Worldwide Inflation, Bank Regulation, and Monetary Reform: Exchange Rates or Interest Rates?

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The Role of Central Banks in Financial Stability: How Has it Changed?

Federal Reserve Bank of Chicago

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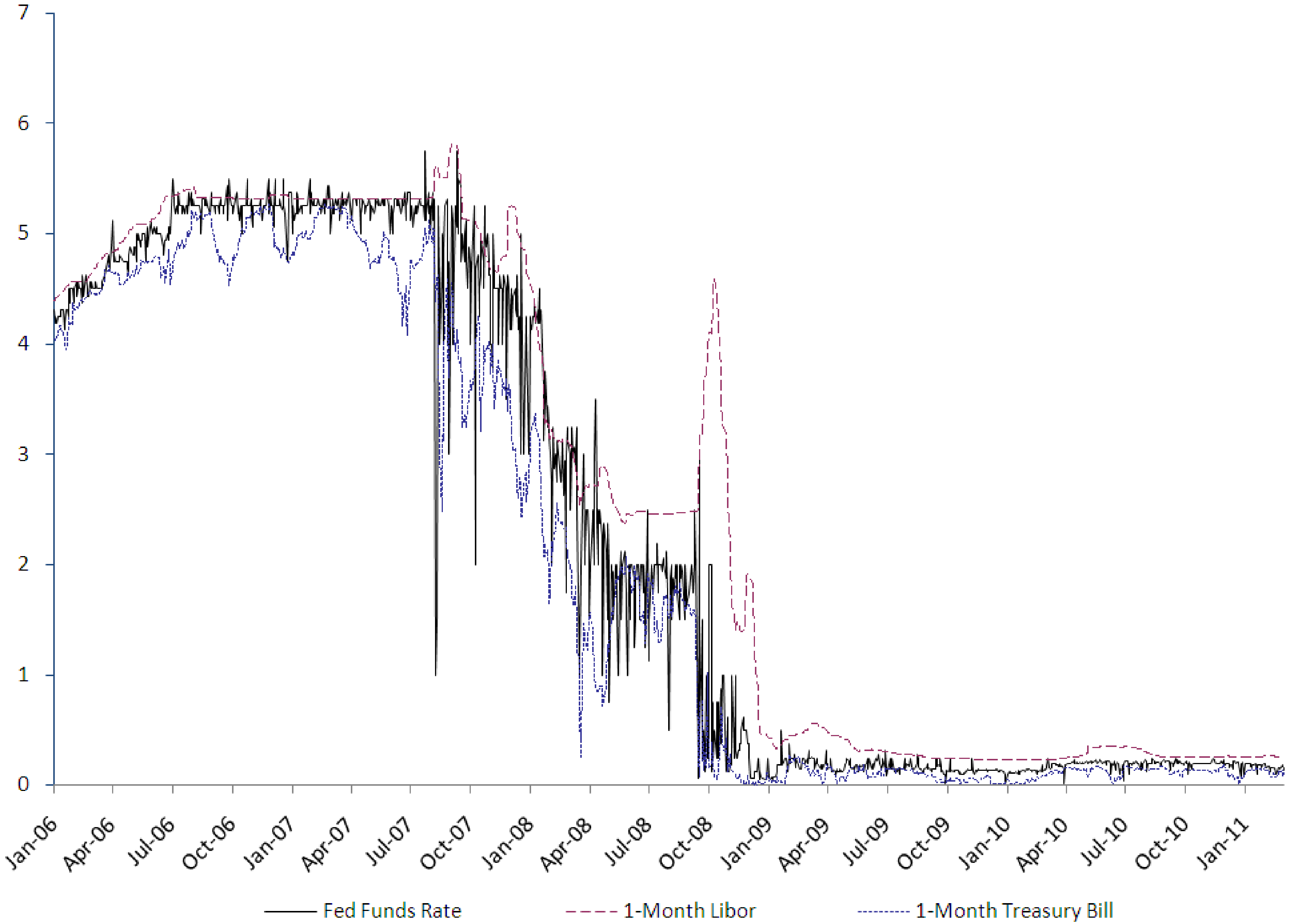
Overview

- Problem with fast moving financial events
- The main paper deals with the world as it was before August 2011
- Ultra-low interest rates in stagnant mature industrial economies induce “hot” money flows into fast growing Emerging Markets (EM) with naturally higher interest rates
- Then the flow reverses from August into October 2011 because of a threatened bank credit crunch from the euro crisis

Figure 1: U.S. Short-term Interest Rates (%)



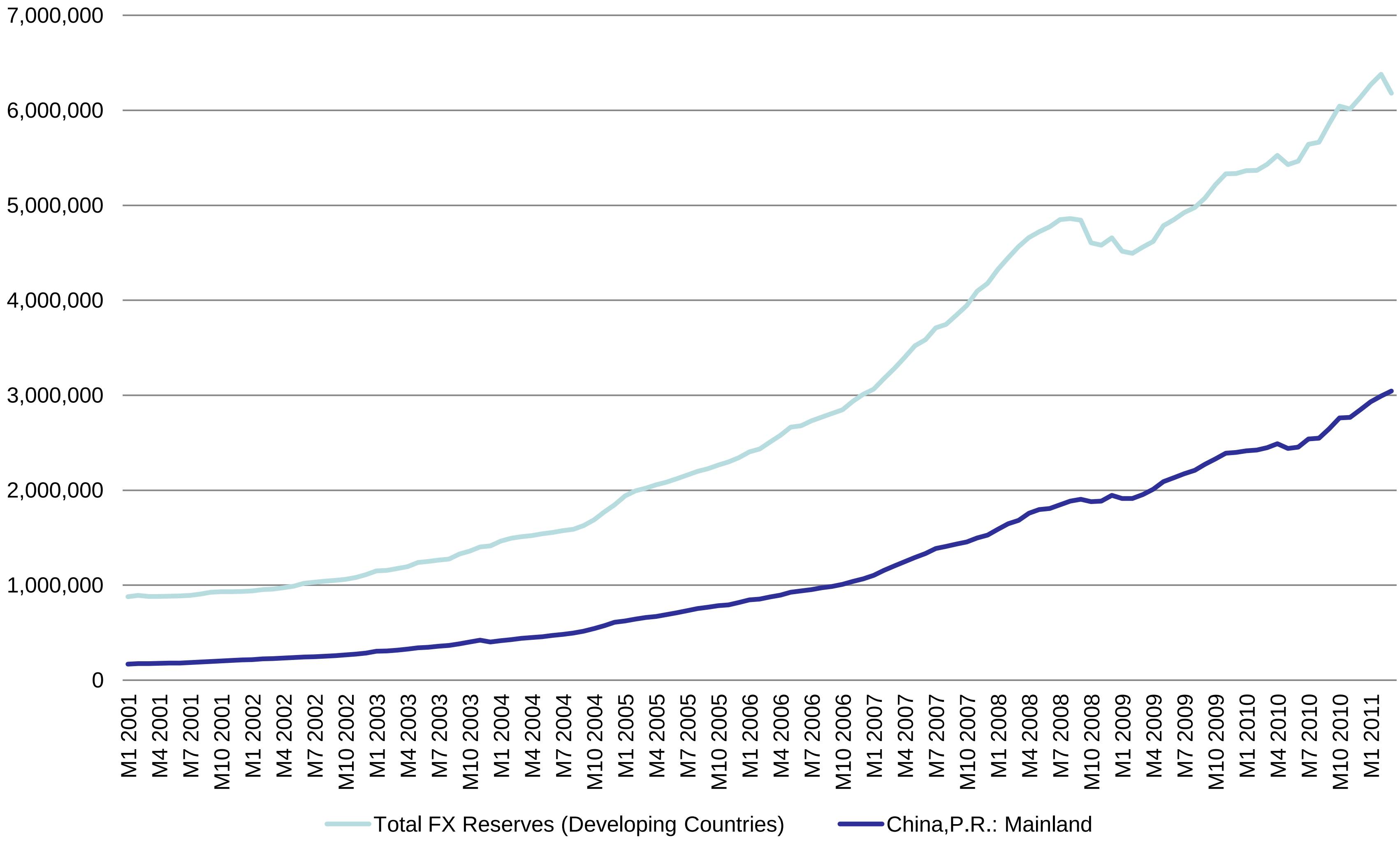
Source: Federal Reserve Economic Data and bloomberg

Interest Rate Structure, China and US

	China				United States			
	Deposit Rate	Lending Rate	Interbank Overnight	GDP Growth	Deposit Rate	Lending Rate	Federal Funds Rate	GDP Growth
2000	2.25	5.85		8.37	6.65	9.23	6.24	6.39
2001	2.25	5.58		10.41	3.73	6.92	3.89	3.36
2002	1.98	5.31	2.4	10.50	1.88	4.67	1.67	3.46
2003	1.98	5.31	2.18	13.41	1.23	4.12	1.13	4.70
2004	2.25	5.58	2.01	17.69	1.79	4.34	1.35	6.51
2005	2.25	5.58	2.01	16.38	3.76	6.19	3.21	6.49
2006	2.52	6.12	1.31	18.76	5.27	7.96	4.96	6.02
2007	4.14	7.47	1.97	19.62	5.25	8.05	5.02	4.95
2008	2.25	5.31	2.21	18.46	3.05	5.09	1.93	2.19
2009	2.25	5.31	0.83	9.57	1.12	3.25	0.16	-1.74
2010	2.5	5.56	2.24	12.88	0.518	3.25	0.17	3.57

Source: IMF.

