EUROPEAN CENTRAL BANK

EUROSYSTEM

The Chinese model: Towards the end of producer-biased and export-led growth?

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Outline

Part 1 – The current Chinese model:

Sustained growth *cum* imbalances

Part 2 – Longer-term sustainability of the current model:

Are the long-term factors supporting China's model running out?
Will this "force" adjustment towards more sustainable growth?

Part 3 – What is being done do adjust the model:

The thorny way to rebalancing

Part 4 – Current contradictions in the adjustment of the model:

Tensions between short-term growth objectives and rebalancing needs

Part 1 – The current Chinese model:

Sustained growth *cum* imbalances

Key proposition:

In the past three decades, China's policy-makers have had incentives to maximise growth while postponing any fundamental adjustment in the associated economic model.

This has led to the accumulation of serious imbalances.

China’s system of policy incentives

<u>Given</u>:

• Political system

• Need to build physical capital and lack of organisational structure to build capital

• Decreasing dependency ratio (so far)

• Reserve army of workers

• Weak social safety net

• Borrowing constraints

→

<u>Incentives to</u>:

• Producer-biased economy

• Investment-led economy

• Financial “repression”

• Export-led economy

• Undervalued exchange rate

• Unconstrained reserve accumulation

Symmetric policy incentives in the Revived Bretton Woods System

United States → *International currency (supply unrestricted)* → **China**

China → *Unrestricted accumulation of US assets, easy financing of US CA deficits* → **United States**

United States

Given:

- *Highly developed financial markets*
- *Issuance of the world currency = exorbitant privilege*
- *Deindustriali-sation process*
- *etc.*

→ Incentives:

- Unconstrained stimulus to domestic demand
- Heavy intertemporal consumption smoothing
- Easy credit in normal times, strongly expansionary macro policies in crisis times
- Borrowing from RoW not subject to any limitations
- Benign neglect of US$ depreciation

China

Incentives: ←

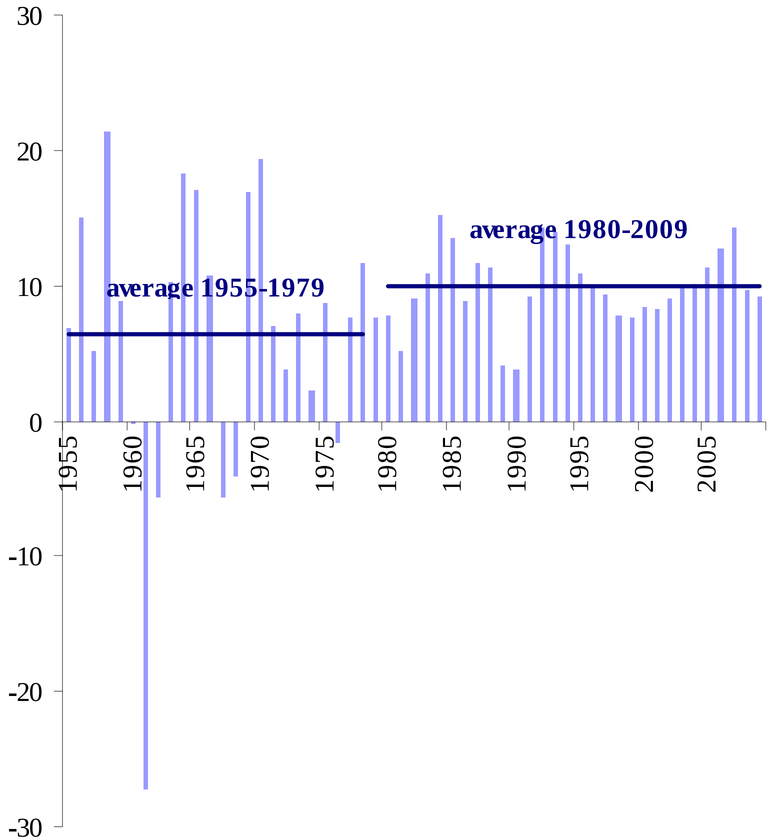
- Using public sector to direct residual S abroad = unconstrained reserve accumulation
- Promoting exports as additional tool besides investment to promote sustained growth
- Reconcile pegged exchange rate with monetary policy autonomy via capital flow restrictions

Given:

- *Very high precautionary savings*
- *Financial underdevelopment*
- *No international currency*
- *etc.*

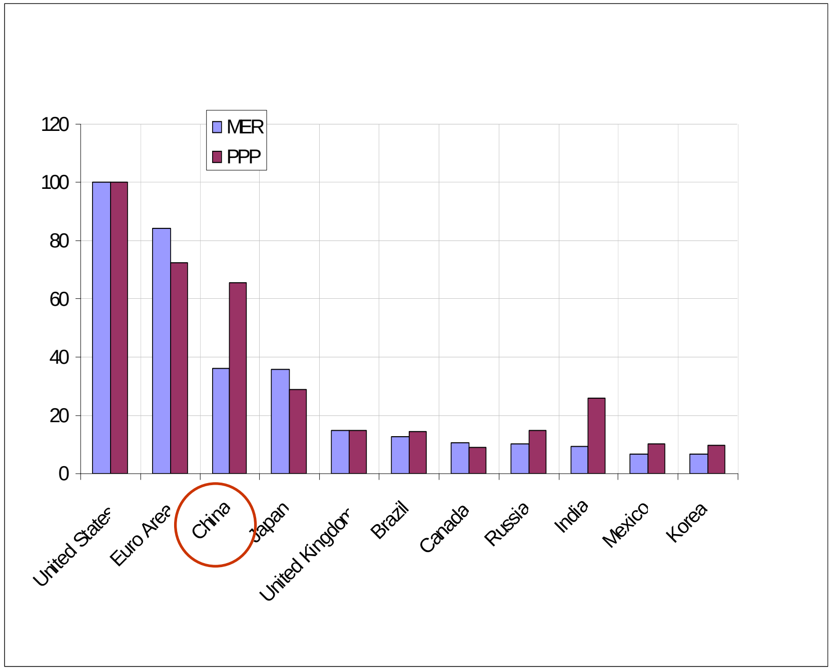
China's model has delivered:
(i) High and sustained growth

China's real GDP growth
(1955-2009)



Source: CEIC and ECB staff estimations. Last observation refers to Q3 2010.

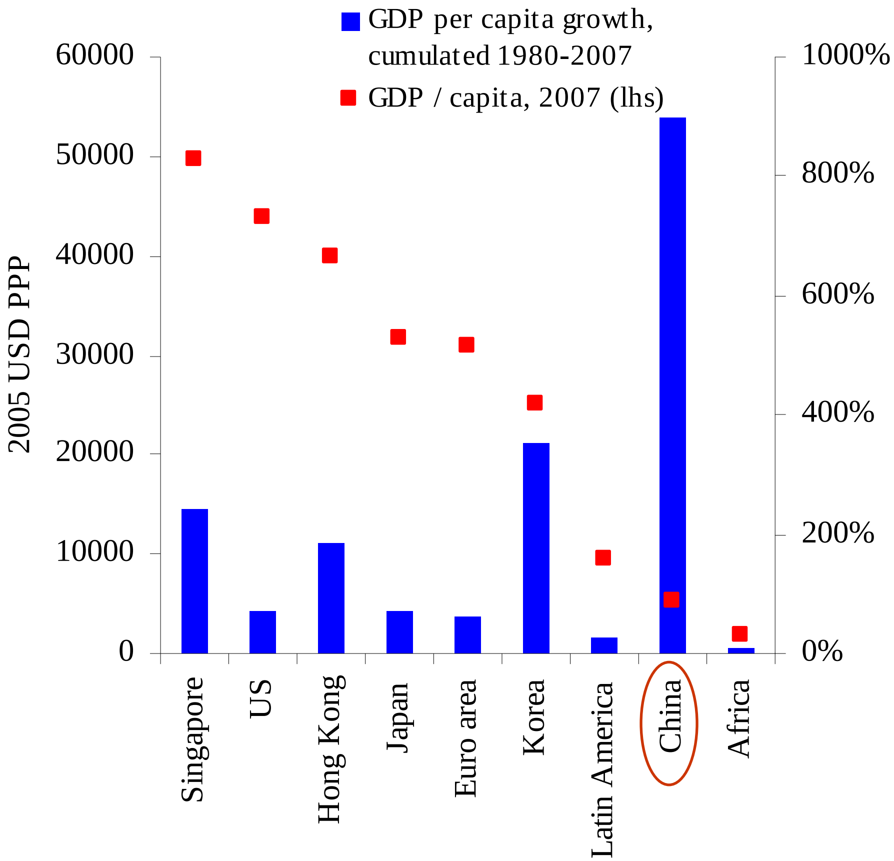
Top-ten GDP ranking relative to the United States in 2010



Source: IMF WEO estimates for 2010.

China's model has delivered:
(ii) Increasing GDP per capita, decreasing poverty

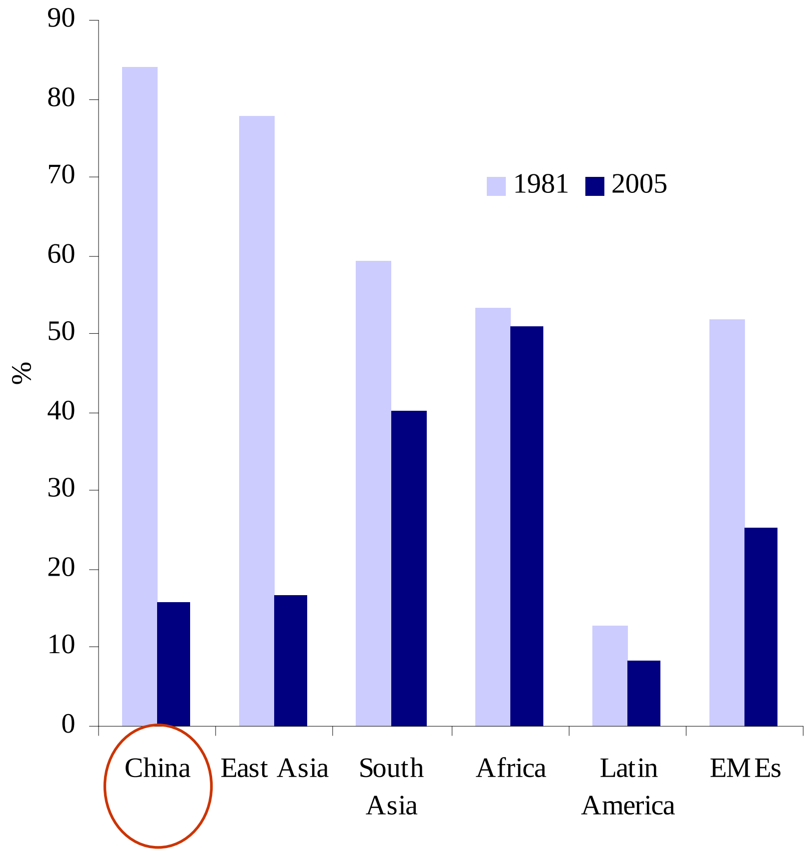
GDP per capita growth



Source: Haver, WDI.

Poverty ratio

(% of population living with less than US$1.25 a day)

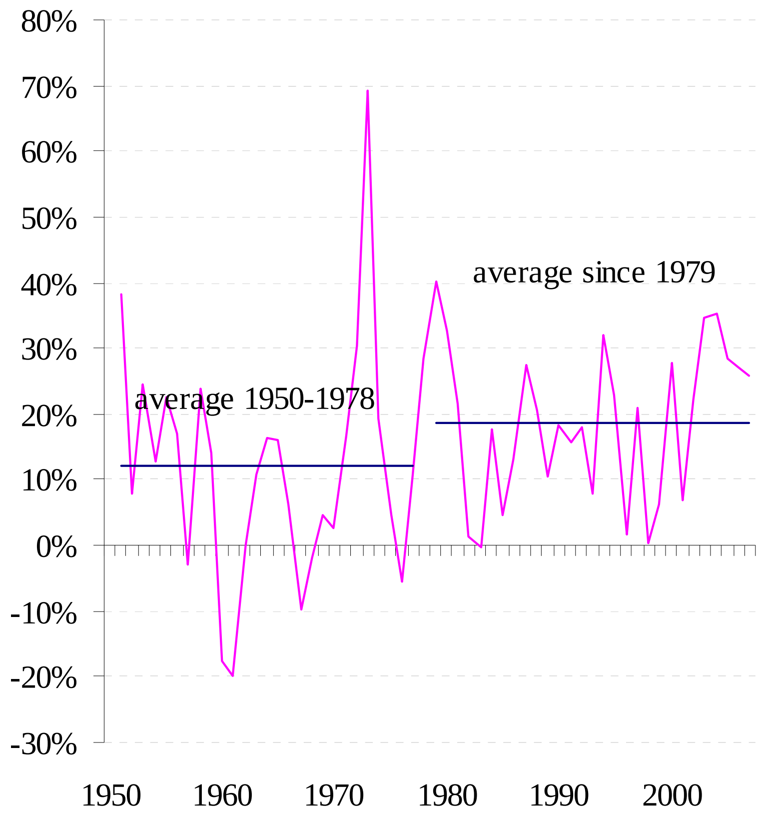


Source: Haver, WDI.

