

# **Can a successful bank restructuring end in tears? The case of China**

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**The views and opinions expressed herein are those of the authors and do not necessarily reflect those of the institutions they are affiliated with**

# Outline

- 1. Introduction**
- 2. The 'successful' reform of the banking system**
- 3. The new wave of financial vulnerabilities**
- 4. How to succeed with the reform**
- 5. Conclusions**

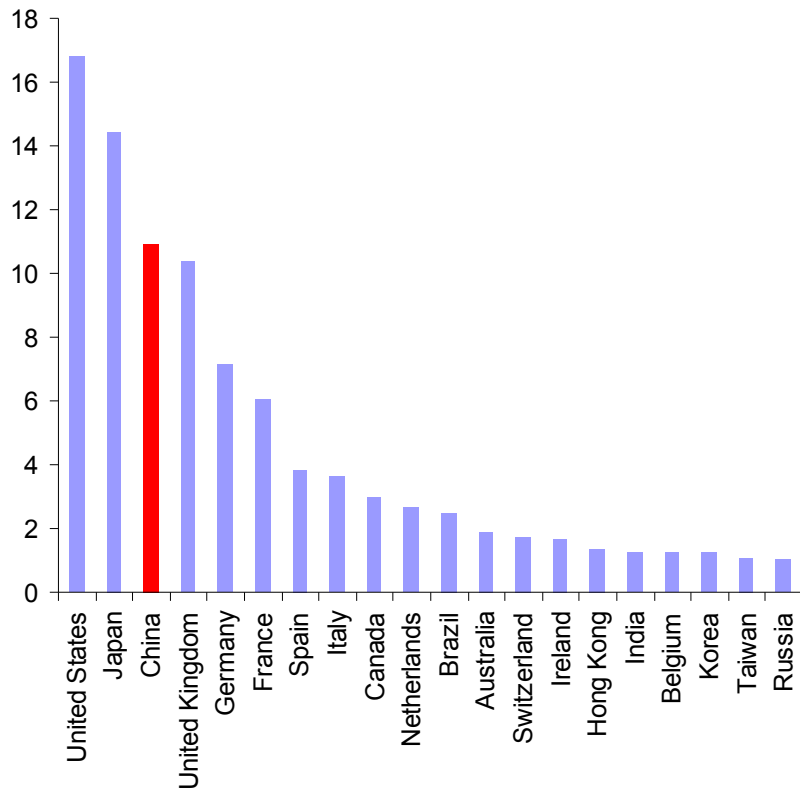
# Introduction

- China's banking system has coped with the global financial crisis without any major problems.
  - Against the background of a very difficult situation of the Chinese financial system during the last decades, China looks like they really did their homework!
- Is it true?
  - To some extent yes: China's financial reform has so far been very successful...
  - But not fully. The root of the problem is still not fully addressed:
    - Government interference, financial underdevelopment, incomplete financial liberalization, in general, **'bad incentives'**
      - **high savings ratios**: over 50% of GDP since 2005
      - **Investment inefficiencies**: 1 unit of Chinese GDP has required 5 units of investment (40% more than Japan and Korea)
      - **low access to finance**: self finance (60%) or informally financing
- The completion and the sequencing of China's financial reform is key for its development

# China's banking sector is very large but underdeveloped...

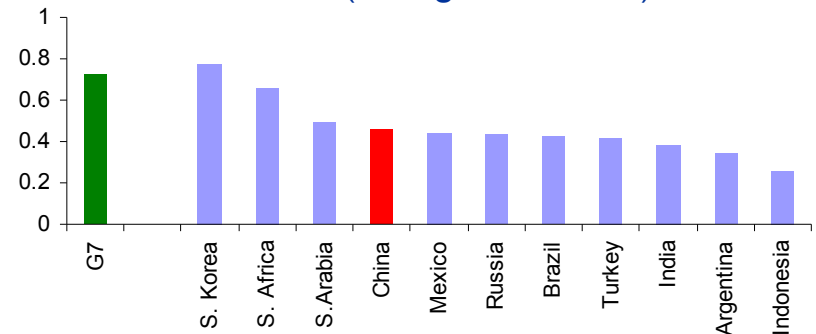
- China's banking system is one of the largest in the world, but financially underdeveloped and relatively closed even compared to other EMEs

**Banking System Assets**  
(USD trn, 2010)

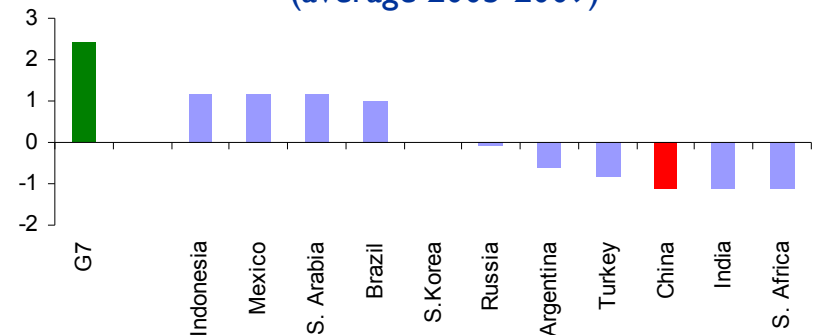


Source: Fitch.

