“Global Economic Downturn: Where are We?

Parallels and differences of Japan and Asia 10 years ago and US now”

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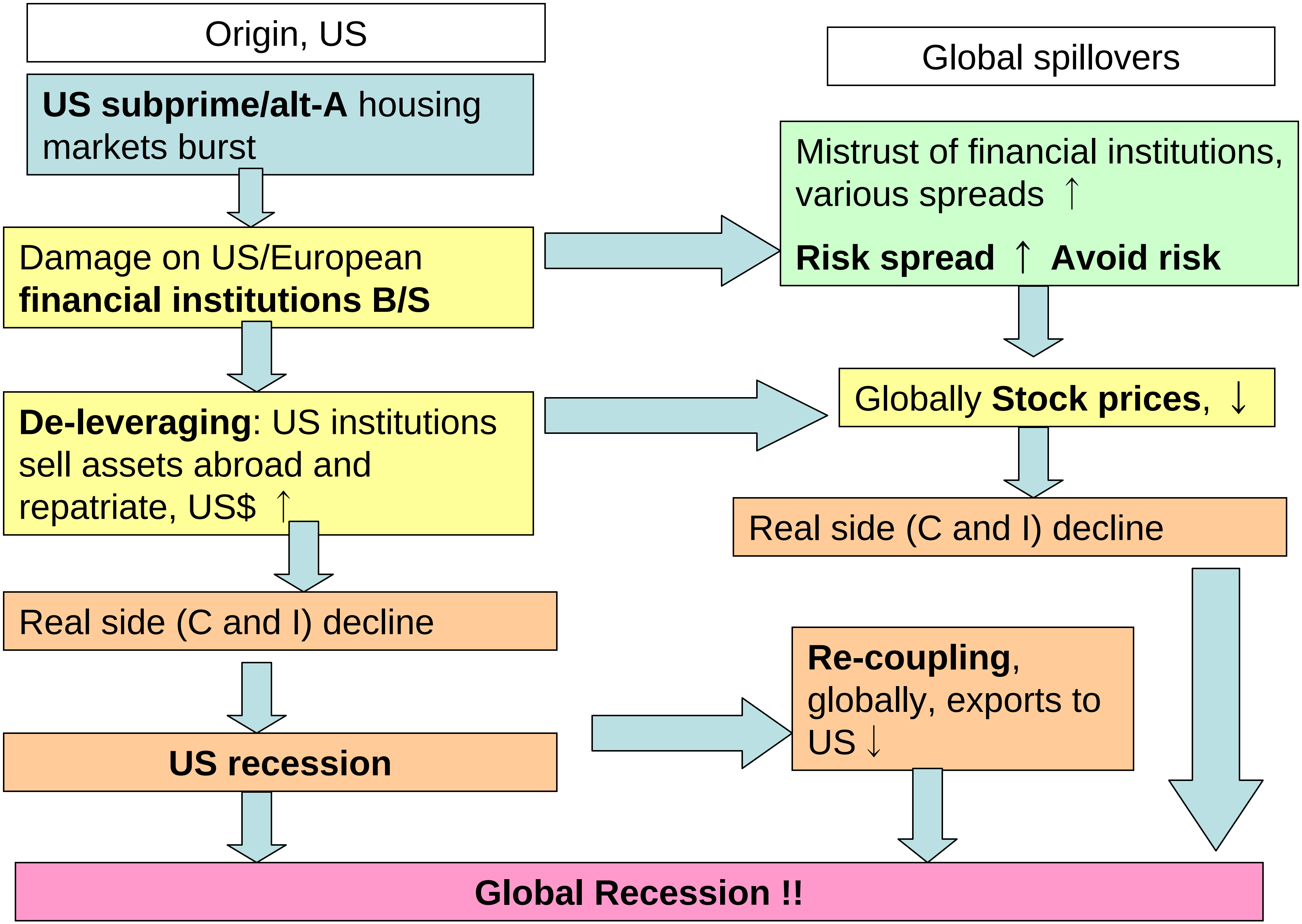
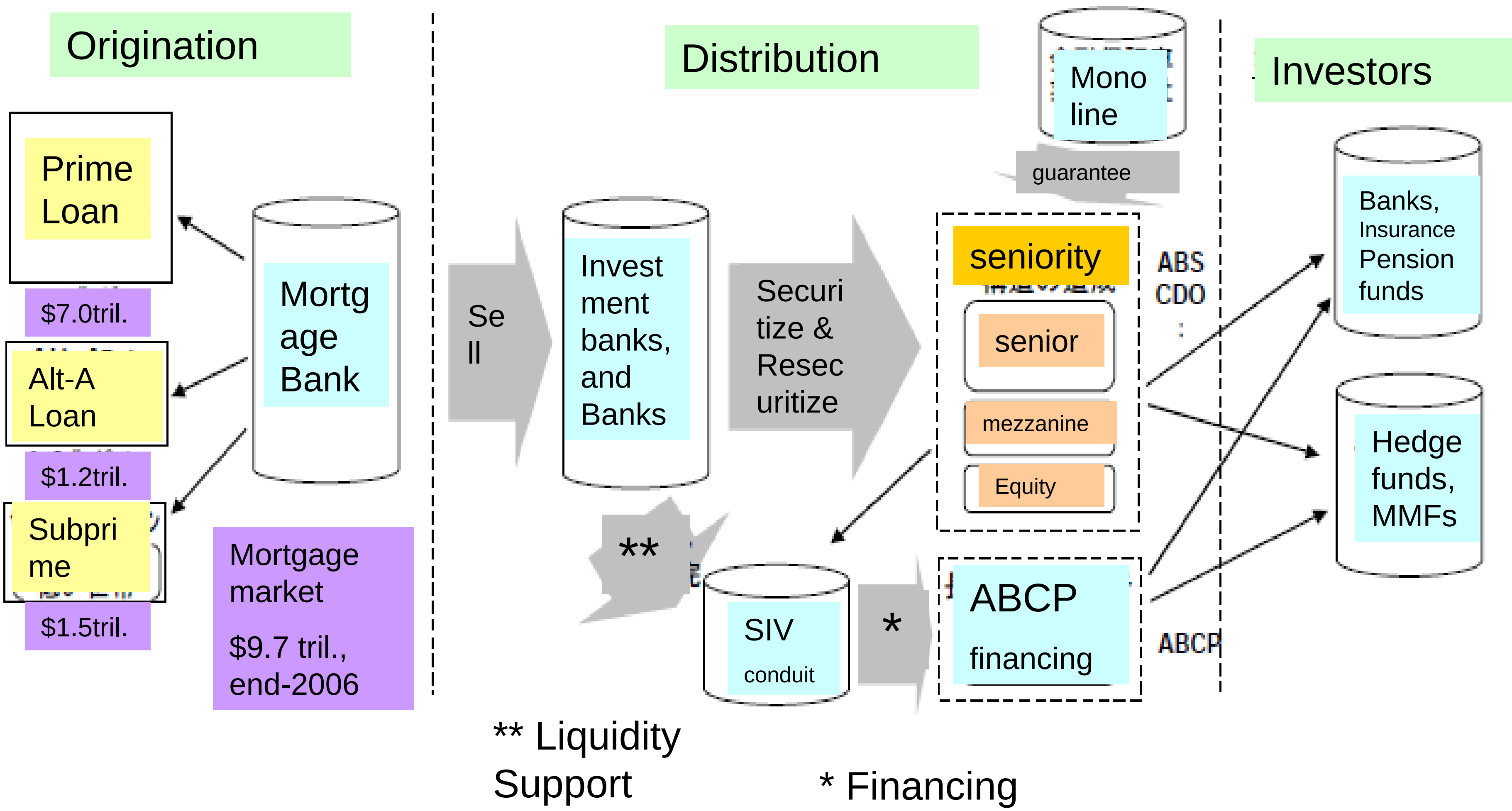
Summary: what happened?