China's model has delivered:
(iii) Gains in world market shares

Export growth

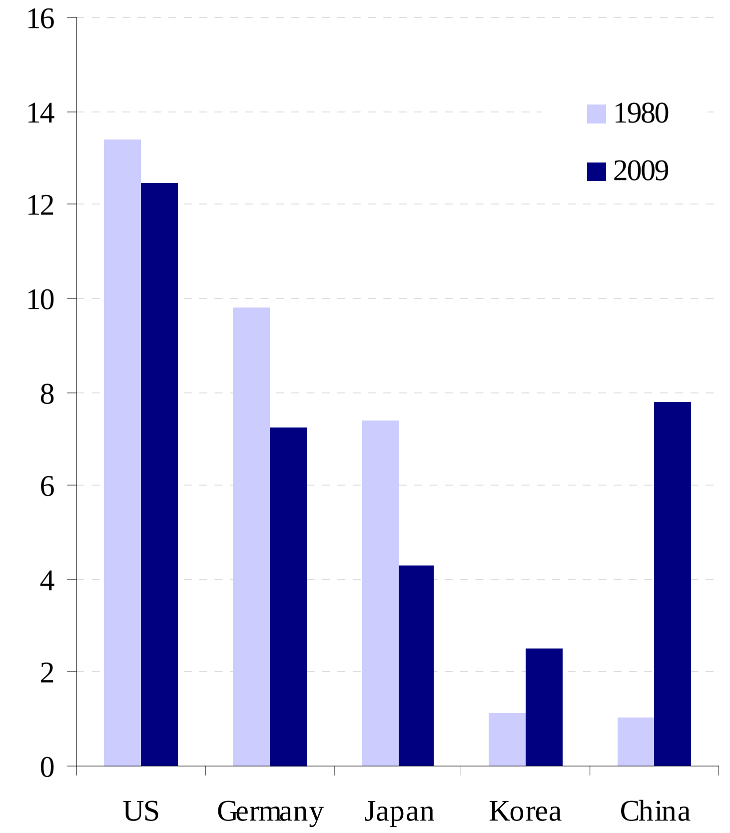
(annual growth rates)



Source: CEIC.

World market shares

(imports from a country as % of world imports)



Source: IMF DOTS.

The macroeconomic policy framework implied by China's system of incentives has remained unchanged

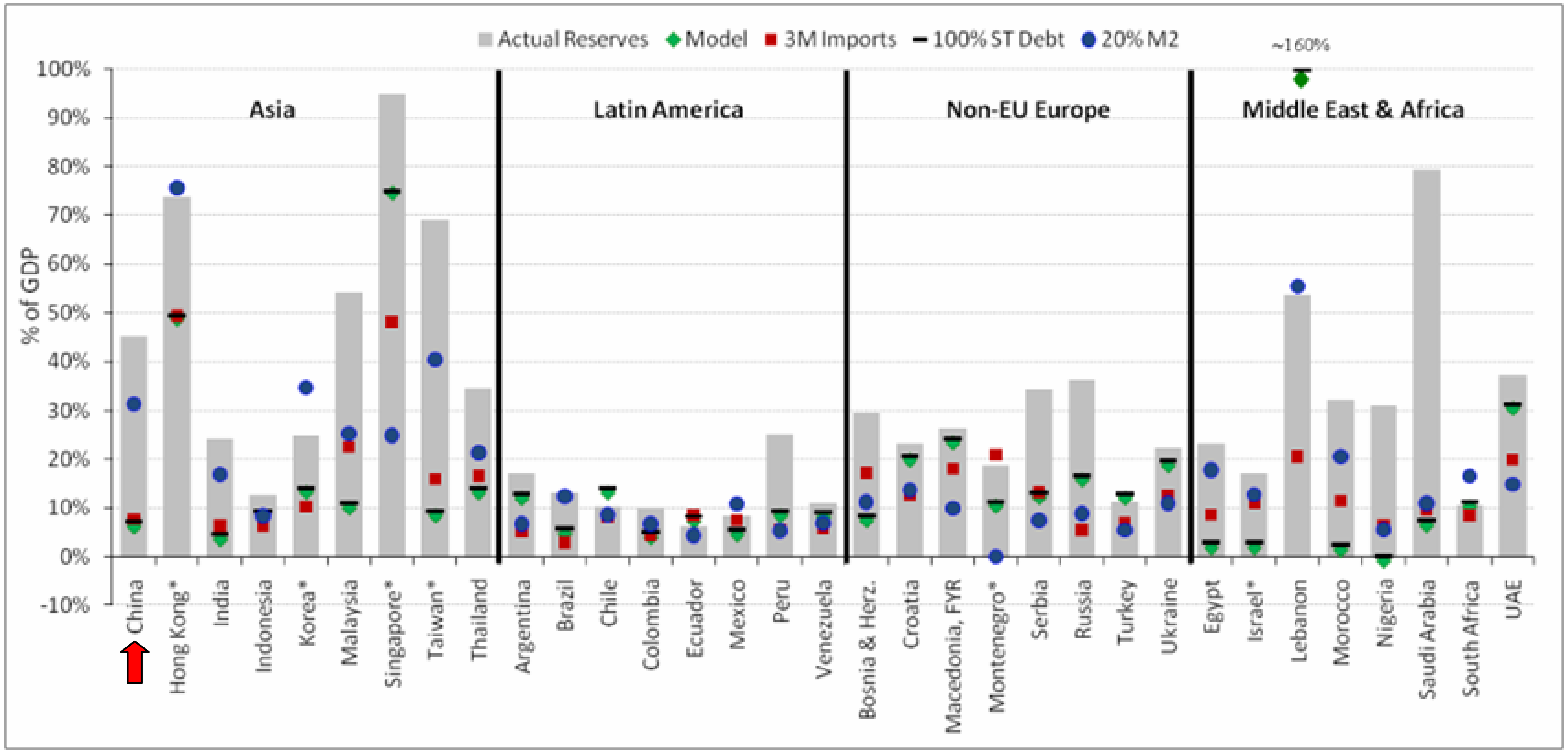
Free trade + **Financial repression (K account, domestic markets)**

Managed exchange rate

Autonomous monetary policy by means of administrative measures

Reserve accumulation goes beyond any benchmarks

Foreign reserve adequacy ratios vs. actual reserves in emerging economies (2007)



Source: Mileva (2010).
Notes:
(1) Model calculations based on Jeanne and Ranciere (2008). This is a dynamic general equilibrium model in which: (i) official reserves are held not only for debt rollover during financial crises but also to alleviate potential output losses; (ii) the opportunity cost of holding reserves is calculated as the difference between the interest rate on long-term external debt and the return on US dollar reserves.
(2) Short-term debt is on a remaining maturity basis, except for the countries marked with (*).
(3) It should be noted that the M2 benchmark is currently not relevant for e.g. China as this country has strong controls on capital outflows. Rather, the benchmark indicates the *potential* domestic drain on reserves in case of an episode of capital flight *after* China liberalises its capital account.

The latest incentive: Maximising the international role of the RMB subject to unchanged approach to the Impossible Trinity

Present …

Free trade + Financial repression

- RMB only domestic currency
- USD = 90% of China trade
- USD = 65% of China reserves

Managed exchange rate ⟷ **Autonomous monetary policy by means of administrative measures**

… and future?

Free trade + Financial repression

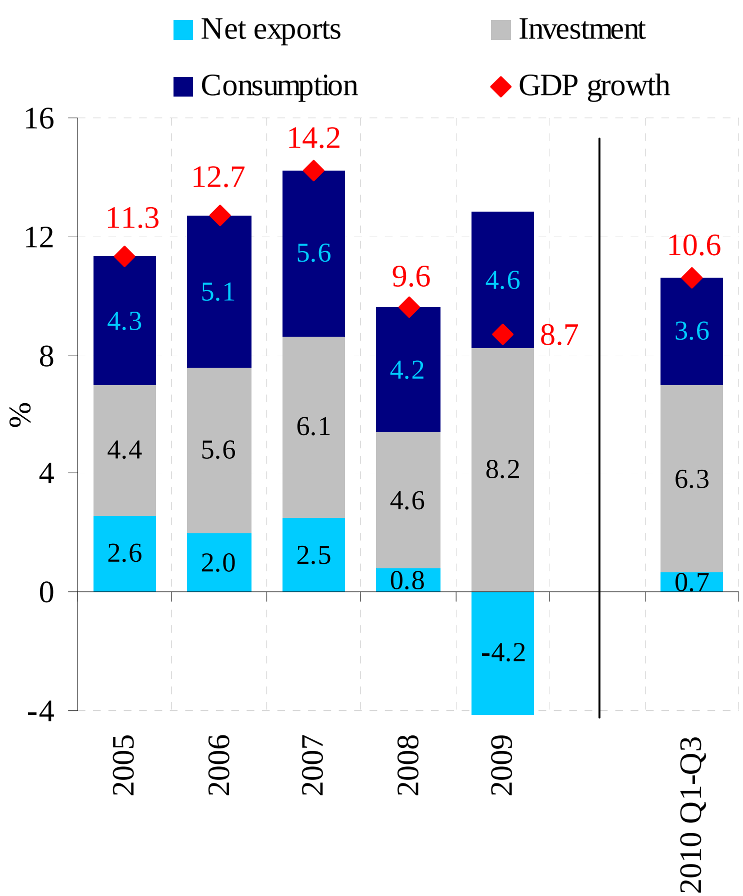
- RMB ↑ in trade invoicing
- RMB ↑ in off-shore centres
- RMB ↑ central bank swaps

Managed exchange rate ⟷ **Autonomous monetary policy based on administrative measures**

China's imbalanced growth: C vs. I + (X-M) (I)

GDP growth and contributions

(in percentage points)



Source: CEIC.

Contributions to year-on-year GDP growth

(in %)

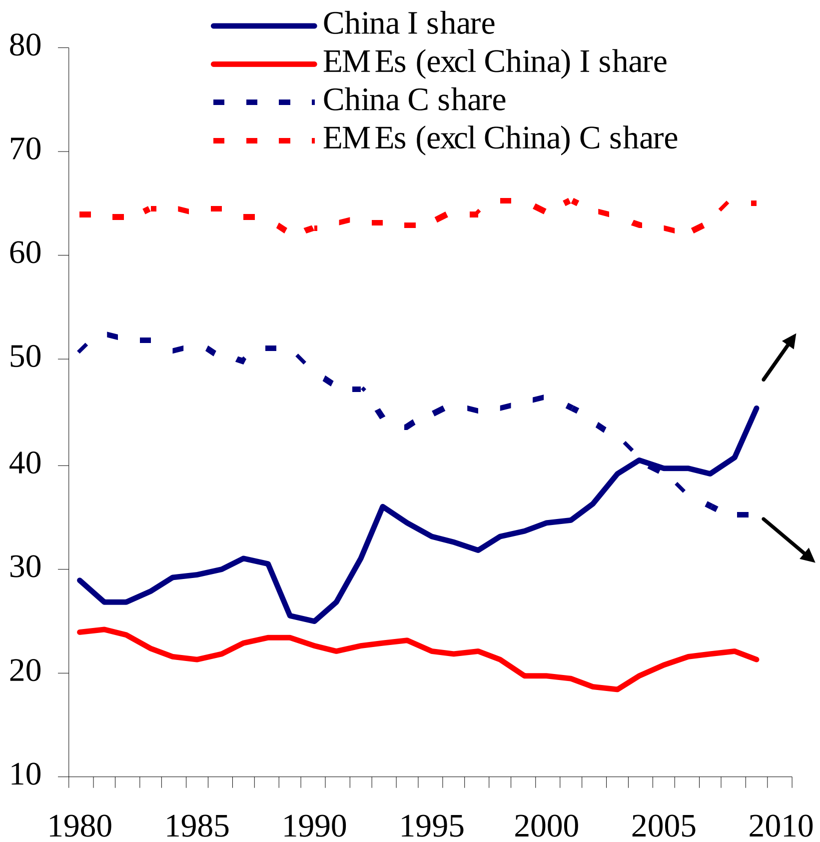
	pre crisis* average	post crisis** average
Consumption	39%	34%
Investment	49%	59%
Net exports	12%	7%

Pre crisis average: 2002-2005 average.
Post crisis average: 2010 Q1-Q3.

China's imbalanced growth: C vs. I + (X-M) (2)

Household consumption vs. investment: Shares in China and other EMEs

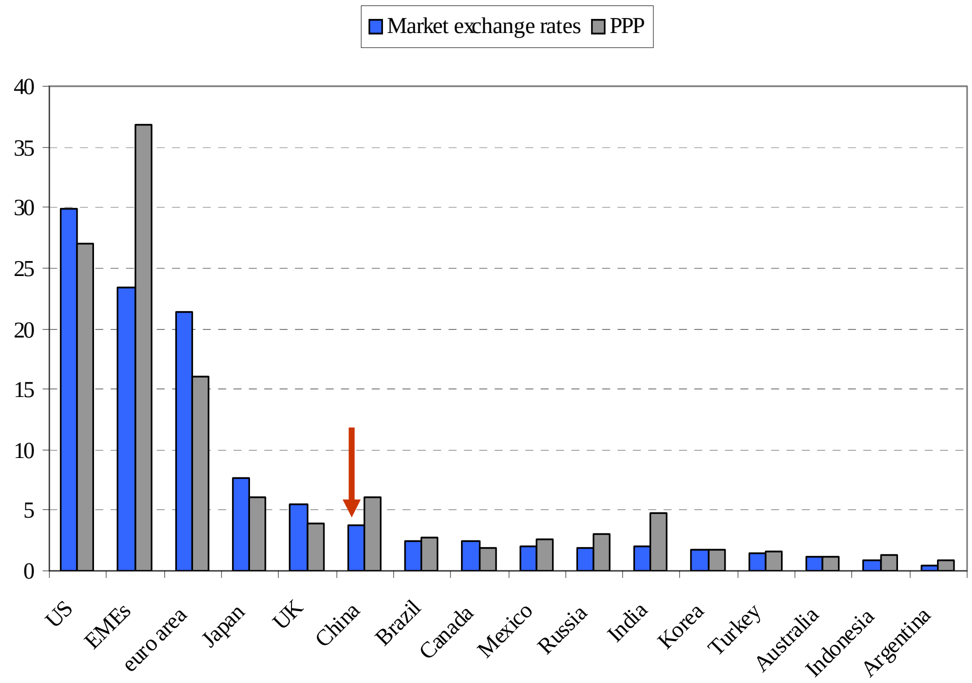
(in % of GDP)



Source: WDI, CEIC.
Last observation refers to 2009.

