Global Financial Challenge: Post-Tsunami Era

Professor Tsang Shu-ki

Senior Research Fellow

Institute for Enterprise Development, School of Business, Hong Kong Baptist University

www.sktsang.com

September/October 2011

Outline

1. A Brief Review of the Financial Tsunami
2. Policy Responses
3. The Second Phrase of the Downwave
4. QE1, QE2, and QE3?
5. Fiscal and policy dilemma
6. Historical Lessons and Prospects

(1) A Brief Review of the Financial Tsunami

- **The financial tsunami was a consequence of long-term and deep-seated problems accumulated in advanced capitalist economies led by the U.S. These problems included:**
  1) **Over-spending (in investment and consumption) and**
  2) **the transfer of costs as debt to the rest of the world through international trade and financial mechanisms.**
- **As a result, these economies faced two crises:**
  1) **profit realization (past investment had to yield returns) and**
  2) **international repayment (the use of foreign money and debt for consumption and investment had to be repaid).**

(1) A Brief Review of the Financial Tsunami

- **If one looks at international economic history, one could observe long waves which had an internal length of 60 to 70 years (Tsang, 2003). Because of government intervention and other factors (such as demography and technology), the timeline might vary.**
- **The long wave phenomenon was first discovered by the Soviet economist and statistician Nikolai Kondratieff (康德拉季耶夫) in the 1920s.**
- **Kondratieff did not provide any in-depth analysis of the driving factors behind the long waves. Scholars subsequently have proposed different explanations.**
- **Four factors driving the long wave can be identified (Tsang, 2003):**

(1) A Brief Review of the Financial Tsunami

1) **Over-investment: In the upwave, optimistic expectations bring about massive investments. Because of the self-ordering effect in the capital goods sector, a reinforcing spiral is formed, leading to over-capacity.**

2) **Under-consumption: Income and wealth distribution tilts towards the capitalist class and against the middle and lower strata of the society and the rest of the world. Disparity dampens aggregate purchasing power, resulting in a "realisation crisis" for paper profits on the part of national and multi-national corporations.**

   There is no contradiction between the "under-consumption" thesis stated here and the trend of "over-spending" in advanced capitalist economies that has caused the financial tsunami. The exploitation of the lower classes in the less developed economies has been subsidizing their counterparts in the "first world".

(1) A Brief Review of the Financial Tsunami

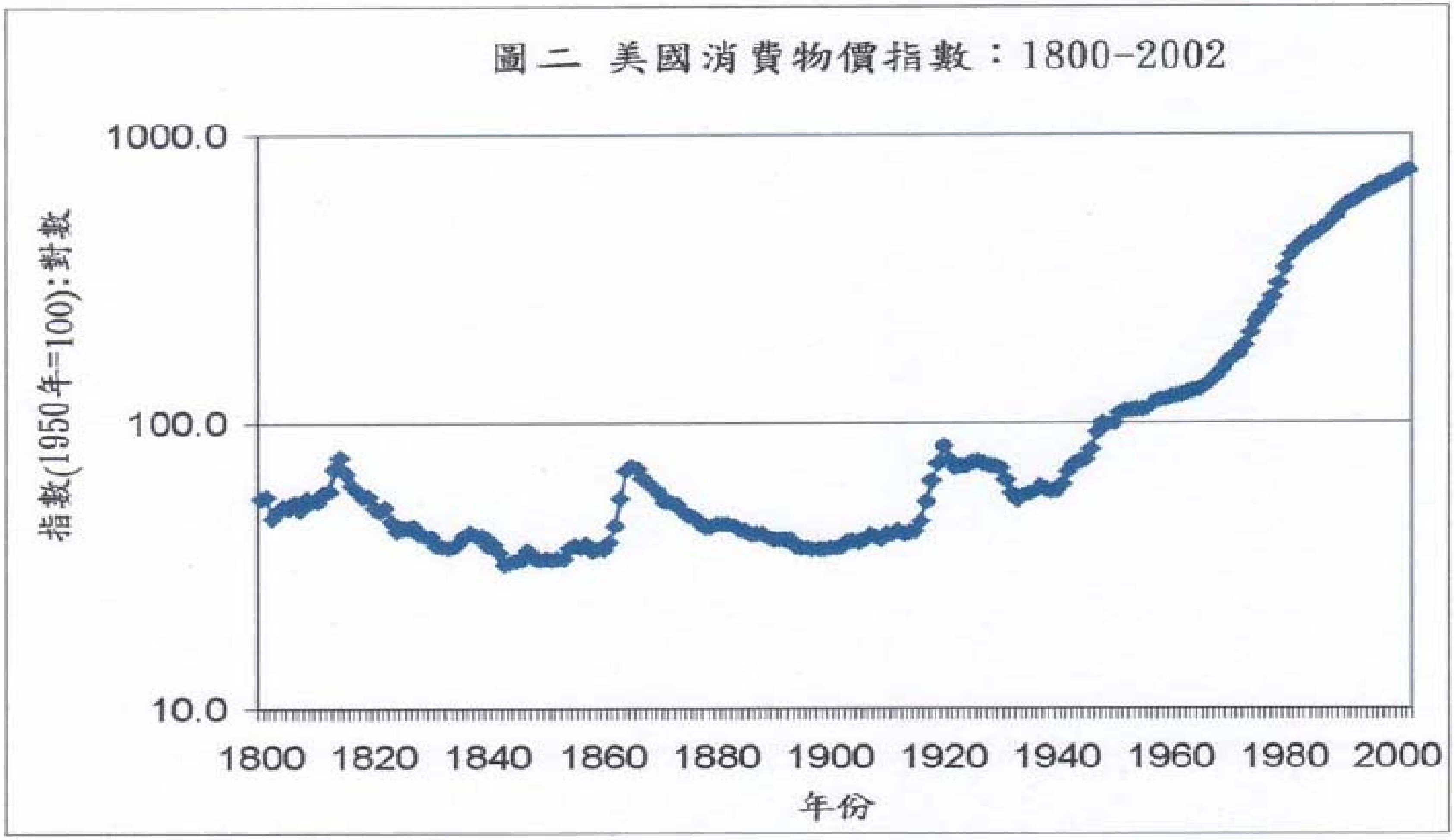
3) **Demographic cycles: Because of political or social factors (e.g. the end of a war), "baby boom" leads to rapid growth in population and eventually provides sufficient labour supply and market demand. But hedonism, materialism and other cultural changes follow; birth rates plunge; and the whole process is reversed.**

4) **Technological cycles: Investments pour into the "new" economic sector, which later turns outmoded. Anyway, parties of vested interests resist even "newer" technologies, forming a "technological stalemate". Production efficiency slips, resulting in a vicious supply-demand circle. However, technological break-through can also prolong the life of an upwave or delay the arrival of the downwave.**

(1) A Brief Review of the Financial Tsunami

Source: Robert Sahr, "Inflation conversion factors for dollars 1665-est.2013".

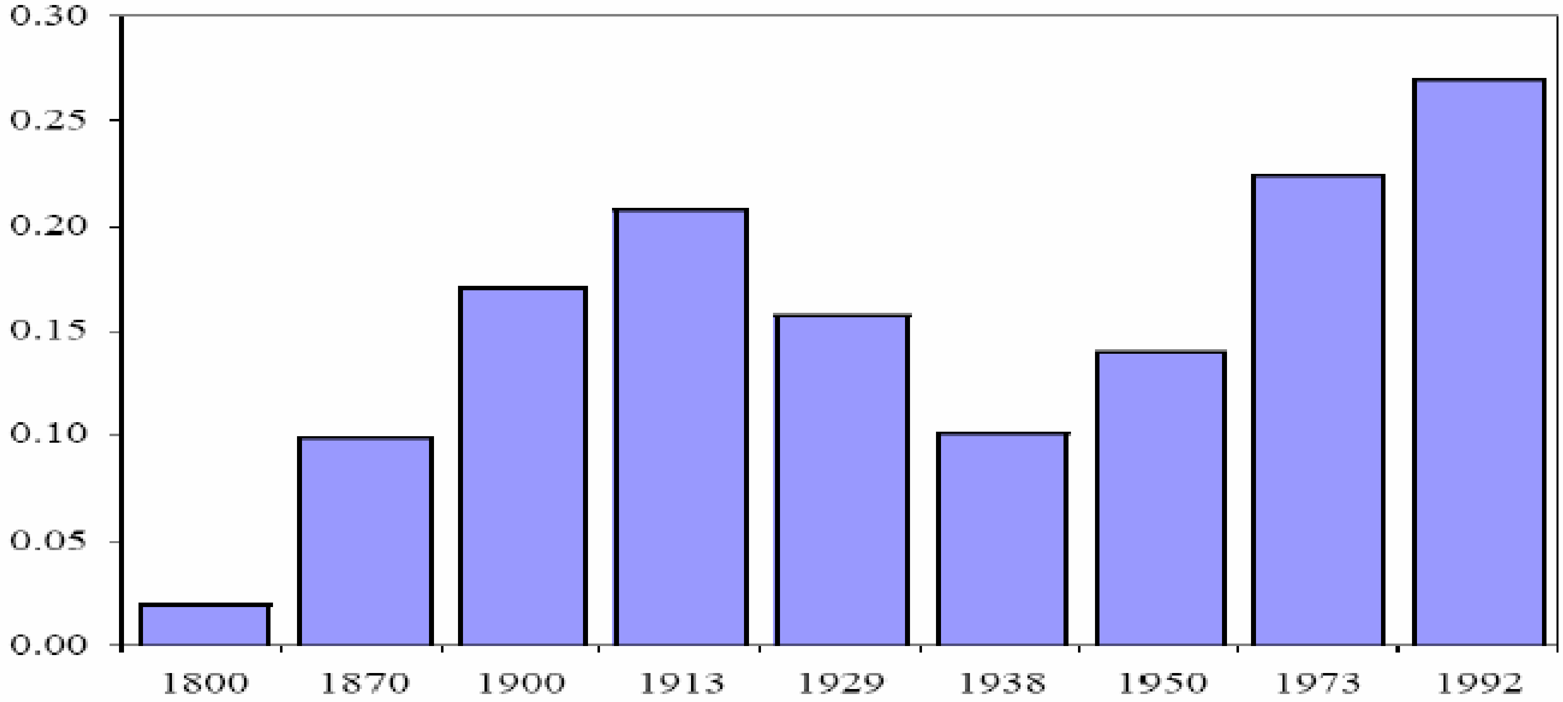
(1) A Brief Review of the Financial Tsunami



Source: Robert Sahr, “Inflation conversion factors for dollars 1665-est.2013”

Long waves in the past 200 years: World trade/world GDP

Figure 1
International Trade as a Percentage of GDP Since 1800



Notes: Exports plus imports divided by output.
Source: Estevadeordal, Frantz, and Taylor (2003).

Sources：Estevadeorda, Frantz and Taylor (2003) , see 曾澍基(2009)

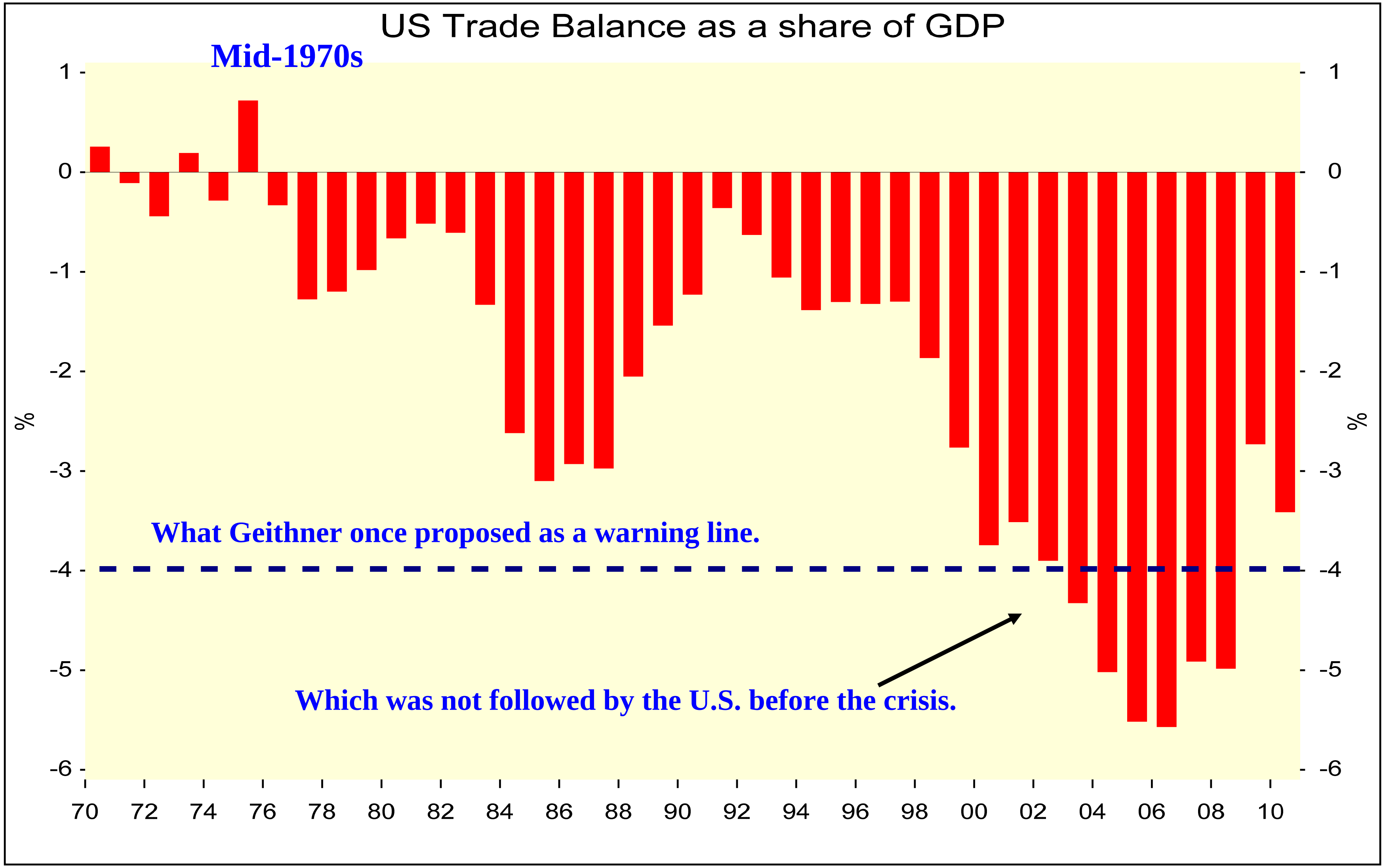
Long waves in the past 200 years：International investment/world GDP

Figure 2
International Investment as a Fraction of GDP Since 1870

Source: Obstfeld and Taylor (2003).

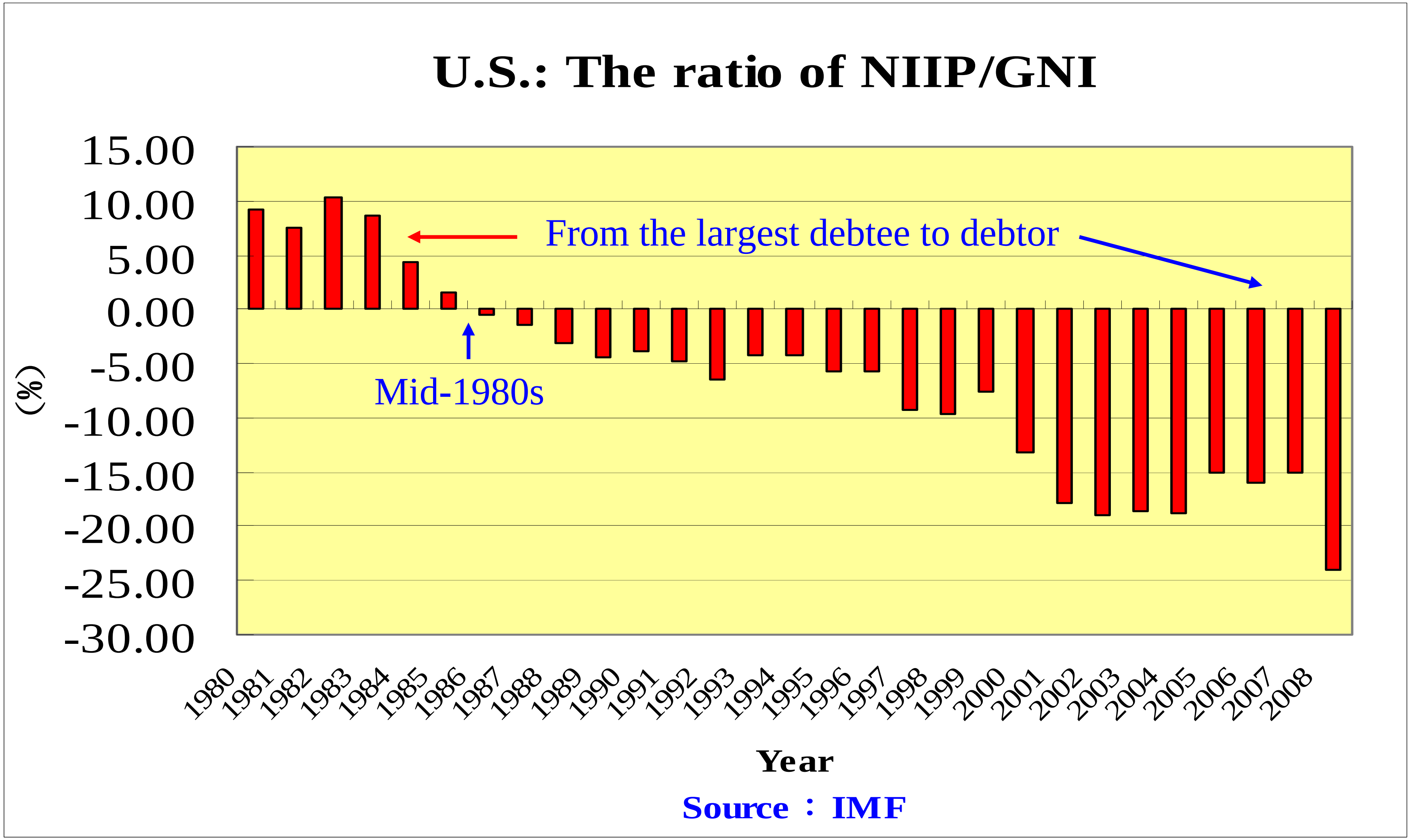
Sources：Taylor (2002) ; Obstfeld and Taylor (2003), see 曾澍基(2009)