**Domestic financial development, G20 EMEs**  
(average 2005-2010)



**'De jure' financial openness, G20 EMEs**  
(average 2005-2009)

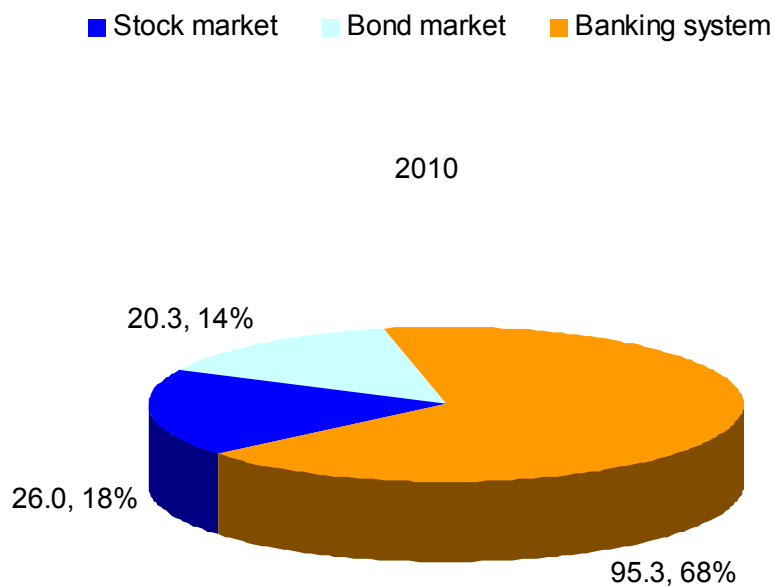


Sources: Dorrucci, et al. (2009), Chinn-Ito (2006)

# ... and the key financing vehicle but mainly public

- The banking system is the main pillar of China's financial system
- The big state banks play a central role

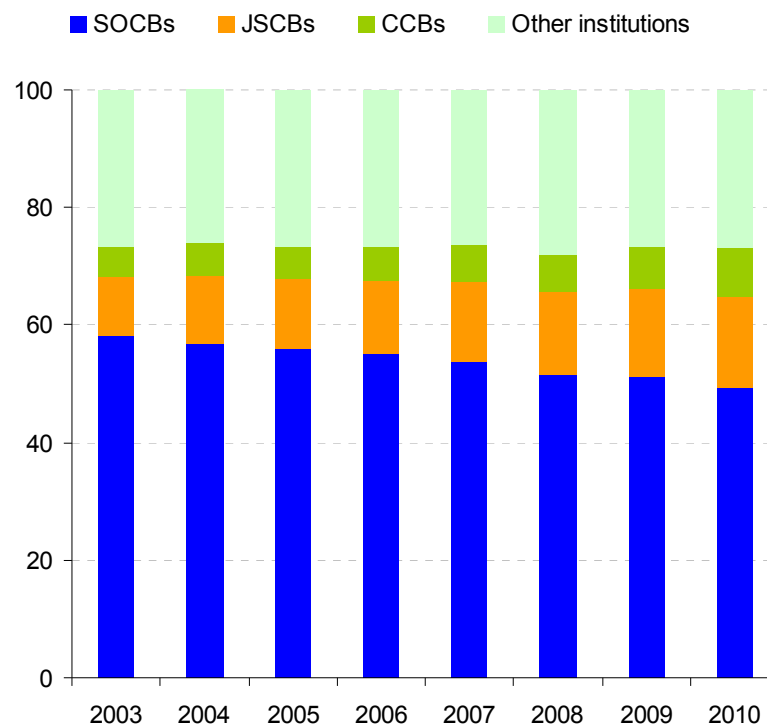
### Financial asset portfolio (RMB trn, 2010)



Total financial assets: RMB 142 trn (356% GDP)

Source: CEIC.

### Share on assets of banking institutions (%)



Source: CEIC.

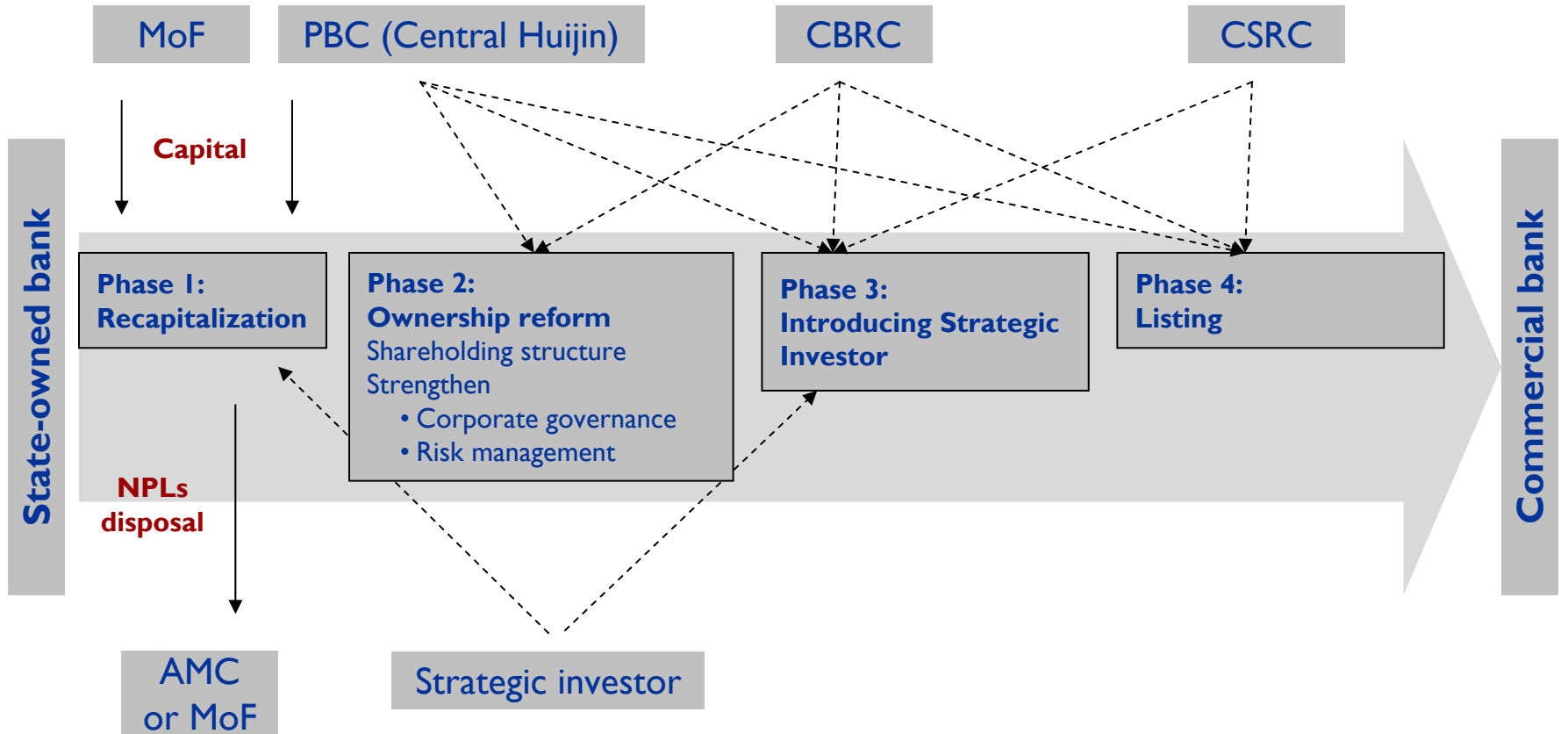
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# How did the reform shape up?