Shares in global consumption in 2009

(%)



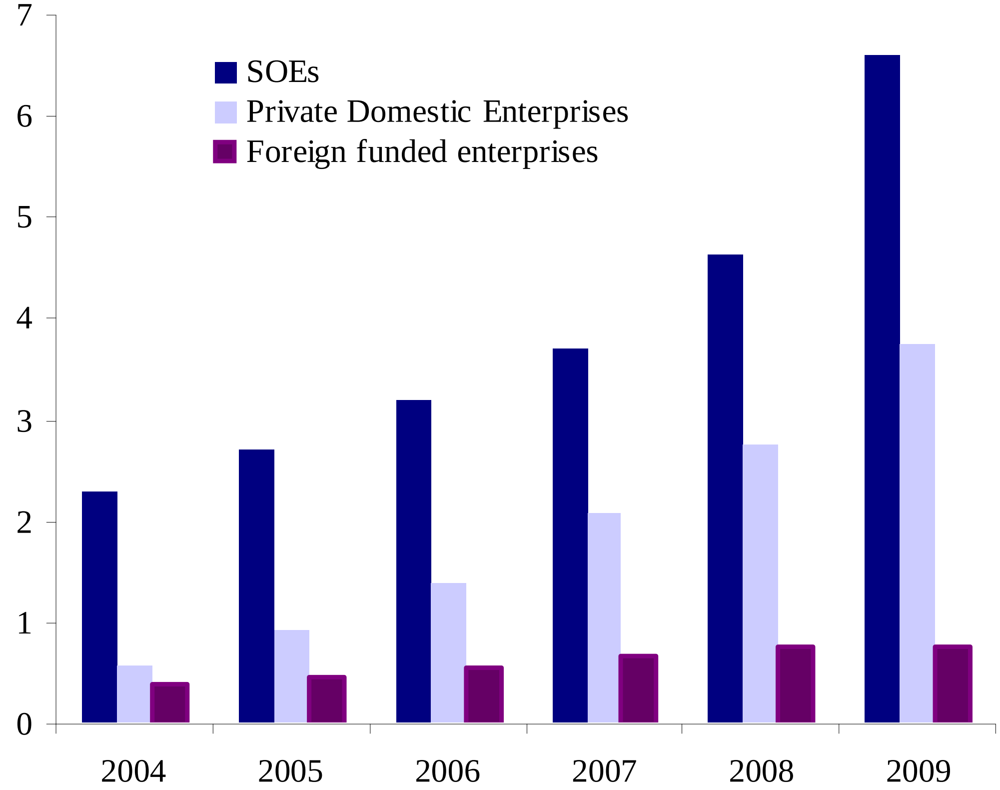
Source: WDI and ECB Staff Calculations.

China's imbalanced growth: Private *vs.* Public sector

Investment by state-owned enterprises (SOEs)

vs.

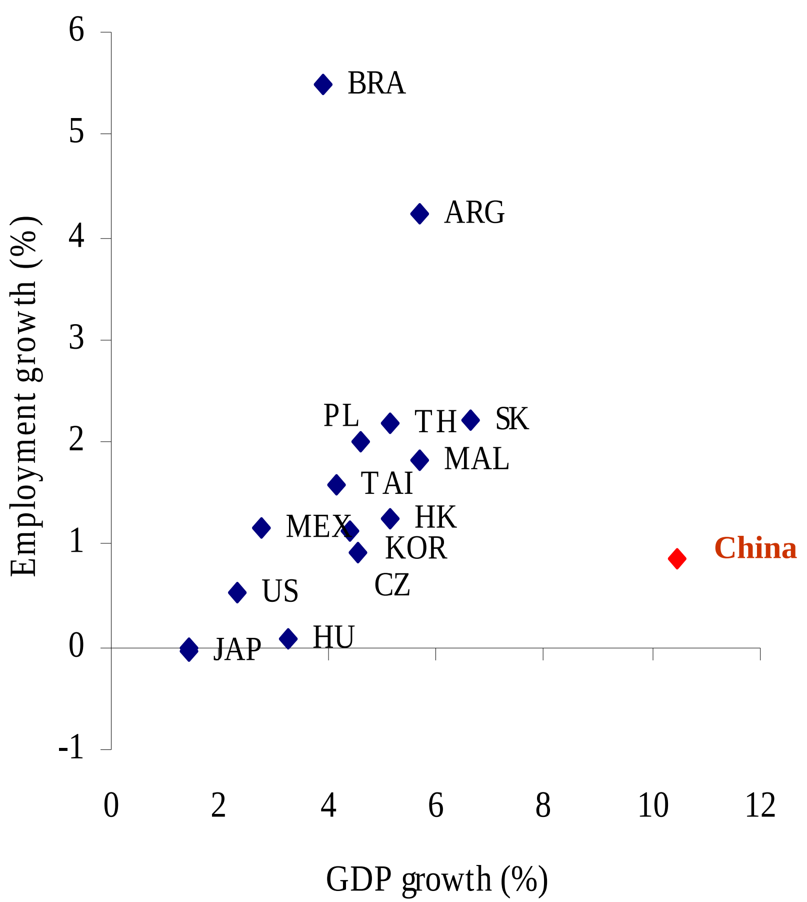
private investment by domestic firms and foreign-owned enterprises



Source: CEIC.

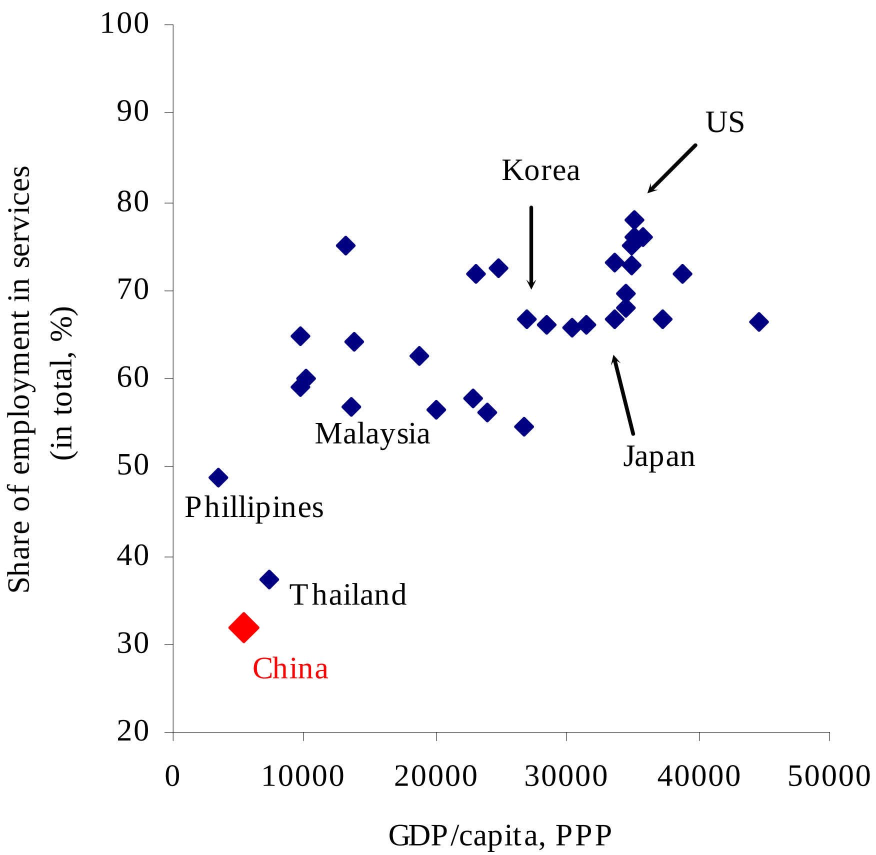
China's imbalanced growth:
Labour *vs.* Capital ; Services *vs.* Manufacturing

Employment vs. GDP growth (2001-2008 average)



Source: IMF WEO.

Share of services employment vs. GDP per capita, 2007

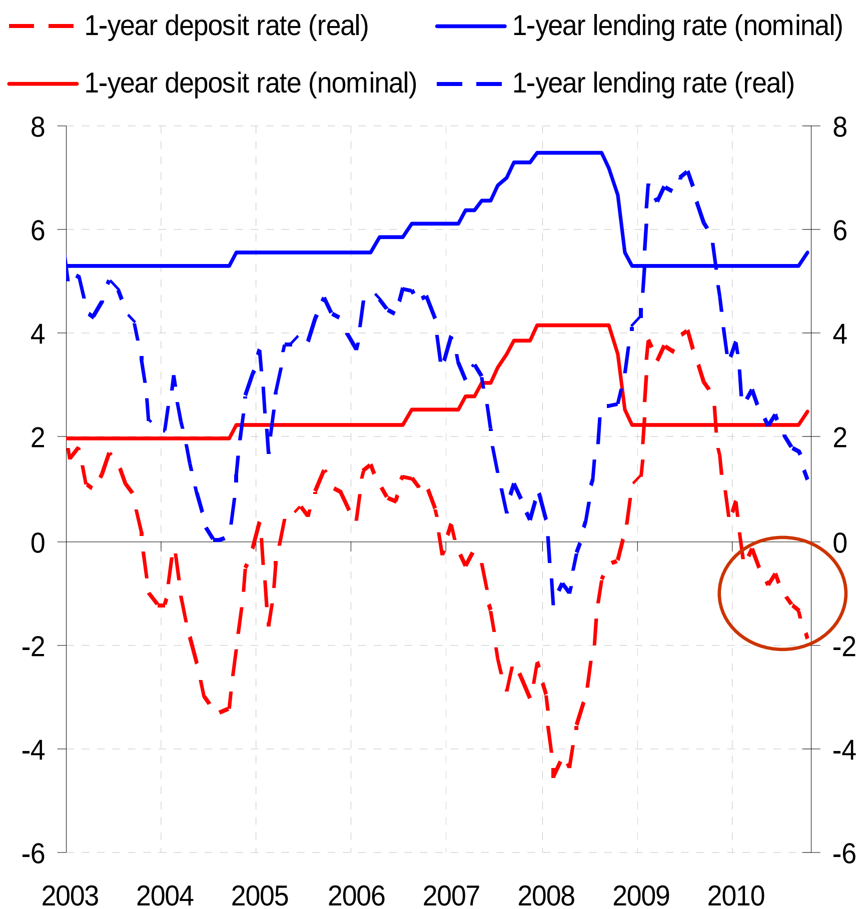


Sources: WDI, NBS.

China's imbalanced growth:
Financial repression and uneven income distribution

Real and nominal deposit and lending interest rates in China

(%)



Source: CEIC.

2002-09 average:

Real GDP growth: 9.9%

Real deposit rate: 0.3% (1 year)

Real lending rate: 3.6% (1 year)

Nominal deposit rate: 2.5% (1 year)

Nominal lending rate: 5.8% (1 year)

Implicit tax on households (compared with a situation in which real lending rates = real GDP growth): **4.1% of GDP** in 2008-Q1 *

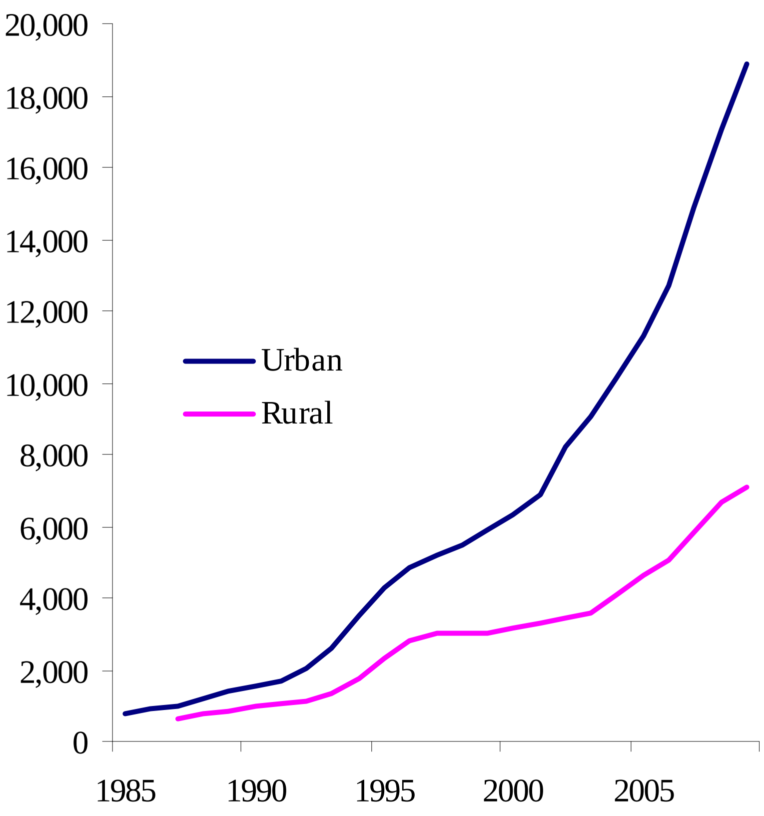
Who benefits? (in % of GDP)

- Corporate sector: 0.9%
- Banks: 1%
- Government: 2.2% (lower cost of sterilisation)

* *using 2002-Q1 as benchmark.*
In 2002-Q1 GDP growth rate ≈ real lending rate.