- Financial Problem
  - Started as a US housing bubble burst
    - Subprime mortgage problem
    - Securitization was a key
  - Losses were widely shared by financial institutions and investors around the world
  - Quickly spread to other securities markets
  - De-leveraging, financial institutions sell assets and pay back borrowings
- Real-side decline
  - Wealth effects (housing equity, financial wealth destroyed) → *C* decline
  - Credit crunch, uncertain future demands → *I* decline
  - Downward spiral of Y, Production, L → Recession


Origin, US
US subprime/alt-A housing markets burst
Damage on US/European financial institutions B/S
De-leveraging: US institutions sell assets abroad and repatriate, US$ ↑
Real side (C and I) decline
US recession
Global spillovers
Mistrust of financial institutions, various spreads ↑
Risk spread ↑ Avoid risk
Globally Stock prices, ↓
Real side (C and I) decline
Re-coupling, globally, exports to US ↓
Global Recession !!

Subprime Loans and Securitization



Source: Bank of Japan, Financial Stability Report, March 2008

Time-line

- 2002-2006, Housing boom
  - Subprime problem started around 2004/05
    - Teaser rate → two-year time bomb
- 2006/07, default rate of subprime increased
- 2007, spring/summer, financial institutions reveal losses
- 2007 November. CitiCorp and others capital injection from China and Middle-East
- 2008, March. Bear and Stearns, rescue merger
- TARP, GSE,
- 2008, November. Lehman Brothers, bankruptcy, chapter 11 → Dramatically changed the scenery
- AIG de facto nationalization, government capital injection, MMF guaranteed, interbank liabilities guaranteed, more government capital injection, deposit guarantee
- Record decline in various production → Fiscal stimulus,

The rest of presentation: Outline

- Opening question
- Putting into a perspective: Bubble and Burst: Comparison of the US in 2007-2008 and Japan in 1997-98
  - – (1) Crisis Mechanism
  - – (2) Crisis Management
- What central banks can do beyond global ZIRP?
- Will fiscal stimulus work?

Memorable Quotes, US Treasury Secretary on Japanese NPL

- "Why don't Japanese banks foreclose NPL properties and auction them. Once the bottom is found, real estate prices have only one way up, and the investors will be happy to purchase them"

  – US Treasury Secretary in a private meeting with economists in Tokyo, sometime during the lost decade of Japan

Also in Asia

- US advice to Asia (1997-98)
  - Implicit guarantee by the government is a problem.
  - "Liquidity support" to banks should be stopped. They may be insolvent. Due diligence is important Introduce Mark to market accounting
  - Do not ban short-selling. Hedge funds are good guys providing liquidity. No reason to regulate. If they attack a currency or company, there is good reason

(1) Opening Question

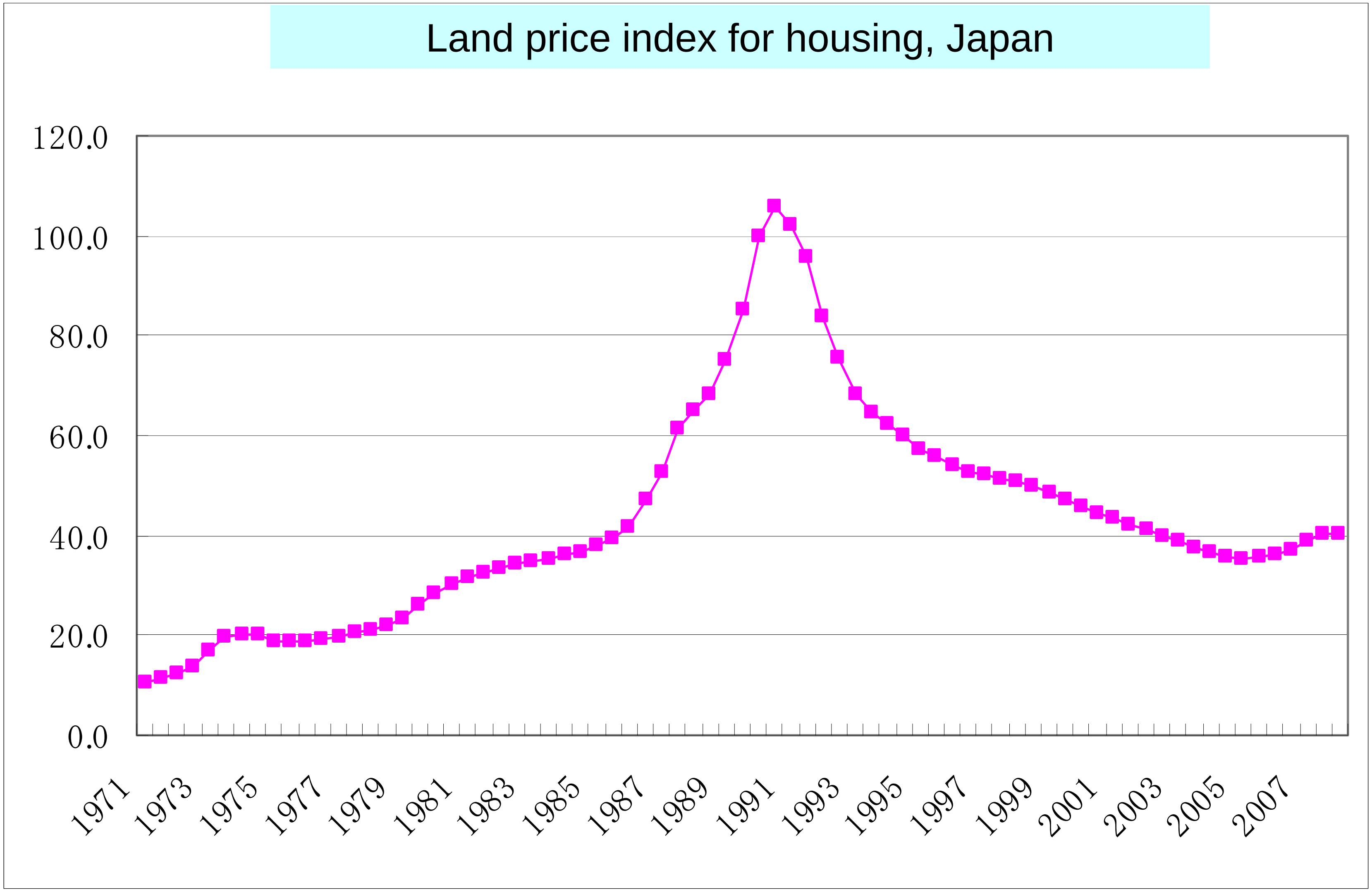
- It seems that "US now" is NOT following what US told Japan (and Asia) 10 years ago—three possibilities
  - (A) American advices 10 years ago were totally wrong
  - (B) Americans are not doing right things right now
  - (C) The two crises are fundamentally, totally different in nature?