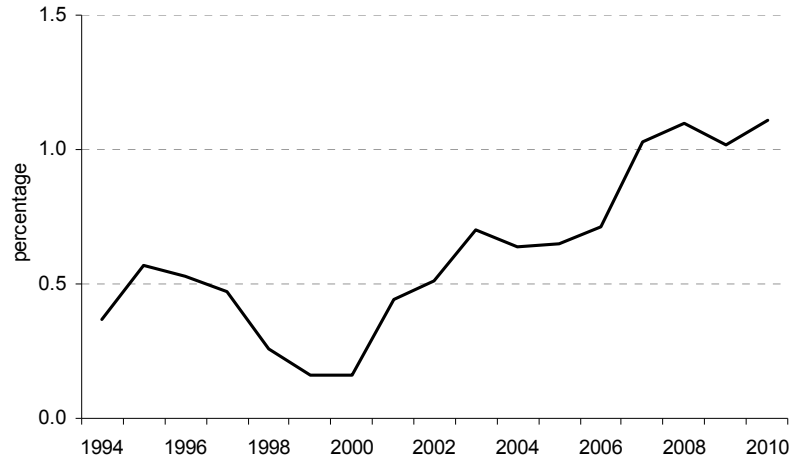
- Based on three pillars:
  - **Bank restructuring**: recapitalization and clean-up of NPLs
  - **Liberalization**: reduction of government interference through an incomplete
    - Ownership reform
    - Price and quantity liberalization
  - **Financial regulation and supervision**
- The reform lasted a decade

# Restructuring process

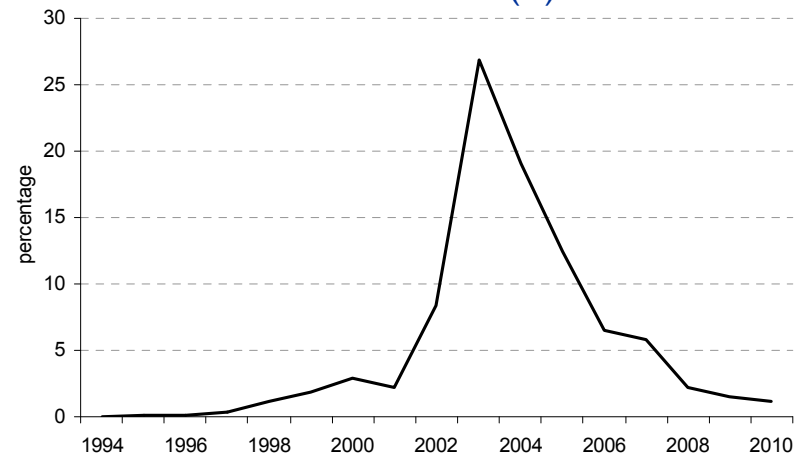


# China's financial reform looks like very successful...

## ROA (%)



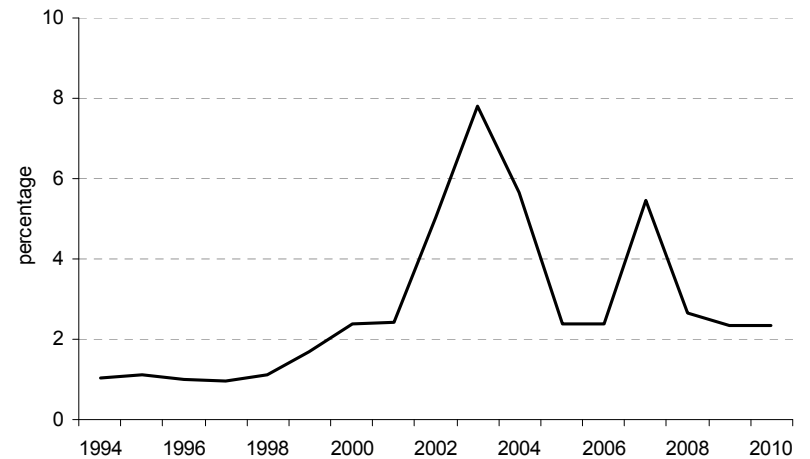
## NPL ratio (%)