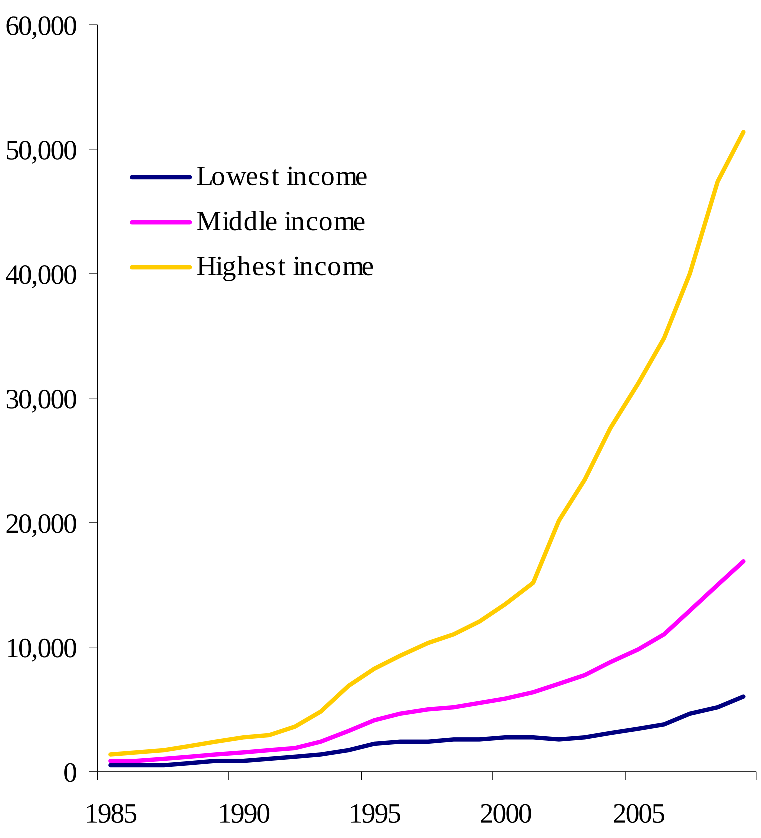
China's imbalanced growth:
Income inequality is on the rise

Income per capita
(in RMB)



Source: CEIC.

Urban per capita income
(in RMB)



Source: CEIC.

Part 2 – Longer-term sustainability of the current model:

Are the long-term factors supporting China's model running out? Will this "force" adjustment towards more sustainable growth?

Key proposition:

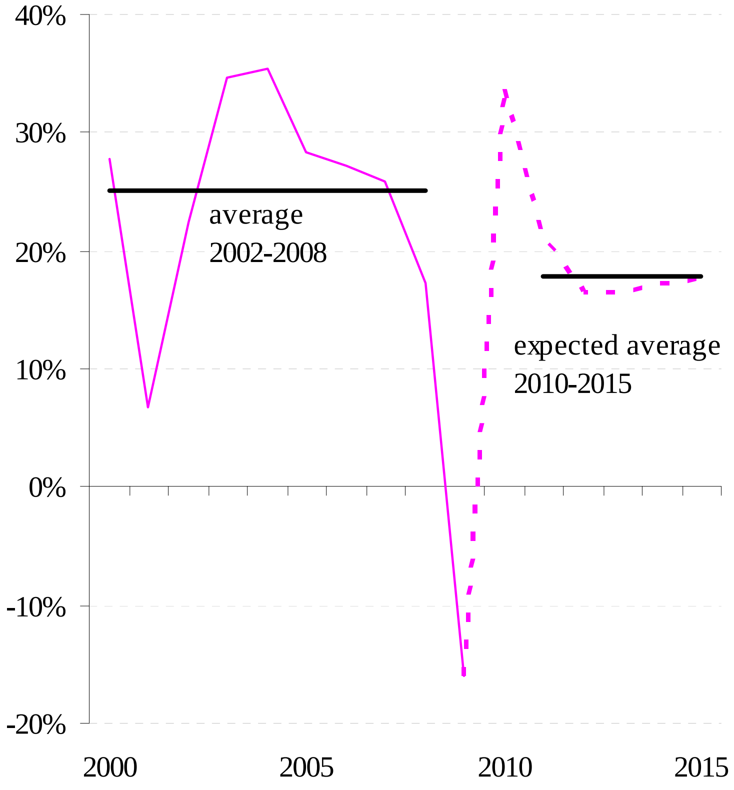
The main long-term factors making China's growth model possible have been: (1) export demand; (2) demographic factors coupled with labour surplus in the primary sector; and (3) capital accumulation.

These factors have started running out, thus forcing adjustment.

Limitations to export-led growth

Export growth 2000-2015*

(year-on-year growth rates)

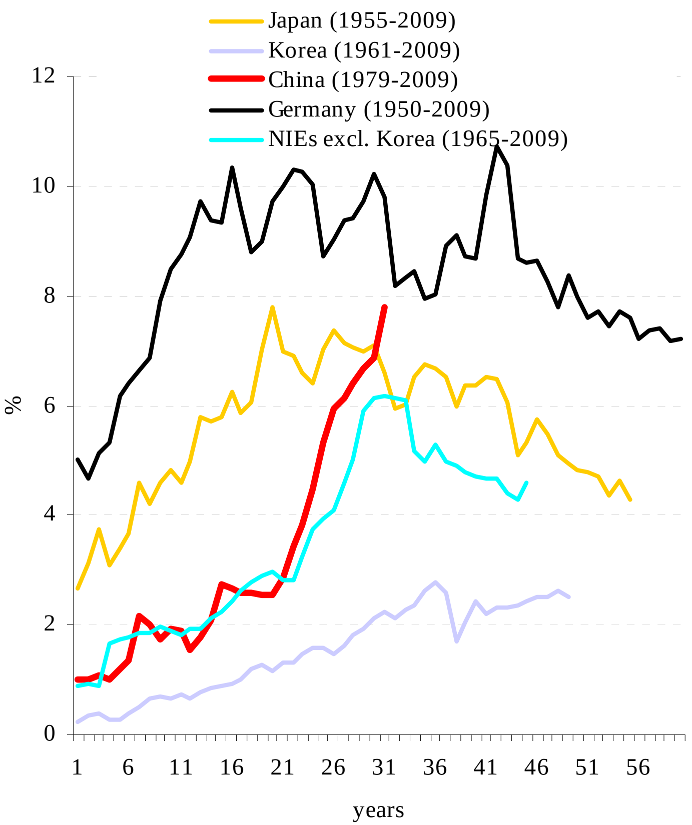


Source: CEIC, IMF.

* Based on the IMF's Article IV consultation on China.

Market shares of selected economies since growth took off

(in % of world market)

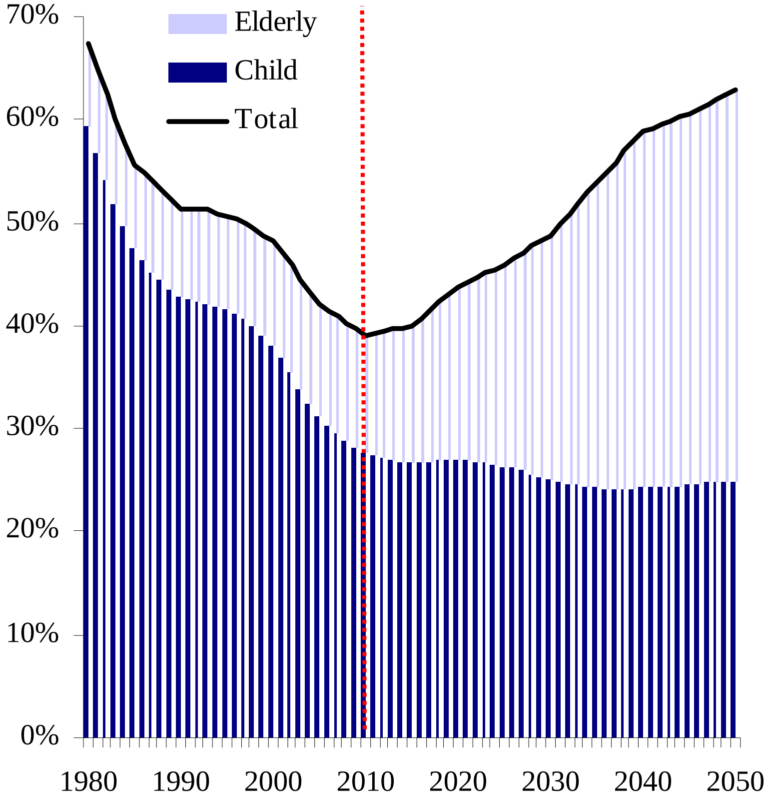


Source: CEIC.

Limitations to persistence of cheap labour?

Dependency ratio

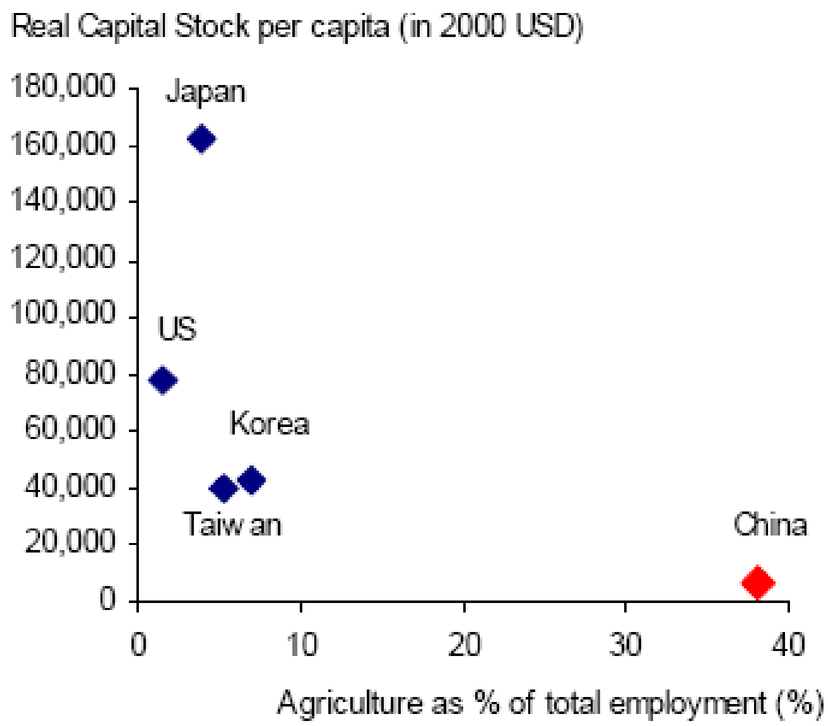
(people in non-working age as a share of those in working age)



Source: Haver, United Nations.

Real capital stock per capita

(in 2000 USD)

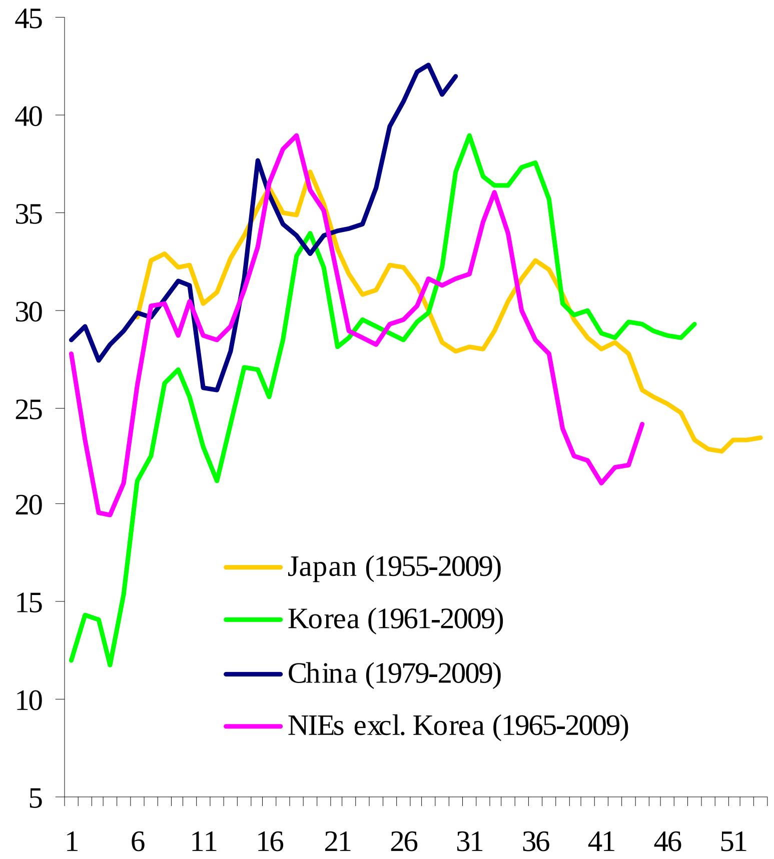


Source: UBS.

Limitations to capital intensive growth

Investment/GDP ratio since growth took off

(in %)



Source: Haver, United Nations.

External factors may also drive adjustment: RMB undervaluation triggers protectionism

<u>November 2008 to October 2010</u>:

→ 1340 protectionist measures announced or implemented in the world

→ 690 measures (51%) announced or implemented by G20 members

→ 497 measures (69%) adopted by G20 emerging economies

→ 243 measures (35%) harm China

1. Trade protectionism is rising despite G20 policy commitments

2. Emerging countries are not only among the most affected by protectionist measures, but also among those which most implement them

3. Hidden protectionism:
   - Only 48% of the measures implemented is tariff or trade defence
   - The rest is mainly state aid, export subsidy and non-tariff barriers

Source: Global Trade Alert.