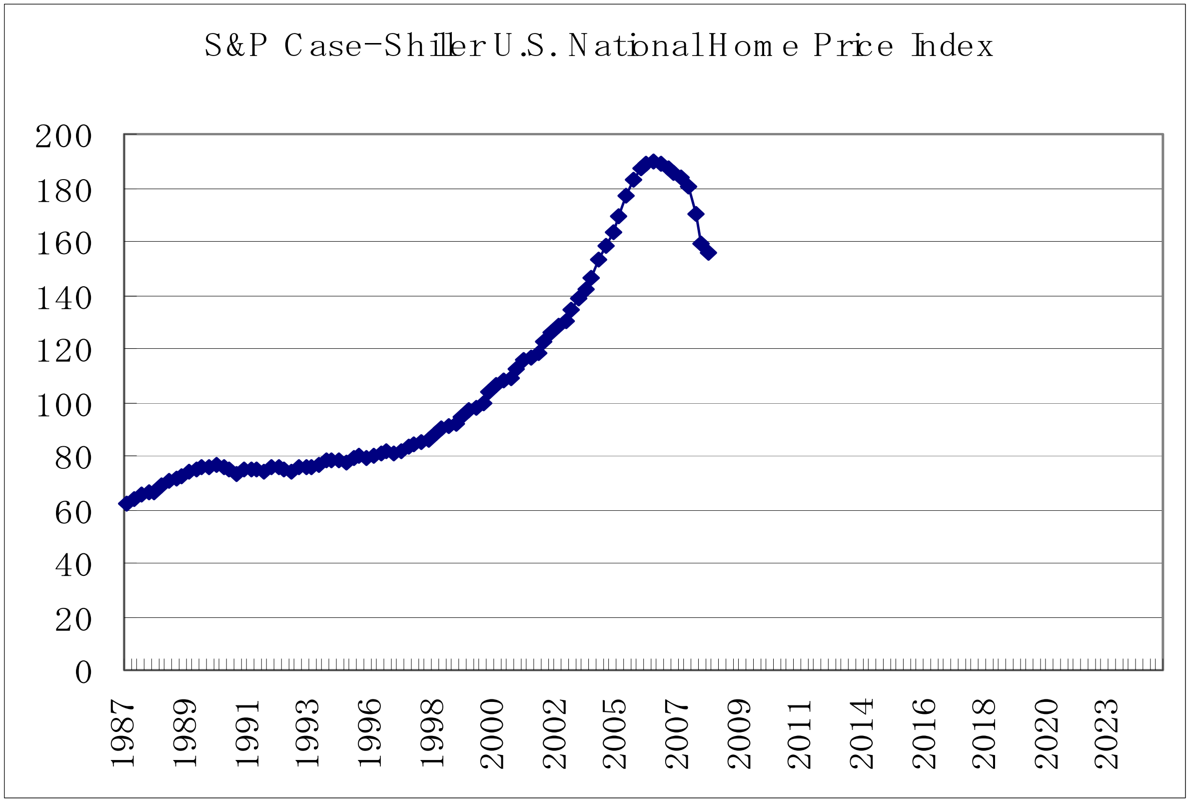
Housing market Problem

- A lot of parallels between Japan, 1985-2003 and US, 2002-2009

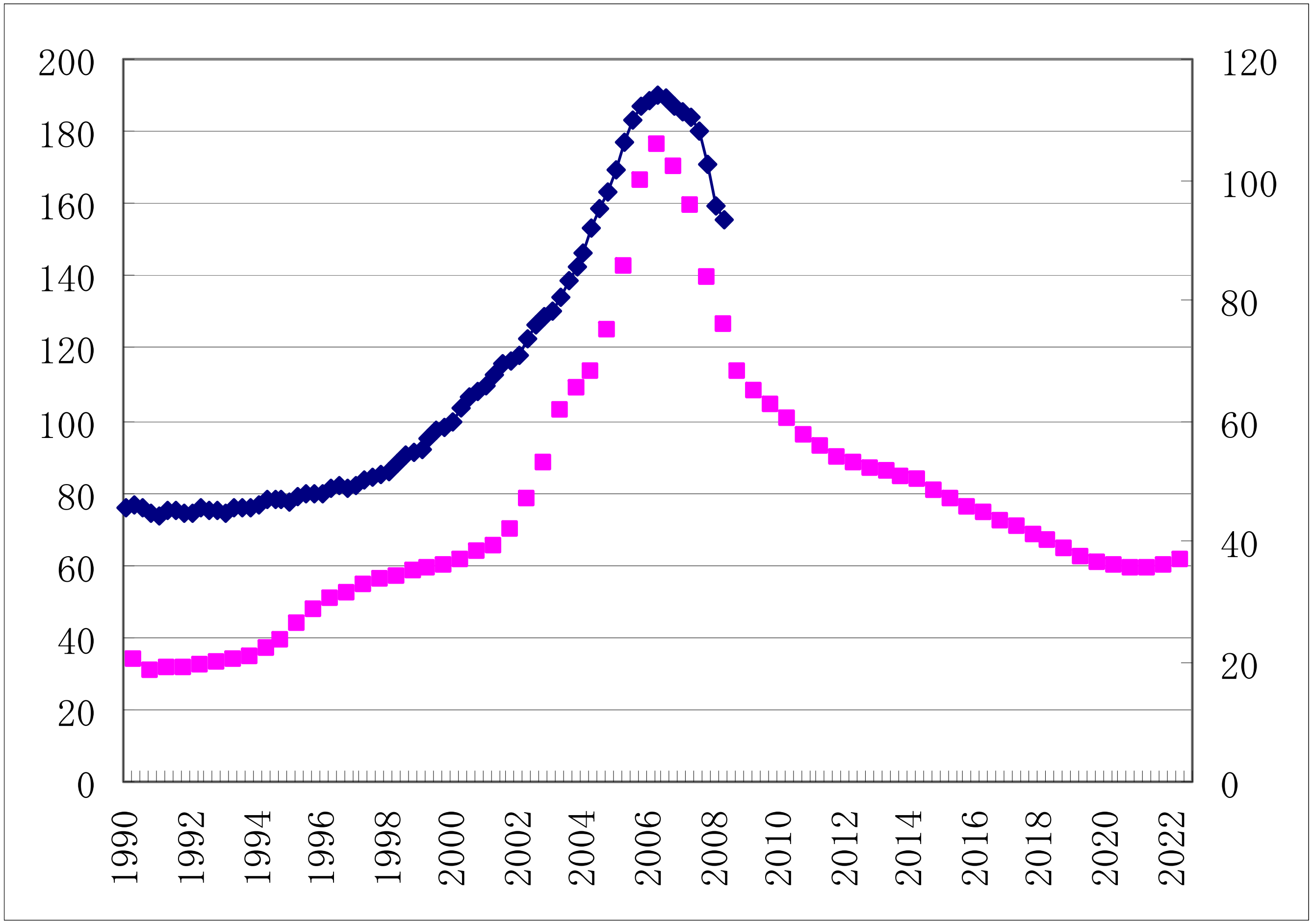
Housing (Real Estate) Boom and burst

- Japanese housing bubble (1980s)
  - 3-fold increase in 6 years
  - All lost in the following 12 years
- Is this what will happen in US?
  - More than double in 8 years
  - Just lost 20% from the peak


Land price index for housing, Japan
120.0
100.0
80.0
60.0
40.0
20.0
0.0
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007


S&P Case-Shiller U.S. National Home Price Index
200
180
160
140
120
100
80
60
40
20
0
1987
1989
1991
1993
1996
1998
2000
2002
2005
2007
2009
2011
2014
2016
2018
2020
2023

Is US following Japanese footsteps? --16 years later



US housing prices may fall further

- Compare the Japanese boom and bust (Land for Housing index) with US boom and bust (Case-Schiller)
- Maybe US is only the 3rd inning of the bust process, if the parallel holds
- Maybe 700 billion may not be enough, if US starts to buying distressed assets

(1) Crisis Mechanism

- Bubble and Burst
  - How bubble was formed and encouraged
    - Starting point, good fundamentals
  - Why did the authorities not take actions
    - No other bad signs like inflation
    - Reason to believe good fundamentals explain a boom

Root of crisis (1)

- Japan
  - Real Estate Bubble and bursting bubble
    - Both housing and commercial
    - Belief in ever-increasing land prices
    - No check on borrowers because of secure collateral
    - “Step interest rate loan” to ease income constraint
    -
- US
  - Housing Bubble and bursting bubble
    - Mostly housing
    - Belief in ever-increasing housing prices
    - No check on borrowers because of securitization ⇔ moral hazard (originate “to” distribute)
    - Teaser rate for first two years, time bomb

Root of Crisis (2)

- Japan No securitization
  - Banks kept loans on their balance sheet
  - Losses hid in subsidiary and creating accounting
- US Securitization
  - Too complex senior/mezzanine/equity, CDOs
  - Conflict of interest in credit rating
  - Hid in subsidiary: Potential losses in SIV, not on B/S of banks

Failed business models differences

- Japan, commercial banking
  - Housing Loan Companies (Jusen) to fall first
  - Smaller commercial banks failed
  - Four large banks failed (1997-2003)
  - Several rescue and strategic mergers of large banks
- US, investment banking
  - Large investment bank fell
  - Crisis spread to Fannie and Freddie, MMF, insurance company (AIG), Big 3 auto companies, (and more?)

Crisis Management, common pattern

- Common pattern (S&L, Nordic, Japanese, and now the US)
  - Refuse to recognize (“No problem”)
  - Forbearance, Recognize, but regard it to be a small problem—no action
  - Try to take action, but fail to win public support (“Why tax payer’s money?”)
  - Action, but too little, too late
  - Big crisis happens and big action becomes possible

Crisis Management

- Japan
  - Denial (1992 – 1995)
  - Forbearance
    - Jusen problem to all banking system
  - Recognize, try to act, but no public support
    - Defeat of 685 billion yen stop gap
    - Distressed asset purchase—good bank-bad-bank model
  - Act, too little too late
    - Capital injection, No. 1
  - Big crisis, big action
    - Public money injection 40 trillion yen