## Equity over assets (%)



## Loan Loss Reserves / Gross Loans (%)



Source: Bankscope based on reporting commercial banks

# ... but the direct costs were large: re-capitalization

- In terms of capital, Chinese authorities have injected into major commercial banks around **7% of GDP**

Capital injected into SOCBs

Date	Bank	Amount			Financed by:	Currency
		RMB bn	USD bn	% GDP		
1998-1999	SOCBs	275	33	3.3	Ministry of Finance	RMB
2003-2004	CCB	186	22.5	1.4	PBC (Central Huijin)	USD (FX reserves)
	BoC	186	22.5	1.4		
2005	ICBC	124	15	0.7	PBC (Central Huijin)	USD (FX reserves)
2008	ABC	130	19	0.4	CIC (Central Huijin)	USD (FX reserves)

Source: Authors' calculations

# ... but the direct costs were large: NPLs transfer to AMCs

- In terms of NPLs transferred to AMCs, the cost was around **20% of GDP** (after recoveries (25%))

**China's NPLs transferred to AMCs**  
(figures in RMB bn)

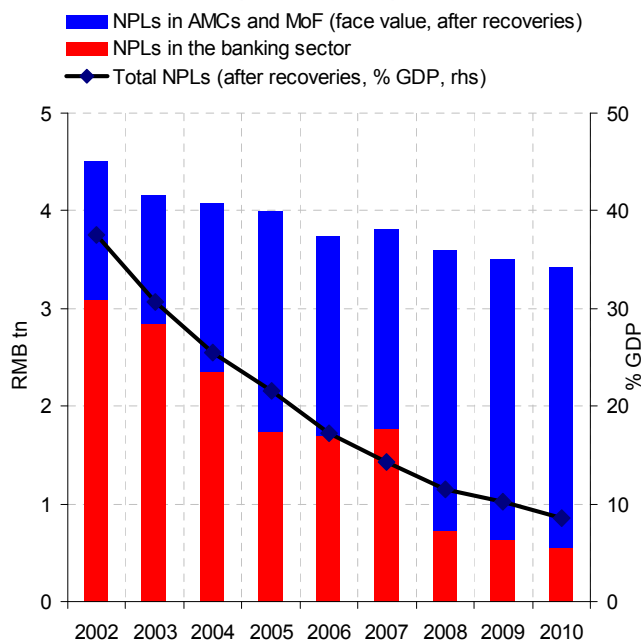
Date	Source bank	Destination AMC	NPLs		Financed by:			Notes
			(RMB bn)	(% of GDP)	AMC bonds	PBC loans	Other	
1999-2000	ICBC	Huarong	408	4.5	313	95		NPLs purchased at 100% of book value, bond maturity 10 years
	ABC	Great Wall	346	3.9		346		
	CCB	Cinda	250	2.8	247	3		
	China Development Bank	Cinda	100	1.1	100			
	BoC	Oriental	267	3.0	151	116		
2000-2001	CCB and China Development Bank		45	0.5				
2004	BoComm	Cinda	64	0.4				Purchased at 47% of book value, PBC loans to 5 years
	CCB	Cinda	129	0.8		161		
	BoC	Cinda	150	0.9				
	CCB	Cinda	57	0.4				Transferred at 0% of book value
	BoC	Oriental	142	0.9				
2005	ICBC	Great Wall	257	1.4				Purchased at 38% of book value, PBC loans to 5 years
	ICBC	Oriental	121	0.7		176		
	ICBC	Cinda	58	0.3				
	ICBC	Huarong	23	0.1				
	ICBC		246	1.3			246	RMB 246bn represents a debt recognition by the MoF
	Shanghai Bank	Cinda	3	0.0		3		Transferred at 0% of book value
2007	Various banks	Oriental	5	0.0		5		
	Shenzhen Comm. Bank	Cinda	4	0.0		4		
2008	ABC		816	2.6		151	665	RMB 665bn represents a debt recognition by the MoF

Source: Authors' calculations based on AMC reports and Dragonomics (2011)

# ... and not fully recognized one decade later

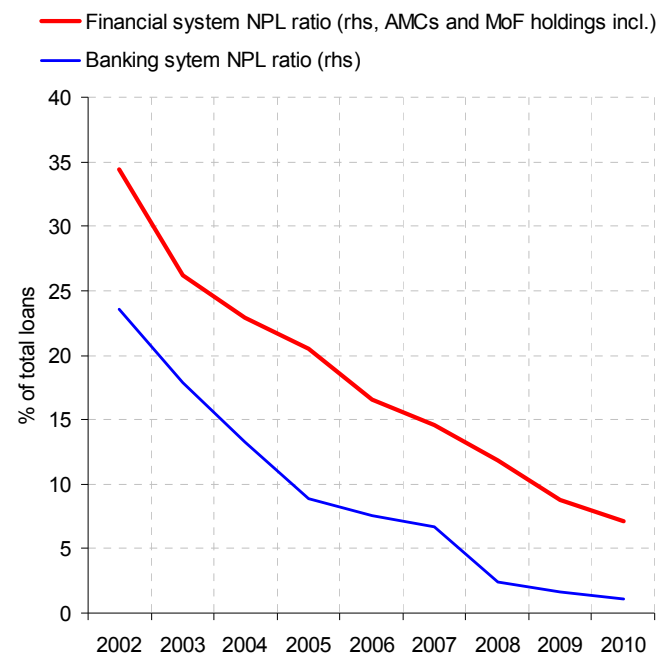
- As a result of NPLs transfer to the AMCs and low recovery ratios, **official NPLs figures underestimate the stock of NPLs**. Our calculations suggest:
  - NPLs were around 37% of GDP in 2002
  - NPLs are close to 10% of GDP in 2010 (RMB 3.5 trn)
  - ‘True’ NPL ratio is around 7% and the reduction is mainly based on rapid credit growth