Part 3 – What is being done do adjust the model:

The thorny way to rebalancing

Key proposition:

Rebalancing is proceeding slowly, also because of policy resistance to change a model of growth that delivered for 30 years.

This may imply short-term advantages, but also longer-term risks given the fading away of longer-run supporting factors.

Rebalancing: What has been done? What has been reversed? What remains to be done? (I)

	In progress	Reversed	To be done
Strengthening private domestic demand			
Private consumption			
Household and rural incomes			
Labour law	X		
Labour mobility ("*hokou*")			X
Social housing subsidies	X		
Agricultural subsidies	X		
Income tax reform			X
Consumption subsidies (cars and durable goods)	X	X	
Reducing precautionary savings via enhanced welfare			
Pensions	X		
Education	X		
Health care	X		
Reducing inequality			X
Private investment			
Crowding out from public investment stimuli 2008-2010		X	
Financial sector reforms (see below)			X

Rebalancing: What has been done? What has been reversed? What remains to be done? (2)

	In progress	Reversed	To be done
Export-led model discontinuation / Private sector promotion			
Exchange rate reform	X	July 08 - Jun 10	
Export tax rebate system		X	
Manufacturing sector's domestic value added			
Technological upgrading		X	
Service sector development			X
Inland regions development	X		
Financial market reform and financial opening			
Capital account liberalization			X
Interest rate liberalisation and price-based monetary policy		Stopped in 2004	X
Bond market development			X
Market driven banking sector		X	
Stock market development		X	
Other financial reforms (Derivatives, OTC market)			X
Other structural reforms			
Agricultural sector reform			X
Strategic industries development	X		

… 12th five-year plan to be finalised in March 2011

Part 4 – Current contradictions in the adjustment of the model:

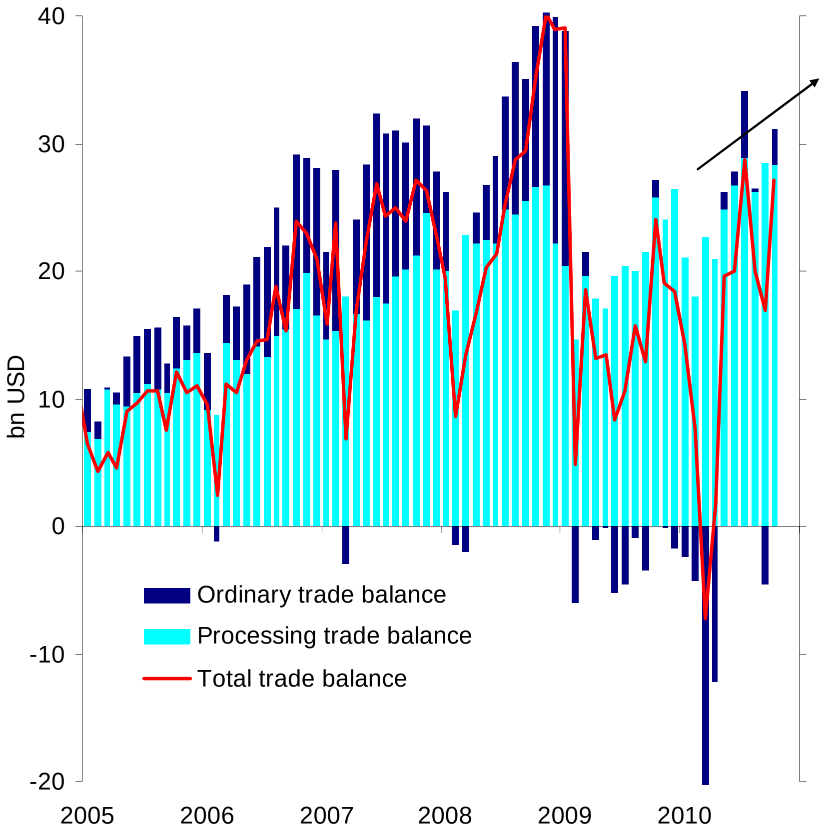
Tensions between short-term growth objectives and longer-term rebalancing needs

Key proposition:

Yes, there are tensions and contradictions, both on (1) the external and (2) the domestic front.

External front: (I) The trade and current account surpluses are re-widening

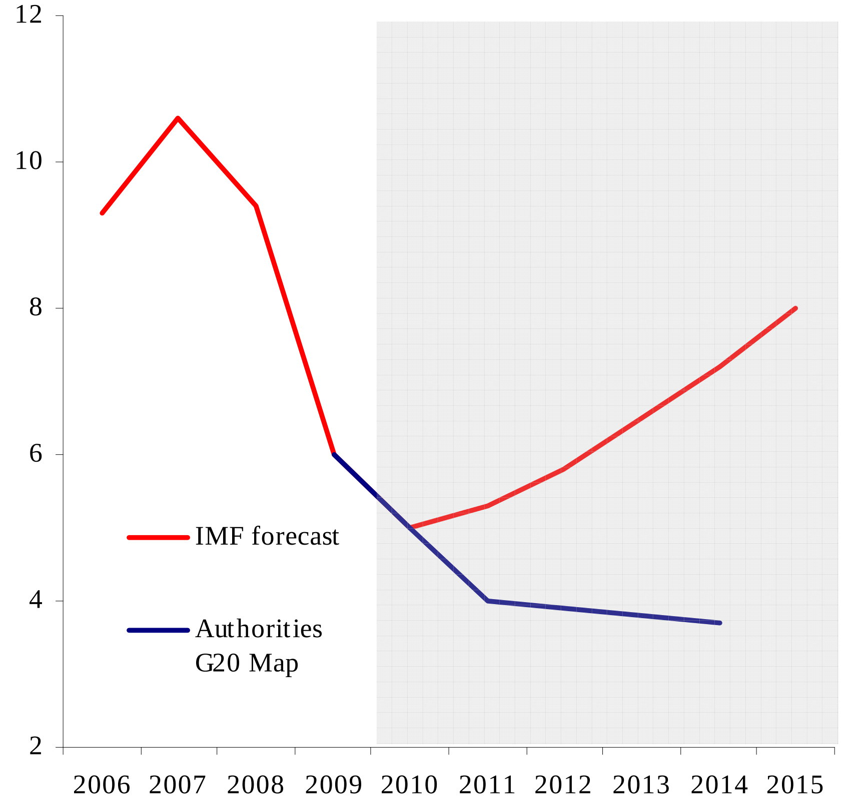
Monthly trade surpluses and their composition *(in USD bn)*



Source: CEIC.

Current account surpluses

(in % of GDP)

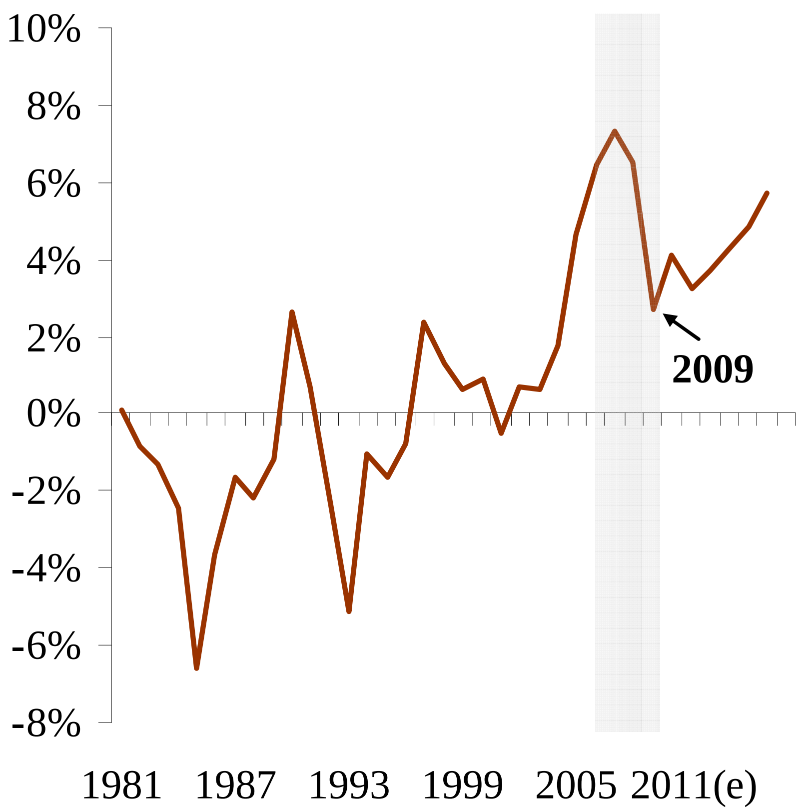


Sources: IMF WEO June, China's G20 MAP (Mutual Assessment Process) initiative.

(2) 80% of the current account adjustment is estimated to have been temporary/cyclical in nature

China's current account: Deviation from estimated benchmark levels (1980-2015)

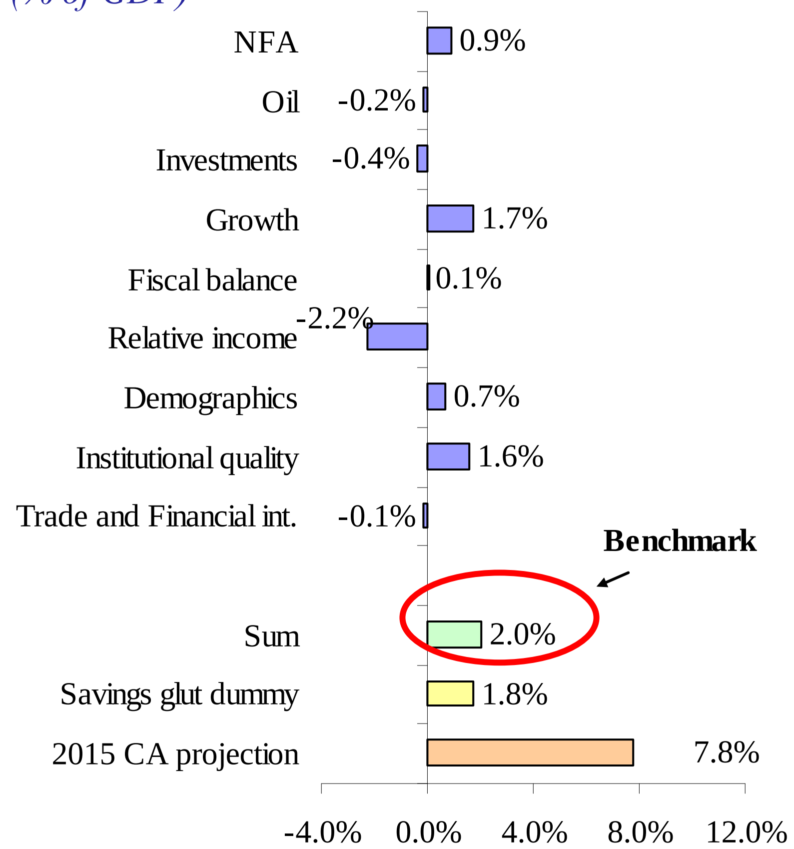
(% of GDP)



Source: ECB staff calculations based on IMF WEO.

China's current account estimates for 2015: Projection, benchmark level and its explanatory factors

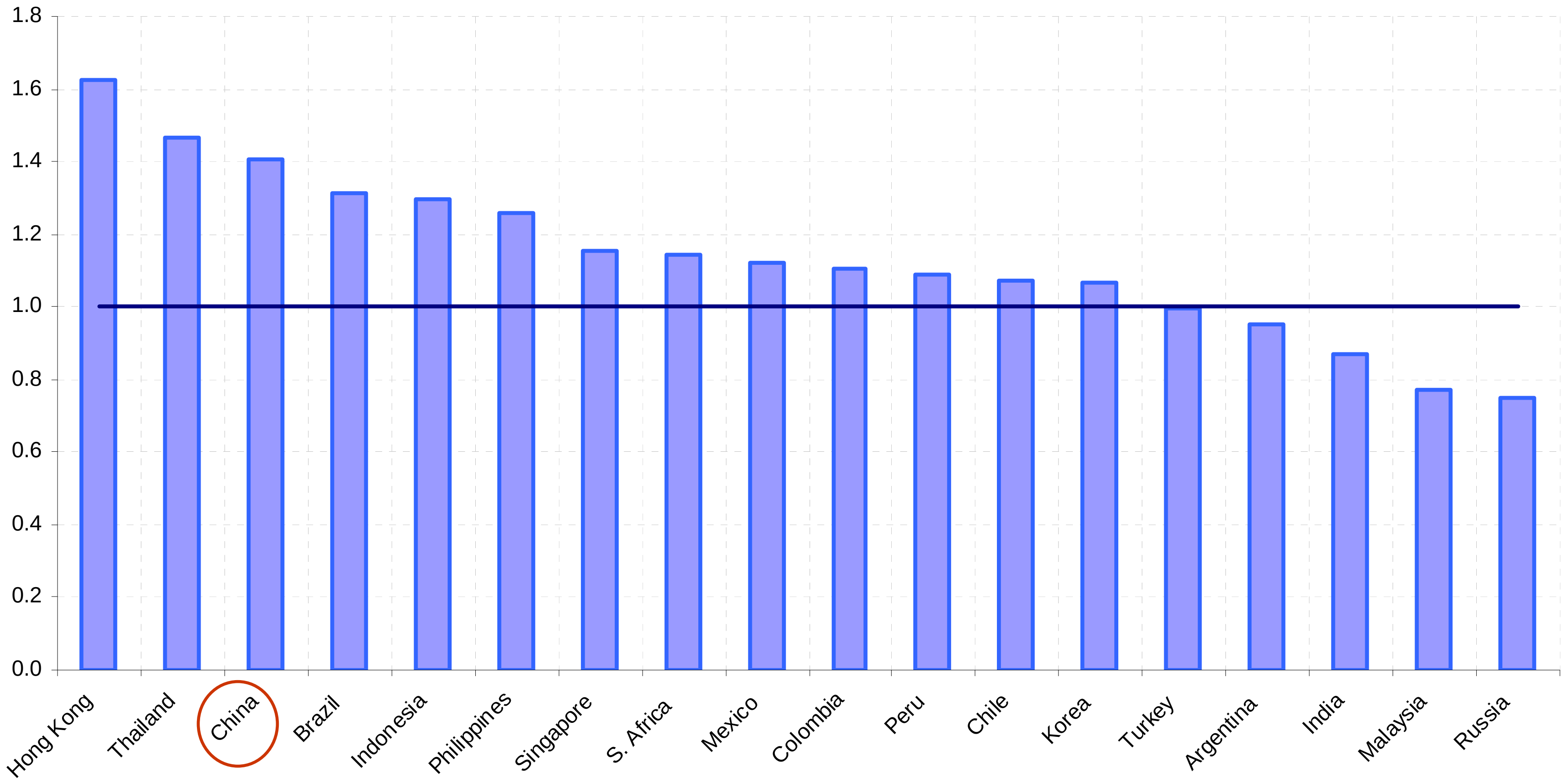
(% of GDP)



Source: ECB staff calculations based on IMF Fall 2010 WEO projections.

