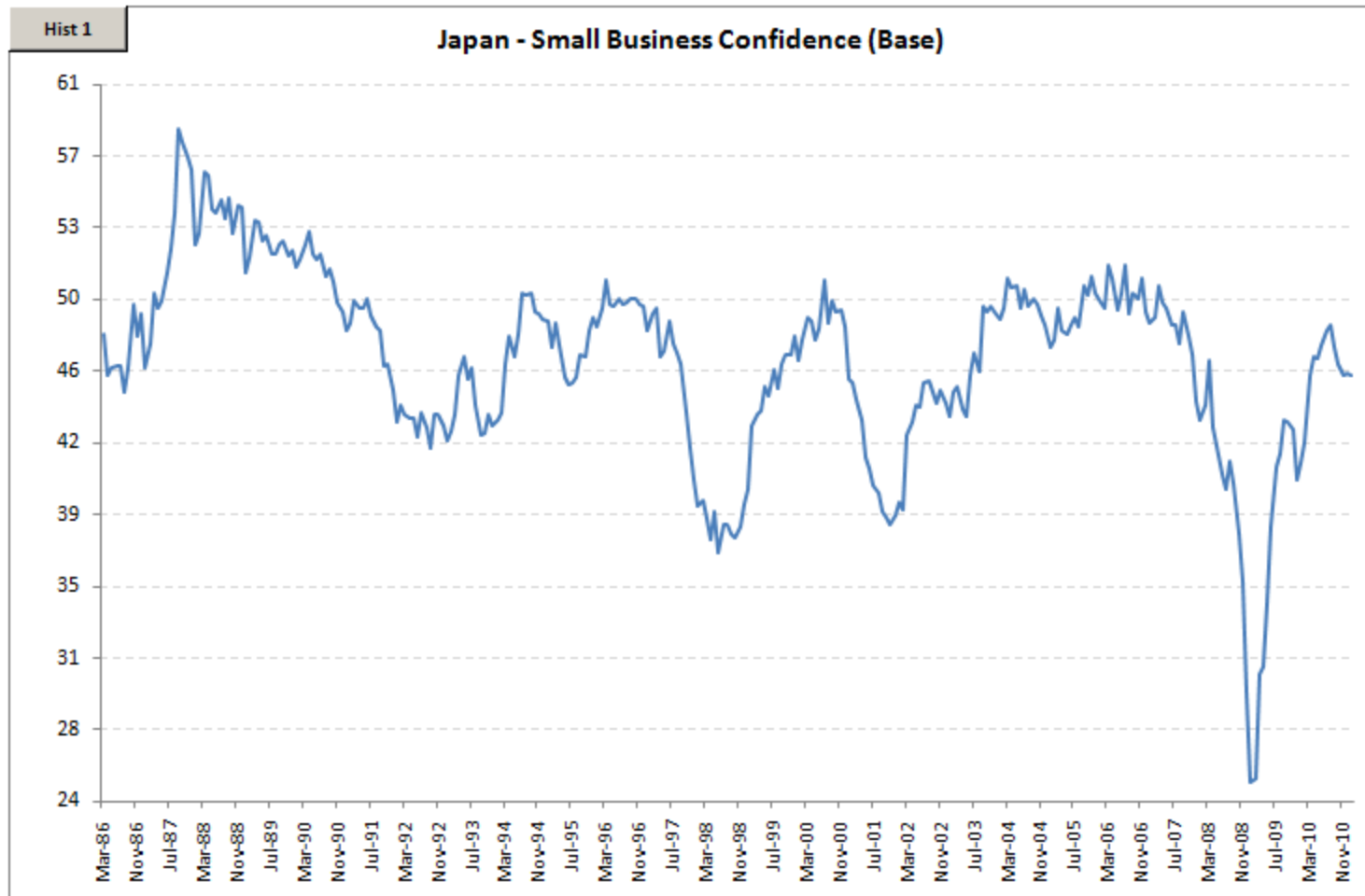
Activity – Leading Indicator



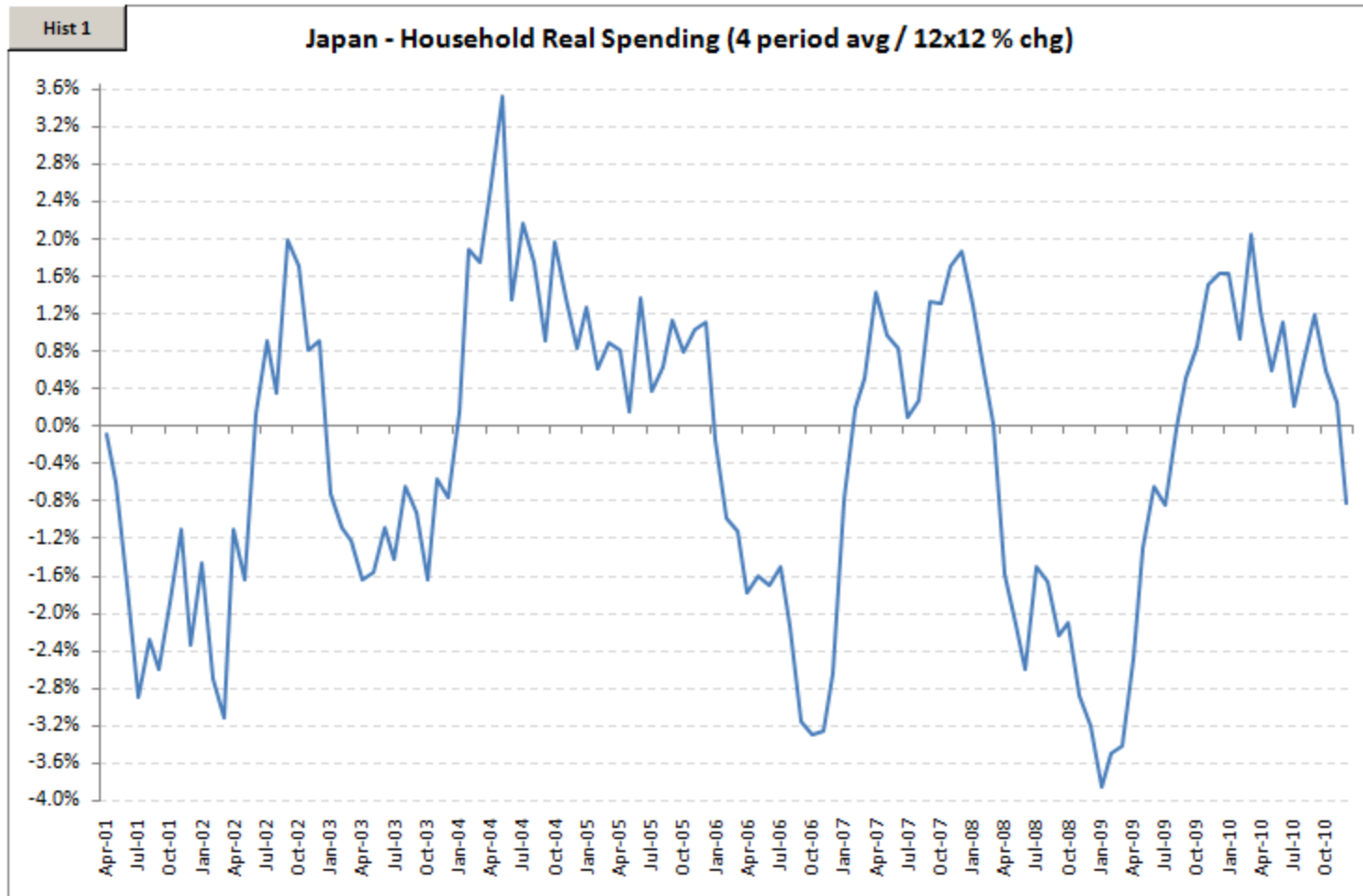
Activity – Consumer Confidence



Activity – Small Business Confidence



Activity – Real Household Spending



Catalysts – Can Japan Sell Financial Assets?