(1) A Brief Review of the Financial Tsunami



Source: IMF

(1) A Brief Review of the Financial Tsunami



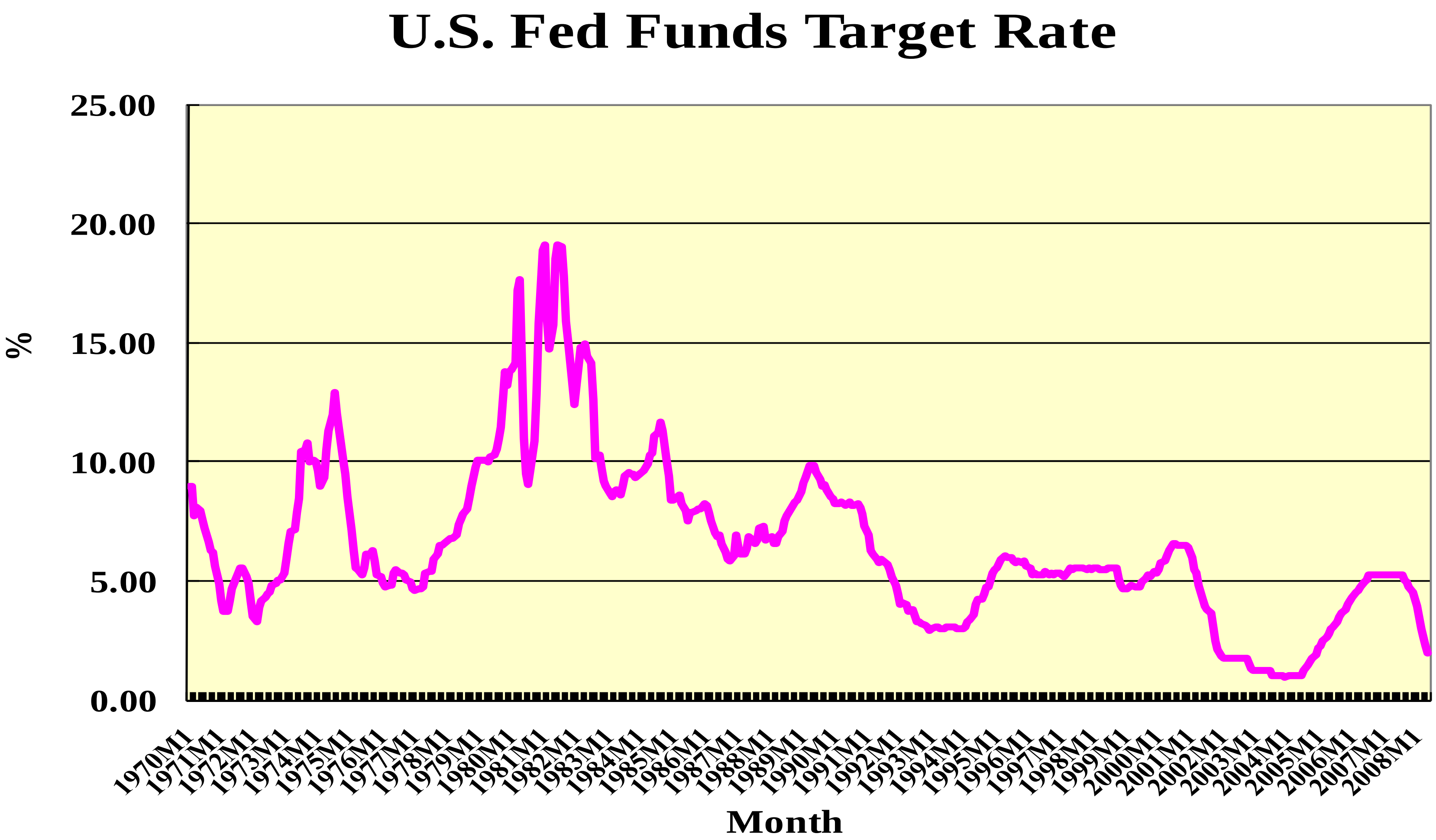
(1) A Brief Review of the Financial Tsunami

- **Given the imbalances, it was clear, what the world needed are the reduction of debt , the rebalancing of the triangular relations among consumption, investment and saving. The relative experience of Iceland (which defaulted) versus Ireland (which did not) has become an issue for debate among economists (Krugman, 2010; Bloomberg Businessweek, 2010)。**
- **Instead, the U.S. went on with the process of financial liberalization, which started when the Depression era Glass Steagall legislation was repealed in 1998. The Commodity Futures Modernization Act of 2000 was an unusual piece of deregulatory legislation, creating a new world of uniquely self-regulated financial instruments.**
- **Since the bursting of the IT bubble in 2000, the U.S. Fed under Alan Greenspan increased money supply and forced down interest rates. George W. Bush, the Republican president, obviously favoured Wall Street in his policies.**

(1) A Brief Review of the Financial Tsunami

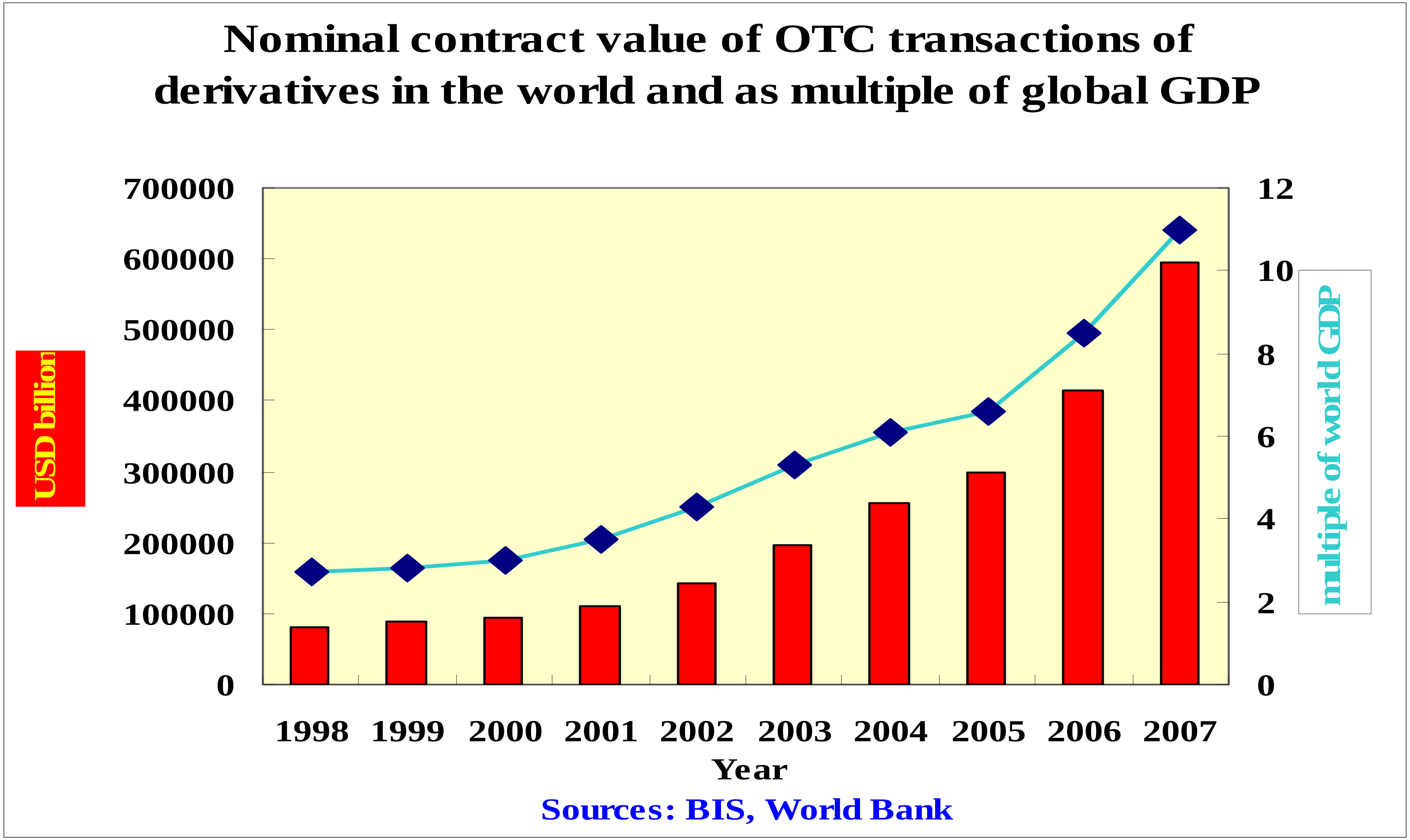
- **In 2004, the SEC issued the Bear Stearns exemption, which changed the net capitalization rule from 12 to 1 leverage to essentially unlimited for Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers and Bear Stearns. After the tsunami, none of these companies now exist in the same structure as before the rule change.**
- **Because of low interest rates and financial liberalization, plus the IT revolution, derivatives became a way for banking and non-banking institution to earn profits. Often the products were highly leveraged and not transparent.**
- **It also gave birth to real estate bubbles and the sub-prime mortgage boom.**
- **Hence the amount of debt did not decline. On the contrary, it rose quickly, sowing the seeds for the eventual bust.**

(1) A Brief Review of the Financial Tsunami



Source： IMF

(1) A Brief Review of the Financial Tsunami



(1) A Brief Review of the Financial Tsunami

- **Because of free market ideology, as well as limited insight, many central banks had not implemented effective supervision on the proliferation of financial products and derivatives. The rise of highly leveraged debt triggered the financial tsunami.**
- **It was the adverse consequence of the vicious cycle of lax macroeconomic policies and undisciplined micro pursuit of profits.**
- **The tsunami has turned out to be the most serious economic crisis since the Great Depression of the 1930s. The fundamental dynamic has been the long wave of capitalism. The procrastination of governments in dealing with deep-seated contradictions and carrying out structural reforms has aggravated the seriousness of the problems.**

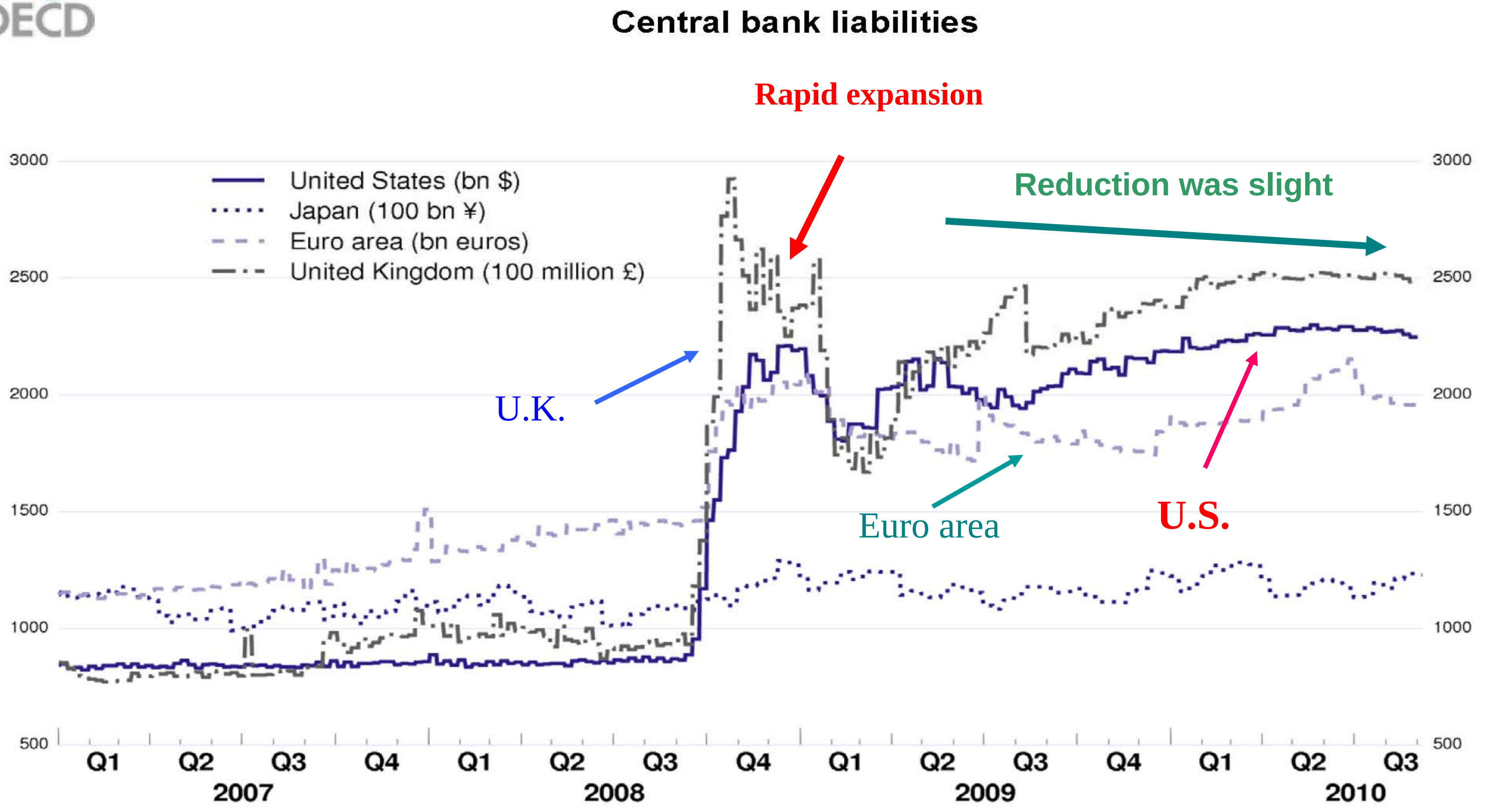
(2) Policy Responses

- **Confronted by the financial tsunami, the United States and Europe and other developed economies took an even bigger, unprecedented step towards loose monetary and fiscal policies, coupled with direct and indirect government intervention to rescue financial institutions and large enterprises and to relieve the pains of mortgagors and consumers.**
- **Under the first round of monetary quantitative easing (QE1), the balance sheets of the United States, Europe, and the U.K. rapidly inflated, interest rates fell to near zero levels. The short-term effect was that the first wave of the financial tsunami retreated, providing a breathing space. Unwittingly, the huge liquidity generated even caused asset bubbles in some developing countries/ regions.**

(2) Policy Responses

- The following chart is from Interim Projections of the OECD Economic Outlook in September 2010 : http://www.oecd.org/dataoecd/22/10/45971907.pdf.
- Please note that the monetary units vary, one should look at the national / regional historical trends.
- I use the average exchange rate of each unit. After harmonizing, I find that among these four economies, the U.S. Federal Reserve released more than 80% of the added funds under QE1, showing the leading position of the U.S. financial system in the world.