    - Capital injection N0.2

- US
  - Denial
  - Forbearance
    - (Aug 2007->March 2008)
  - Recognize, try to act, but no public support
    - Bear Stearns rescue
    - Refusal of first TARP in Senate
    - TARP difficulty
  - Act, too little too late
  - Big crisis, big action
    - Change TARP to capital injection
    - Make investment bank to commercial bank (holding company)

Key moments, crisis management

Japan

- November 1997
- Failures of Sanyo Securities, Hokkaido Takushoku Bank, and Yamaichi Securities
  - Sanyo default in the call market
  - Financial institutions become skeptical each other
  - freeze of the call market
  - Japan premium
- Legal framework was not ready (supervision mistake)

US

- September 2008
- Lehman failure
  - Financial institutions become skeptical each other
  - Freeze of money markets
  - Western Premium
- Legal framework was not ready
- Failed business model of investment banks (supervision mistake)

Key Moments: deposit guarantee

Japan

- Blanket deposit guarantee, 1995-2003
- Capital injection into banks by the government, 1998, 1999, 2003
- Arrange rescue mergers
  - Many regional banks
- Temporary nationalization of banks, 1998-2003
  - LTCB, 1998
  - NCB, 1998
  - Resona, 2003

US

- Deposit guarantee ceiling raised from $100,000 to $250,000, proposed
- Capital injection into banks by the government
- Arrange rescue mergers
  - Bear and Stearns
- Nationalization?
  - AIG

Key moments: Capital injection

Japan

- Denial of capital injection, Feb 1995
- 685 billion yen to help resolve Jusen companies (small housing finance companies) were denied in the budget process
- Two years later, 40 trillion yen was needed to help large banks
- Capital injection to large banks, March 1998 and March 1999
- Capital injection first resisted by banks for fear of dismissal of management
  - In the end, no management responsibility pursued

US

- TARP was first voted down by the House of Representatives
- One week later, TARP was passed
- A few weeks later, an aim of TARP changed from purchasing distressed assets to injecting capital (preferred shares) to large banks
- Capital injection first resisted by banks for fear of dismissal of management
  - In the end, management pay restriction

A series of policy actions

- Japan (1995 – 1997)
  - Blanket deposit guarantee
  - Lax accounting standard on NPL => “evergreening”
  - No action on lack of capital shortage
  - Arrange rescue mergers
  - Blanket deposit guarantee (1995)
  - Capital injection (1998, 1999)
  - Create a legal framework to fail banks (until 1998)
  - Nationalization (1998-2003)
  - Fail life insurance companies
  - Arrange mergers (of smaller institutions)

- US (2008)
  - Bail out investment banks
  - FRB buys (almost) any assets, expand B/S
  - Arrange rescue mergers
  - Loss guarantee for distressed assets taken over by rescuing institutions (Bears-JPMorgan)
  - Bail out AIG
  - Explicit guarantee for Freddie and Fannie
  - Deposit guarantee (MMMF) and raise ceiling (FDIC)
  - Stop mark-to-market accounting

Policy role: Monetary policy

Japan

- Was monetary policy responsible for creating a bubble?
  - Low interest rate, 1987-89
- Was monetary policy too tight for mitigating the damage from a bursting bubble?
  - Too slow cutting the interest rate, 1992-1999
  - Should BOJ have adopted the ZIRP (maybe 1995?)