## NPLs in the financial sector (RMB trn)



Source: Authors' calculations based on AMC reports and Dragonomics (2011)

## NPL ratio (%)

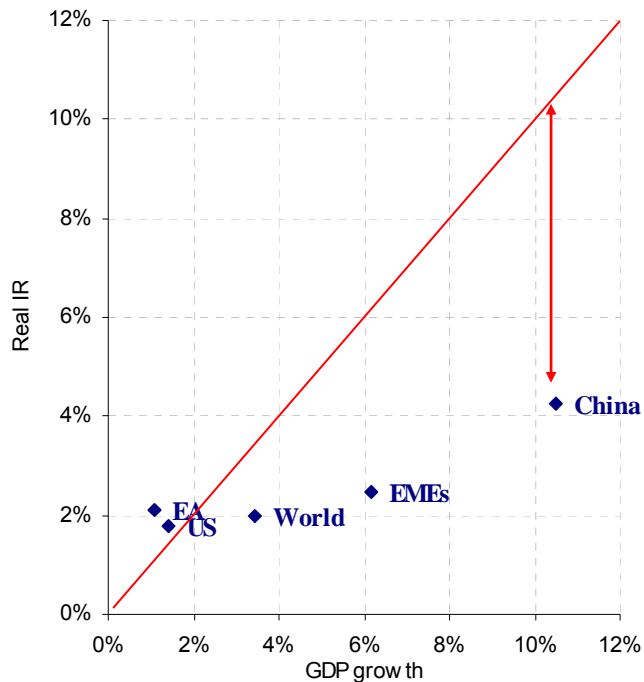


Source: Authors' calculations and CBRC

# The indirect cost: financial repression

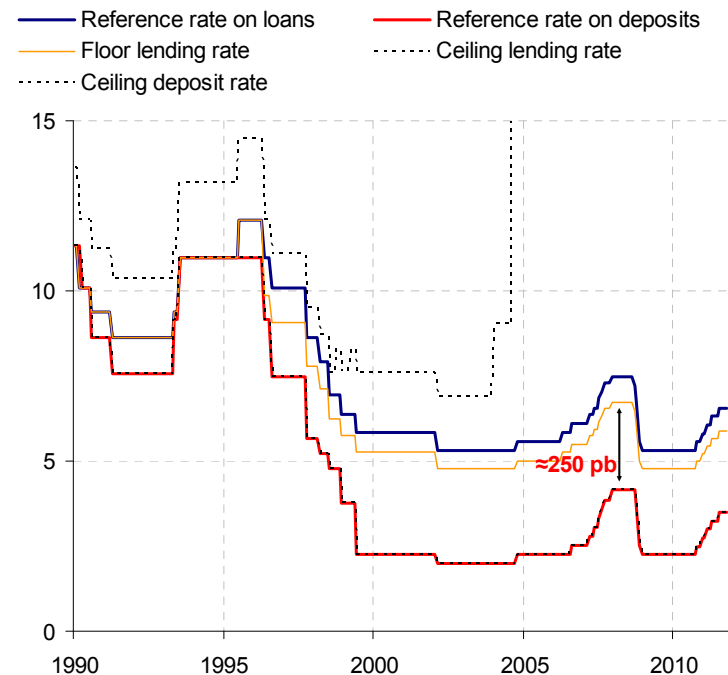
- In the 2000s, financial repression shifted the final costs of restructuring to bank depositors.
  - Real interest rates were artificially low
  - Wide spread between lending and deposit rates to shield banks' profitability
  - No further financial market development to maintain a stable deposit base