Emerging Markets’ Foreign Exchange Reserves ($MM)



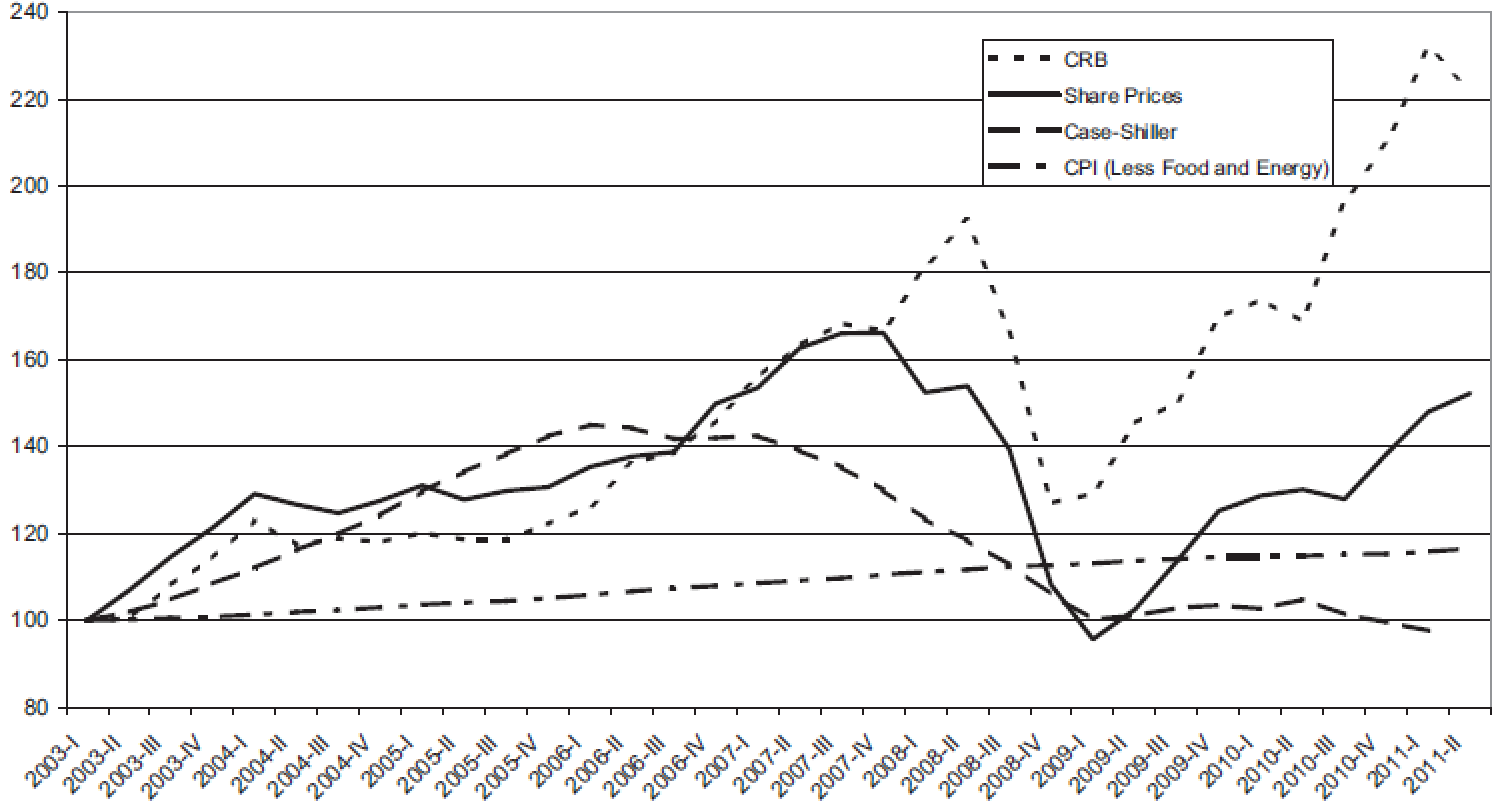
Source: IFS

Emerging Markets (EM) include the following countries: Russia, Poland, Czech Republic, Hungary, Romania, Ukraine, Turkey, Israel, UAE, Saudi Arabia, South Africa, China, India, Hong Kong, Korea, Singapore, Indonesia, Malaysia, Thailand, Brazil, Mexico, Chile, Peru, Colombia, Argentina, Venezuela

The Malfunctioning Dollar Standard

– Near zero U.S. short-term interest rates launch hot money outflows into Emerging Markets (EM) including China.
– EM central banks intervene to prevent their currencies from appreciating precipitately
– They lose monetary control and begin inflating
– Primary commodity prices rise worldwide
– This inflation on the dollar’s periphery only registers in the U.S. “core” CPI with a long lag

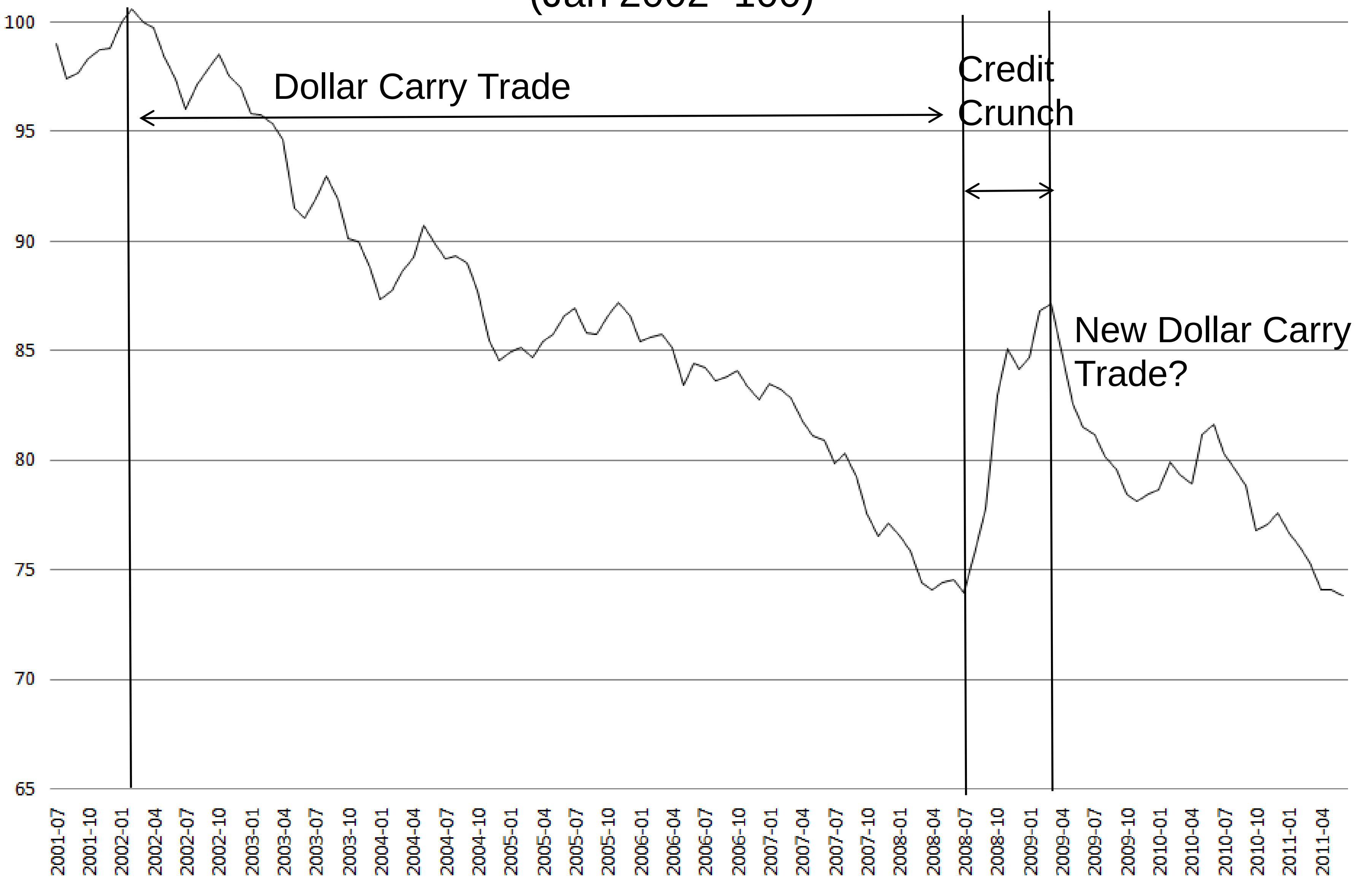
The Greenspan-Bernanke Bubble Economy (From Steve Hanke)



SOURCES: International Monetary Fund, *International Financial Statistics*; Federal Reserve Bank of St. Louis; Standard and Poor's; Bloomberg and Author's Calculations.