(3) Reserve accumulation is back on the stage

Current foreign exchange reserves in selected emerging market economies compared to pre-crisis maximum *(ratio; 1 = pre-crisis maximum)*



Sources: Haver Analytics, IMF IFS and ECB Staff Calculations.
Note: Last observations refer to September 2010, except for Chile, Peru, Hong Kong S.A.R., Indonesia, South Korea, Philippines, Singapore and South Africa, which refer to August 2010.

(4) No RMB effective appreciation since 19 June 2010

RMB bilateral and effective exchange rates (as of 17/11/2010)

		% Change			
Currency Pair	Rate	since 19-Jun-10	since 01-Jul-08	since 20-Jul-05	since 01-Jan-99
RMB/USD	6.6434	2.32	3.20	24.58	24.62
RMB/EUR	8.9739	-6.50	20.79	11.09	8.95
RMB/JPY[(2)]	7.9710	-6.30	-18.62	-8.43	-8.17
RMB/NEER	-	-2.77	2.17	7.69	10.88
RMB/REER (CPI based) [(1)]	-	-0.71	7.31	18.66	9.90
RMB/REER (PPI based) [(1)]	-	-4.70	-1.41	12.79	13.97

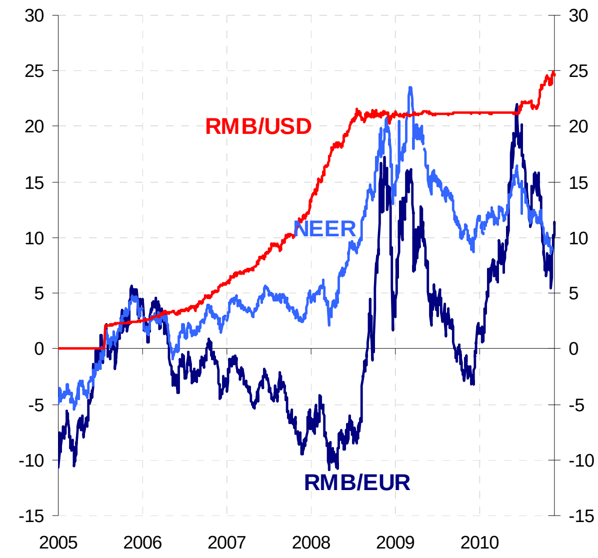
[(1)] Are in monthly frequency.

[(2)] Multiplied by 100.

Source: Bloomberg.
Notes: [(1)] Includes the 2.1% one-off revaluation of 21 July 2005. / (2) Multiplied by 100.

RMB nominal exchange rates

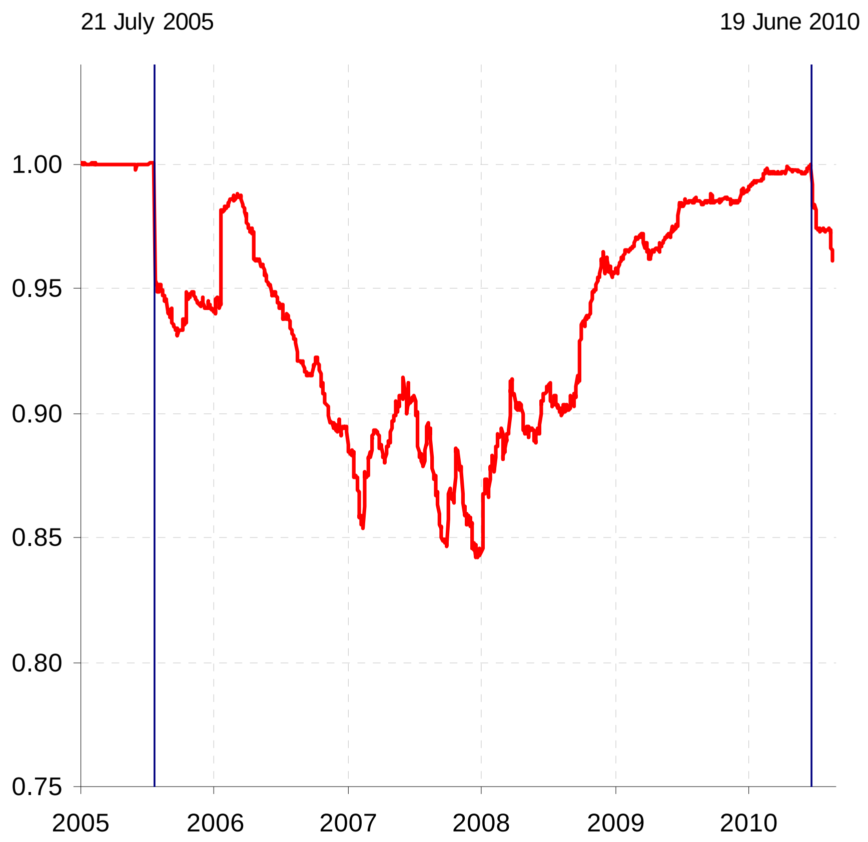
(cumulative % change since 20 July 2005)



Source: Bloomberg
Note: Last observation refers to 17 November 2010.

(5) US dollar peg still dominant, RMB still undervalued

Implicit weight of the USD in the RMB basket



Source: ECB estimates based on a 6-months rolling OLS regression of

$$d\ln(JPY/RMB) = \alpha + \beta \times d\ln(JPY/USD) + \gamma \times d\ln(JPY/EUR)$$

- **Estimates of equilibrium REER concur in finding RMB undervaluation (except Goldman Sachs)**

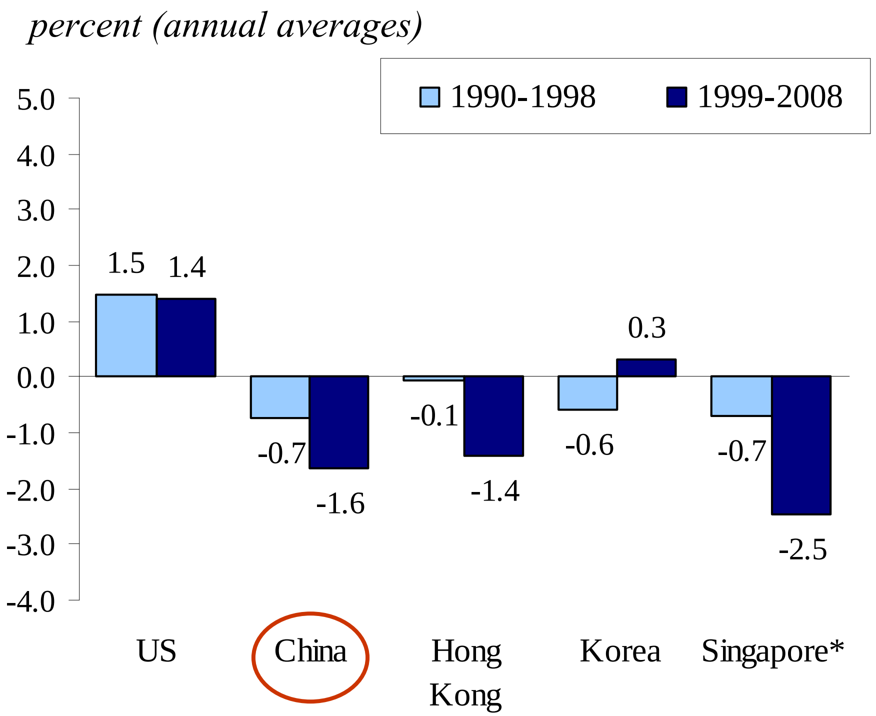
… Medium-term distortions, costs and risks of reserve accumulation beyond optimality thresholds

	Distortions, risks and costs
Global level	Reserve accumulation corresponds to a large-scale re-allocation of capital flows organised by the public sector of the accumulating countries. This produces major distortions in the global economy and international financial markets and can have negative implications for: (i) **global liquidity conditions**, by possibly contributing to an artificially low yield environment (ii) the **potential for build-up of asset price bubbles**, to the extent that reserve accumulation is not sufficiently sterilised (iii) **global exchange rate configurations**, including the risk of misalignments (iv) **trade flows**, to the extent that reserve accumulation becomes the equivalent of a protectionist policy subsidising exports and imposing a tariff on imports
Regional level	Reserve accumulation by a major economy in one region may contain currency appreciation in competitor countries in the same region when this is needed. This: (i) **constrains the degree of flexibility of the other currencies** in the region, (ii) may **magnify capital flow volatility** in the other region's economies in a context of misaligned exchange rates
Domestic level	Reserve accumulation can: (i) **undermine a stability-oriented monetary policy** if the monetary policy of the anchor country is more expansionary than domestically required (ii) **hamper the market-based transmission of monetary policy impulses** and **the development of the domestic financial market** (iii) be **costly** as reserves have a relatively lower return and involve sterilisation costs (iv) **distort resource allocation, impede service sector development and constrain consumption and employment** by unduly favouring the tradable sector at the detriment of the non-tradable sector (v) affect **income distribution** and **consumption growth** by unduly damaging the household sector as a result of artificially low interest rates on deposits in a financially underdeveloped economy

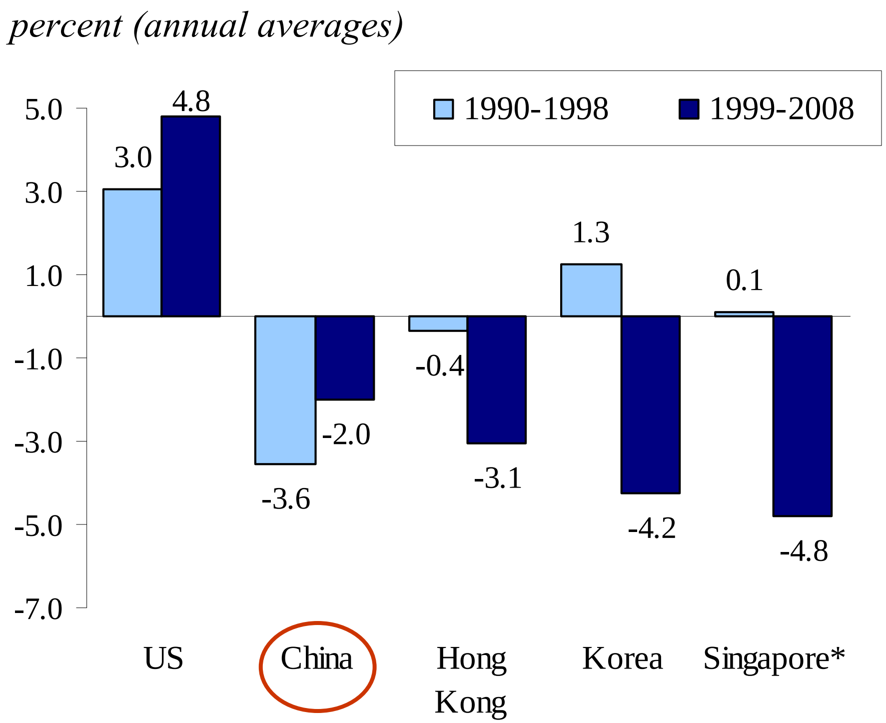
(6) The "exorbitant cost" of net asset positions

Difference between real returns on foreign assets and foreign liabilities

Excess Yields (income)



Excess Total Returns (income + capital gains)



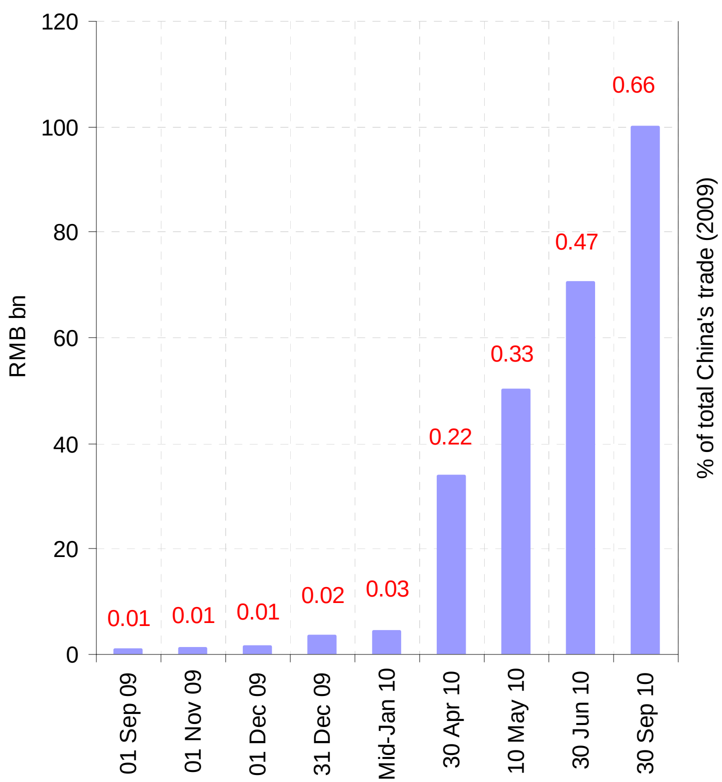
Source: Habib (2010).