US

- Was monetary policy responsible for creating a tech bubble, 93-99?
- FRB learned from the Japanese mistake of bursting a bubble too aggressively, so massive cut in the interest rate 2001-02
- Responsible for creating a housing bubble, 2003-07?
  - Too low interest rate to manage the tech bubble burst?
  - Too slow in increasing the interest rate to prevent the next bubble?
- FRB is again cutting the interest rate very quickly, 2007-2008
- Will FRB adopt the ZIRP (another lesson from Japan)?

Housing→ Financial→ Real Side

- Housing market burst
- Financial B/S damaged
  - Capital injection from private sectors were not enough → huge evaluation losses to Middle-east and Chinese SWF
- After Lehman Brothers, many financial markets became dysfunctional
- Wealth effects, confidence effects and real side (consumption and investment) decline

US→ Global

- Two channels
  - Stock prices decline
    - De-leveraging. US Financial institutions global fire sale of assets and repatriation → Dollar appreciates!
    - European institutions wanted dollar liquidity→FED swap
  - Exports decline, Re-coupling after all.
- All other countries felt the same down turn in financial markets and real side
  - Exports to US go down and ripple effects to upstream
  - Asia particularly hit hard

Monetary Policy: Global ZIRP

- Policy rates are all near zero (as of Feb 2009)
  - Japan, 0.1%
  - US, 0 – 0.25%
  - UK, 1%
  - ECB, 2% (but floor of “corridor” is 1%)

Deflation and Monetary Policy

- Deflation (=negative inflation rate) poses a particular difficulty on monetary policy
- [Nominal interest rate, zero bound problem] Traditional monetary policy instrument, the interest rate, may become zero but cannot become negative;
  - zero interest rate policy (ZIRP)
- More deflation (lower inflation rate) will raise the real interest rate, bad influence on investment and on the economy, thus a deflation spiral
- Real interest rate = nominal rate – inflation rate

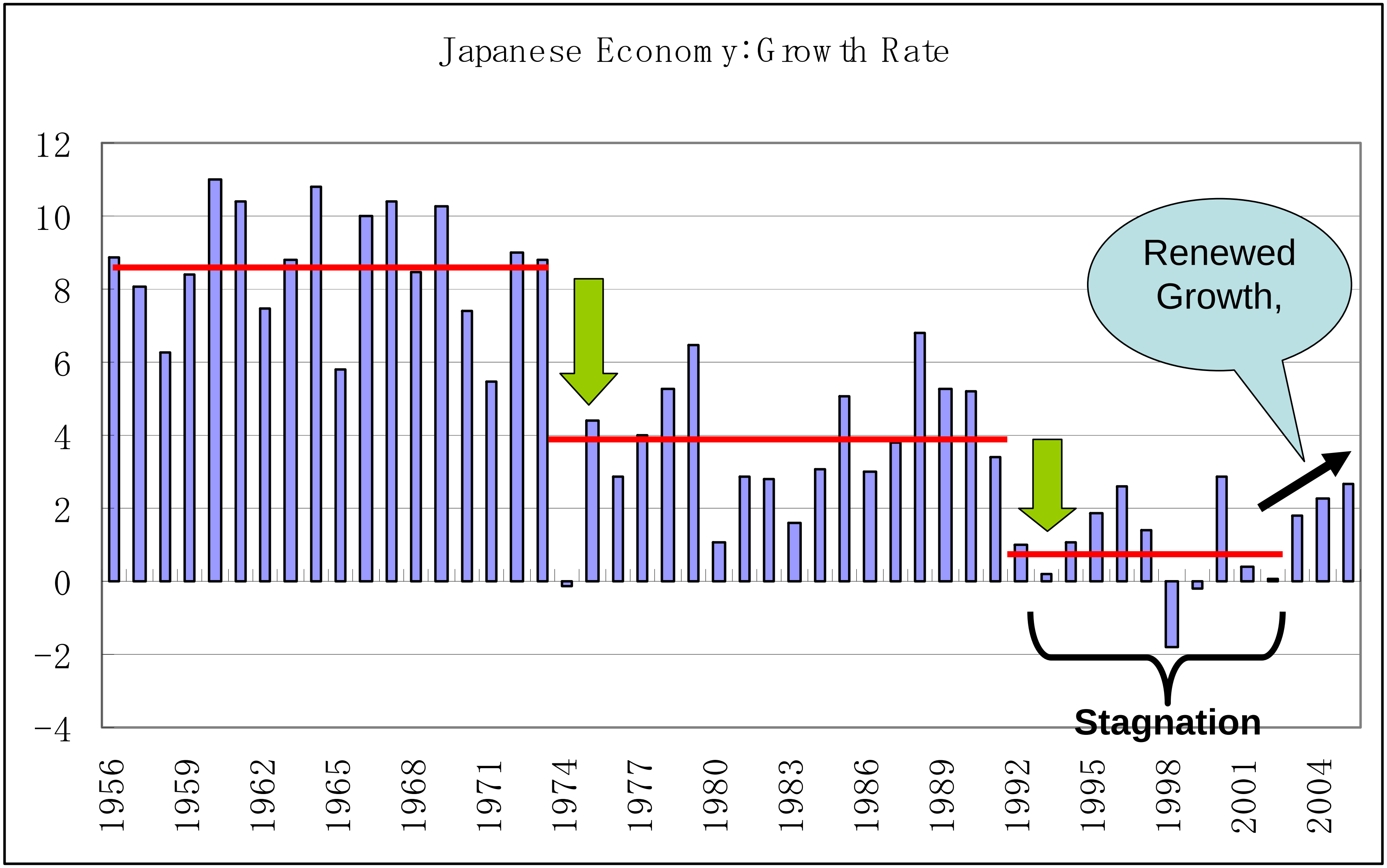
- So, what do you do? → Quantitative Easing (QE)

QE, several types

- QE = expansion of balance sheet of the central bank, by buying risk assets
- BOJ-excess reserve targeting, 2001-2006
- BOJ-purchase of Long government bonds
- FRB, credit easing
  - No quantitative target
  - Buy assets of dysfunctional markets
- Other options include
  - Purchase of equities (BOJ did, but not as QE)
  - Purchase of foreign assets (=unsterilized intervention)