Figure 5. The Nominal Broad Dollar Index Movements

(Jan 2002=100)



Source: Federal Reserve Economic Data

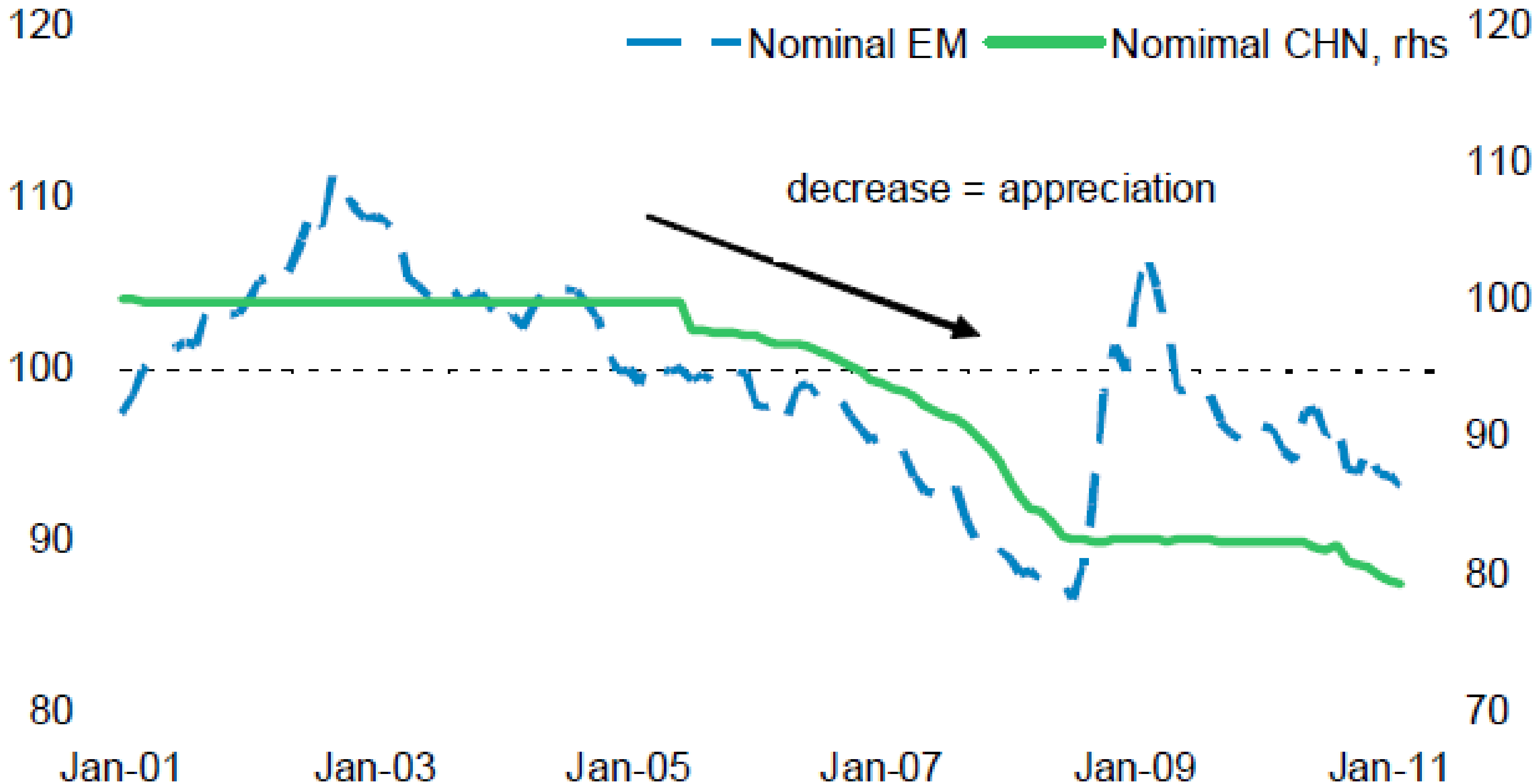
Returns on Carry Trades

(2000-2007)

Funding Currency	Interest rates		Returns from	Returns of	Investment
	Funding	Investment	Appreciation	Carry trades	Currencies
US Dollar	3.4	10.2	1.1	7.9	Brazil, Mexico, and Canada
Euro	3.2	7.4	1.0	5.2	Iceland, Poland, and Czech Republic
Japanese Yen	0.1	5.3	5.2	10.7	Australia, Korea, and New Zealand

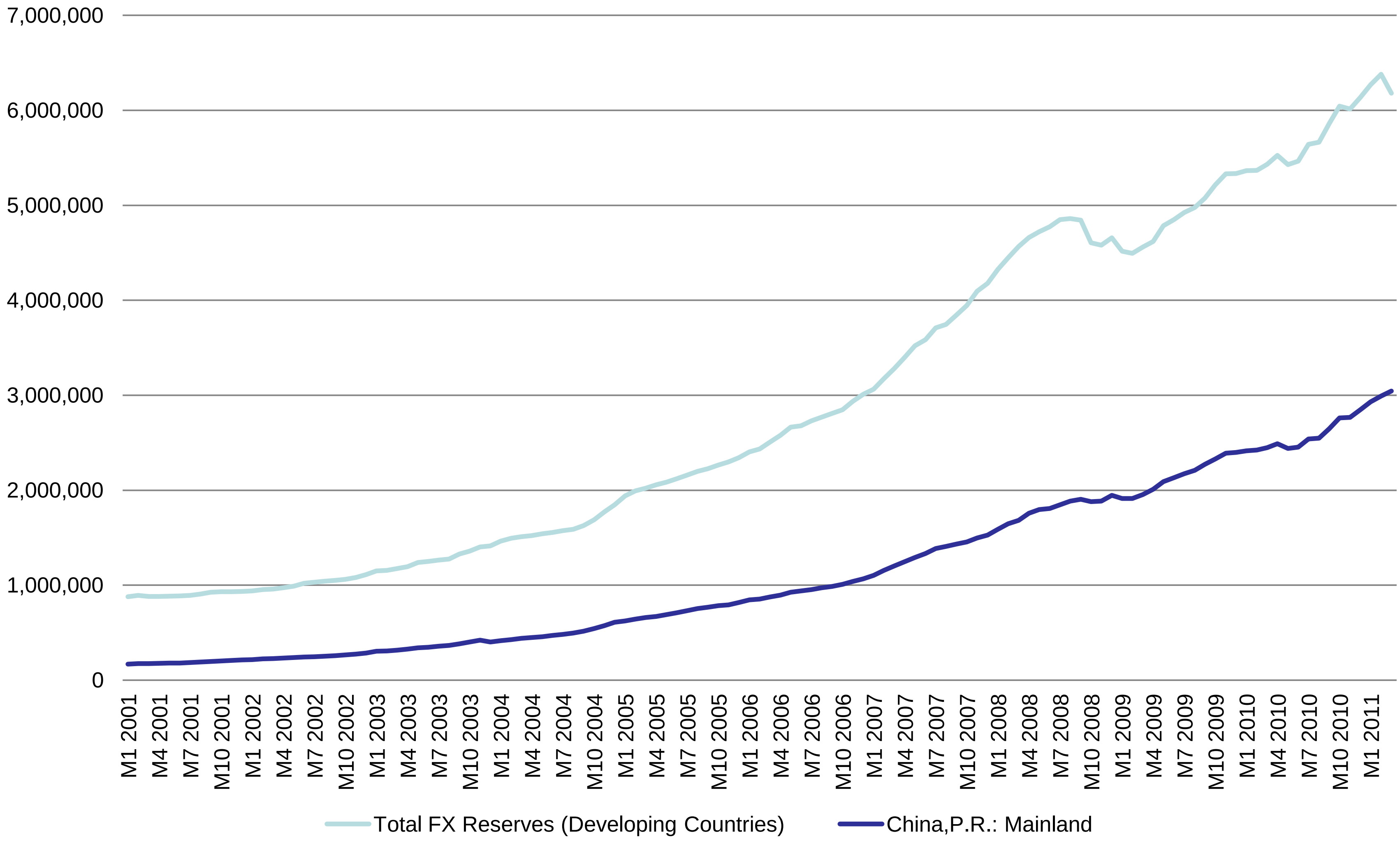
Data Source: *IMF*

EM and CHN Nominal Exchange Rate Appreciation, Jan'05 = 100



Source: Haver Analytics, Morgan Stanley Research

Emerging Markets' Foreign Exchange Reserves ($MM)