Central bank balance sheets remain enlarged

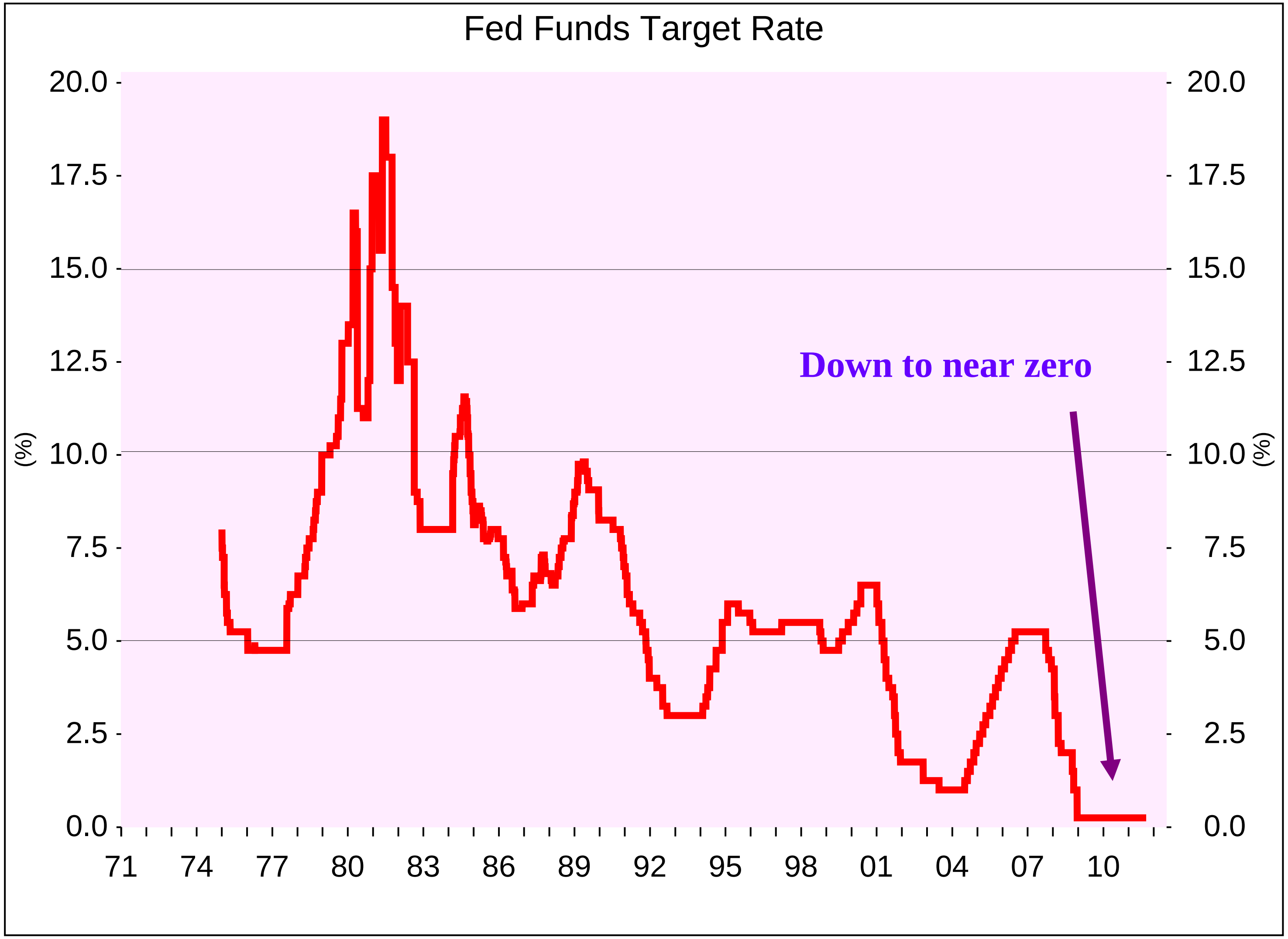


Source: Federal Reserve; Bank of Japan; European Central Bank; and Bank of England.

Handout page 22

QE1 in the U.S., Euro area, UK and Japan

(2) Policy Responses: Fed Funds Target Rate



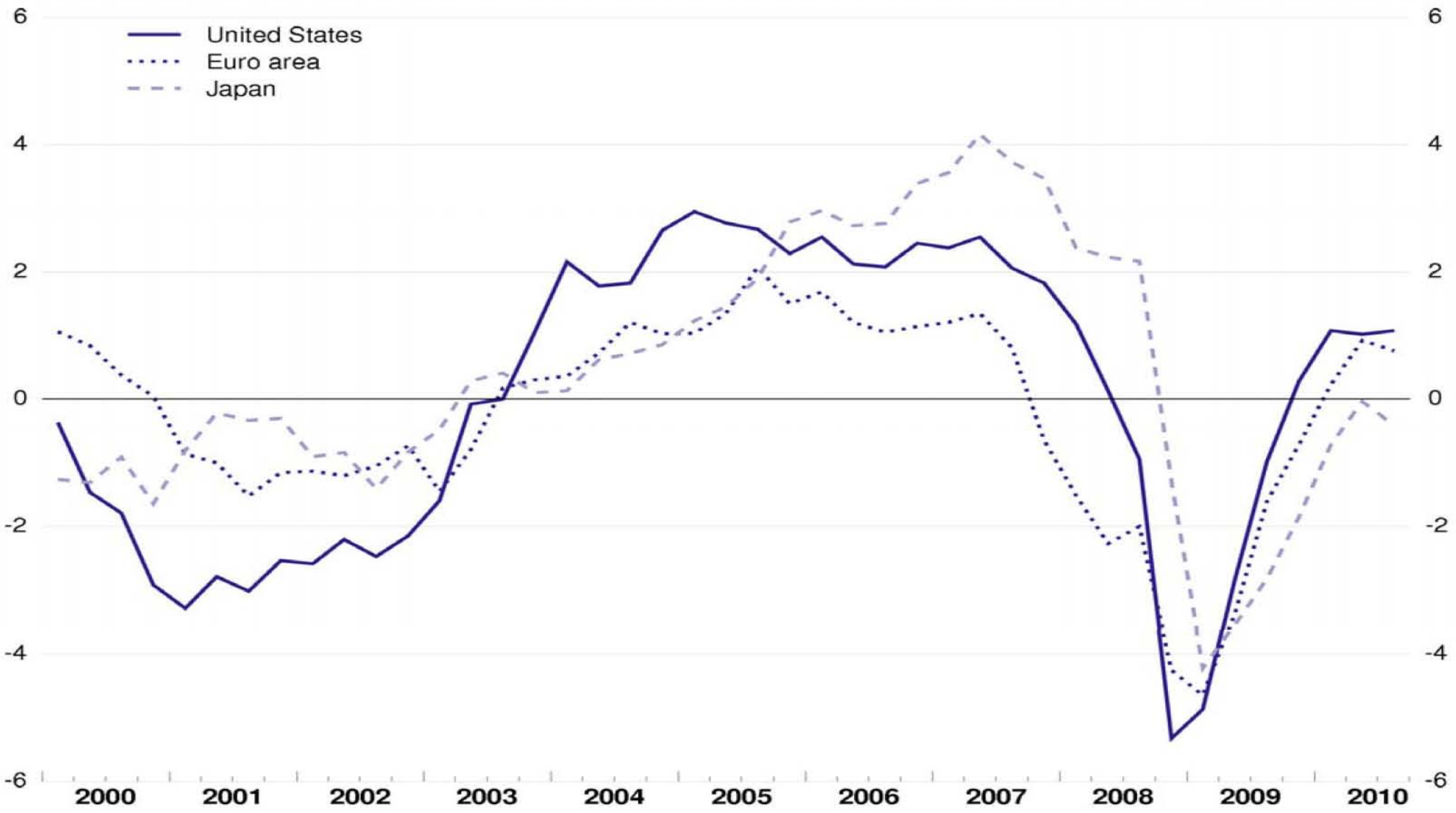
(2) Policy Responses: Monetary

The degree of monetary easing		
Country	Year/month	CB total assets/GDP
U.S.	2007 year end	6.4%
	2010/October	15.8%
U.K	2007 year end	7.3%
	2010/October	16.7%
Japan	2007 year end	20.9%
	2010/October	24.5%

Source: Harding (2010).

Financial conditions have stabilised

OECD Financial Conditions Index[1]



1. A unit decline in the index implies a tightening in financial conditions sufficient to produce an average reduction in the level of GDP by 1/2 to 1% after four to six quarters. See details in Guichard et al. (2009).

Source: Datastream; and OECD calculations.

Handout page 15

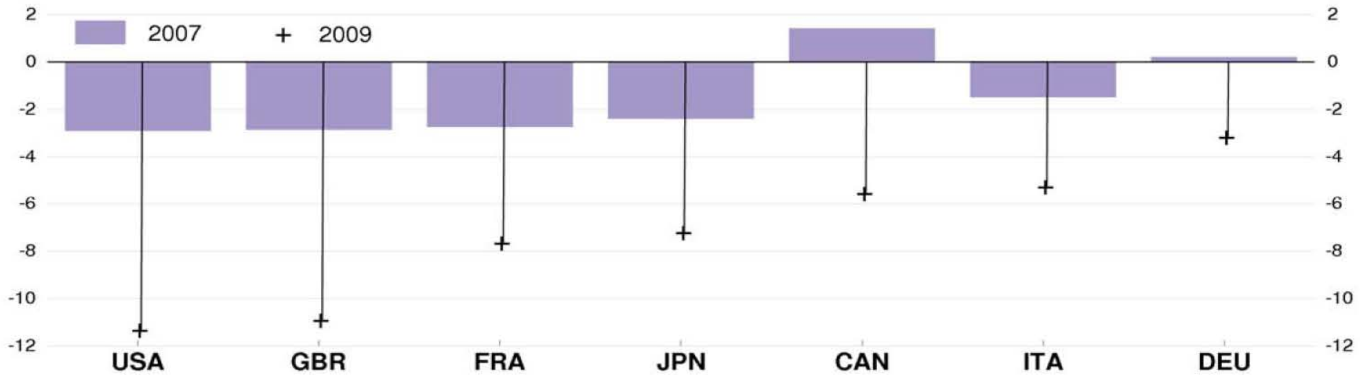
The tsunami temporarily retreated after QE1

(2) Policy Responses

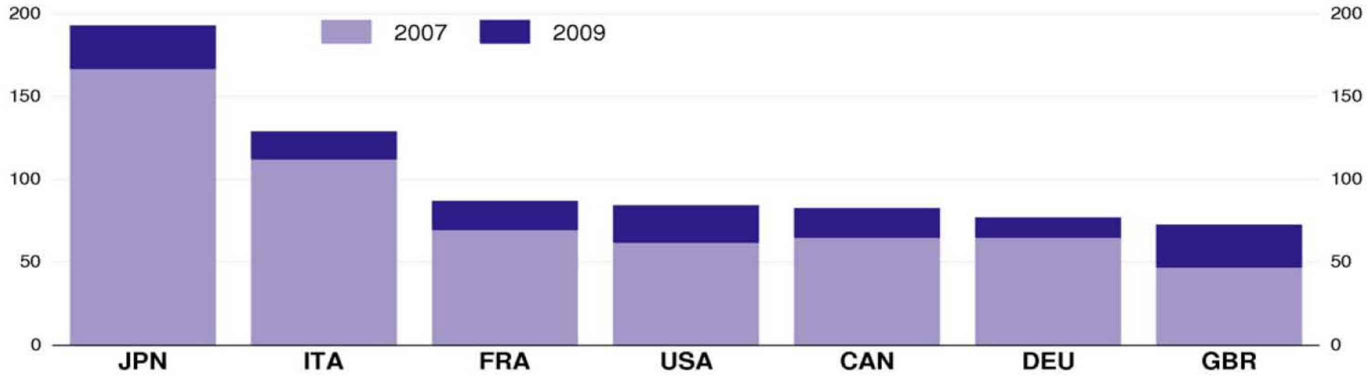
- **As for fiscal policy, governments resorted to capital injection, semi-public ownership, tax breaks, subsidies and public expenditure, which supported monetary easing so that the real economy would not fall into a deep recession.**
- **The consequence was that fiscal deficits rose sharply. In the EU, fiscal-monetary crises emerged from five non-core countries - Portugal, Ireland, Italy, Greece and Spain (PIIGS).**
- **These five countries are subject to restrictions of the euro area, there is no independent monetary policy. Hence they could only use fiscal deficits to ward off the recession and issued bonds to finance them. Unlike Japan, most holders were foreign financial institutions and investors. Any decline in confidence could lead to shocks.**

Public finances have weakened significantly

General government balance, in per cent of GDP



Gross government debt, in per cent of GDP



Note: Data for 2009 are estimates for Japan.

Source: OECD, System of National Accounts database; and OECD Economic Outlook 87 database.

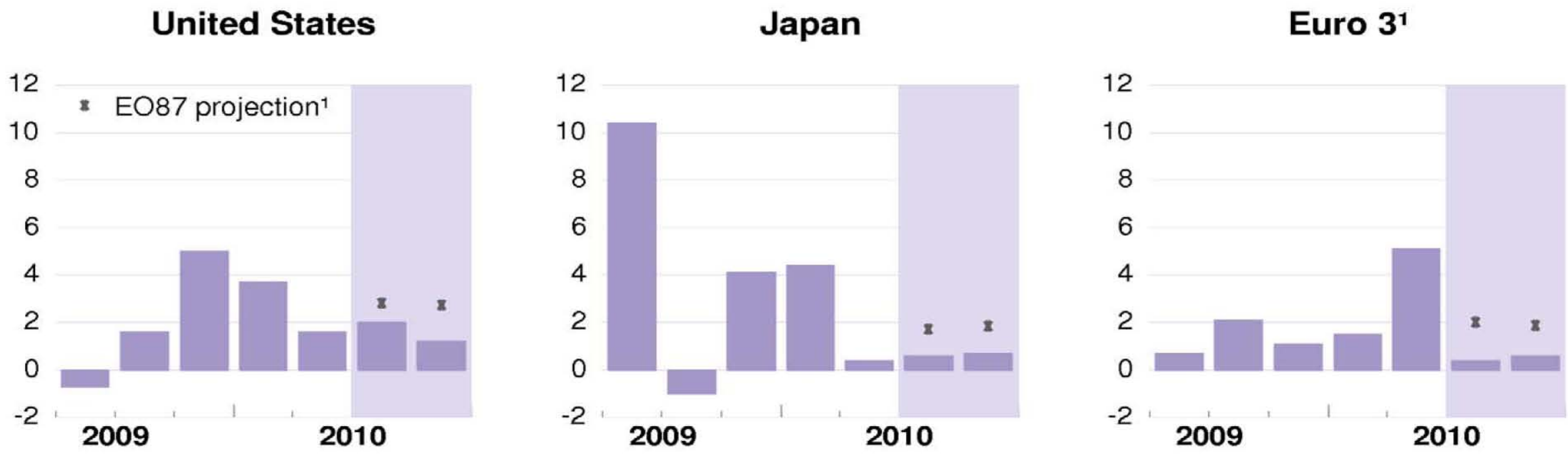
Handout page 23

(3) The Second Phrase of the Downwave

- **In any case, despite the unparalleled governmental efforts, the expected recovery has lacked momentum in developed economies, as unemployment remains high. It appears in the first phrase of the downwave, monetary, fiscal and other rescue measures have failed to genuinely reverse the recessionary forces.**
- **The reason is that money channeled to the banks, large enterprises and subsidies on consumers as well as incentives of near-zero interest rates etc. have not significantly enhanced effective demand, because they are skeptical of the long-term effects of these short-term policy maneuvers. They are reluctant to spend the new money, but rather choose to prepare for something worse in the future.**
- **Moreover, even as QE1 reduced short-term interest rates, long-term interest rates pressure did not subside. U.S. yield curve in the past two years actually became steeper, showing that the lack of market confidence, especially concerning the fiscal situation.**

The pace of recovery could be slower than anticipated

Annualised quarter-on-quarter real GDP growth, in per cent



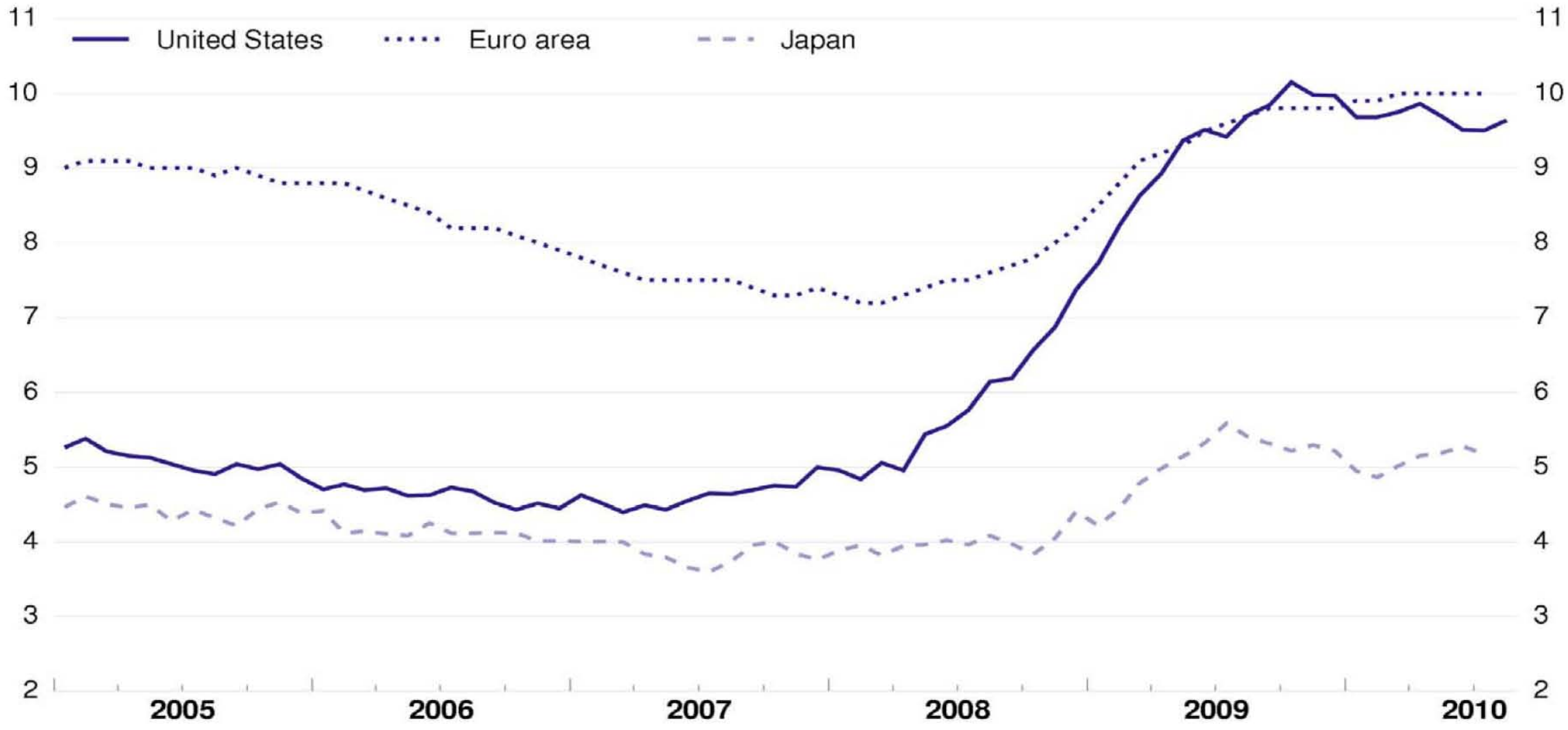
1. Refers to OECD Economic Outlook No. 87 projections (published in May).
2. Weighted average average of the three largest countries in the euro area (Germany, France and Italy).