## Real GDP growth and real long-term interest rates, average 2001-09 (%)



Source: Haver Analytics

## Interest rate liberalization (%)



Source: PBC

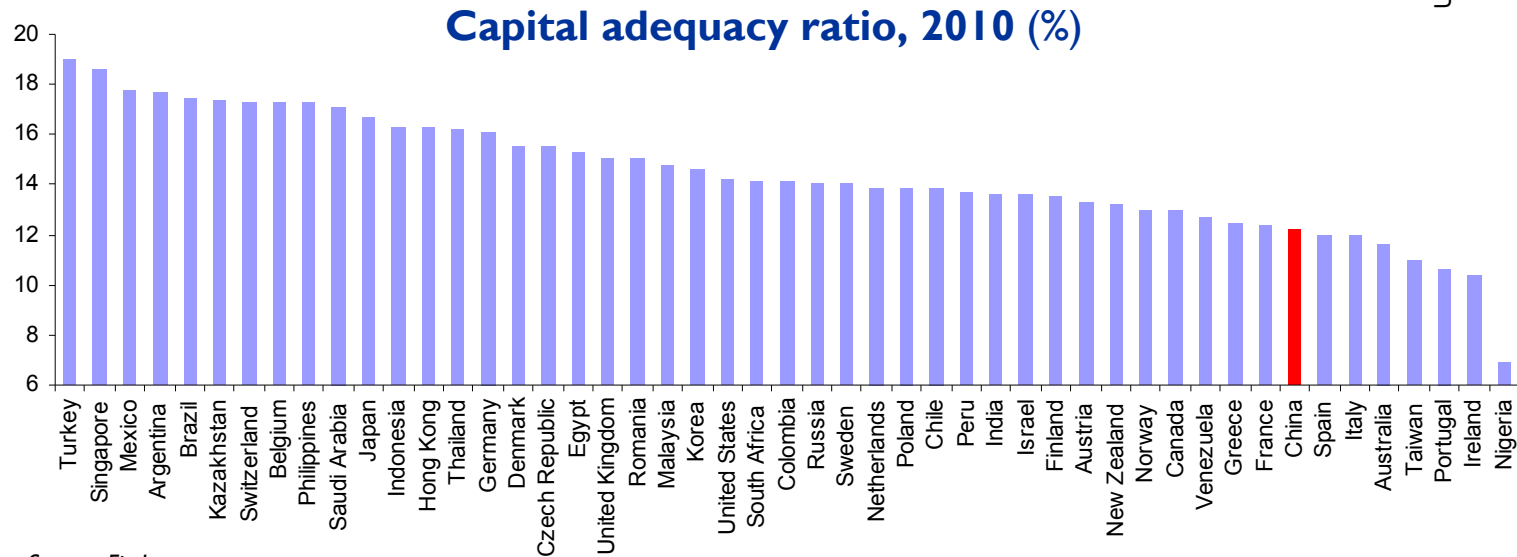
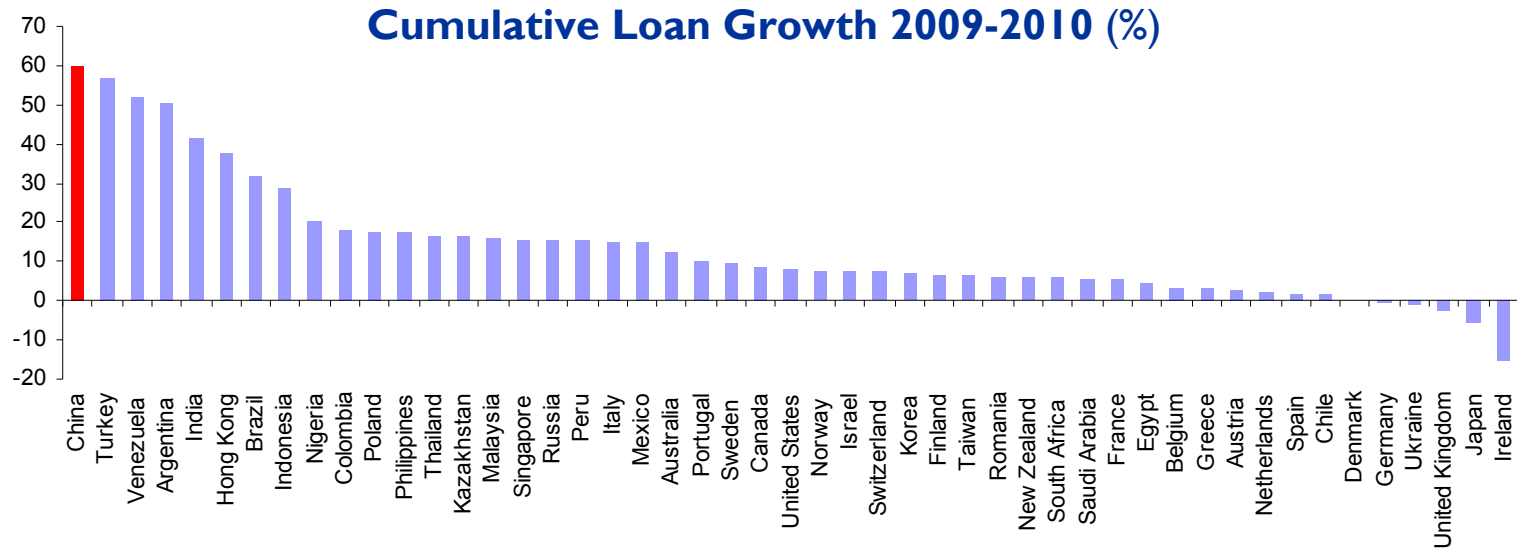
# Wrong incentives remain

- **The underdevelopment of capital markets** has distorted saving decisions
  - High corporate savings: limited alternatives of corporate funding
  - High household savings parked in bank deposits
- **Public ownership** impedes the establishment of a commercially driven financial system whereas **banks** continue to be used to **pursue broader policy goals**
  - Inefficient allocation of capital: implicit guidance on the direction of new lending (e.g., lending to local governments and SOEs)
- **Low cost of capital** creates incentives to over-invest and asset price inflation
- **Incomplete interest rate liberalization** alters banks' behaviour
  - Guaranteed interest margins discourage efficiency gains and competition
  - Limited ability and willingness to differentiate loan rates
- This environment contributes to inefficiencies in credit allocation and **a build-up of financial vulnerabilities**

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# The current status of the banking sector: fast credit growth but low capitalization