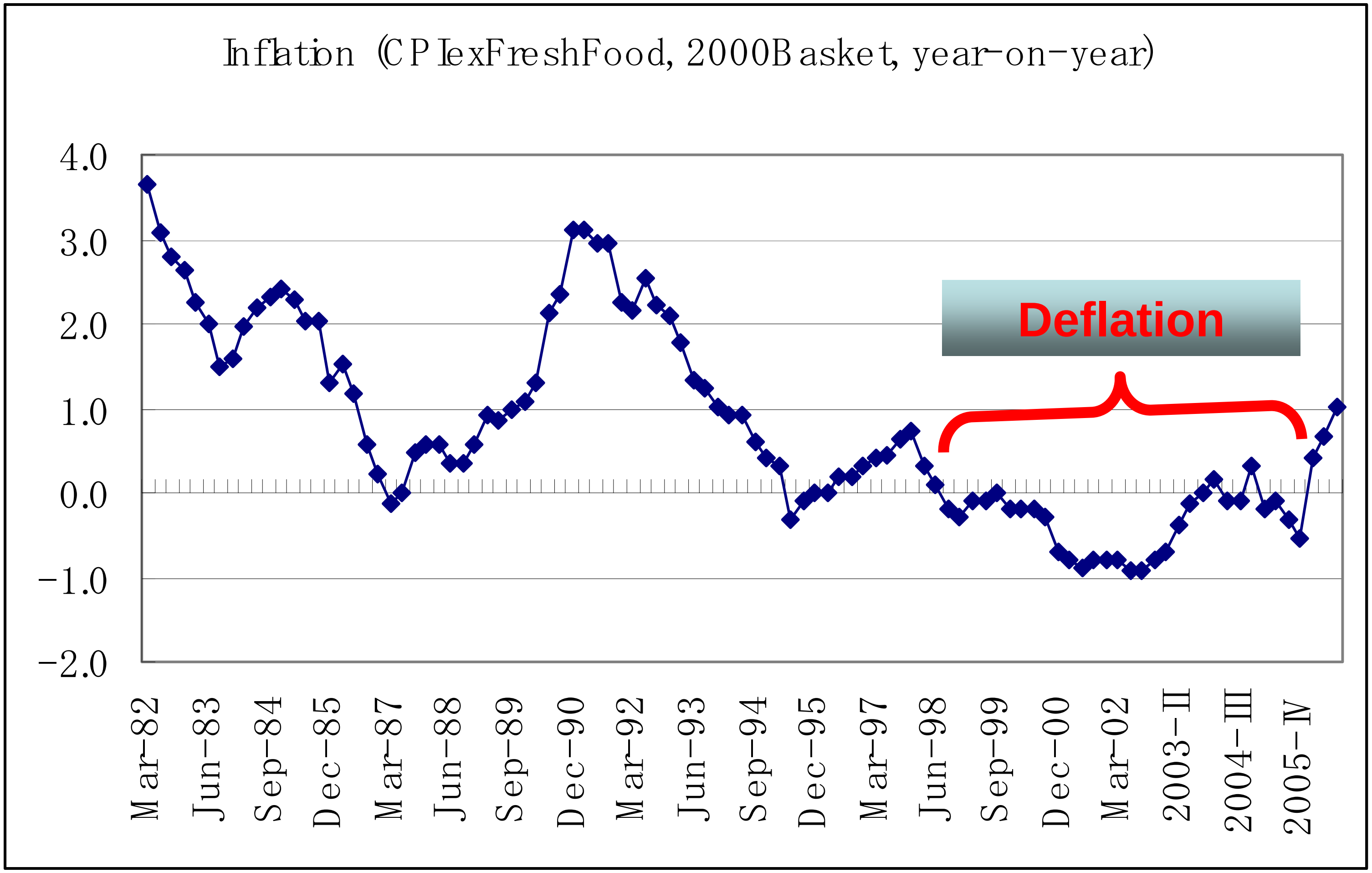
Japan’s experience, 1990s-2008

- [Lost Decade] Japanese economy is on the steady recovery process after 10 years of stagnation, 1993-2003
- [Deflation] Deflation (negative inflation rate) was part of the cause and results of economic stagnation, 1998-2006
- [ZIRP] Against deflation and stagnation, traditional monetary policy (interest rate) became ineffective at ZIRP (1999-2000, and 2001-2006)
- [QE] BOJ targeted the excess reserves; increased purchase of JGB (Longterm government bonds); expanded
- [Not QE] BOJ purchases equities from commercial banks, but this was not part of monetary policy
- [Not QE] MOF did large interventions (2003-2004), partly coincided with expansion of excess reserve target—a unsterilized intervention? Probably not.