Source: OECD, System of National Accounts database; Datastream; Markit Economics Limited; OECD Economic Outlook 87 database; and OECD Indicator Model forecasts.

Handout page 5

Unemployment rates appear to have peaked, albeit at high levels

In per cent of the labour force



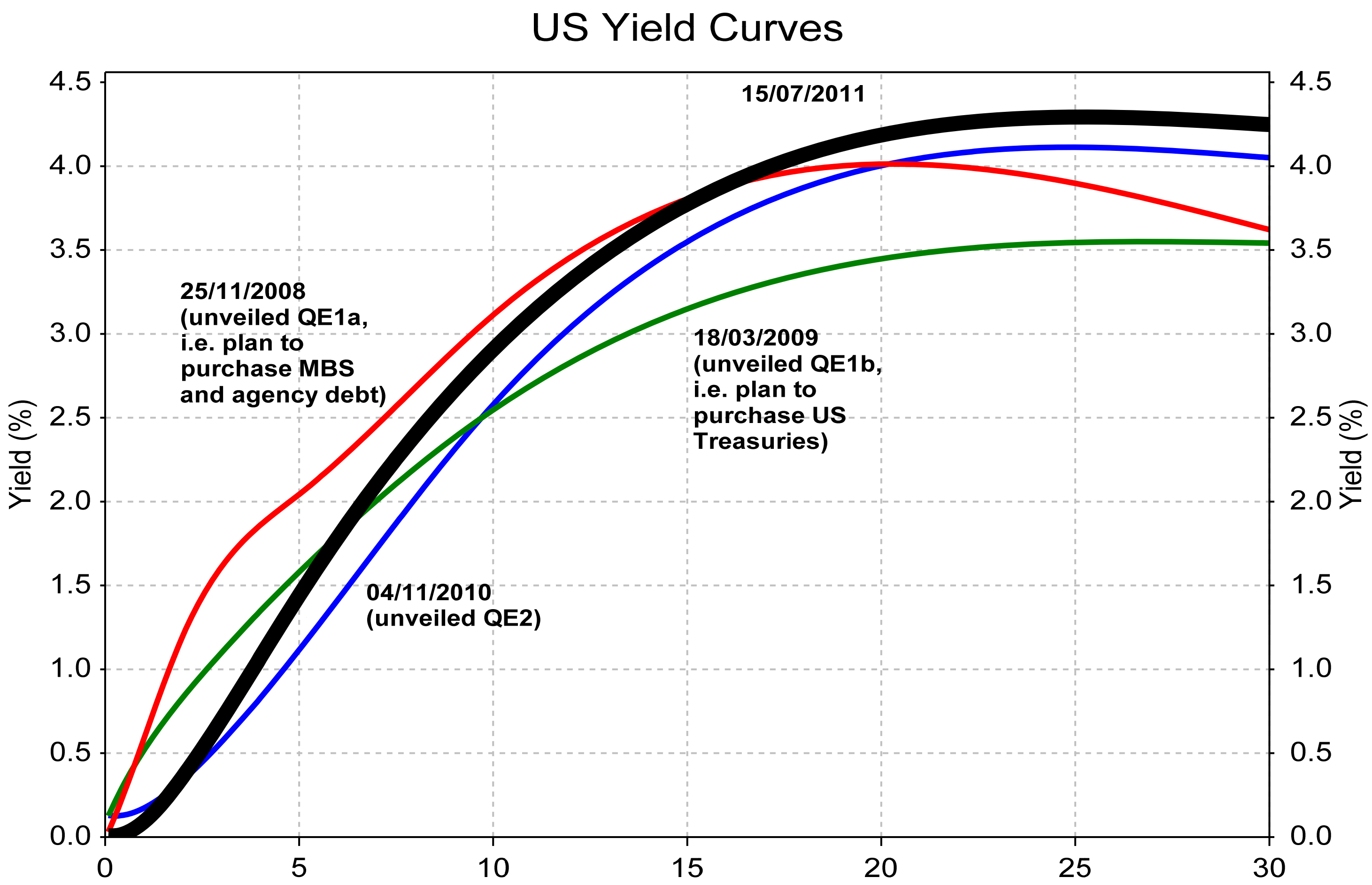
Source: OECD, Main Economic Indicators database.

Handout page 11

(3) The Second Phrase of the Downwave

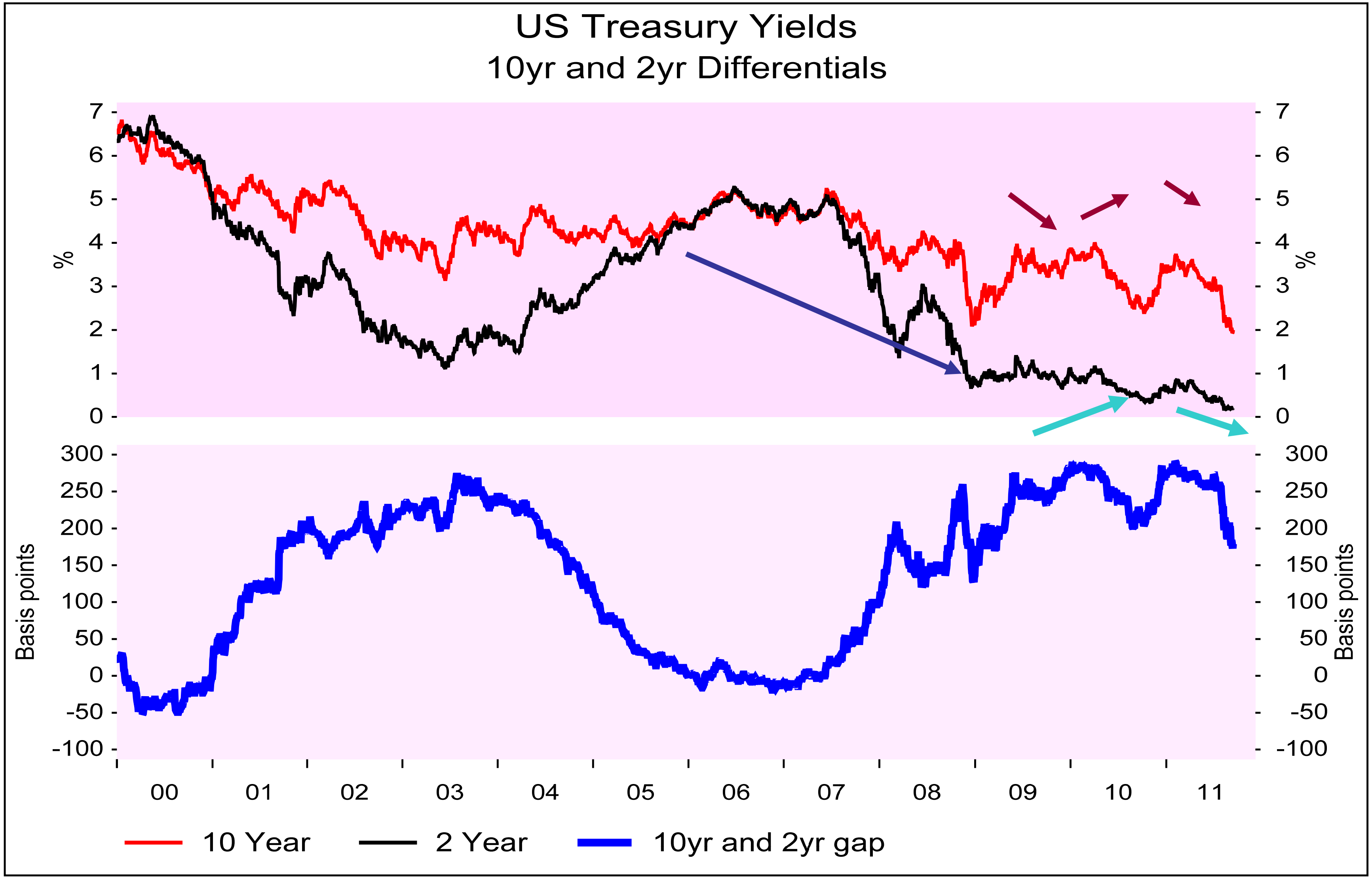
- **In response, instead of "exit" from QE1, the U.S. Federal Reserve launched a second round of quantitative easing (QE2) in November 2010.**
- **Compared to $ 1.725 trillion under QE1, 600 billion dollars of new funds, plus the maturity of loans to Freddie and Fannie and mortgage-backed securities, bonds, to the tune $250 to 300 billions, would be employed to purchase Treasuries, mainly five or six-year bonds.**
- **The goal of QE2 was ostensibly to flatten the yield curve. Would it be successful? Many economists were skeptical. There was a focus on the future of more long-term debts. QE3 or even QE4 was considered possible.**

(4) QE1, QE2, and QE3?



The steepening of the yield after QE1 and QE2

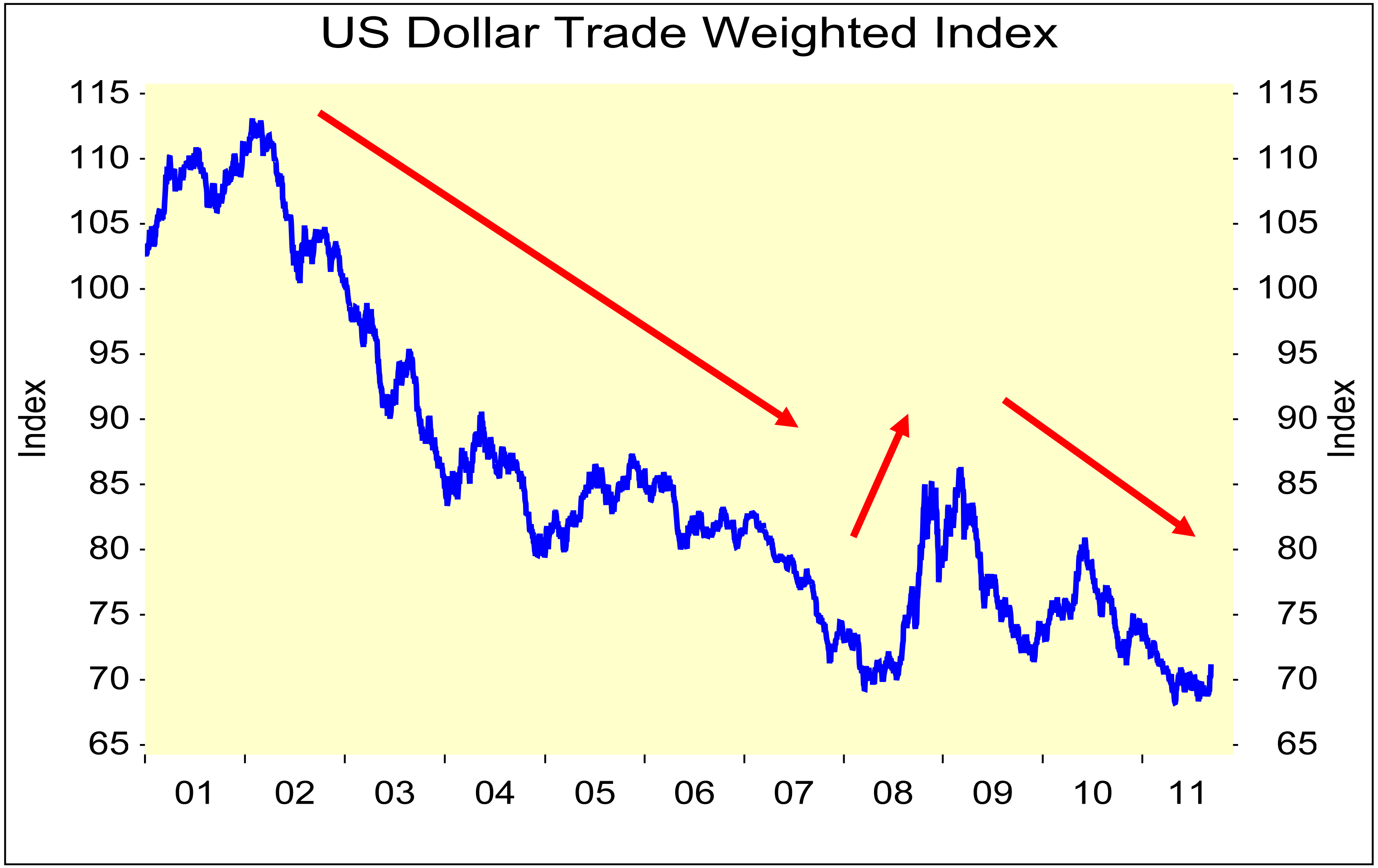
(4) QE1, QE2, and QE3?



(4) QE1, QE2, and QE3?

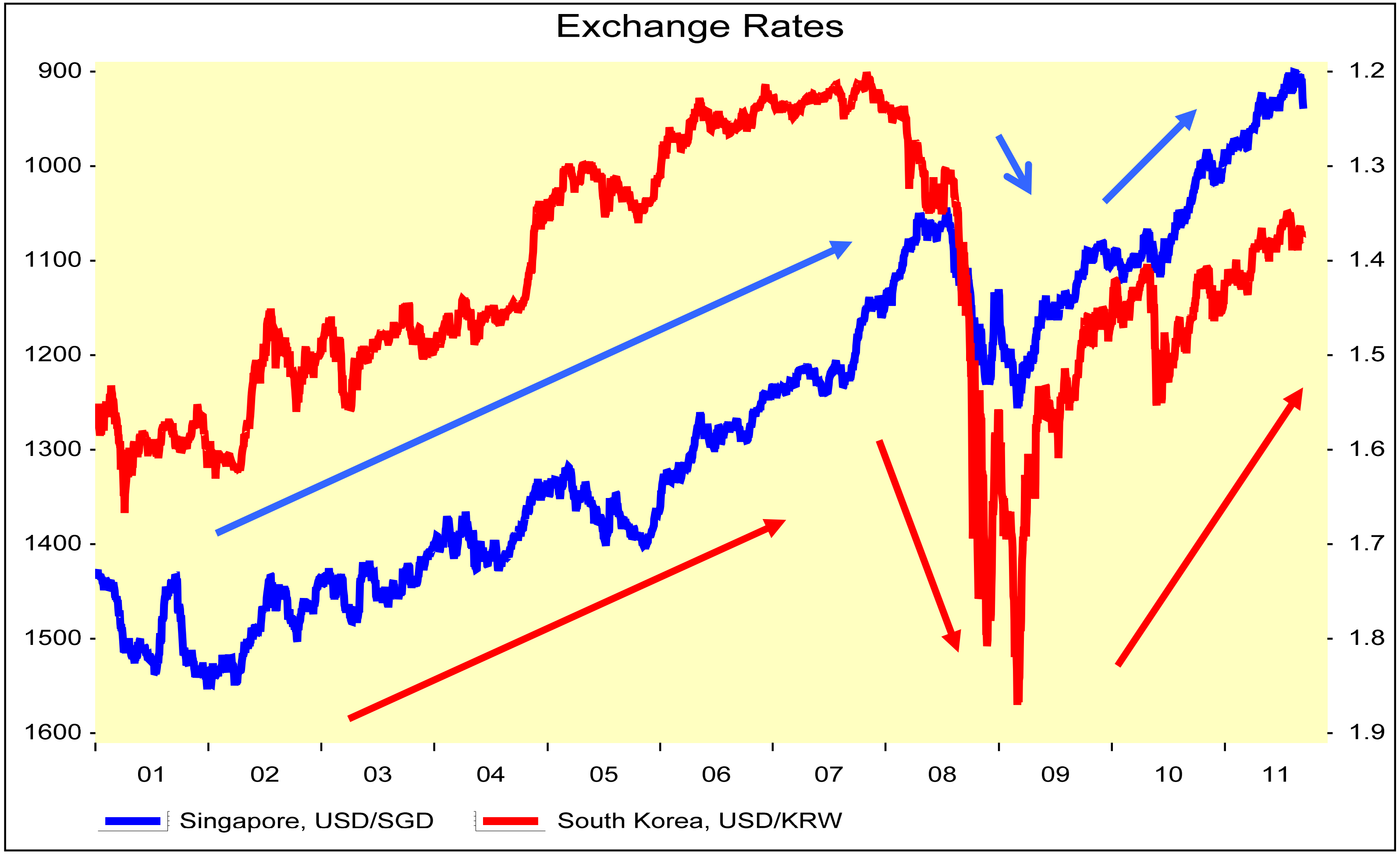
- **Theoretically, if QE were successful in flattening the entire yield curve, businesses and consumers would be willing to spend more money in the short term instead of putting it aside for an uncertain future. Effective demand would increase, enhancing real economic growth.**
- **The problem is that because of regional imbalances in the world economy under QE1, the internal effects within the U.S. and Europe were significantly reduced. Instead, a huge flow of capital, most destined to emerging economies with better prospects (such as BRIC and ASEAN), alleviated the adverse impact of the financial tsunami on them.**
- **Moreover, it has caused unexpected asset bubbles plus unpalatable consequences on consumer price inflation. Some of the emerging economies have had to take "flood prevention" measures, including interest rate increases and tightening of capital controls.**

(4) QE1, QE2, and QE3?