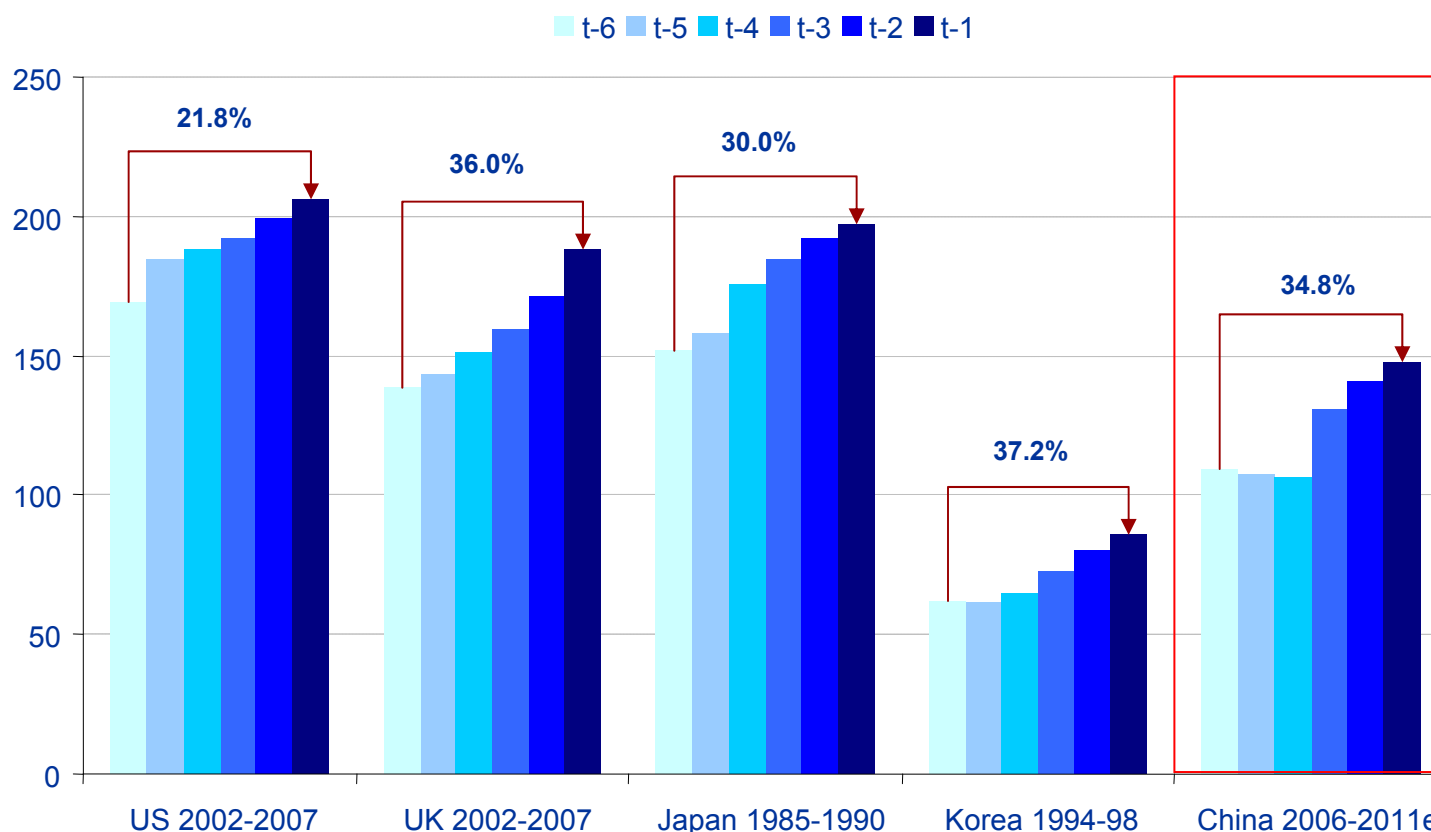


Source: Fitch

# Financial vulnerabilities might be mounting

- Historical experience shows that banking crisis are associated to (i) lending growth and (ii) private sector indebtedness

**Private Credit/GDP, pre-stress period (%)**



Sources: IFS, CEIC, (e) China: estimated for 2011, total bank loans adjusted for off-balance sheet lending

# Incentives have increased financial vulnerabilities

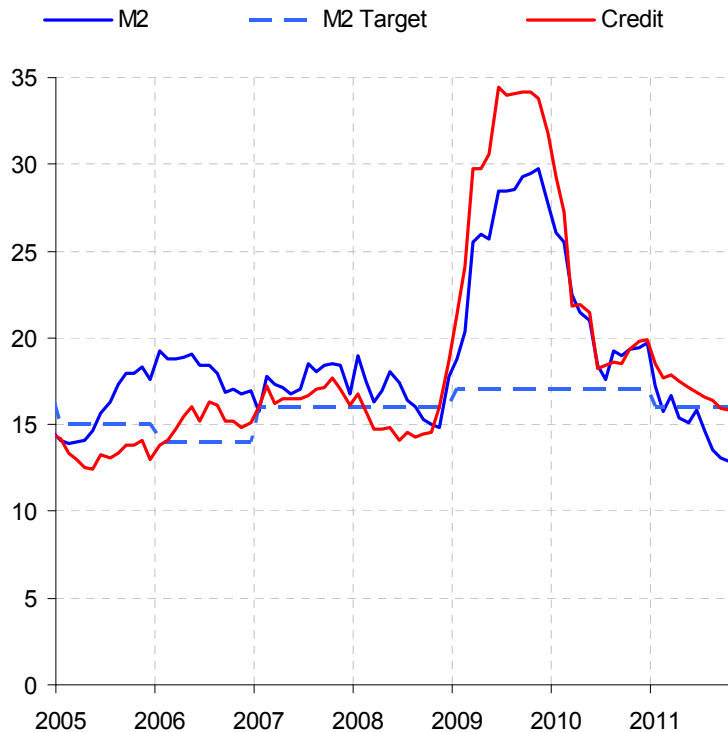
The banking system faces three major financial vulnerabilities:

- **Fiscal:** the financing of the 2008-2010 stimuli
- **Monetary:** low cost of capital feeding asset prices
- **Financial repression:** build up of a shadow banking system