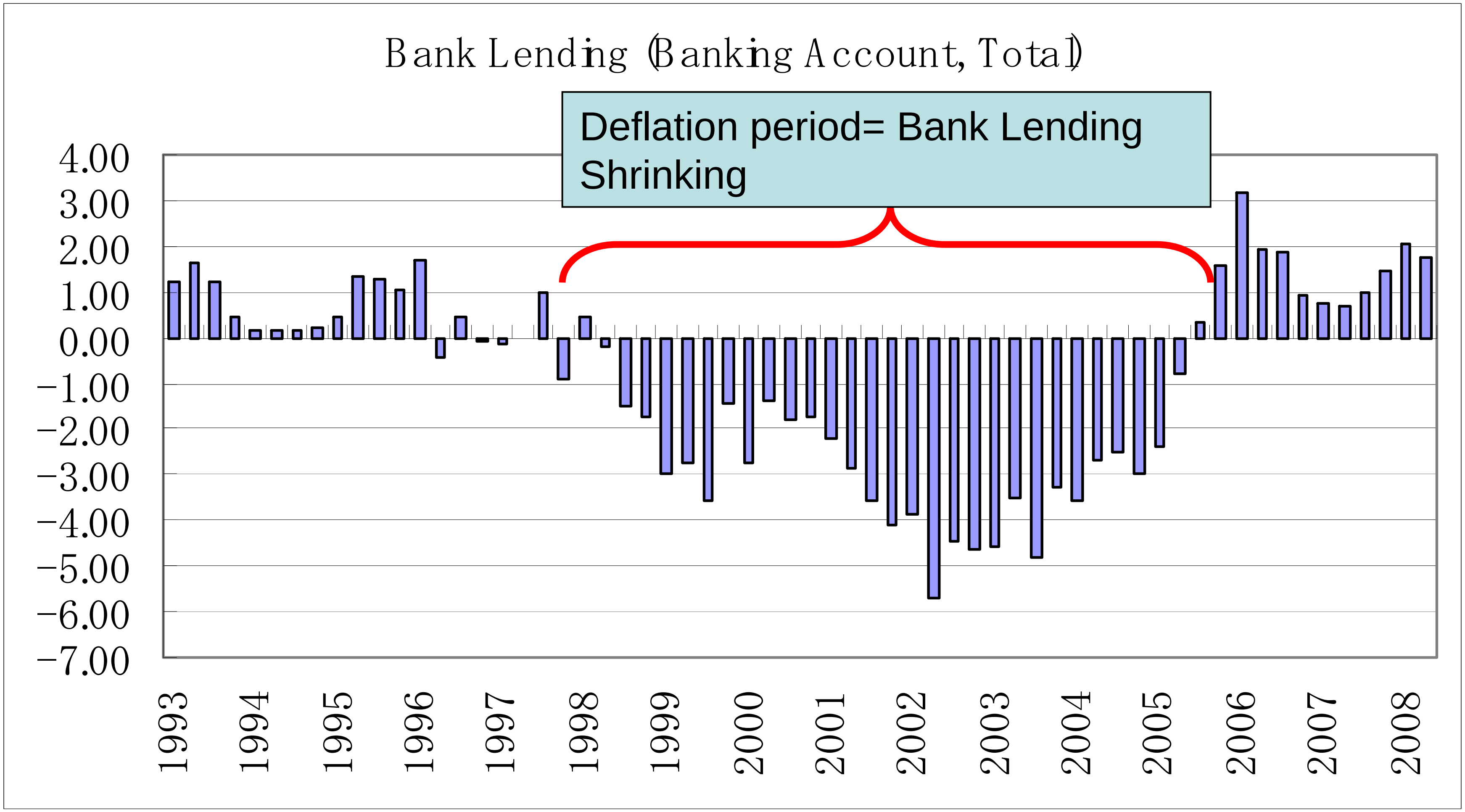


Japanese Economy:Growth Rate
12
10
8
6
4
2
0
−2
−4
1956
1959
1962
1965
1968
1971
1974
1977
1980
1983
1986
1989
1992
1995
1998
2001
2004
Renewed Growth,
Stagnation

Deflation


Inflation (CPI ex Fresh Food, 2000 Basket, year-on-year)
4.0
3.0
2.0
1.0
0.0
−1.0
−2.0
Mar-82
Jun-83
Sep-84
Dec-85
Mar-87
Jun-88
Sep-89
Dec-90
Mar-92
Jun-93
Sep-94
Dec-95
Mar-97
Jun-98
Sep-99
Dec-00
Mar-02
2003-II
2004-III
2005-IV
Deflation