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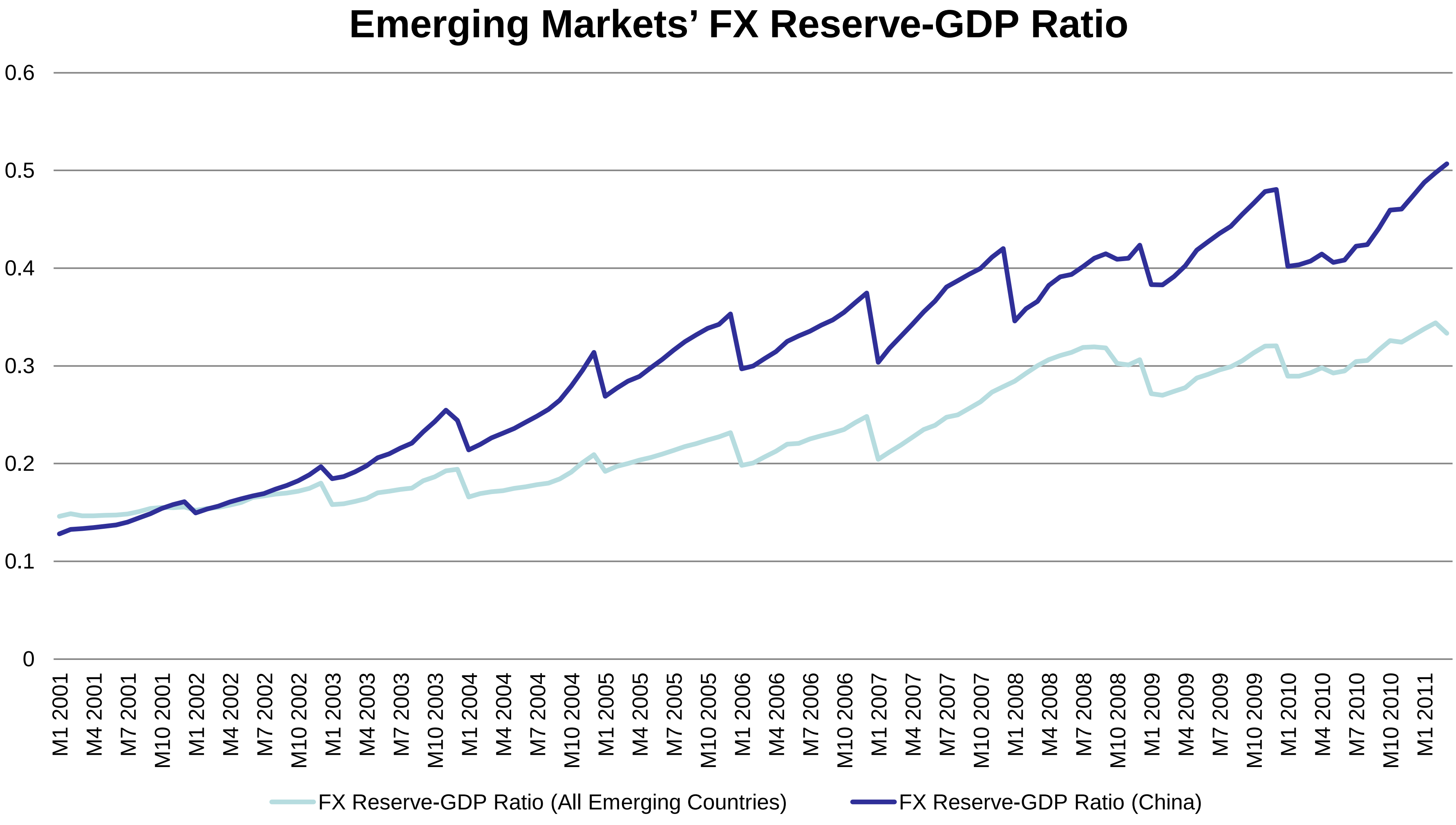

Source: IFS

Notes: The ratio uses annual GDP of the corresponding year in the denominator. The months in 2011 uses 2010 GDP in the denominator.

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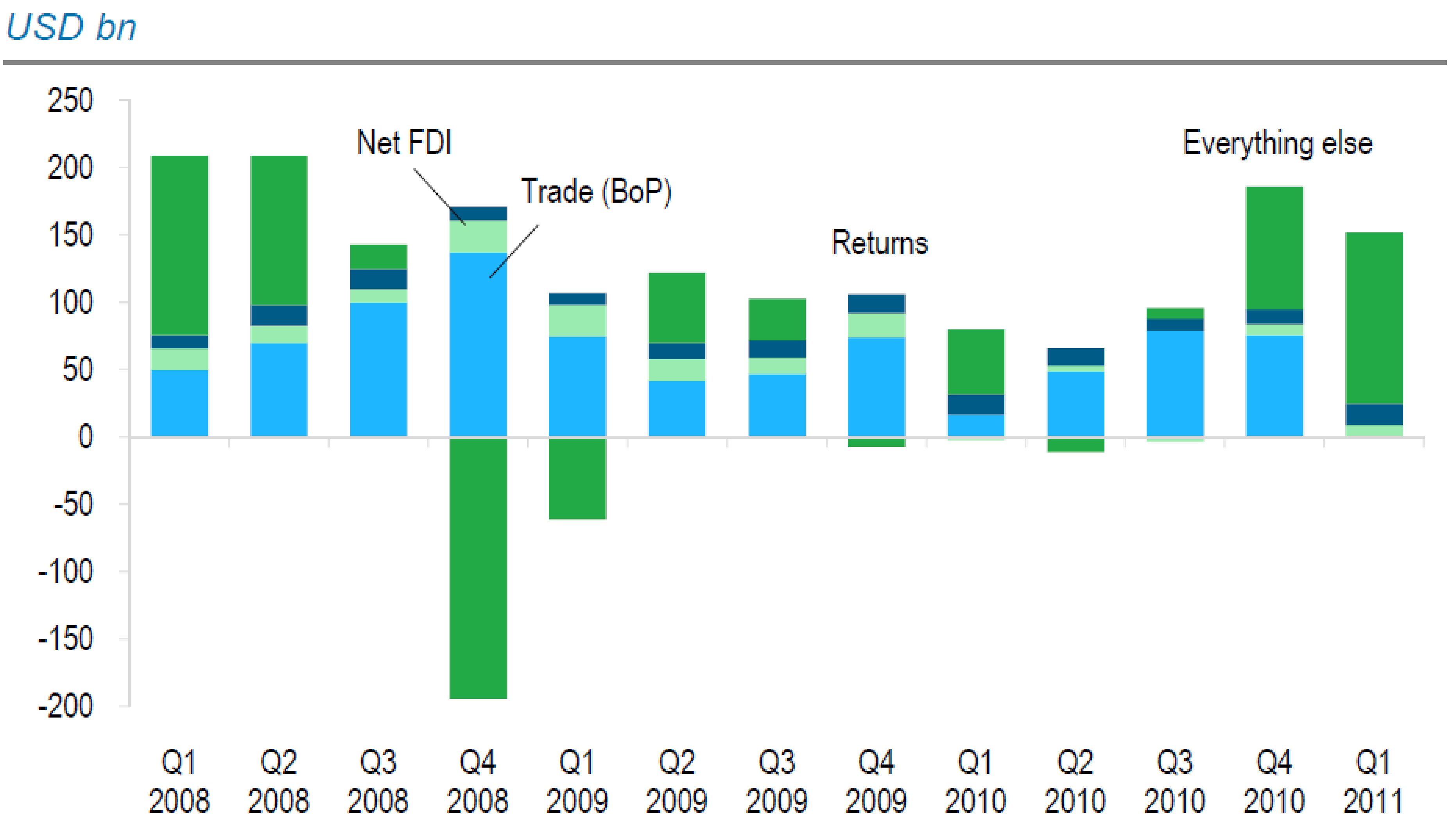
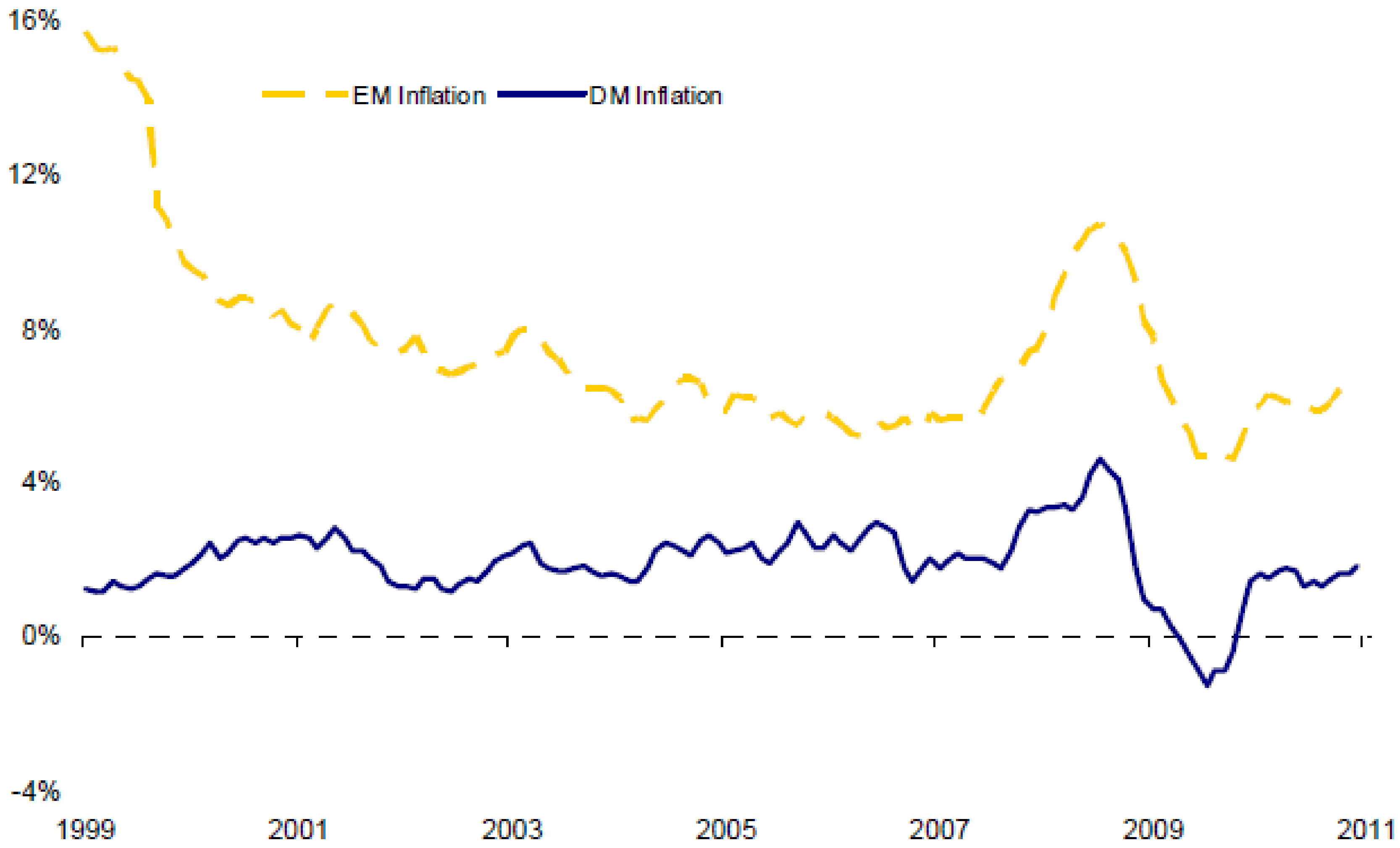
Composition of China’s Foreign Exchange Reserve