The Bank of Japan is currently running a Quantitative Easing program:

- It has committed funds to buy equities, bonds, commercial paper, ETFs and REITS
- Size: 35 trillion Yen (3.5tln for government securities, 30tln for fixed-rate fund supply operations)

If the Government were to sell financial assets what impact would it have?

- Equities: would the domestic and/or foreign markets get hurt?
- Bonds: would interest rates remain low?

The BoJ can buy JGBs up to the amount of banknotes issued

- That leaves room for money printing
- Will the JPY go unscathed in this case?

Financial Assets, billion Yen, Dec 2009	Central Govt	Local Govt	Total	USD billion
2. Currency and deposits	27,852	22,773	50,625	612
3. Loans	49,241	8,519	57,760	698
4. Securities other than shares	12,109	1,855	13,965	169
5. Shares and other equities	45,066	39,597	84,663	1,023
8. Other financial assets and liabilities	107,066	604	107,671	1,301
Total	241,334	73,349	314,683	3,803

Catalysts – If Japan Didn't Blow Up Yet, Why Will It Now?

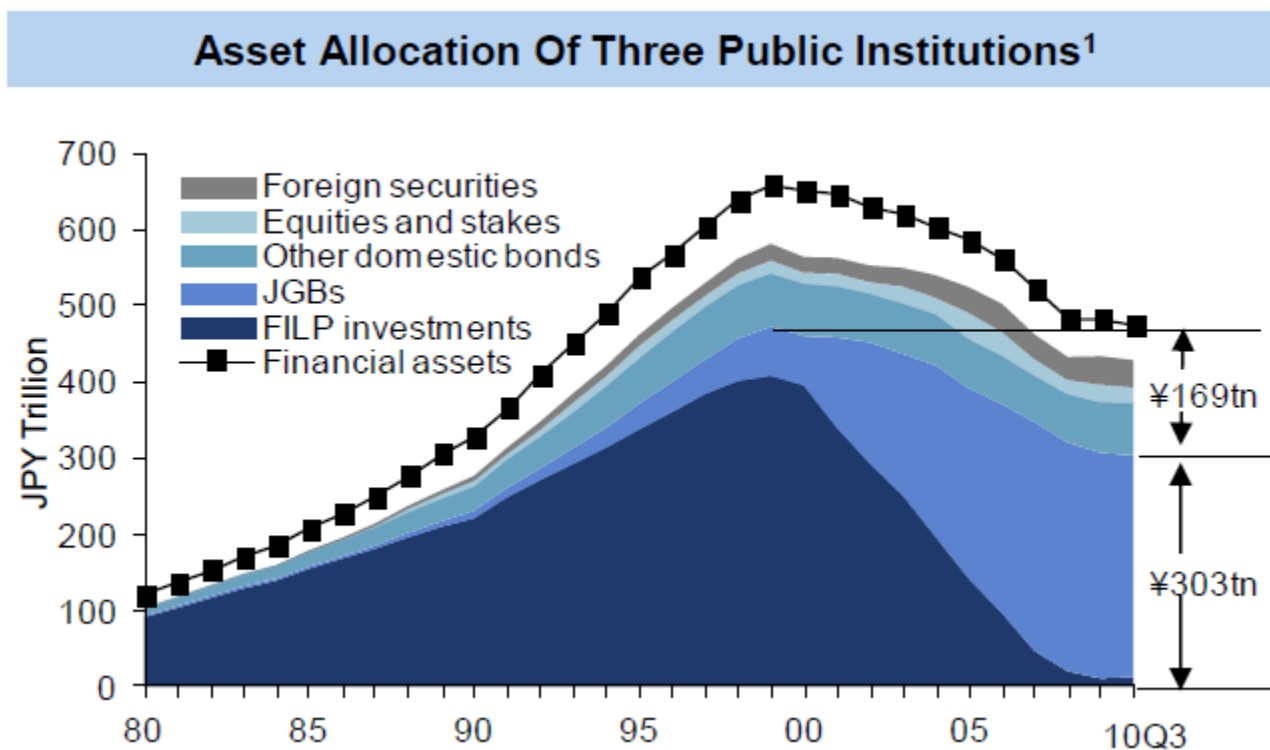
- Europe Sovereign Debt Crisis
- Rate hikes in the developed markets: Europe and United Kingdom hitting activity / draining global liquidity
- Inflation and current/coming tightening in China, India, Brazil, Chile, Australia and others