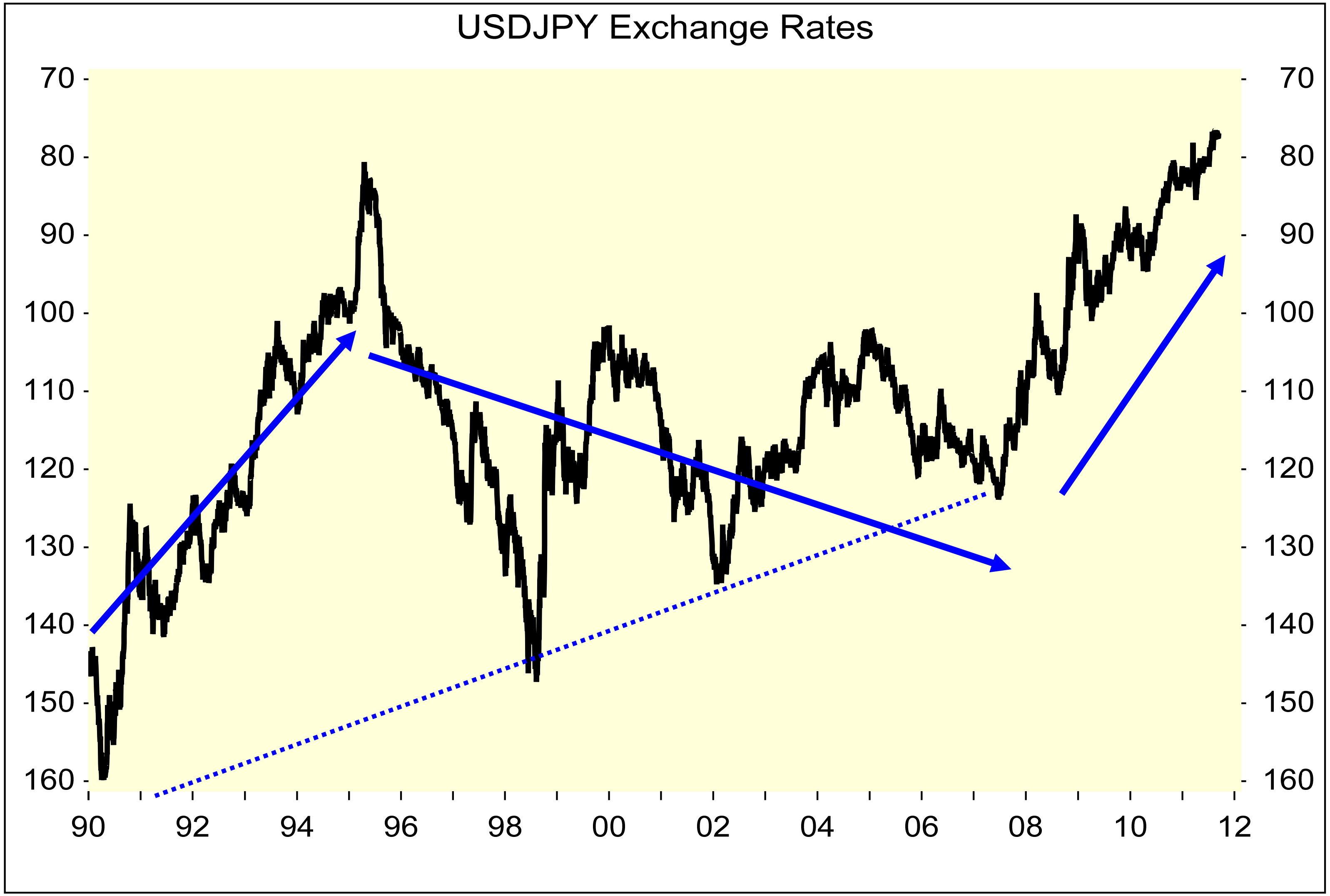
U.S. dollar rose soon after the tsunami, because the crisis resulted in a lack of the dollar in international markets, and other countries had to sell their currencies to get it. This reflected the dollar's dominant position. But with the historical accumulation of unfavorable factors, coupled with QE1 and QE2, the consequence would be the long-term decline of the dollar.

(4) QE1, QE2, and QE3?



The upward pressure on USD/SGD and USD/KRW

(4) QE1, QE2, and QE3?



Upward pressure on Japanese Yen

(5) Fiscal and policy dilemma

- **Regarding fiscal policy, Japan has been in deep mud for a long time, and Europe is bothered by the crises in PIIGS. The situation in the U.S. was not too bad before the tsunami, but has deteriorated (see the table on the next slide).**
- **Theoretically, facing a "liquidity trap", where more money does not create effective demand, fiscal expansion would be an alternative, as argued by some Keynesians like Paul Krugman (2011) and McKinley and Cozzi (2011) .**
- **However, the stalemate in U.S. politics, as testified by the recent quarrels over the national debt ceiling, shows how difficult it is for Obama to implement any New Deal type of fiscal stimulus a là Roosevelt after the Great Depression of the 1930s.**

(5) Fiscal and policy dilemma

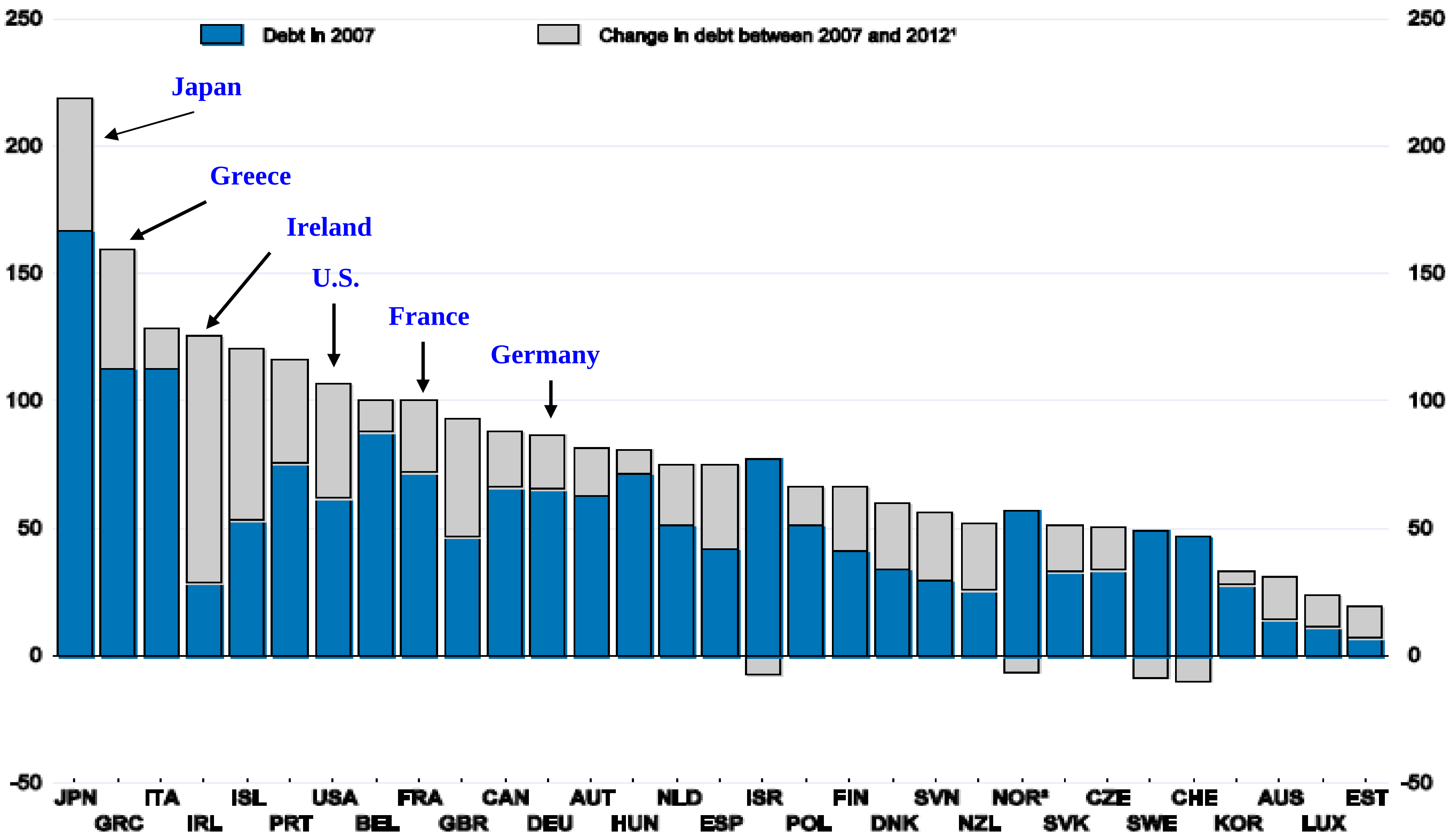
Table A8. Major Advanced Economies: General Government Fiscal Balances and Debt[1]
(Percent of GDP unless noted otherwise)

	Average 1995–2004	2005	2006	2007	2008	2009	2010	Projections 2011	2012	2016
Major Advanced Economies										
Net Lending/Borrowing	. . .	–3.4	–2.3	–2.1	–4.4	–9.8	–8.8	–8.5	–6.3	–4.4
Output Gap[2]	–0.1	–0.2	0.4	0.6	–0.9	–5.5	–4.0	–3.1	–2.2	–0.2
Structural Balance[2]	. . .	–2.9	–2.4	–2.2	–3.7	–5.8	–6.4	–6.5	–4.9	–4.1
United States										
Net Lending/Borrowing	. . .	–3.2	–2.0	–2.7	–6.5	–12.7	–10.6	–10.8	–7.5	–6.0
Output Gap[2]	0.1	0.0	0.3	0.0	–1.8	–6.0	–4.8	–3.7	–2.7	–0.4
Structural Balance[2]	. . .	–2.3	–2.0	–2.3	–4.7	–6.8	–7.5	–8.1	–5.7	–5.3
Net Debt	43.2	42.7	41.9	42.6	48.4	59.9	64.8	72.4	76.7	85.7
Gross Debt	62.3	61.7	61.1	62.2	71.2	84.6	91.6	99.5	102.9	111.9
Euro Area[3]										
Net Lending/Borrowing	–2.5	–2.5	–1.3	–0.6	–2.0	–6.3	–6.1	–4.4	–3.6	–1.9
Output Gap[2]	–0.5	–0.4	1.0	2.1	1.1	–3.5	–2.8	–2.3	–1.7	0.0
Structural Balance[2]	–2.7	–2.8	–2.3	–2.1	–2.7	–4.3	–4.1	–3.2	–2.7	–1.7
Net Debt	54.7	54.7	53.1	50.7	52.9	61.0	64.4	66.9	68.2	68.1
Gross Debt	70.7	70.0	68.5	66.2	69.8	79.3	85.0	87.3	88.3	86.3
Germany[4]										
Net Lending/Borrowing	–3.2	–3.4	–1.6	0.3	0.1	–3.0	–3.3	–2.3	–1.5	0.0
Output Gap[2]	–0.6	–1.3	0.9	2.4	2.0	–3.7	–1.6	–0.5	–0.1	0.2
Structural Balance[2,5]	–2.4	–2.6	–2.2	–0.9	–0.7	–1.0	–2.2	–2.1	–1.5	–0.1
Net Debt	43.5	53.1	52.7	50.1	49.7	55.9	53.8	54.7	54.7	52.6
Gross Debt	60.4	68.0	67.6	64.9	66.3	73.5	80.0	80.1	79.4	71.9

Source：IMF World Economic Outlook, April 2011

Government debt continues to accumulate apace

In per cent of GDP



1. Includes cumulated deficit for 2008-12, debt-increasing equity participations in companies and the impact of GDP growth.

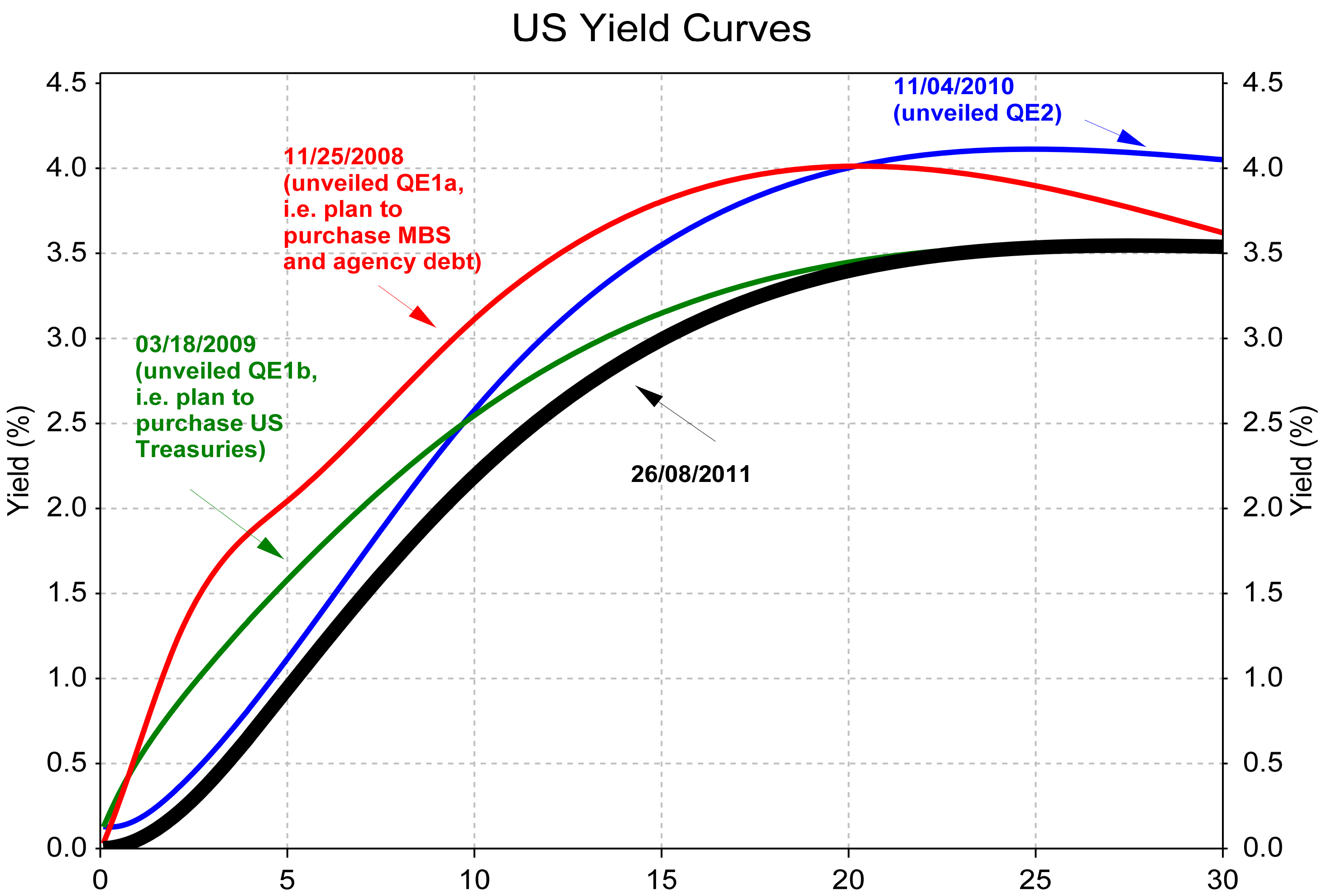
2. Cumulated deficits correspond to mainland only.

Source: OECD Economic Outlook 89 database.