Source: Standard Chartered Research

Emerging Markets (EM) and Developed Markets (DM) Inflations



Source: Haver Analytics, Morgan Stanley Research

Developed Markets (DM) include the following countries: United States, Germany, France, Italy, Spain, Japan, United Kingdom, Canada, Sweden, Australia

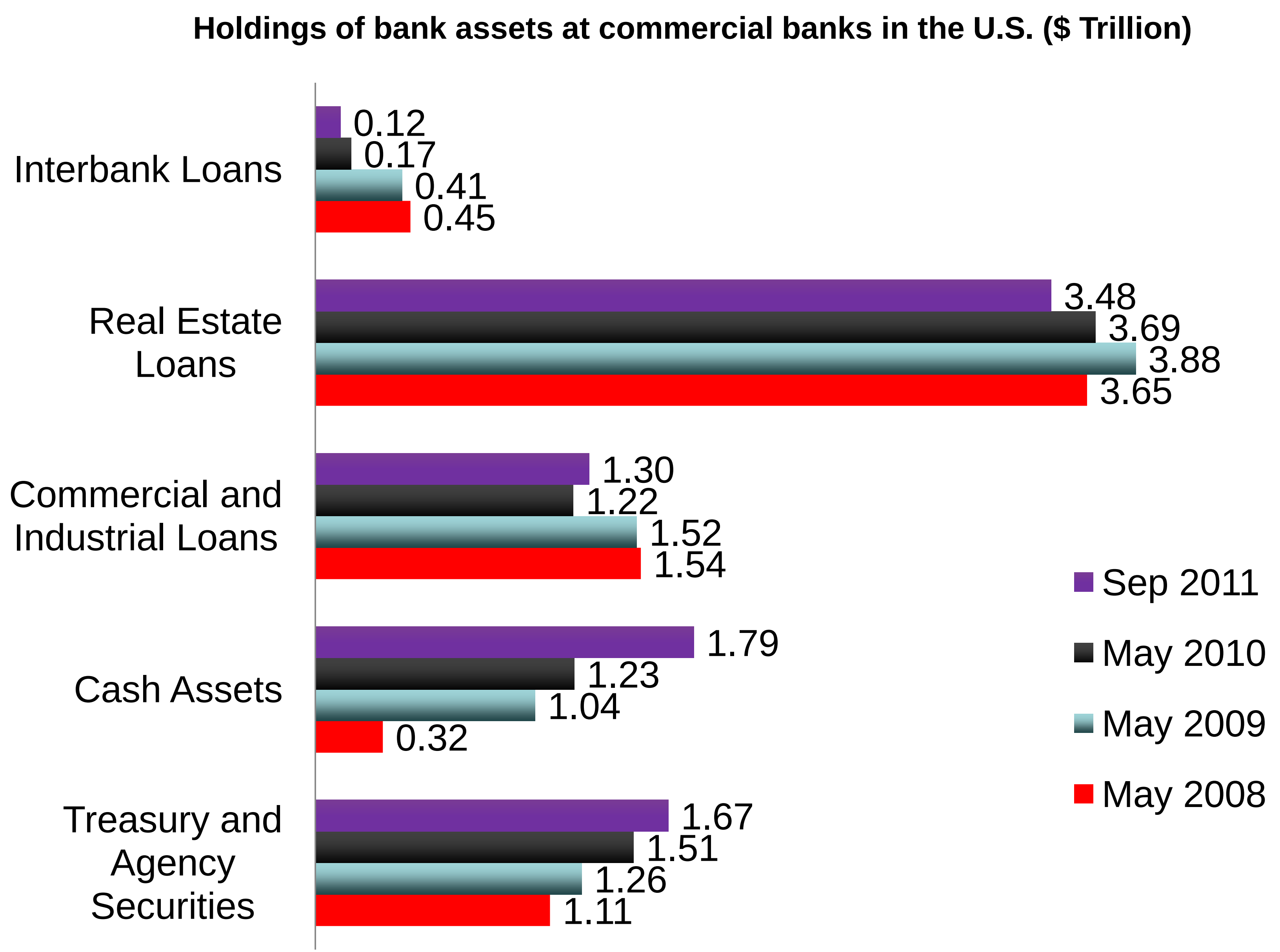
Bank Regulation In China

- PBC imposes controls on capital inflows. Banks limited from borrowing dollars to convert into RMB. More difficult for banks to provide forward cover to Chinese exporters who want to sell future dollar earnings forward.
- PBC sterilizes some of the domestic monetary effect of its foreign exchange purchases by
  (1) selling central bank bonds; and
  (2) increasing reserve requirements on banks

(2) is preferred to (1) to prevent higher interest rates attracting more hot money. But China's int. rates are now too low for fighting inflation (now over 6%) or preventing low-yield investments.

Bank Regulation in U.S.

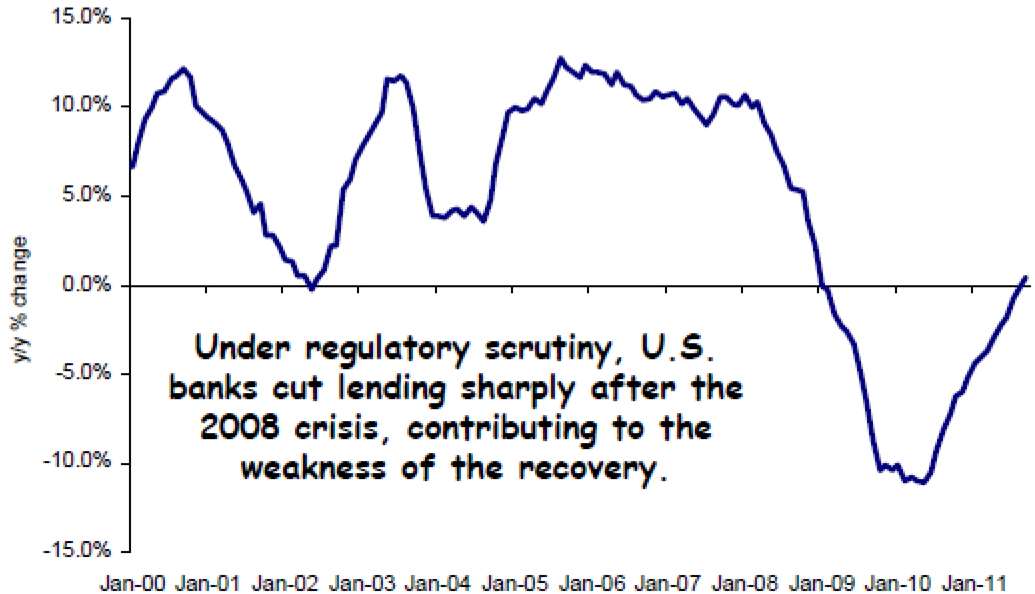
- Low or near zero interest rates disrupts bank intermediation
- Collapse in Interbank market restrains retail bank lending



Source: Federal Reserve Economic Data

US Pro-cyclical Bank Lending Policy

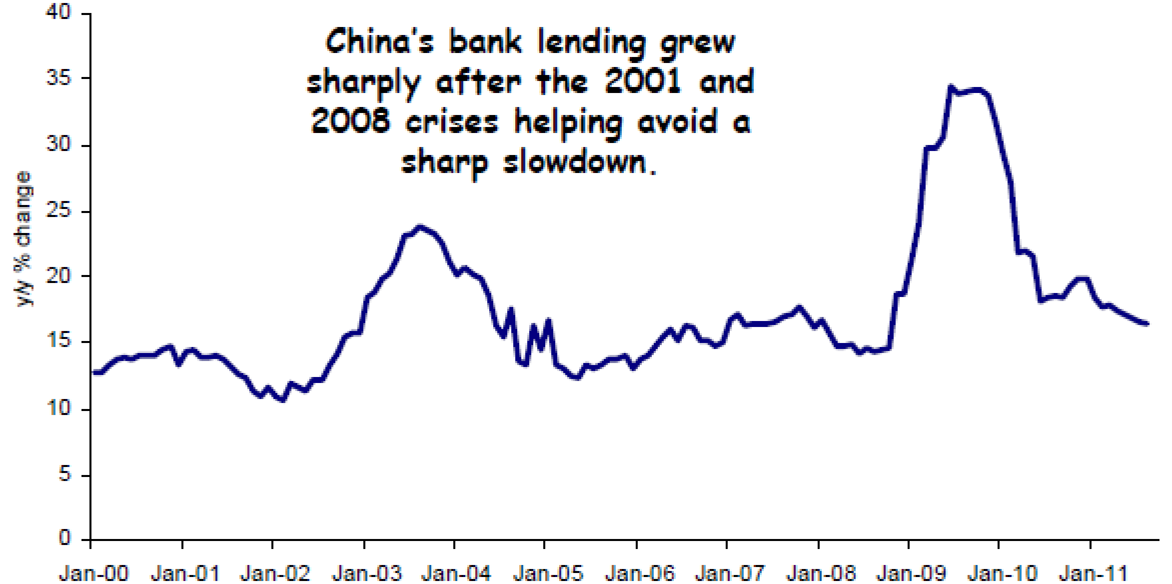
(last obs. August 2011, estimate September 2011)