* Until 2007 for Singapore.

(7) The internationalisation of the renminbi has limits if promoted under the current macro frame

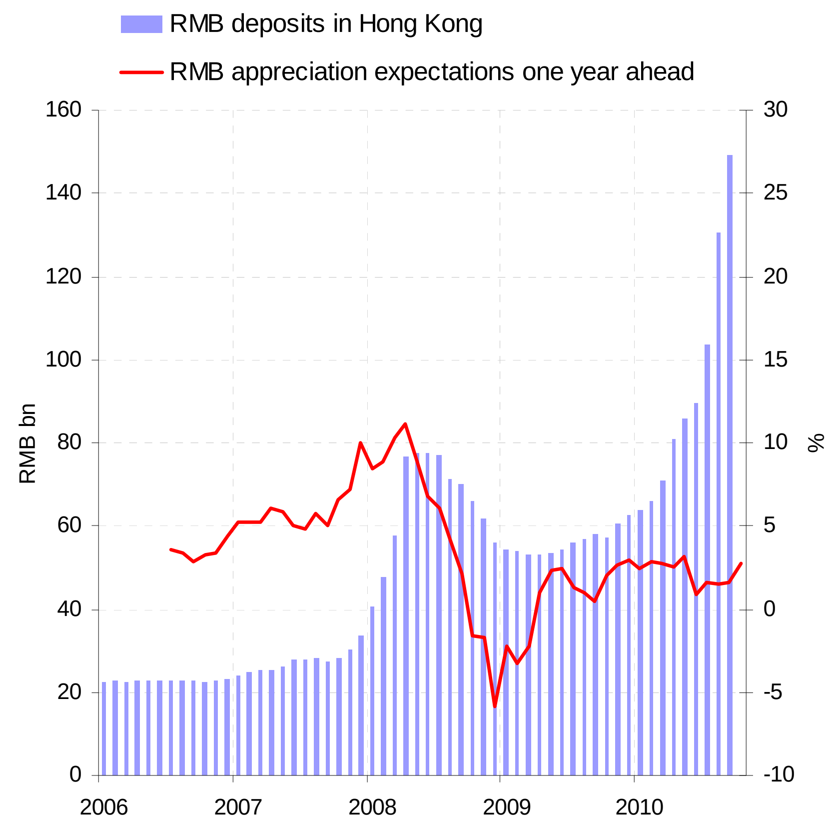
Volume and share of RMB in trade transactions

(cumulated since April 2009; volumes on left-hand side; shares of total China's trade highlighted in red)



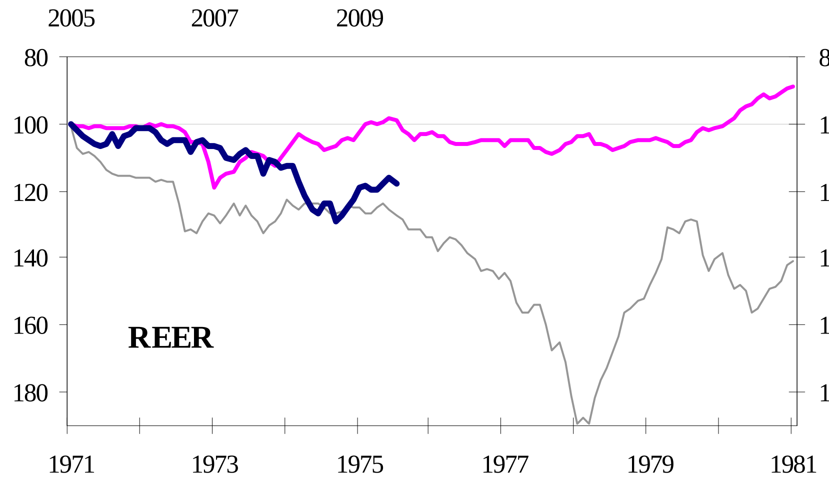
Sources: Standard Chartered; Hong Kong Monetary Authority.

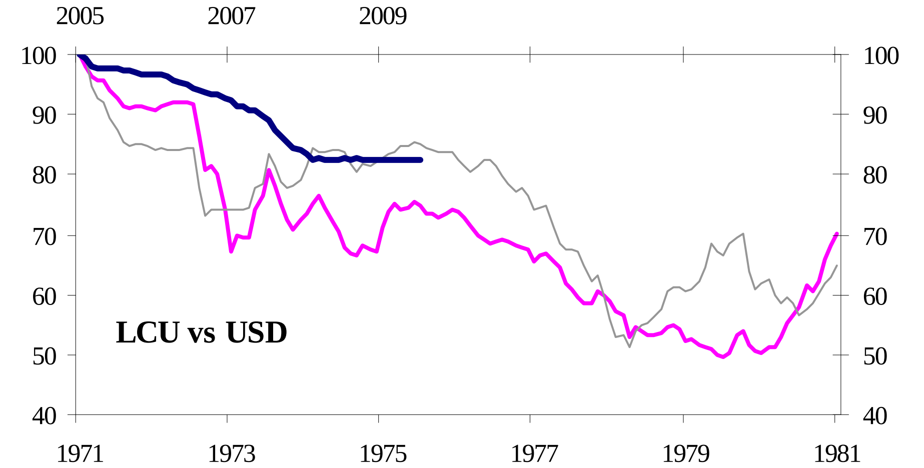
RMB deposits in Hong Kong and RMB/USD non-deliverable forward rate

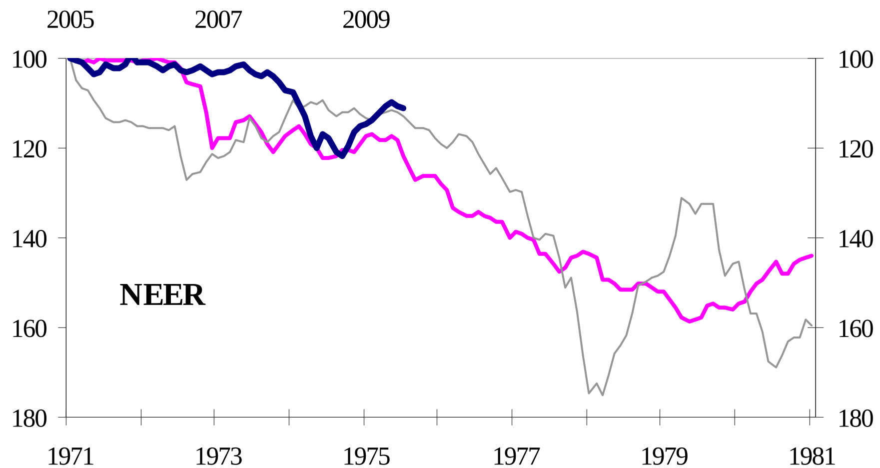


Source: CEIC.

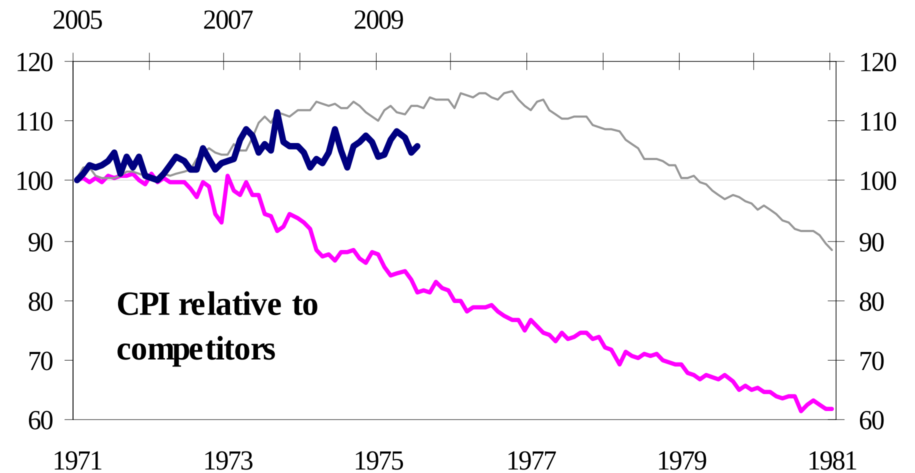
(8) Over the long run, REER is determined by structural factors: Policymakers can only choose to adjust via nominal ER or CPI







DEM (Aug 1971 = 100)
JPY (Aug 1971=100)
RMB (July 2005=100), upper axis



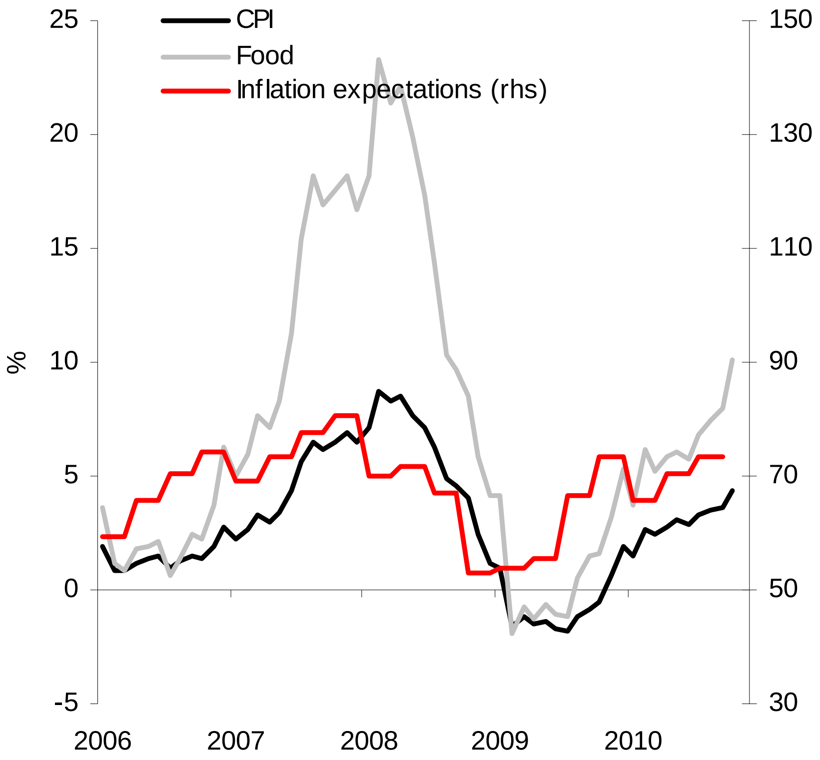
Germany (Aug 1971=100)
Japan (Aug 1971=100)
China (July 2005=100), upper axis

Source: BIS.

Domestic front: (I) Inflationary pressures

CPI inflation and inflation expectations

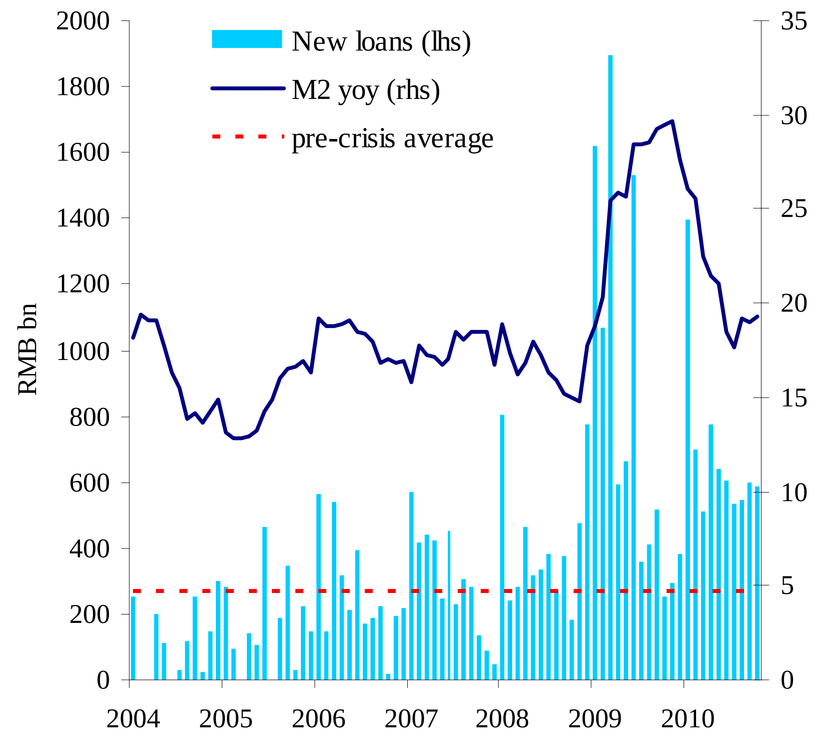
(year-on-year growth rates)



Source: CEIC.
Last observation refers to September 2010.