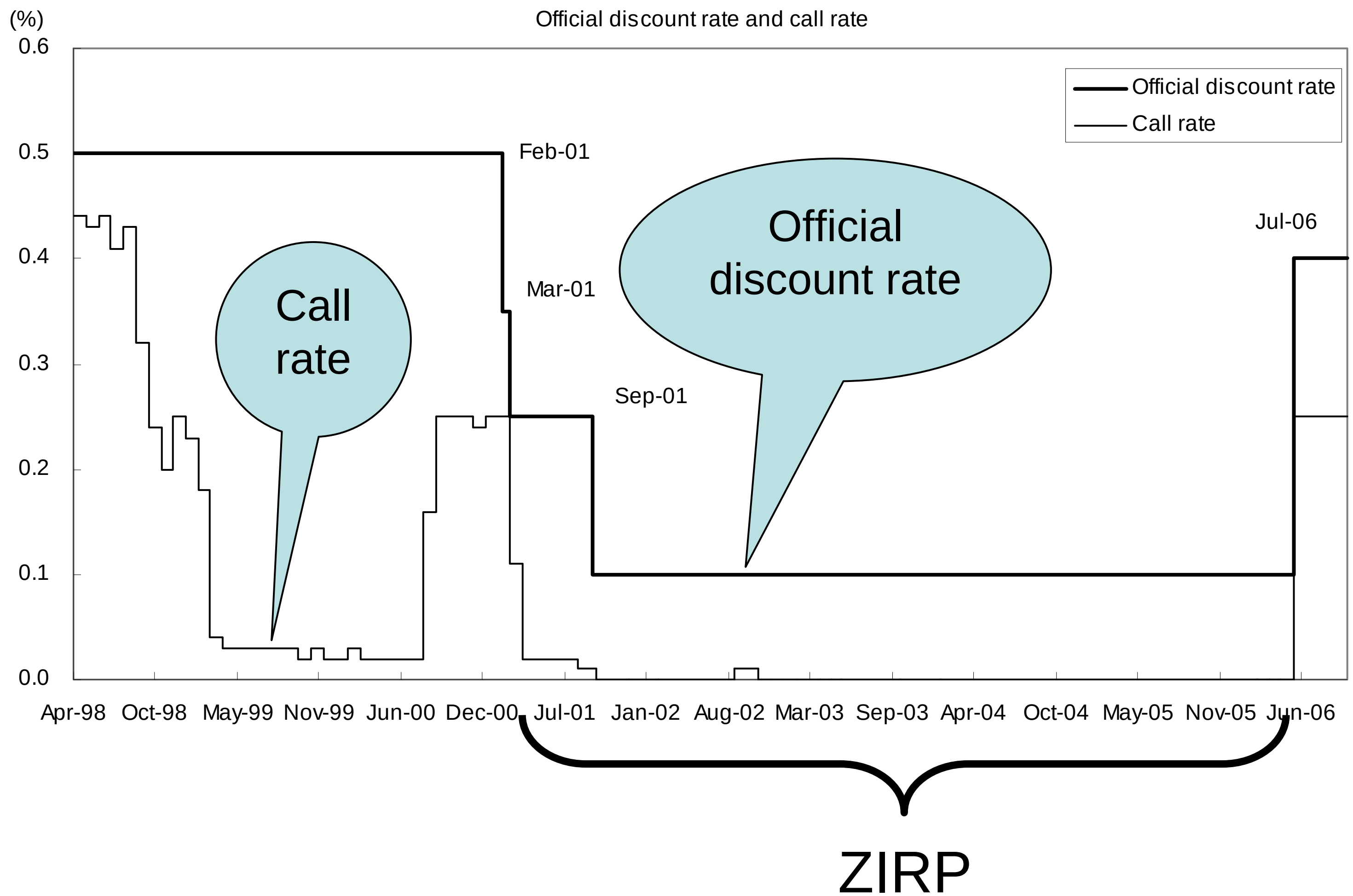
Bank Lending Remained shrinking



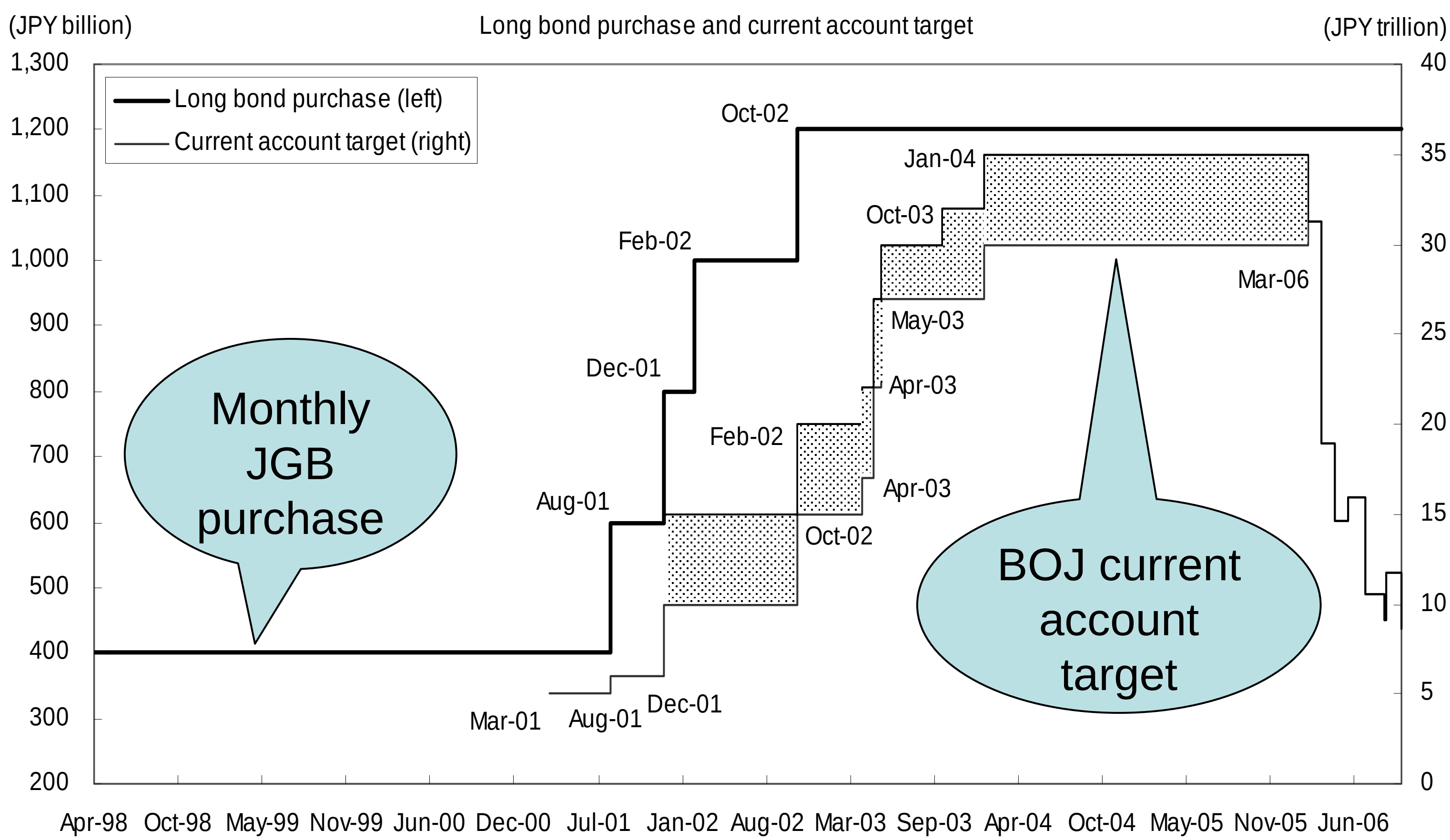
BOJ policies in details: summary

- Some mistakes
  - Not acting early: ZIRP after deflation
  - Premature exit in August 2000
  - Commitment of late exit became not credible → Excess reserve targeting became part of commitment strategy
  - Communication was bad, 1998-2002, not committed to do everything to prevent deflation
- Unconventional policy to fight deflation
  - Increase in purchasing Long bonds (JGB)
  - Quantitative Easing (QE)=targeting BOJ current account balances (basically targeting excess reserves)
    - No worry for liquidity even for weak financial institutions, possible to encourage taking risks
    - Flattening the yield curve (policy duration effects)
  - Commitment of keeping ZIRP until the economy is “stably out of deflation”
    - Flattening the yield curve (expectations effect)

Official Discount rate and the call rate has been reduced (ZIRP)



The purchase of JGBs and current account balances (QE excess reserves)



First ZIRP, Feb 1999-Aug 2000

- February 1999. ZIRP introduced.
  - To lower the policy rate to 0.15% immediately, and induce the rate lower as soon as possible
  - By mid-March, the rate was near zero, and in April, Governor mentioned that ZIRP would continue "until the deflation concern would be dispelled" – no precise definition
- August 2000. ZIRP lifted
  - Inflation rate was still negative
  - Controversial decision
    - Votes were 7 to 2
    - Overriding Government motion "to delay voting" (BOJ Law)
  - Turned out to be a mistake, but was a mistake even at the real time

Too early exit—August 2000

- Outlook document, October 2000. MPC Members' forecasts for CPI (excluding fresh food) were ranged from -0.5 to -0.1. Just two months earlier, they voted to raise the interest rate (with no major events in between).
- In sum, the too-early exit, from ZIRP, not only in hindsight but in real time, revealed that the Bank was too eager to raise the interest at the earliest opportunity.

Reintroduction of ZIRP with QE

- March 2001
  - Instrument target, change from the policy interest rate to the current account balance (=required reserve + excess reserve)
  - Setting target current account balance higher than required reserve.
  - In essence, ZIRP + QE
  - Exit condition (clearer than 1999 ZIRP):
    - Until “stably at zero or above zero”
    - Later “stably” = a few months

BoJ “normalizing” the interest rate

- March 2006, end of quantitative easing
- July 2006, raising the policy interest rate to 0.25%.
- February 2007, raising interest rate to 0.5%.
  - Core inflation rate, still at 0.1%. Why in hurry?
  - As the economy becomes normal, the interest rate should be normalized--BOJ

Global ZIRP, coming?

- Japan falling back to near ZIRP (0.1%)
- FRB is de facto ZIRP (0 – 0.25%) with credit easing

- How about Europe?
  - BOE toward ZIRP?
  - ECB toward ZIRP?
  - Sweden, Switzerland, …

Global ZIRP, difficulty

- ZIRP + QE by one country (say, Japan) would tend to depreciate that currency (yen)
  - Hasten recovery by stimulating exports, and prevent deflation
- However, *Global* ZIRP means no country can rely on this channel
- Trade surplus country with positive growth should not depreciate the currency—take the burden of appreciation

Fiscal Policy

- Are we all old-fashioned Keynesians?
- What happened to all those theories that deny effectiveness of fiscal policy?
  - Ricardian equivalence
  - Mundell-Flemming model
  - Politicians' rent-seeking
- Is the fiscal stimulus package (of US, China, France, others) size too small or too large?
- Fiscal stimulus to favor domestic companies and markets → Need to protect employment → Are we heading toward global protectionism?

END