Source: Federal Reserve; Encima Global

China's Countercyclical Bank Lending Policy

(last obs. August 2011)



Source: Bloomberg; Encima Global

Countercyclical Bank Lending: U.S. and China Compared (D.Malpass)

- **United States**: bank credit is *pro-cyclical*

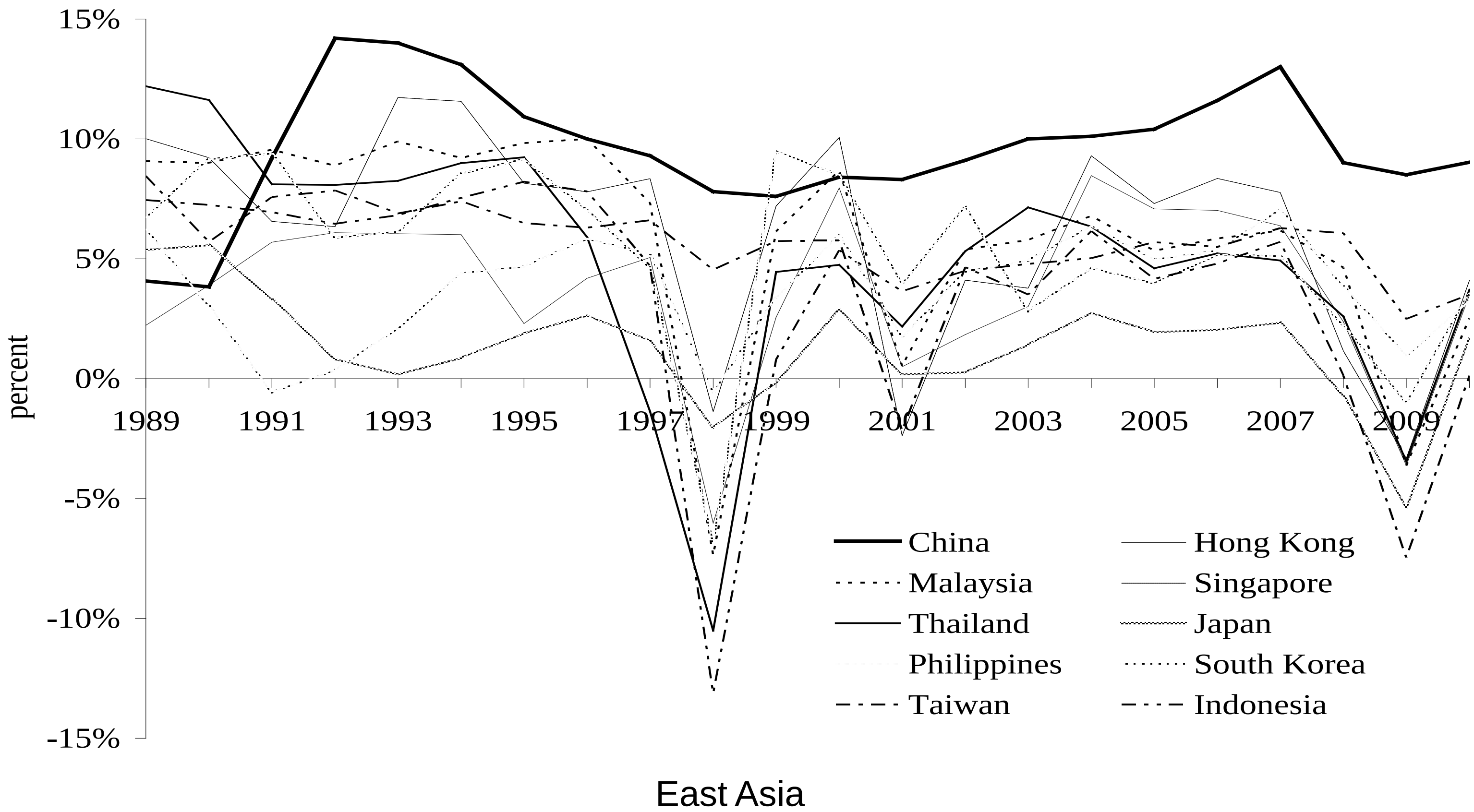
  -animal spirits with few controls in booms

  - heavy controls after busts: increased bank capital, mark-to-market accounting, closer regulatory scrutiny.
- **China:** bank credit is *counter-cyclical*

  -lending restricted during booms with rationing

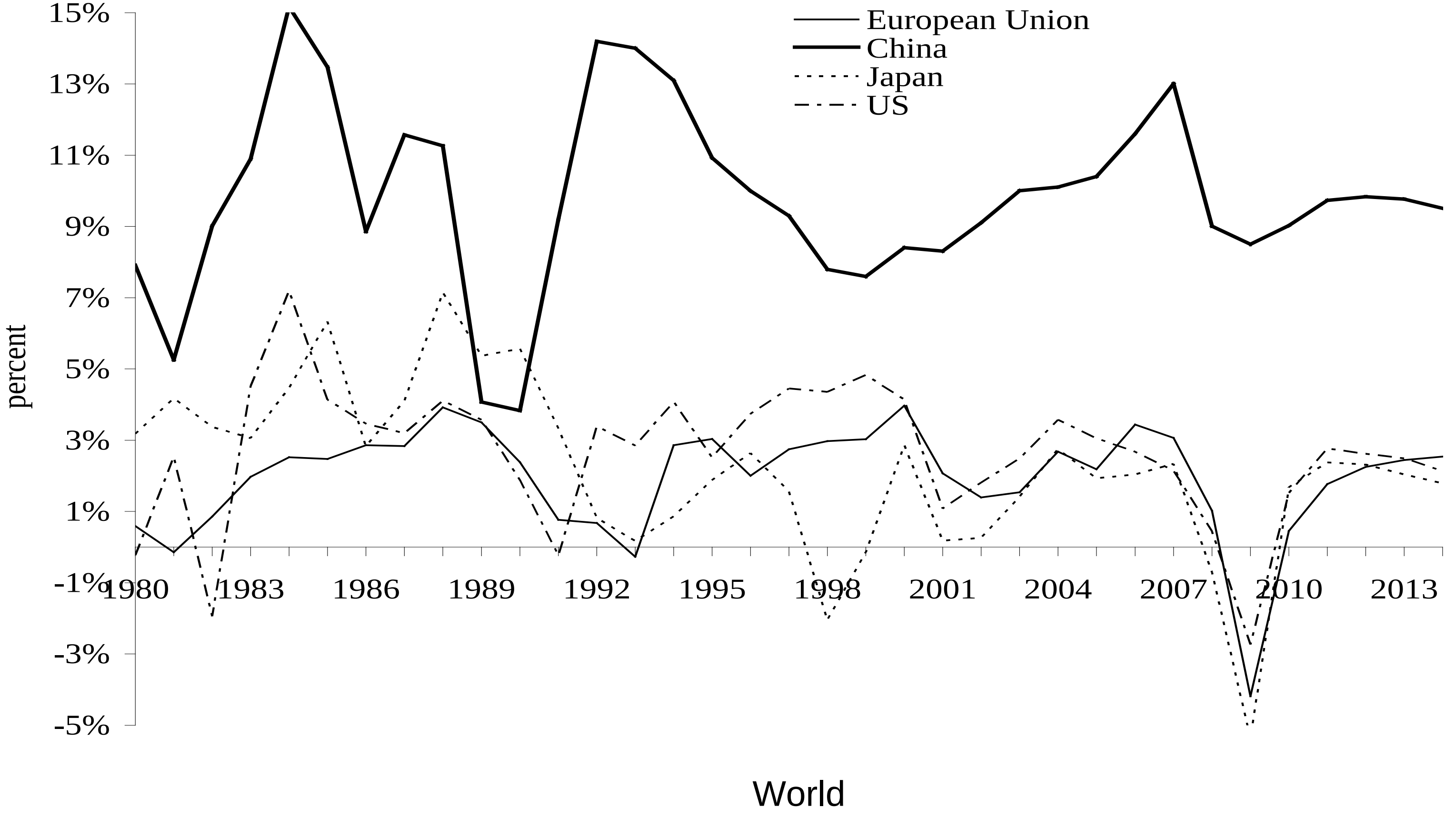
  - lending encouraged (required?) in a bust
- A natural consequence of indirect regulation in U.S. against state ownership of banks in China?

Real Growth in East Asia:
China as a Stabilizing Influence



Source: IMF.

Global Growth Performance: China Relatively Stable after 1994



Source: IMF.

The Return of Stagflation to U.S.?

Consequence of near-zero U.S. Int Rates

(1) Worldwide inflation that eventually hits U.S.