(5) Fiscal and policy dilemma

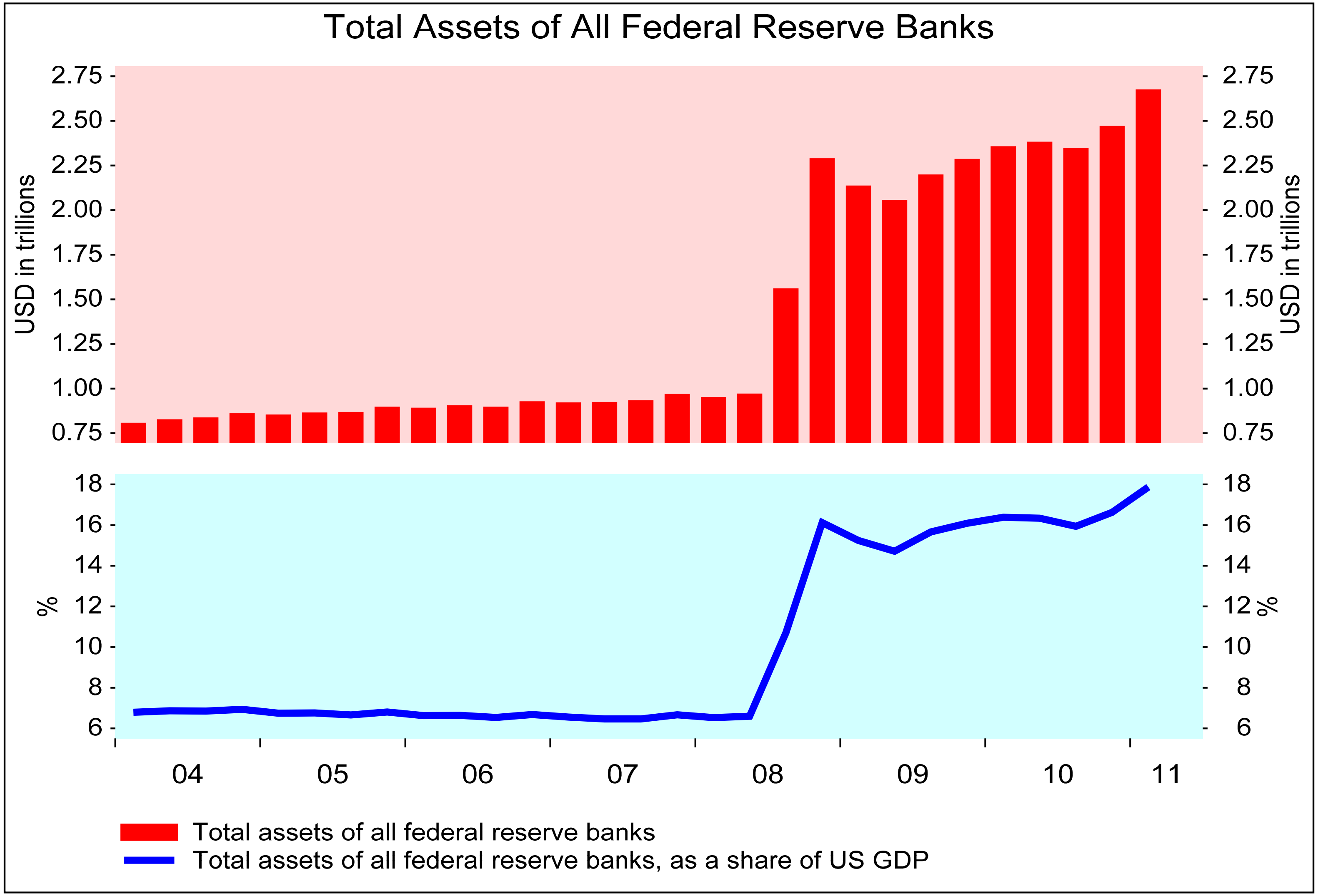
- **The recent downgrade of the U.S.'s treasuries rating by S&P's only aggravates the dilemma of the Obama Administration.**
- **QE3 seems to be on hold, although the Fed has said that near-zero interest rate would stay until mid-2013, indicating a possible shift from quantitative to price targeting.**
- **How would the Fed Funds target rate affect the whole yield curve except by the purchase of longer-term treasuries by the Fed? Would new funds be employed? Bernanke's recent Jackson Hole speech did not give much clue.**
- **Anyway, the U.S. yield curve has flattened, perhaps because of the fear of a double-dip recession.**

(5) Fiscal and policy dilemma

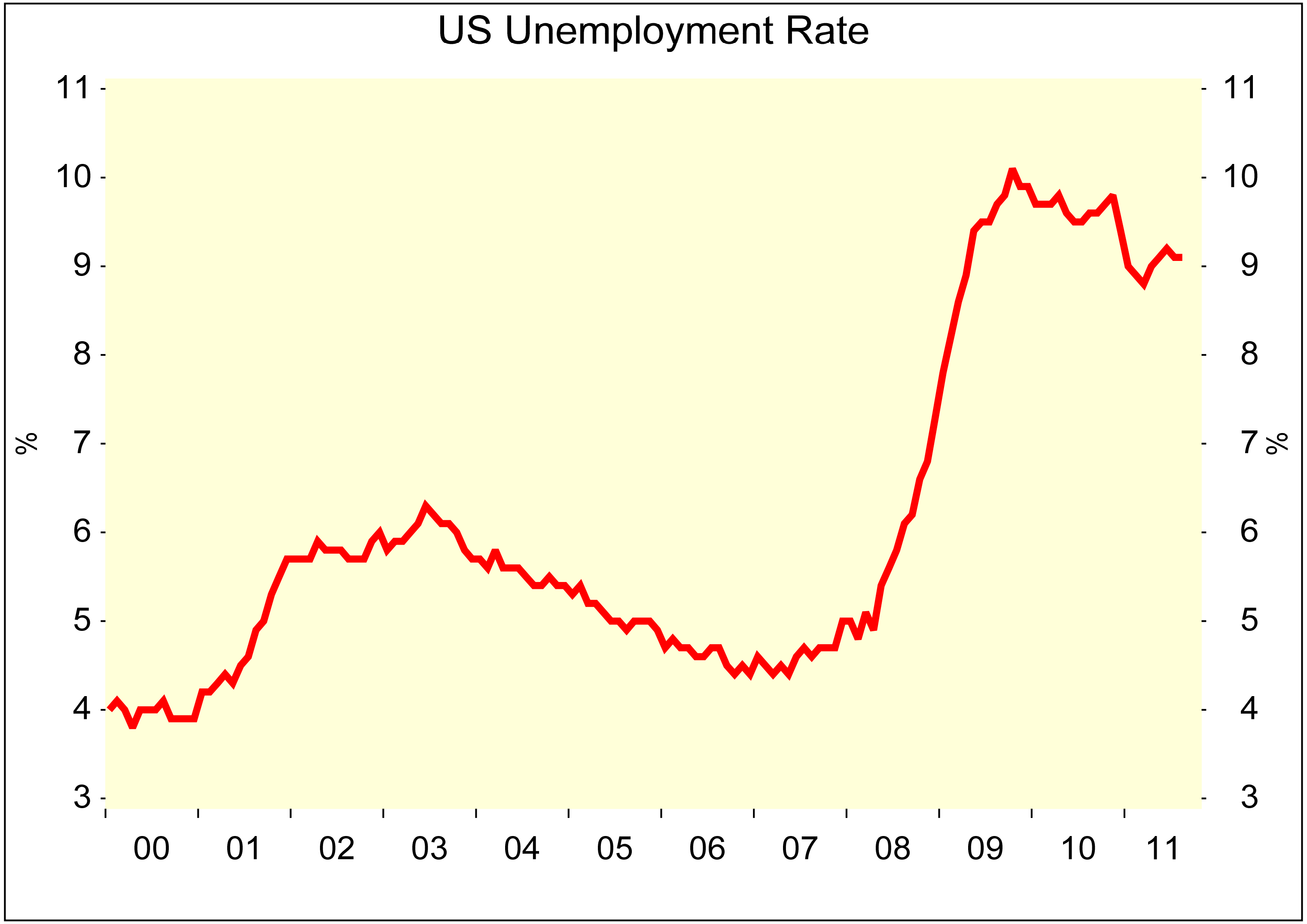


The steepening of the yield curve until the recent fear of double-dip …

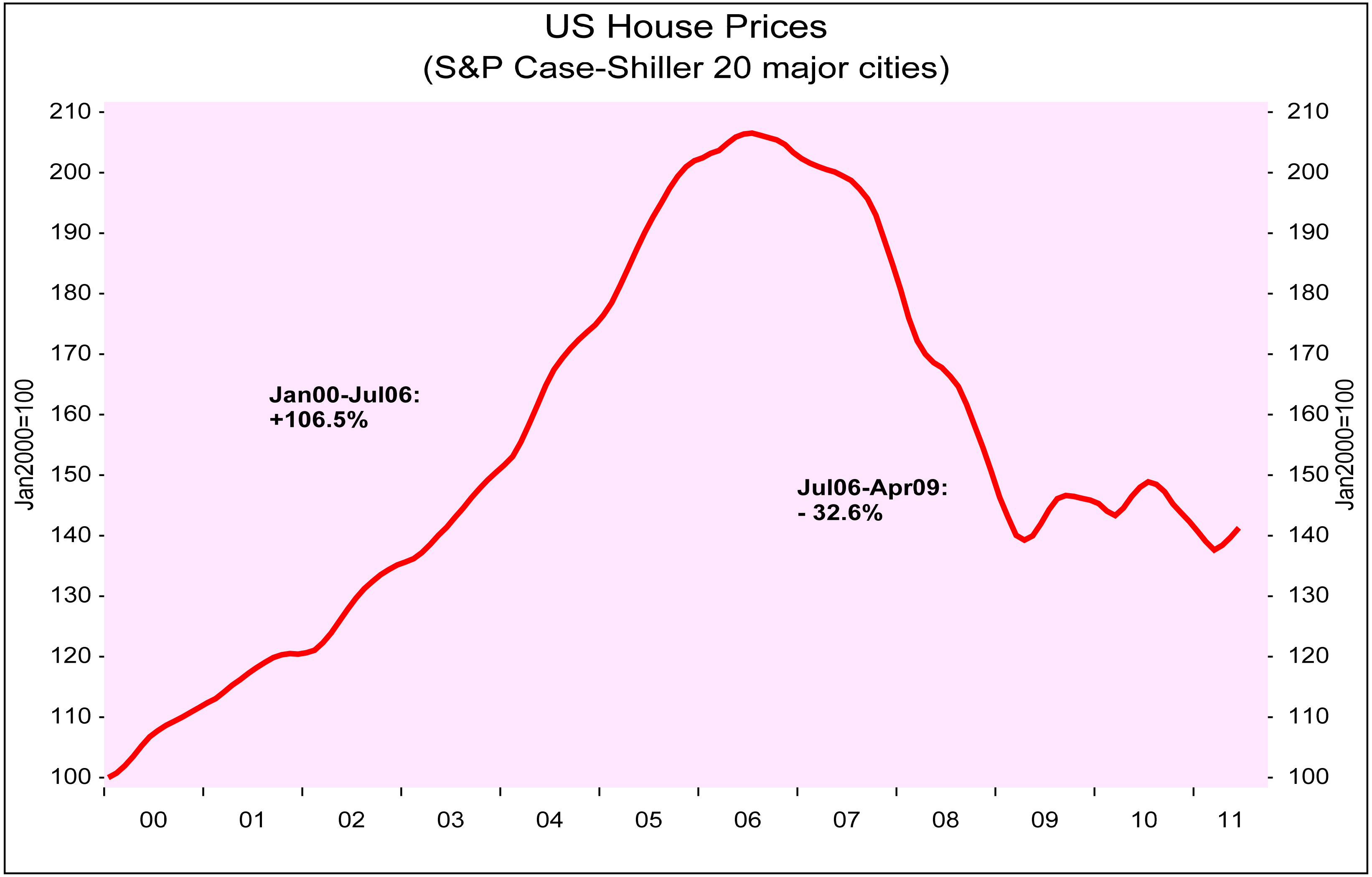
(5) Fiscal and policy dilemma



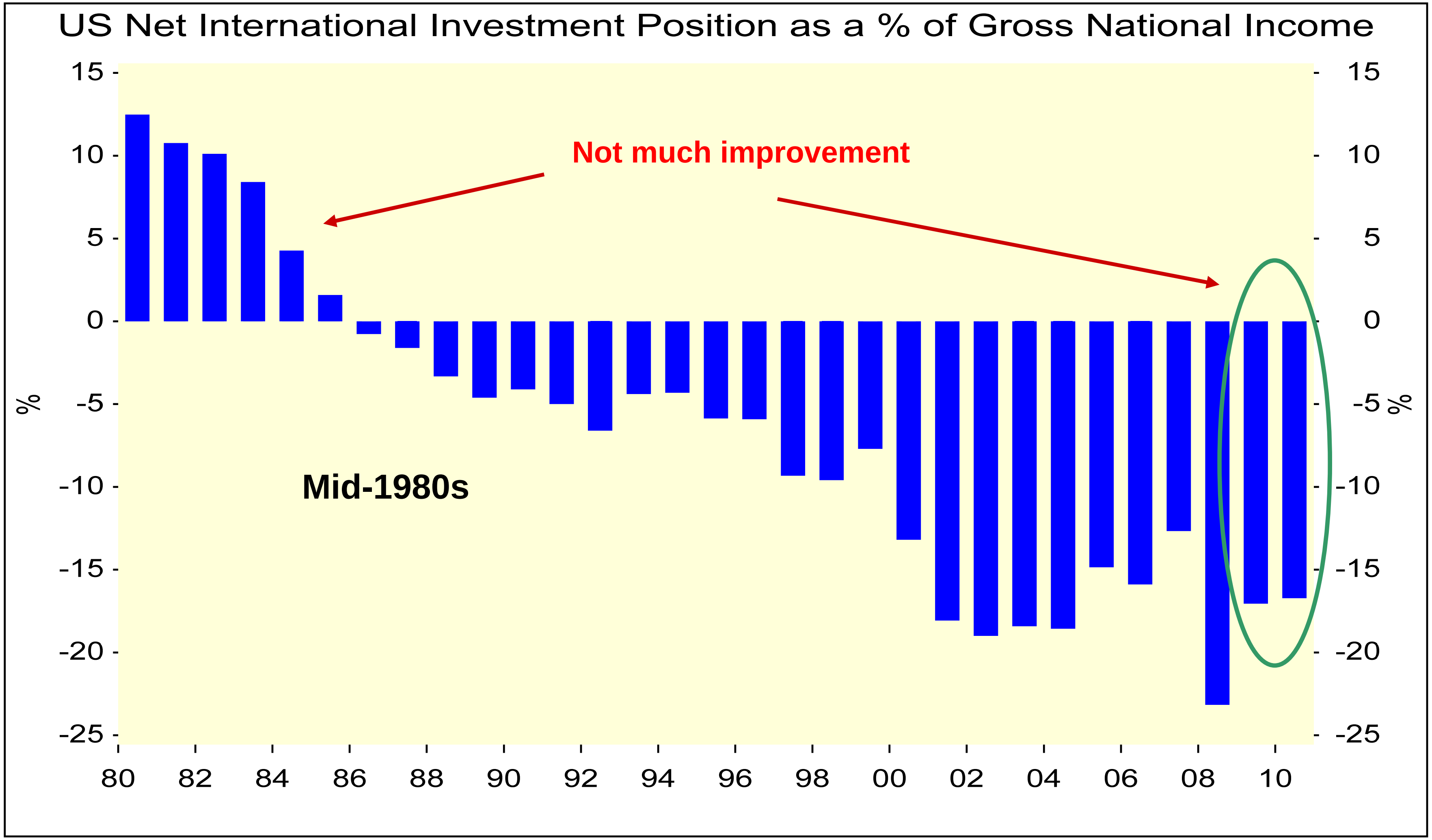
(5) Fiscal and policy dilemma



(5) Fiscal and policy dilemma



(5) Fiscal and policy dilemma



Source: IMF

(5) Fiscal and policy dilemma

- In early September, Obama unveiled the Administration's job plan through fiscal stimuli, amounting to USD447 billion. It represents about 3% of U.S.'s GDP in a year.
- It is not clear whether the package could pass the Congress and how it would be implemented without taxing the rich (the "Buffet Tax"?), given the cap on national debt ceiling. Moreover, 2012 will be a year of presidential election.
- Some estimates put the benign effect of the package as reducing the unemployment rate by 0.5% to 0.75%, not a very encouraging prospect.

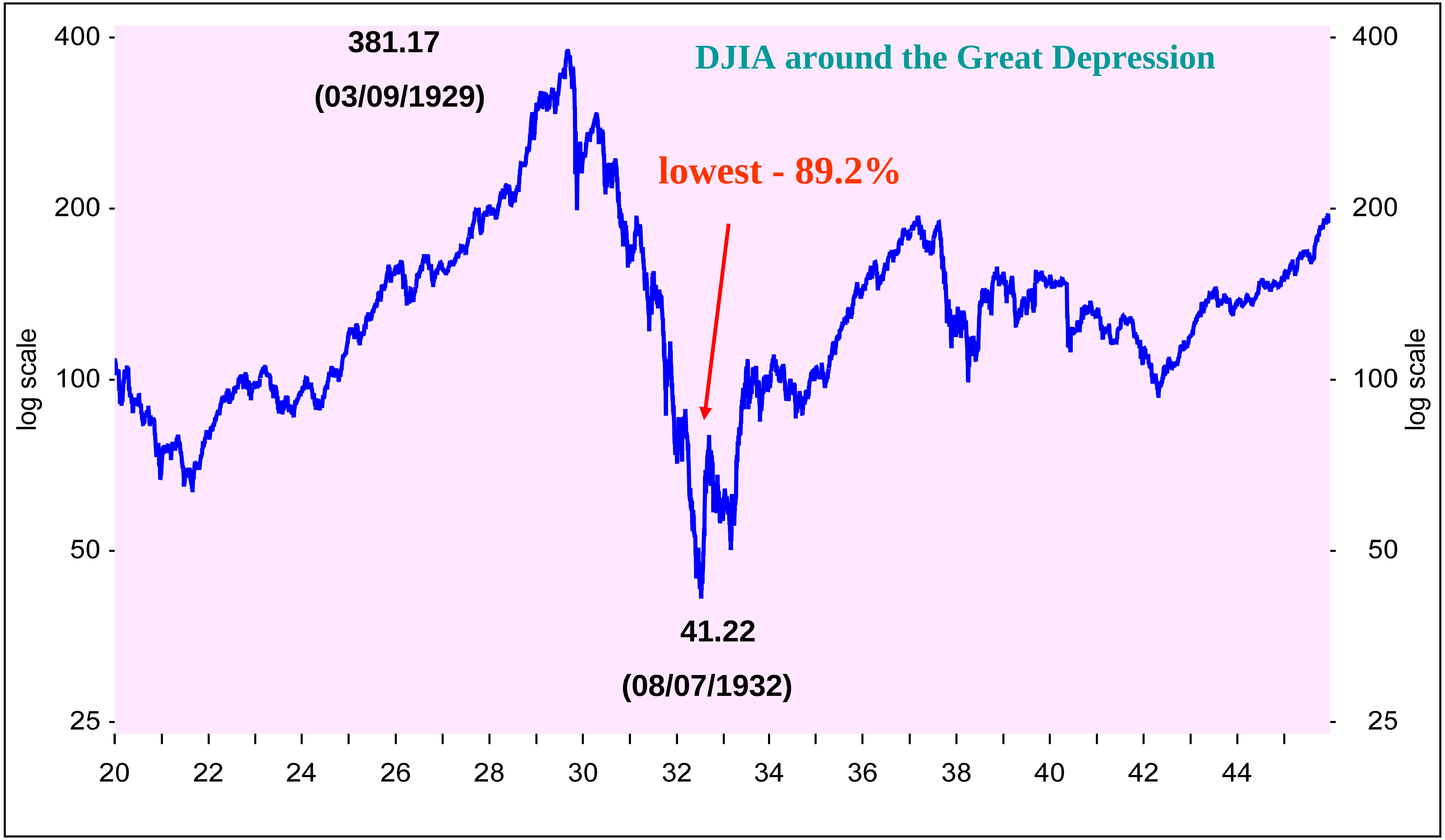
(5) Fiscal and policy dilemma

		USD billion
1	Employee payroll tax holiday	175
2	Employer payroll tax holiday	65
3	Tax break for companies investing in new plant and equipment	5
4	Aid for state and local governments	85
5	Infrastructure projects	50
6	Unemployment benefits for long-term unemployed	49
7	Tax relief for firms taking on new employees	8
8	Others	10
		447