M2 growth and new loans

(year-on-year growth rates (right scale) and RMB bn (right scale))

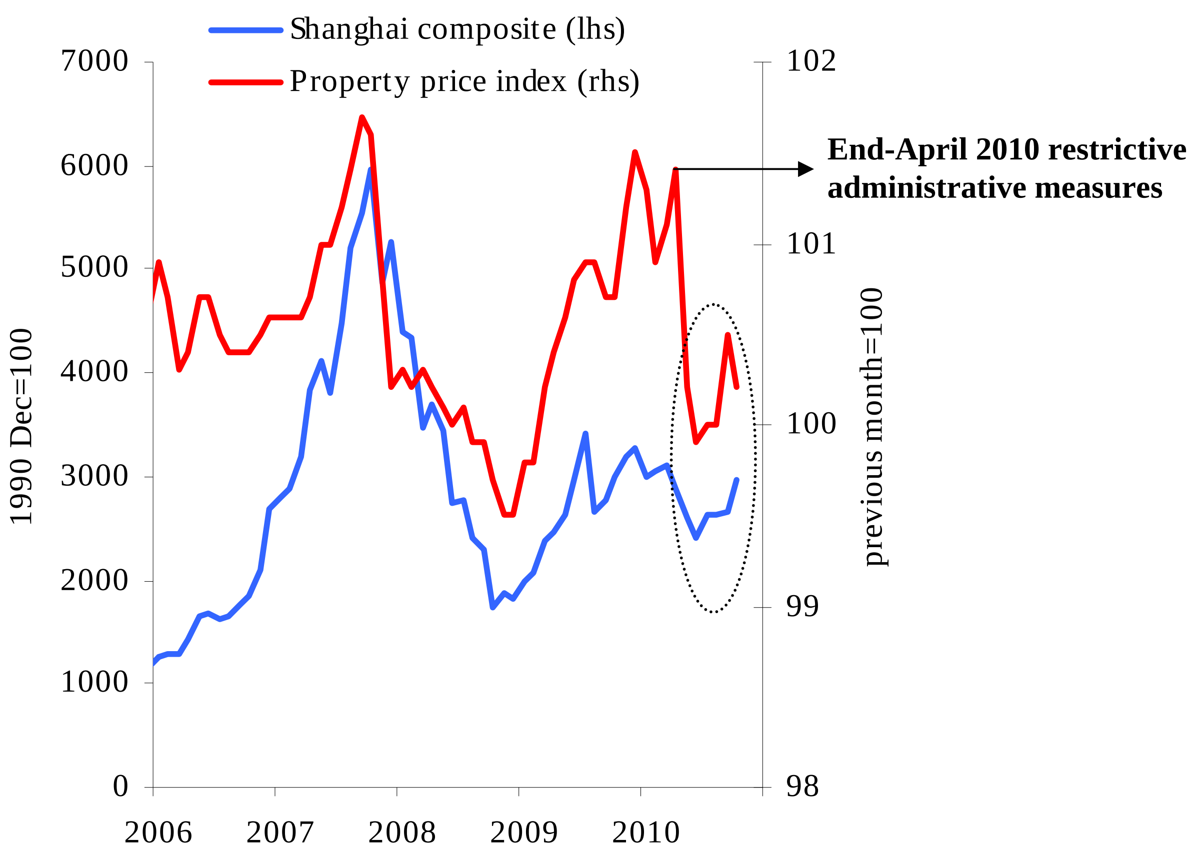


Source: CEIC.
Last observation refers to October 2010.

(2) Asset price tensions

Property and stock prices

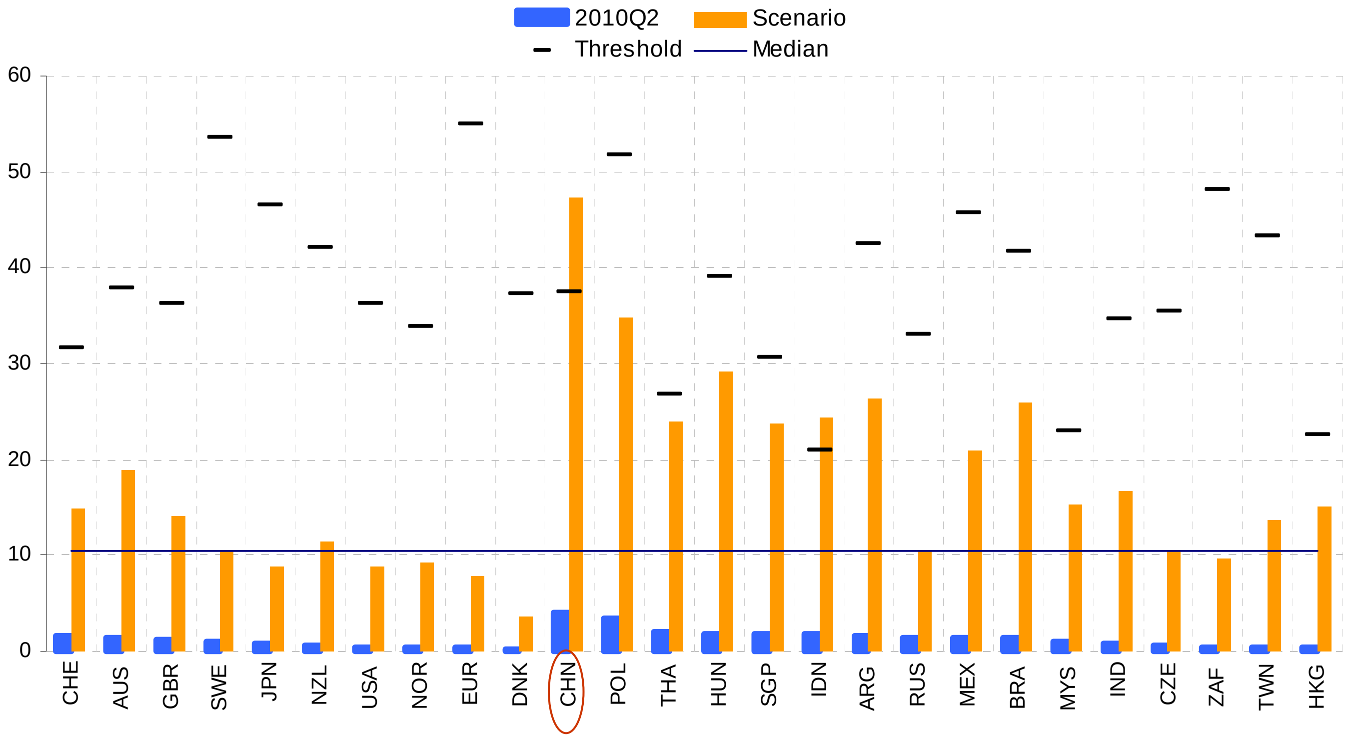
(month-on-month growth rates and levels)



Source: CEIC.

(3) The predicted risk that China triggers a systemic event is currently higher than elsewhere

Assessment of systemic risks in key emerging economies, based on the predicted probability of systemic event occurring within 6 quarters ahead



Source: ECB Global Early Warning System (GEWS), a framework to assess systemic risks stemming from domestic and global macro-financial vulnerabilities and their interactions. For more details, see *Lo Duca and Peltonen (2010): Macro-Financial Vulnerabilities and Future Financial Stress*, available in the SSRN.

Notes: (1) The output of the GEWS is a country-specific probability of a systemic event occurring within a time horizon of 2-8 quarters (in benchmark model 6 quarters), estimated with a Logit model. The predicted probabilities are shown in the chart as blue (baseline analysis) and orange (scenario analysis) bars;

(2) The black horizontal lines show the optimal “Early Warning” thresholds for the predicted probabilities based on “neutral observers’ preferences” (who is indifferent between Type I and Type II errors);

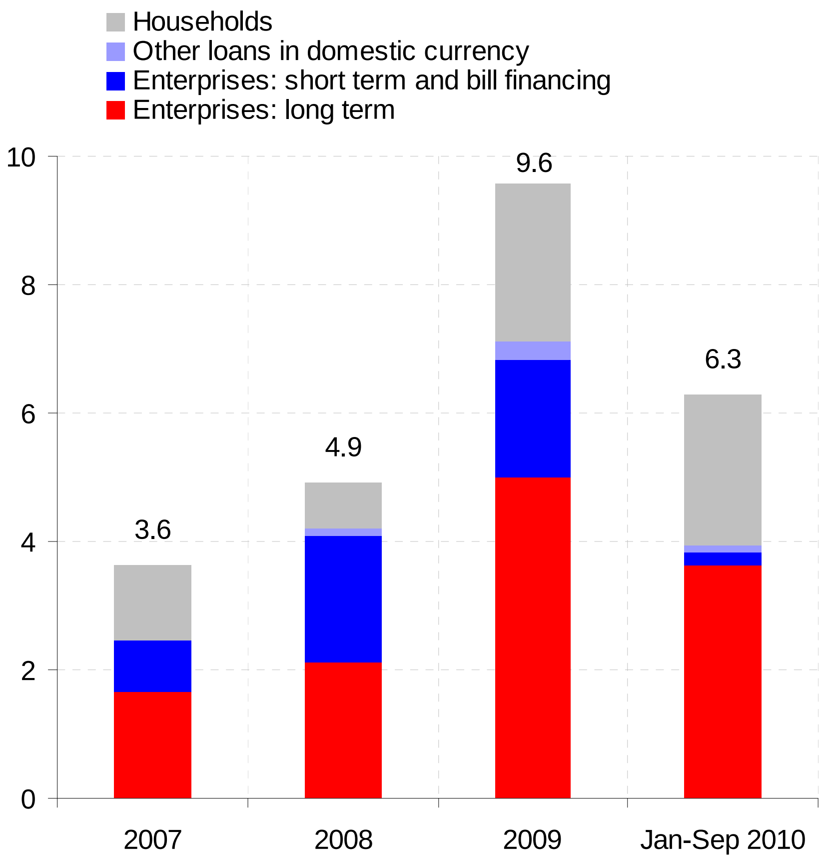
(3) Main model details: (i) Dependent variable: systemic event (extreme level of financial stress that on average had negative real consequences); (ii) Explanatory variables: domestic and global macro-financial vulnerabilities (e.g. GDP growth, inflation, fiscal deficit, asset price growth and valuation, credit growth and leverage);

(4) In the scenario analysis, global macro-financial variables are set to their median levels (scenario of “normalisation of global environment”), which highlights the current domestic vulnerabilities in key emerging economies.

(4) Will the surge in loans result in higher NPLs?

Loans issued broken down by recipients

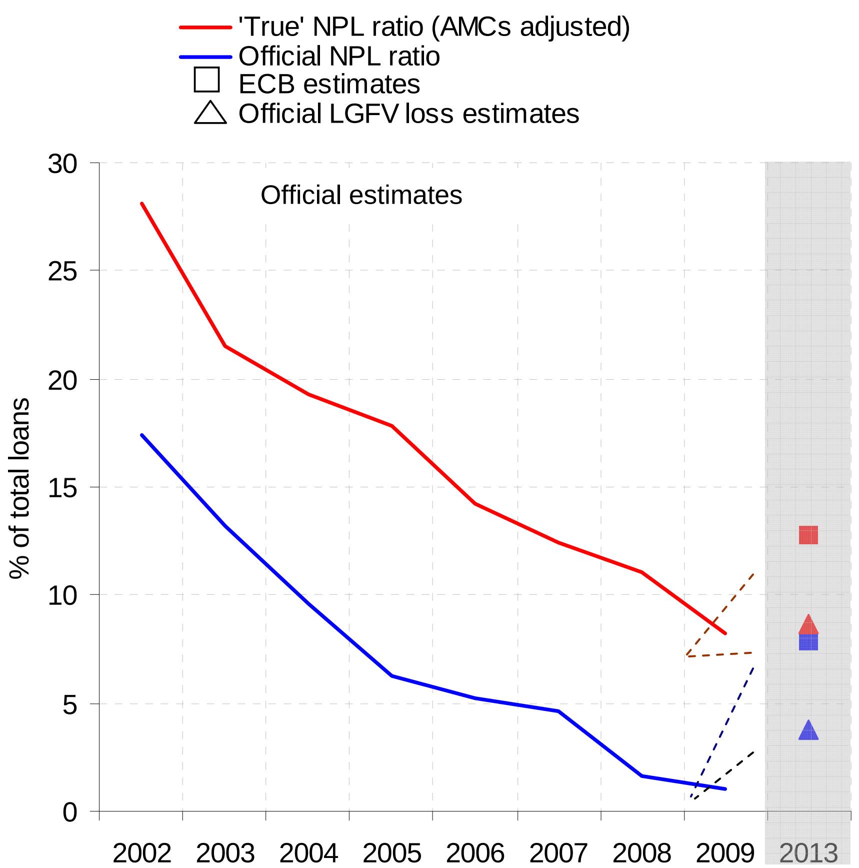
(RMB trn)



Source: CEIC.

Official and "true" NPL ratios

(% of total loans)



Source: ECB estimates based on CEIC and CBRC.

CONCLUSIONS

1. China's model may not be sustainable going ahead
2. Reforms are needed to rebalance the economy. This is both in the domestic and global interest
3. Reforms agreed thus far might prove too gradual given the running out of long-term supporting factors; importance of upcoming 12th five-year plan
4. Multilateral cooperation (G20, IMF) can help set the right aligned incentives to rebalancing both in China and in its key global partners

Thanks!

Grazie!

Xiè xiè!