(2) Disrupts bank intermediation within the U.S.: bank credit continues to fall, employment and growth remain stagnant

Springing the U.S. Stagflation Trap

– Federal Reserve gradually raises short rates to some modest level, say 2 percent—in concert with ECB, BOJ, and BOE to damp FX movements among mature economies

China as an Immature Creditor

- China has a large net saving surplus ($S - I$) as manifested in its large trade surplus
- But China is also an *immature* creditor: claims on foreigners are largely in dollars and not RMB
- This *currency mismatch* makes it too risky for domestic banks, insurance companies, or pension funds to hold the dollar claims.
- Floating the RMB becomes impossible.
- Thus international financial intermediation devolves to government agencies: PBC, CIC, EX-IM Bank, and so on

Exchange Rate and the Trade Balance

X − M = S − I = Trade (Saving) Surplus

X is exports and **M** is imports broadly defined,

S and **I** are gross domestic saving and investment

Two theoretical Approaches:

(1) Microeconomic focus on **X − M** : the elasticities approach to the trade balance; and

(2) Macroeconomic focus on **S − I** : the absorption approach to the trade balance.

Effect of Appreciating the Renmimbi ?

- *Elasticities Approach*:

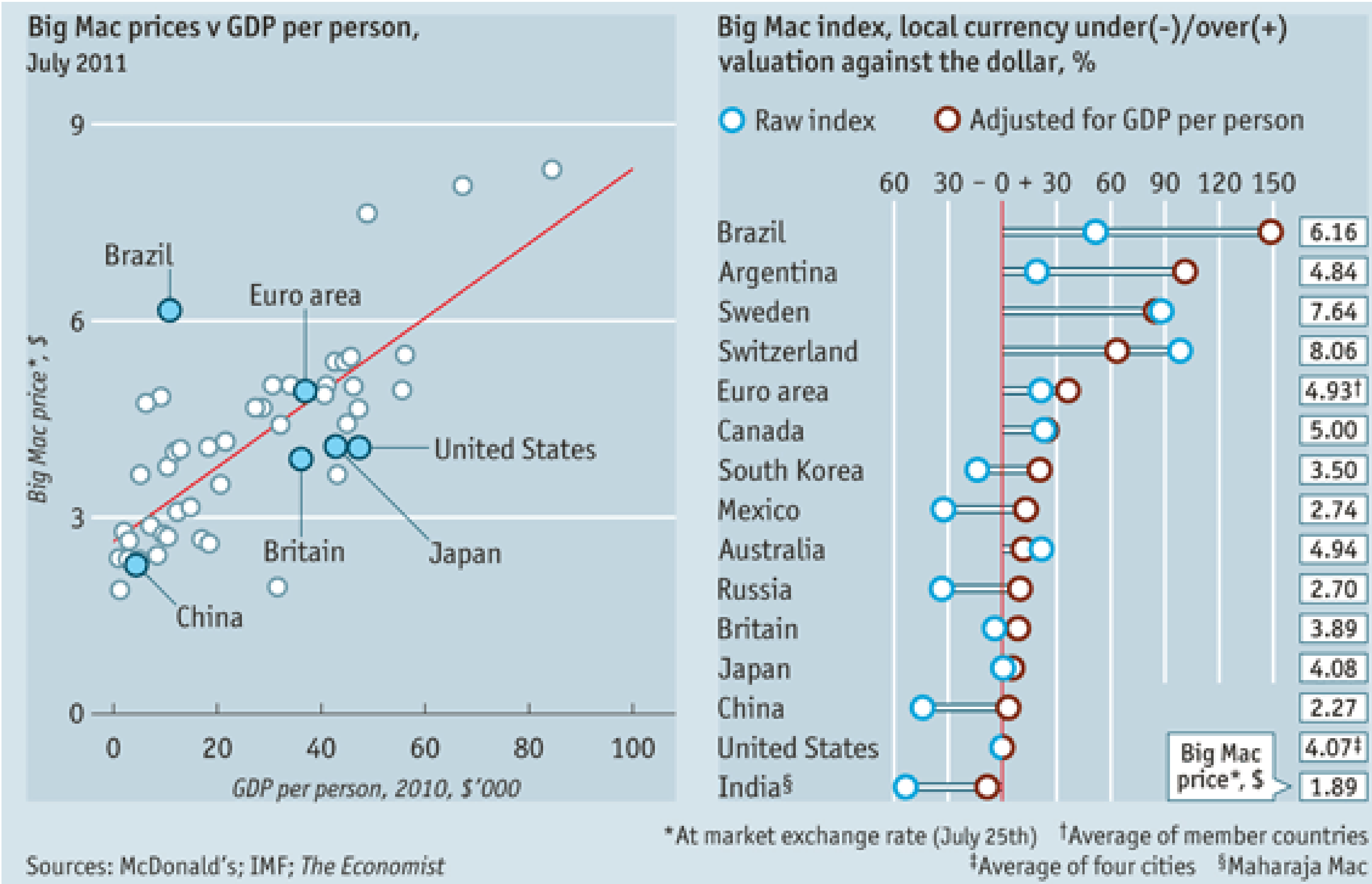
  X ↓ **M**↑ and trade surplus declines

- *Absorption Approach*:

  S ↕ **I**↓ and trade surplus ?

  But if **I** is sensitive to the exchange rate and slumps, trade surplus increases. Investment in China's open economy, with multinational firms, is huge: more than 40% of GDP.

- Japan's experience with ever-higher yen, 1971 – 95: Investment eventually slumped with general deflation, followed by "lost" decades, but the trade surplus remained.



Big Mac prices v GDP per person,
July 2011
9
6
3
0
Big Mac price*, $
0
20
40
60
80
100
GDP per person, 2010, $'000
Brazil
Euro area
United States
Britain
Japan
China
Big Mac index, local currency under(-)/over(+)
valuation against the dollar, %
Raw index
Adjusted for GDP per person
60
30 – 0 + 30
60
90
120
150
Brazil
Argentina
Sweden
Switzerland
Euro area
Canada
South Korea
Mexico
Australia
Russia
Britain
Japan
China
United States
India§
6.16
4.84
7.64
8.06
4.93†
5.00
3.50
2.74
4.94
2.70
3.89
4.08
2.27
4.07‡
1.89
Big Mac price*, $
*At market exchange rate (July 25th)
†Average of member countries
‡Average of four cities
§Maharaja Mac
Sources: McDonald's; IMF; The Economist

Springing China's Money Trap

- **First Best:**

  - U.S. increases short-term interest rates

  - China re-stabilizes yuan/dollar rate to remove fear of future appreciations

  - hot money inflows and inflation diminish

  - China reduces reserve requirements on banks and relaxes capital controls

- **Second Best**:(No change in U.S. policies)
  - China tightens controls on financial inflows, keeps high reserves required of commercial banks, but also re-stabilizes yuan/dollar rate

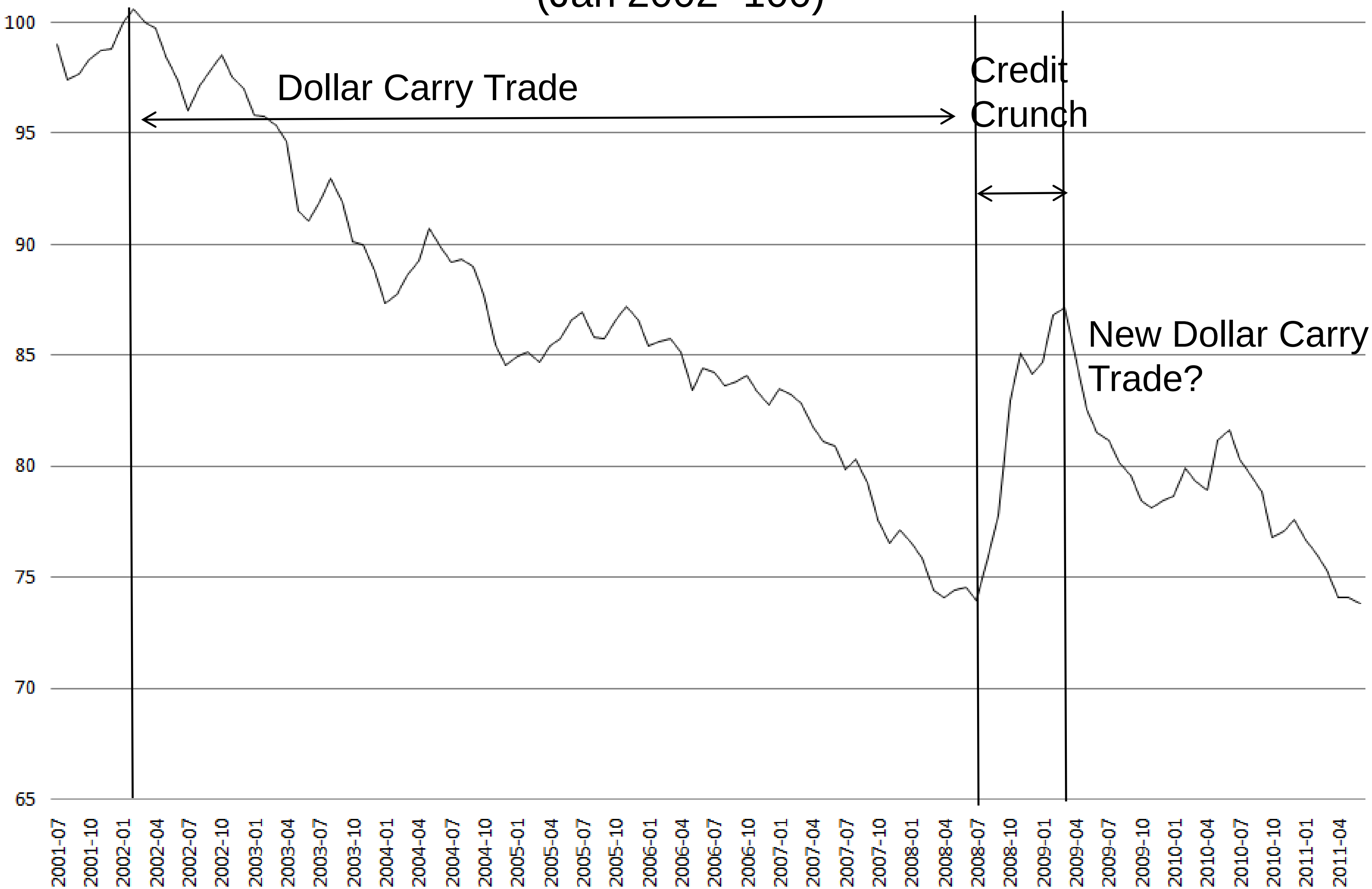
Addendum: Collapse of the Second Greenspan-Bernanke Bubble

First Bubble collapses in 2008 with the global credit crunch and seizing up of bank credit: speculators can no longer hold long positions in commodities or foreign currency. Dollar appreciates sharply

Second Bubble seems to be collapsing since August 2011 as bank credit seizes up from the euro crisis. Dollar appreciates sharply against EM currencies and primary commodities.