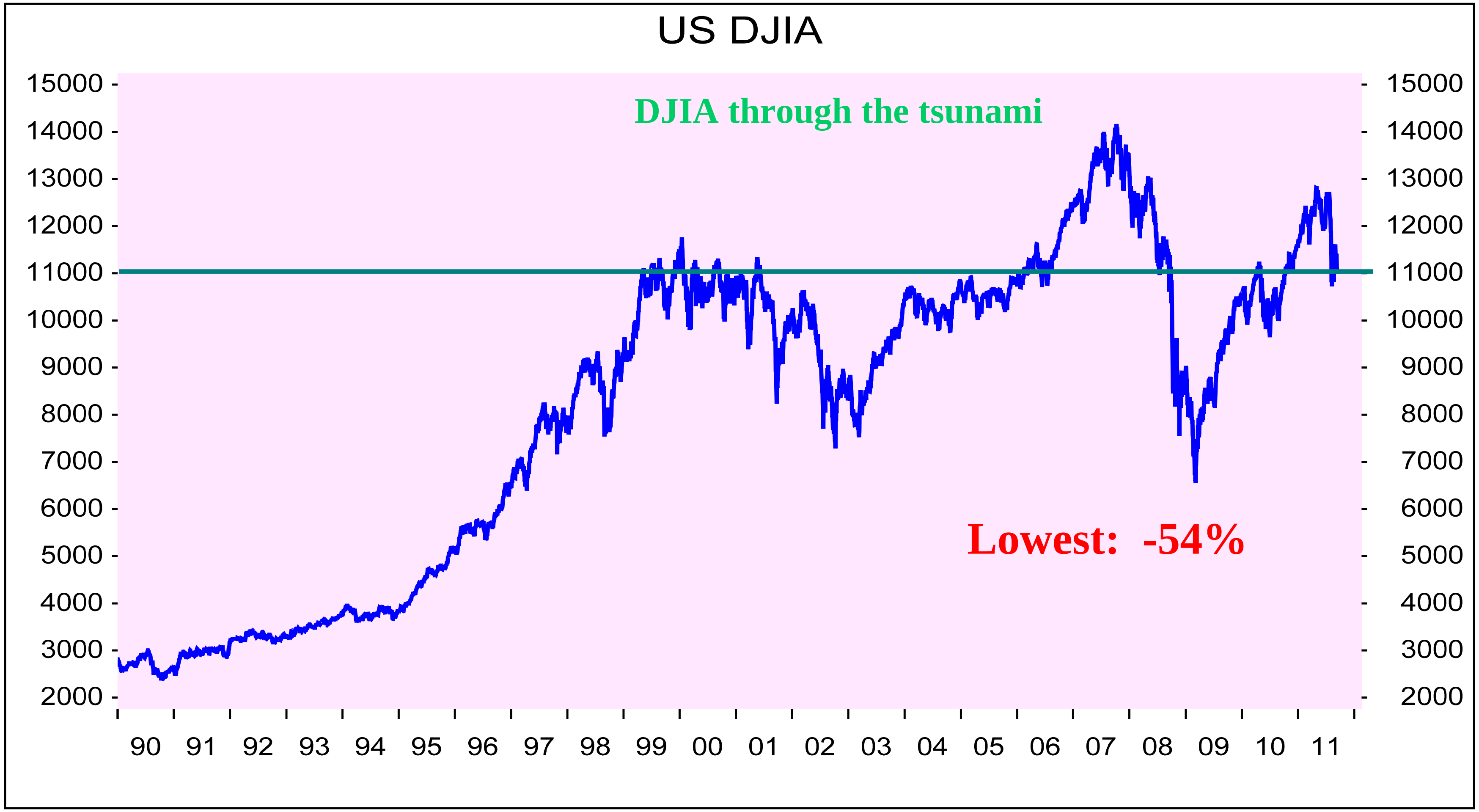
(6) Historical Lessons and Prospects

- From the historical perspective, the financial tsunami has not been effectively addressed by the unprecedented effects of the advanced economies. The stabilization has failed to feed significantly into real growth (Puplava, 2011).
- The downwave has entered into the second phrase. No disaster finishes one-off. Here some past evidence is provided.
- Compared the Great Depression of the 1930s, this particular downwave has also been complicated
- (1) differences in policy responses by leading economies；
- (2) a shift in global economic balance: the migration of growth engines to the East from the West.
- It appears that the interest of the U.S. government in reforming the international trade and financial infrastructure and reining in its over-arching financial sector is basically for the sake of "convenience". It has no intention of conceding its dominant position.

(6) Historical Lessons and Prospects

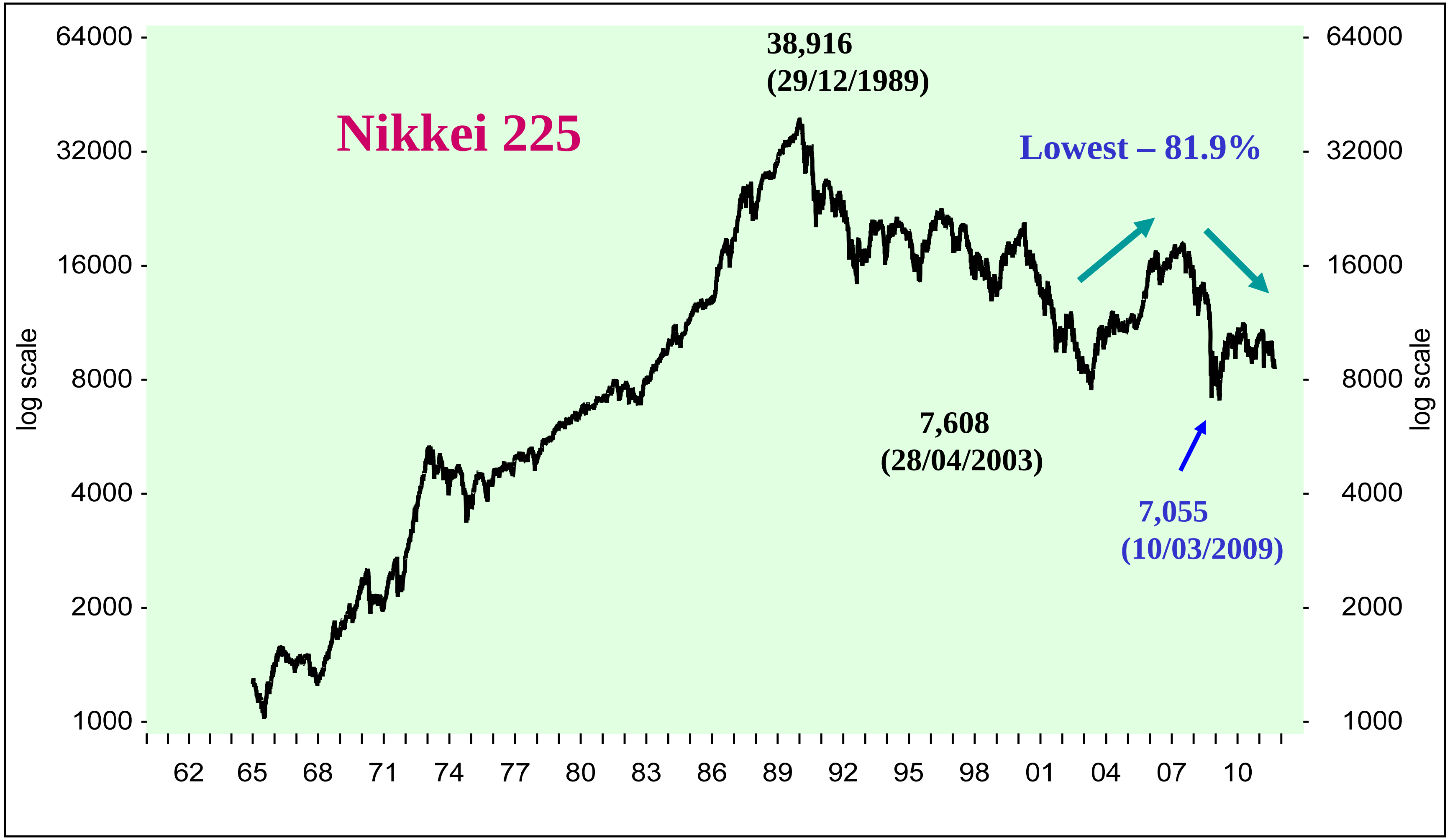


(6) Historical Lessons and Prospects



What disaster? Ask Wall Street.

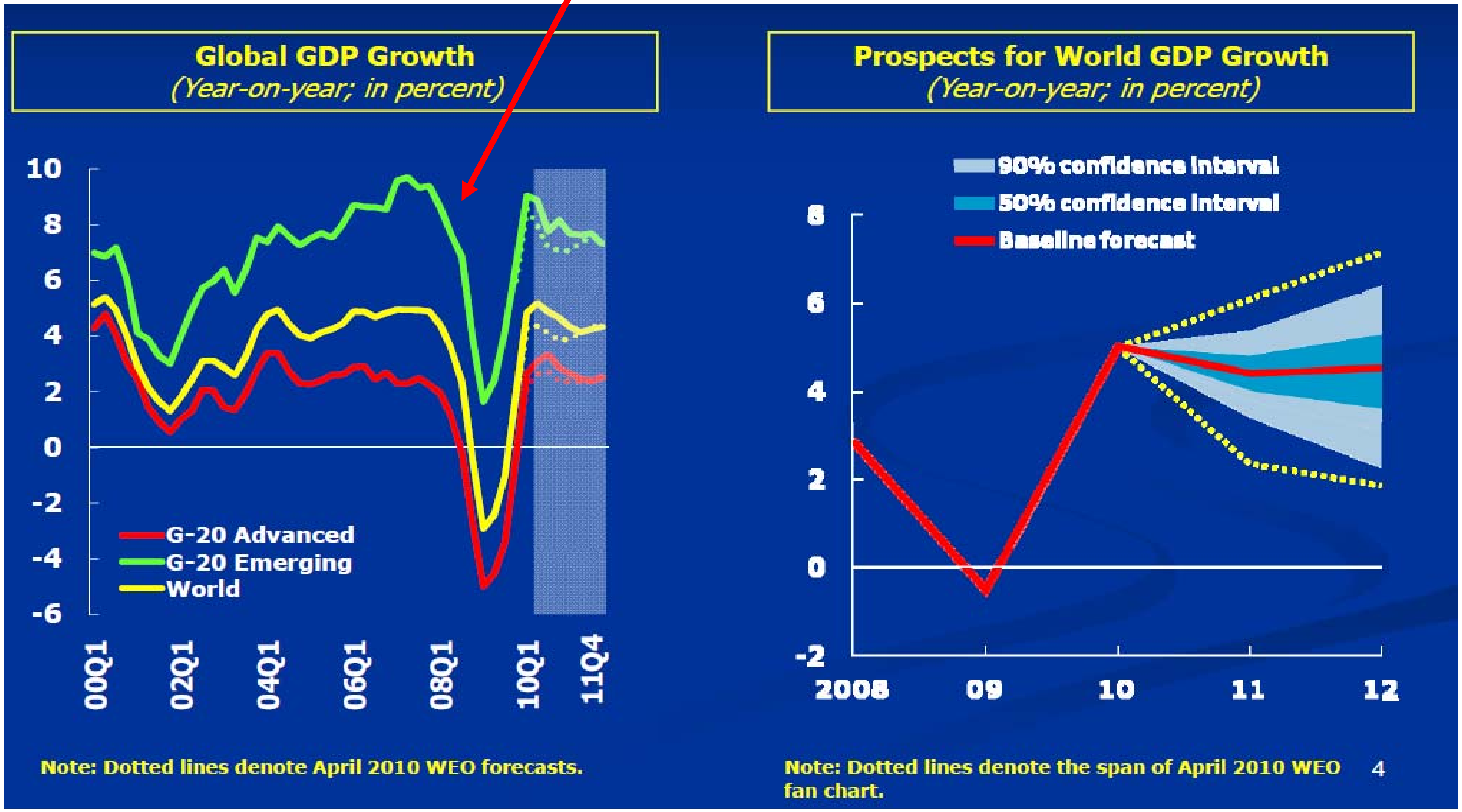
(6) Historical Lessons and Prospects



The lost decade? Double-decade? Triple-decade?

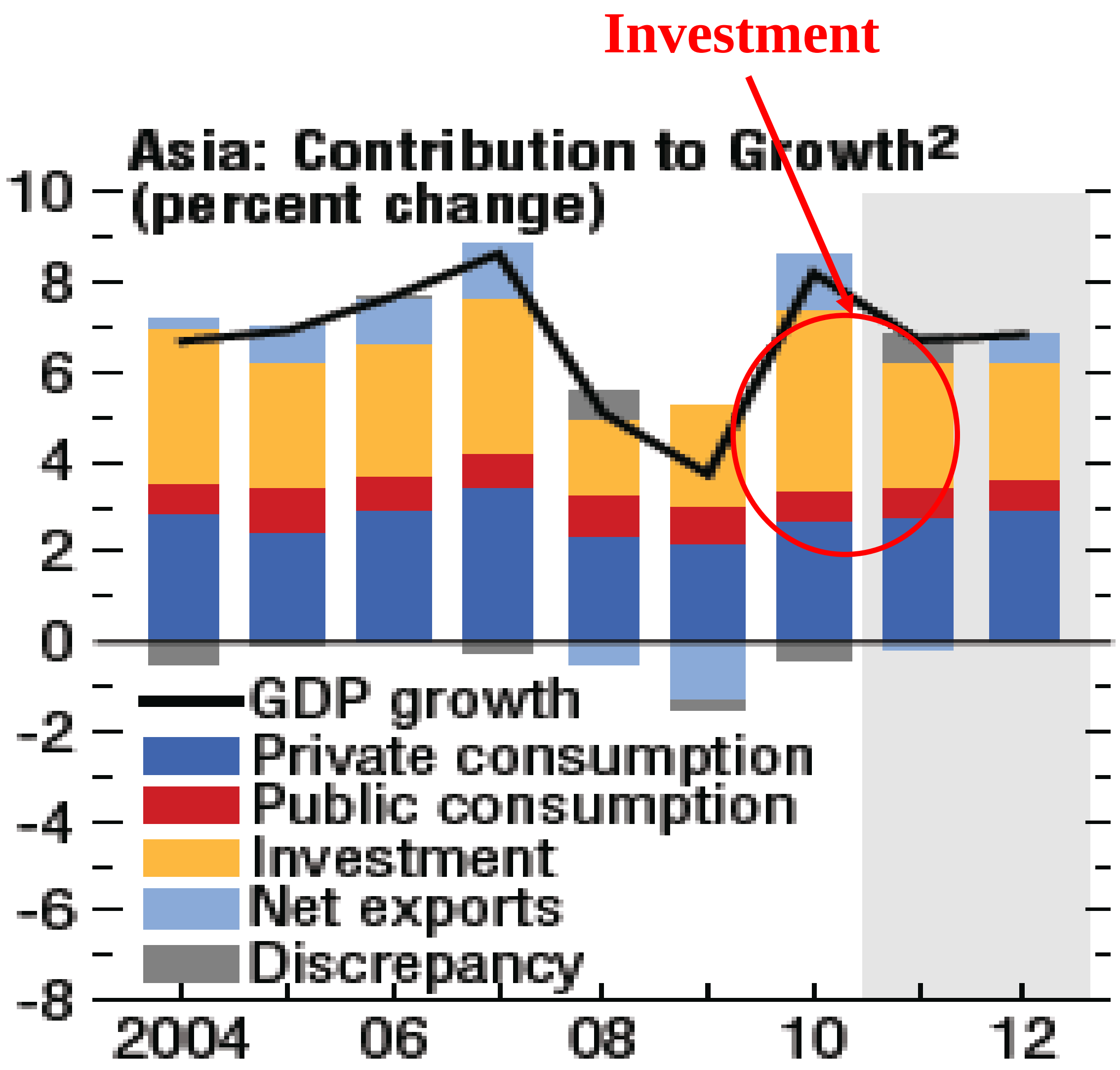
(6) Historical Lessons and Prospects

The contribution of the emerging G20 economies



Source: IMF

(6) Historical Lessons and Prospects



Source: IMF

(6) Historical Lessons and Prospects

- **I am not predicting the end of the world, not at all. However the downwave works out, there probably would be another "golden era". Hopefully nations might have learnt the appropriately historical lessons.**
- **Contrary to the Great Depression, this crisis has been coupled with a geo-political and geo-economic shift. An obvious piece of evidence is the rise in commodity prices.**
- **This could herald a "tectonic" movement, reflecting structural transformation. With Asia, BRIC and other emerging economies strengthening, there might be a <u>fight for resources</u> as the phoenix rises from the ashes.**
- **Facing the unique challenges, some of the emerging economies, e.g. BRIC, have had to resort to tightening policies and measures.**