- Further cuts in sovereign debt ratings driving it below investment grade

- Japan's Government Pension Investment Fund (GPIF), the largest pension fund in the world with about USD 1.4 trillion is now a net seller of funds as contributions decrease as population ages: it has sold bonds worth around 720 billion Yen in fiscal 2009 to cover its expenses
 - GPIF's shortfall is expected to reach 4.74 trillion yen in 2010 (fiscal-year ended March 2011) and another 6 trillion yen in fiscal 2011.
 - Takahiro Mitani, president of the GPIF, has mentioned that it will need to rebalance its portfolio by selling the assets they are currently overweight: the current weight for domestic bonds is 67.44% vs the current holdings of 70.04% (Sep2010)

- Japan Postal Bank has issued notes that will start diversification of its investments. They currently hold the largest deposit base of Japan (~ 2 trillion USD) and 80% of its assets in JGBs

Catalysts – If Japan Didn't Blow Up Yet, Why Will It Now?



Execution – Call USD / Put JPY

OUTRIGHT CALL USDJPY			
Call USD			
Put JPY			
Strike USDJPY	110		
Spot	81.85		
Forward	78	(381)	
OTM:	41%		
Price, USD	1.19%	0.40%/year	

Scenarios	Deval from Fwd	PnL	Risk-reward
105	-26%	-1.2%	-1.0x
110	-29%	-1.2%	-1.0x
115	-32%	3.2%	2.7x
120	-35%	7.1%	6.0x
125	-38%	10.8%	9.1x
130	-40%	14.2%	11.9x
135	-42%	17.3%	14.6x
140	-44%	20.2%	17.0x
145	-46%	22.9%	19.3x
150	-48%	25.5%	21.4x
155	-50%	27.8%	23.4x

CALL SPREAD USDJPY			
Call USD			
Put JPY			
Strike USDJPY	110	130	
Spot	81.85		
Forward	78.05	(380.5)	
OTM:	41%		
Price	0.89%	0.30%/year	

Scenarios	Devaluation	PnL	Risk-reward
105	-26%	-0.9%	-1.0x
110	-29%	-0.9%	-1.0x
115	-32%	3.5%	3.9x
120	-35%	7.4%	8.4x
125	-38%	11.1%	12.5x
130	-40%	14.5%	16.3x

Execution – Payer Swaption

Swaption Payer		
Maturity	3yr	23-Feb-14
Tenor	10yr	
Current Forward		1.90%
Strike		4%
Duration		9.80
Premium, of Notional		1.30%
In 10yr swap bps		0.13%

Scenarios	chg (bps)	PnL	Risk-reward
3.0%	110	-0.13%	-1.0x
3.5%	160	-0.13%	-1.0x
4.0%	210	-0.13%	-1.0x
4.5%	260	0.37%	2.8x
5.0%	310	0.87%	6.5x
5.5%	360	1.37%	10.3x
6.0%	410	1.87%	14.1x
6.5%	460	2.37%	17.8x
7.0%	510	2.87%	21.6x
7.5%	560	3.37%	25.4x
8.0%	610	3.87%	29.2x

Execution – CDS

Long 5yr Japan CDS, 3yr forward	Return	Risk-Reward
Base Case: 300bp, in 3yr	4.7%	1.2x
Worst Case: 0bp in 3yr	-4.0%	-1.0x
Best Case: 600bps in 3yr	13.3%	3.3x

Long 5yr Japan CDS, 1.5yr forward	Return	Risk-Reward
Base Case: 300bp, in 3yr	6.0%	1.5x
Worst Case: 0bp in 3yr	-3.9%	-1.0x
Best Case: 600bps in 3yr	15.9%	4.0x

Long 5yr Japan CDS, 1yr forward	Return	Risk-Reward
Base Case: 300bp, in 3yr	7.3%	1.8x
Worst Case: 0bp in 3yr	-3.9%	-1.0x
Best Case: 600bps in 3yr	18.4%	4.6x