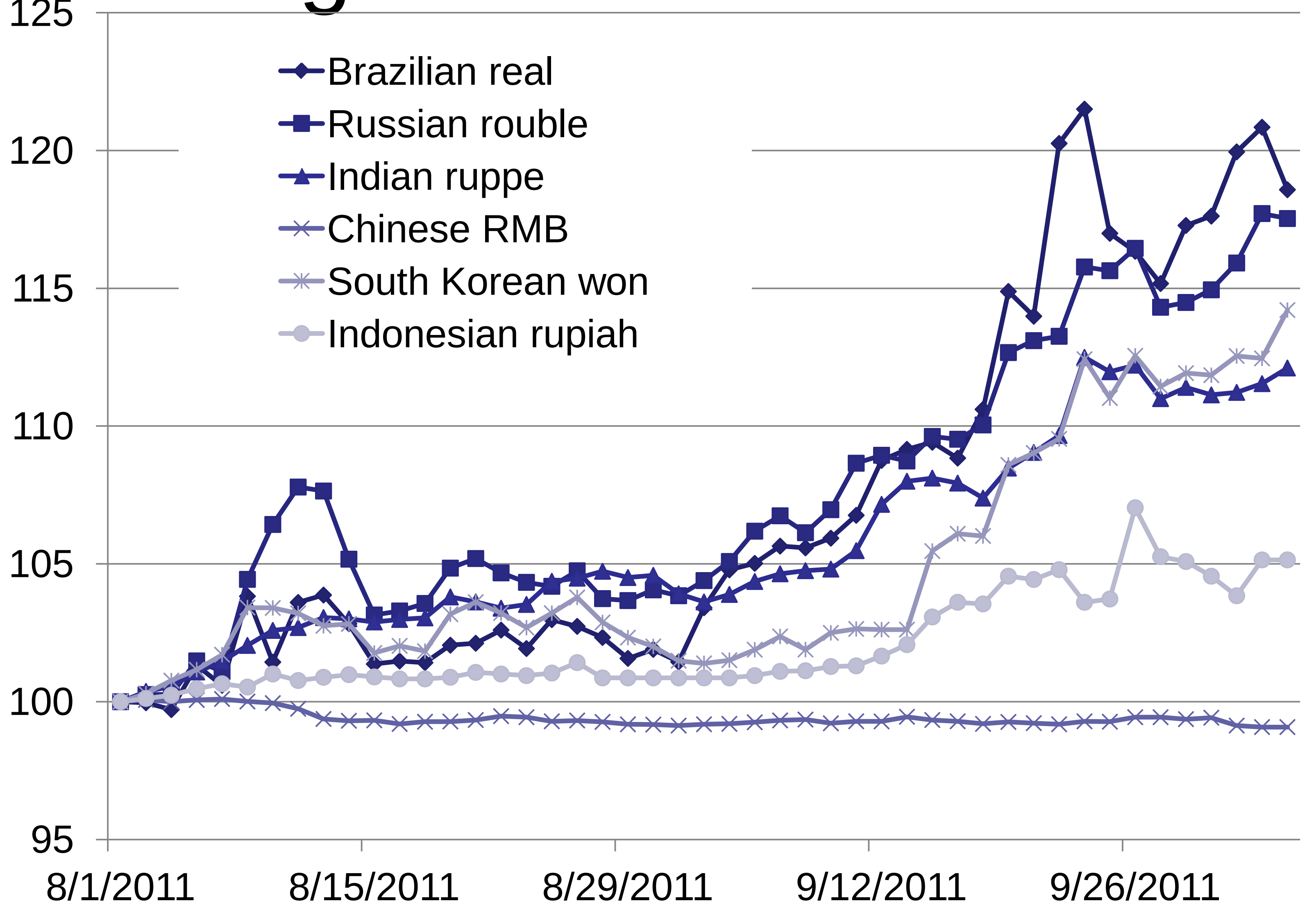
Figure 5. The Nominal Broad Dollar Index Movements

(Jan 2002=100)

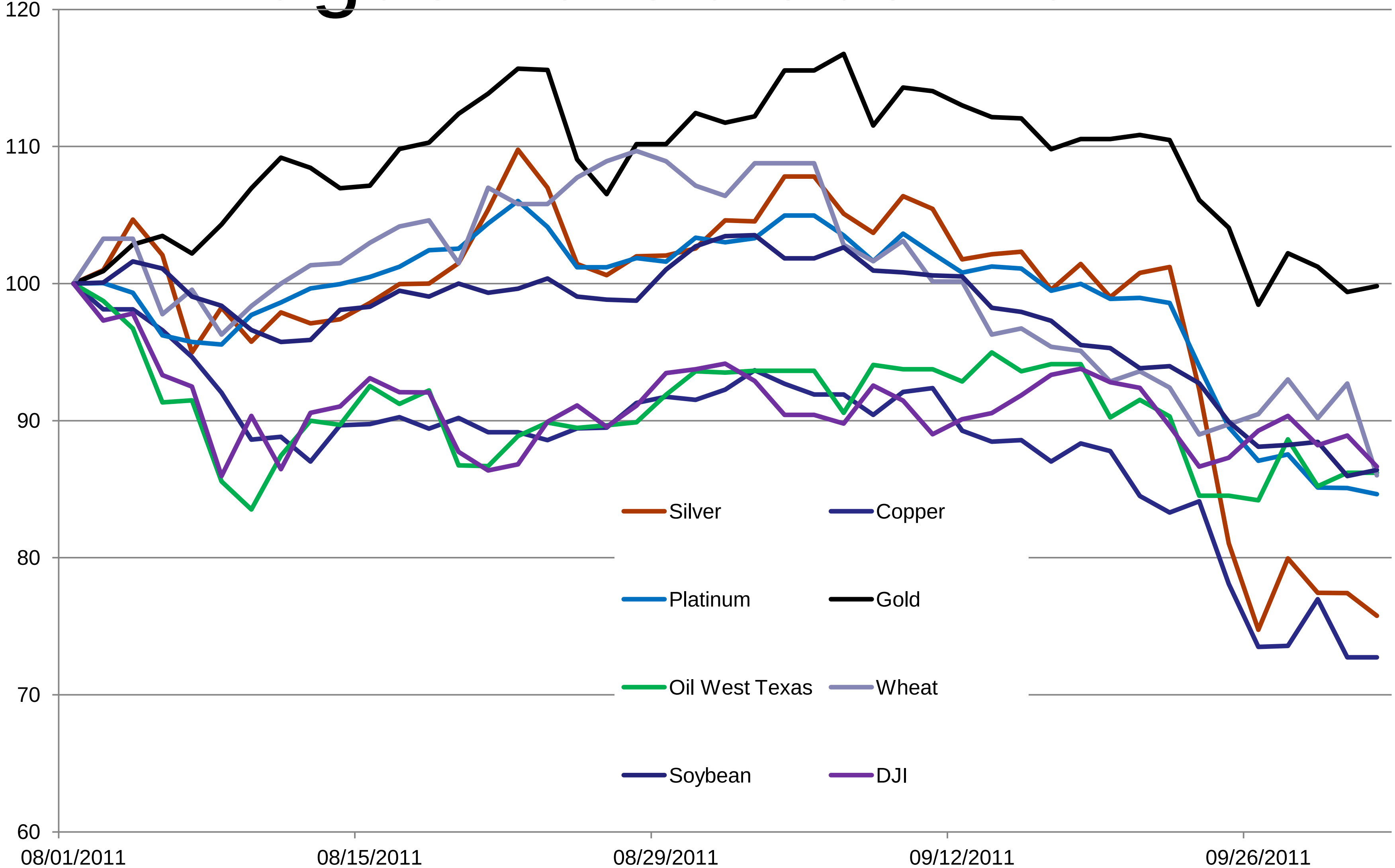


Source: Federal Reserve Economic Data

EM Currencies per Dollar; August to October 2011



Dollar Commodity Prices
August to October 2011



Moral of this Unhappy Story: What Governments Should Do

- Suppress bubble-producing carry trades by limiting interest differentials between the "center" and the "periphery".
- U.S. Fed should abandon its zero interest policy, and phase in modestly higher rates in conjunction with the other industrial countries represented by the ECB, Bank of England, and Bank of Japan