(6) Historical Lessons and Prospects

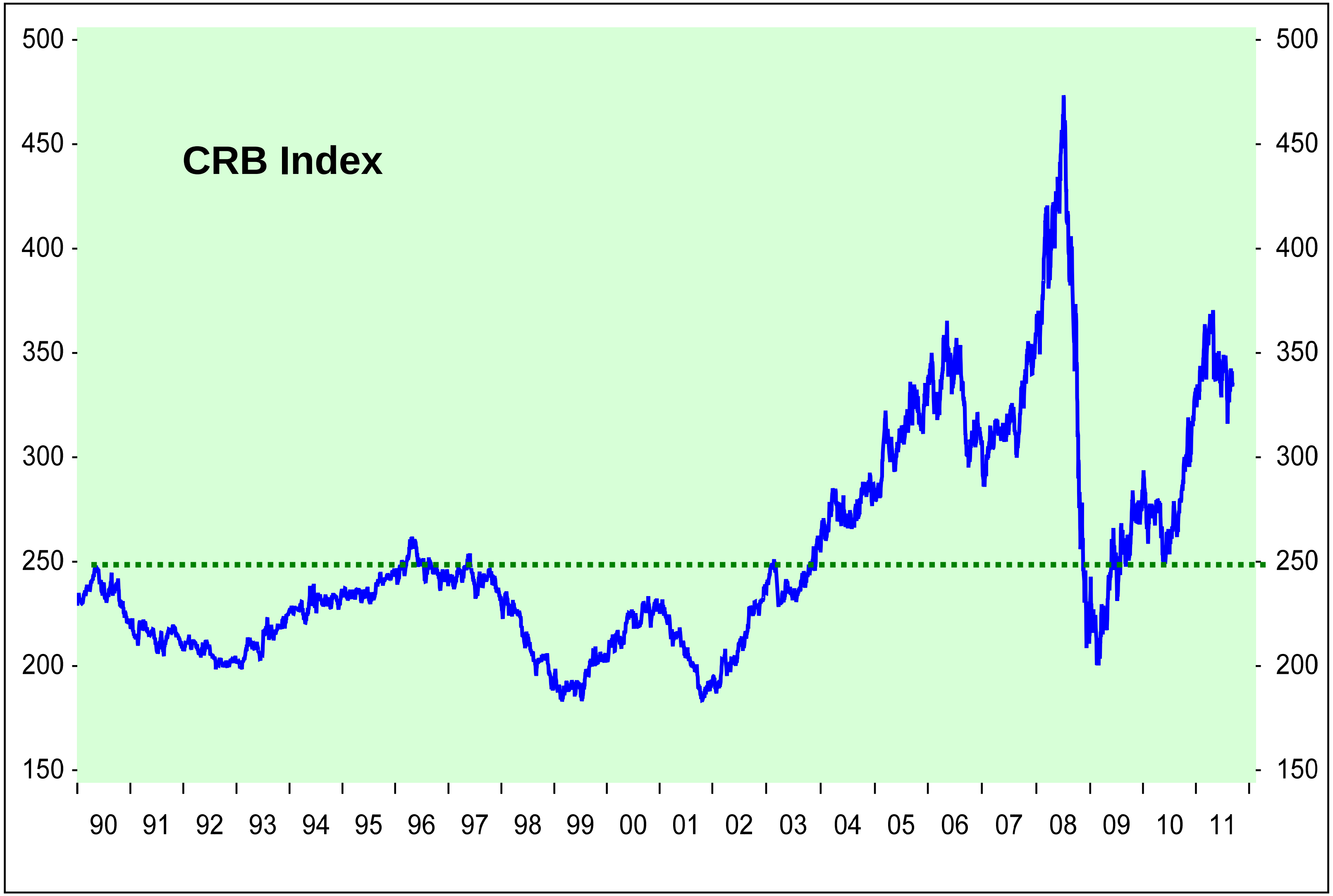
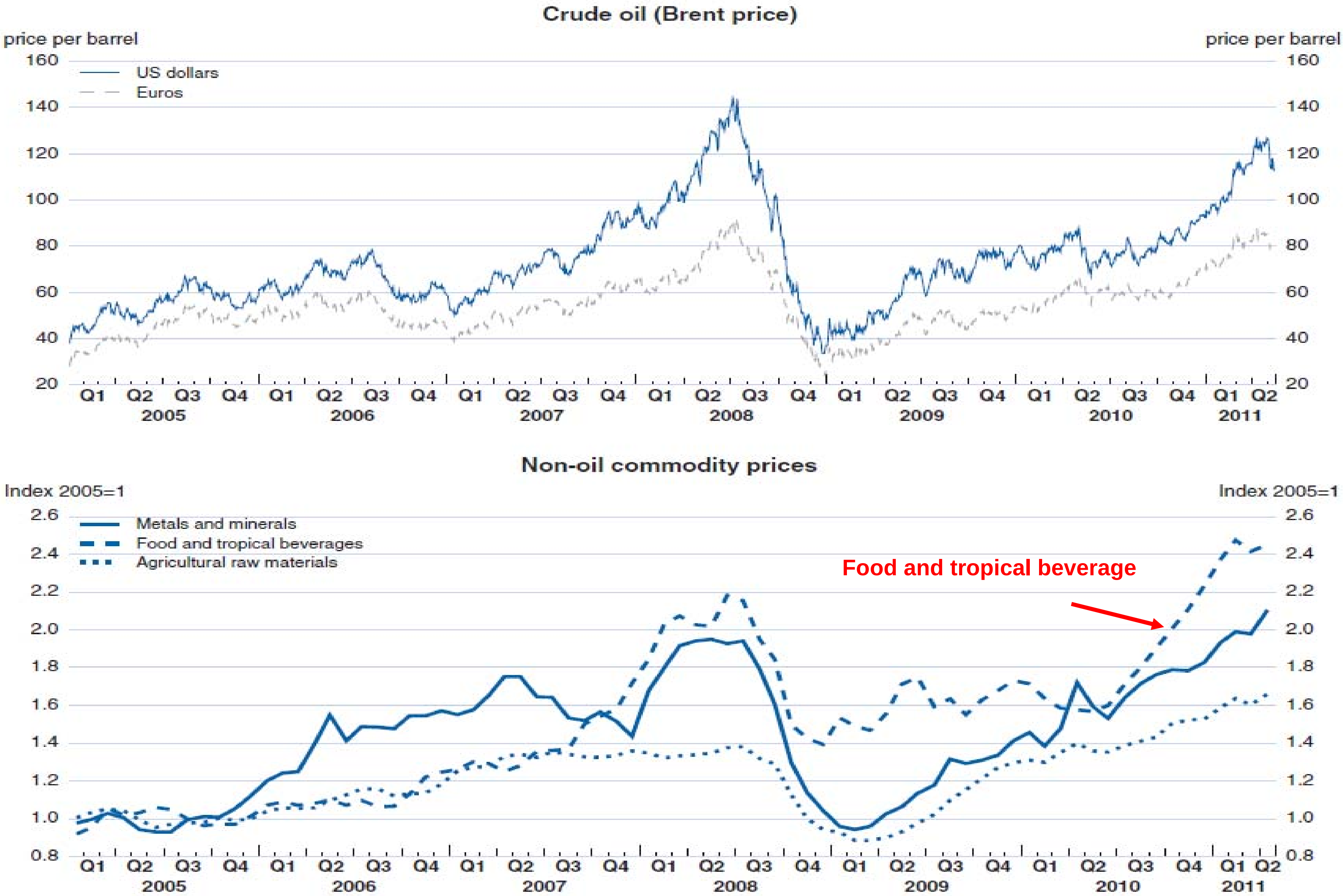


Figure 1.8. **Commodity prices have surged**

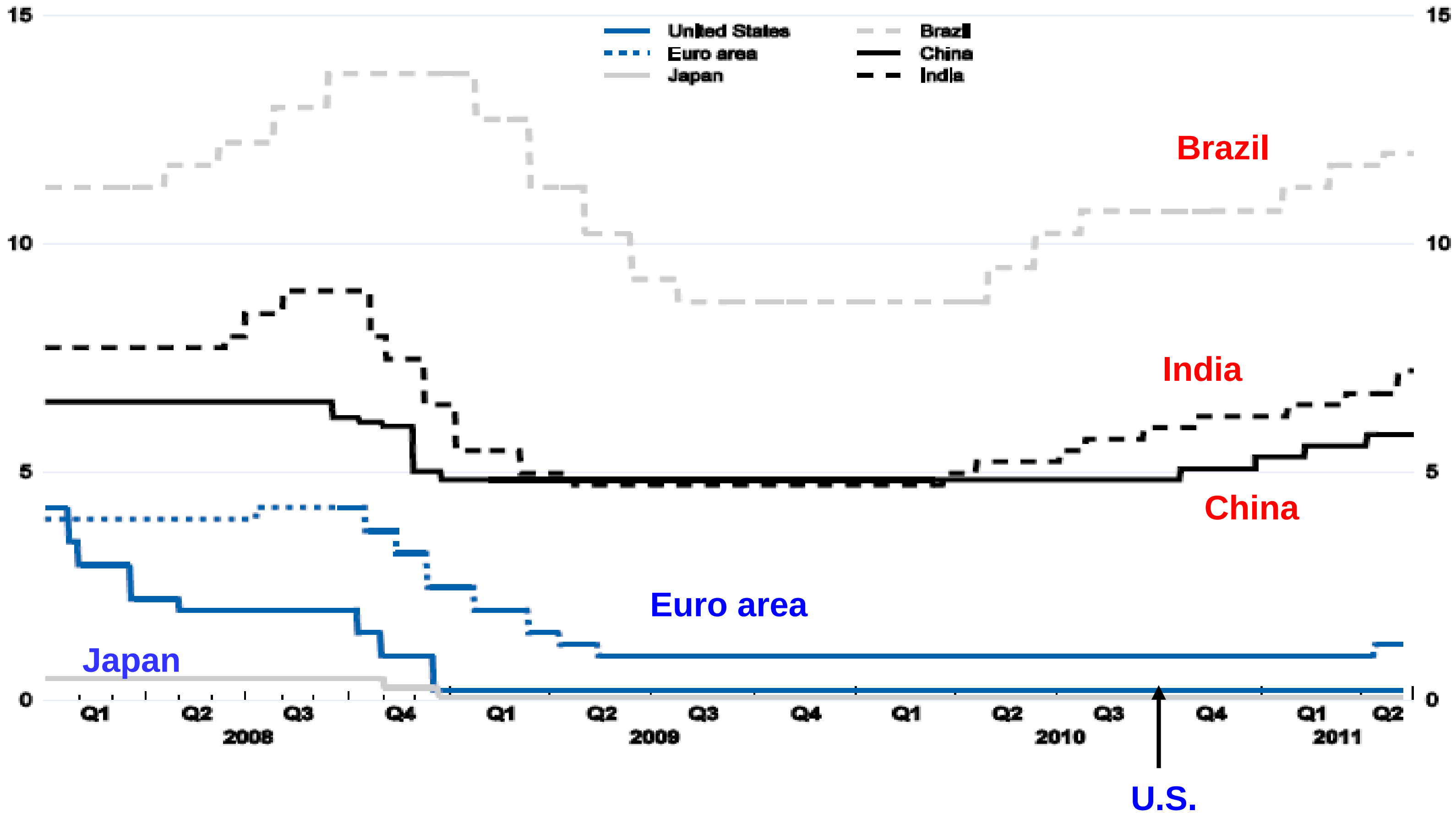


Source: OECD, Main Economic Indicators database; and Datastream.

StatLink http://dx.doi.org/10.1787/888932433782

Monetary policy is tightening in emerging-market economies

Policy interest rates, percentage points



Note: Last observation 23 May 2011.

Source: Datastream; Central Bank of Brazil; Reserve Bank of India; and CEIC.

Brazil recently lowered interest rate in view of the deterioration in international economic environment.

(6) Historical Lessons and Prospects

- **The U.S. is only a "hurt tiger", but still the dominant power in the world. It will be a waste of time to directly challenge it, although the push for the reforms in international trade and financial architecture must go on, so as to redress the global imbalances.**
- **As I have argued that China and other emerging regions should reconsider the meaning of internationalization. It is different from globalization. Internationalization means extending beyond a country's border and nurturing cross-border cooperation. In short, regionalization is an alterantive, building bloc or fall back position (Tsang, 2009) to globalization run by irrepsonsible superpowers.**
- **Only when emerging economies have built regional strength, will they be in a position to challenge the hegemony of the U.S. and Europe as irresponsible leaders in the global trade and financial order.**

References

- **Bloomberg Businessweek (2010), "Iceland Bankruptcy-to-Rebound Reveals Models Ireland Won't Take", 2 December 2010 (http://www.bloomberg.com/news/2010-12-02/iceland-bankrupting-self-to-recovery-reveals-policy-ireland-dared-not-take.html).**
- **Harding, Robin (2010), " Some enchanted easing ", Financial Times, 28 October 2010, p.9.**
- **Krugman, Paul (2011), "The Hijacked Crisis ", New York Times, 11 August 2011, OP-ED.**
- **Krugman, Paul (2010), "Eating the Irish", New York Times, 25 November 2010, OP-ED.**
- **McKinley, Terry and Cozzi, Giovanni (2011), "Fiscal Contraction or Fiscal Expansion in the US: Which Will Promote Growth and Employment?" Development Viewpoint Number 66, September 2011, CDPR, SOAS.**

References

- Puplava, Chris (2011), “A Pictorial Review of the Weakest Recovery since the Great Depression”, Financial Sense, 16 September 2011. (http://www.financialsense.com/contributors/chris-puplava/2011/09/16/a-pictorial-review-of-the-weakest-recovery-since-the-great-depression)
- 曾澍基(2011)，“酷熱中再看長波下浪” (13/18/2011)，載於 http://www.sktsang.com/RF/downwave-again.pdf 。
- Tsang Shu-ki (2011), “Two-Speed Recovery under Tectonic Effect? -- Comments on IMF Regional Economic Outlook: Asia and Pacific” (28/4/2011) (http://www.sktsang.com/ArchiveIII/Com%20on%20IMF%20AREO.pdf).

References

- 曾澍基(2010)，“長波下浪第二期” (6/11/2010)，載於 http://www.sktsang.com/ArchiveIII/Tsang-DWII-20101106.pdf 。
- 曾澍基，(2010年)，〈中國未來經濟發展的3R挑戰〉，載薛鳳施主編，《中國富強之路 - 前景與挑戰》，香港浸會大學當代中國研究所及三聯書店(香港)有限公司聯合出版，頁131-153。
- Tsang Shu-ki (2009), “Dragons Weathering the Storm: Blue Sky Ahead?” Whither the global polity/economy?” (28/9/2009) (http://www.sktsang.com/ArchiveIII/Tsang-CPU-DRC-090928.ppt).
- 曾澍基(2009)，“中國經濟發展的3R挑戰” (28/10/2009)，載於 www.sktsang.com/ArchiveIII/Tsang3R091028.ppt。

References

- **曾澍基(2008)，"從長遠看世界與中國經濟" (11/10/2008)，載於 www.sktsang.com/ArchiveIII/CBC_sktsang_081011.pdf 。**
- **Tsang, S.K. (2008), "The Economic Basis of Regionalization", *The Pan-Pearl River Delta: An emerging regional economy in a globalizing China*, in Y.M. Yeung and Shen Jianfa (eds.), The Chinese University Press: pp.89-113.**
- **Tsang Shu-ki (2008), "How to save the economy as an irresponsible central bank" (20/4/2008)載於 www.sktsang.com/RF/CB_2008A.pdf.**

References

- **Tsang Shu-ki (2005), "History unfolding - economic crisis in an uneven world" (4/5/2005)載於 www.sktsang.com/ArchiveIII/History_unfolding.pdf.**
- **Tsang Shu-ki (2004), "Delayed calls: the paradox of demand side deflation versus supply side inflation" (16/5/2004) (www.sktsang.com/ArchiveIII/Delayed_calls.pdf).**
- **曾澍基(2003)，"再看資本主義長波" (27/6/2003)載於 www.sktsang.com/ArchiveIII/Long-WaveAgain.pdf 。**
- **Tsang Shu-ki (2001), "Kondratieff Long Waves Unsynchronized – KLUWs –at Last" (8/4/2001) (http://www.sktsang.com/ArchiveIII/Lwsal.pdf).**

References

- **Gail Tverberg, “Why the US Debt Limit Agreement is Only a Temporary Solution”, 3/8/2011, Financial Sense (http://www.financialsense.com/contributors/gail-tverberg/2011/08/03/why-the-us-debt-limit-agreement-is-only-a-temporary-solution#.TjolU_rAAyQ.facebook)**
- **Jia Lynn Yang, Neil Irwin and David S. Hilzenrath, “Fed aid in financial crisis went beyond U.S. banks to industry, foreign firms”, December 2, 2010, Washington Post (http://www.washingtonpost.com/wp-dyn/content/article/2010/12/01/AR2010120106870.html?sid=ST2010120106876)**