# I. Financing the 2008-2010 stimuli

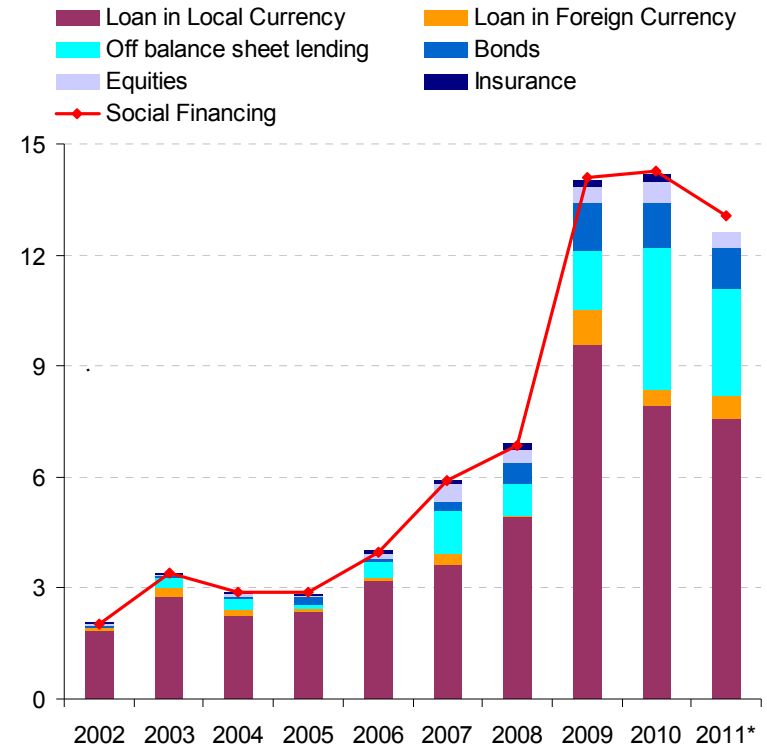
- In November 2008, China announced a fiscal stimulus package to stimulate domestic demand, mainly through infrastructure investment

## M2 and credit growth (%)



Source: CEIC. Last observation Q3 2011.

## Social financing (RMB trn)

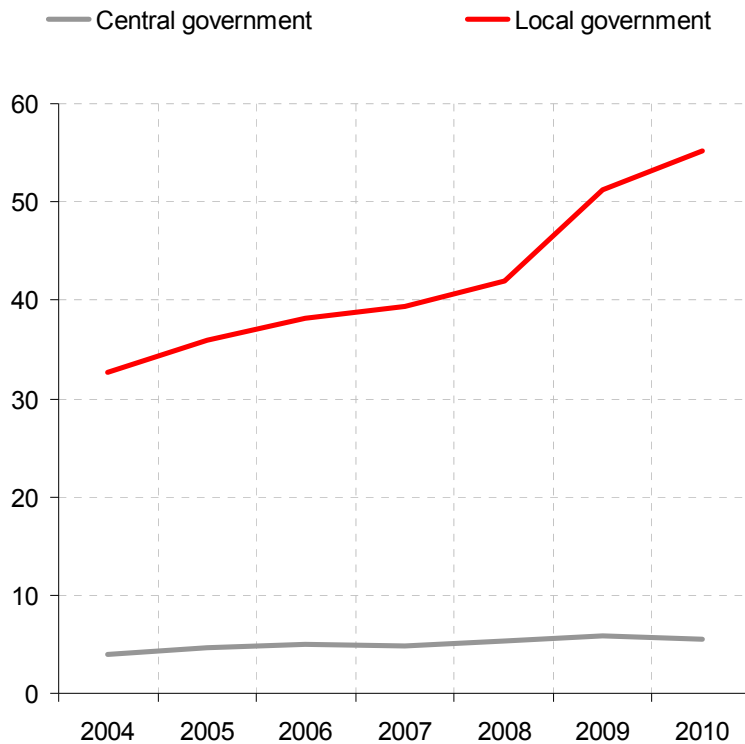


Source: CEIC. Last observation Q3 2011. (\*) Annualized

# Stimuli: local governments' role

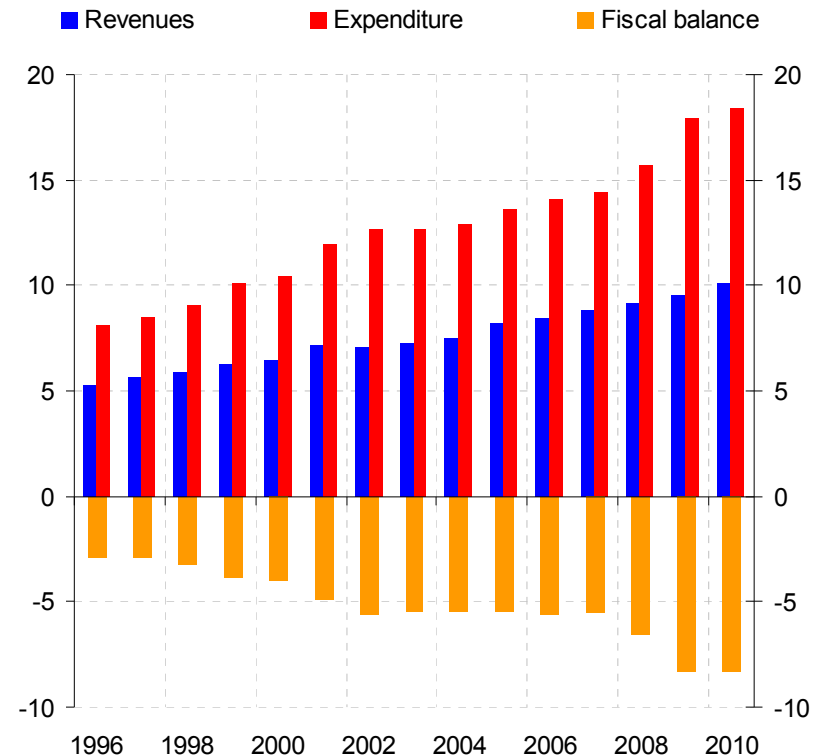
- Local governments' investment took a leading role in the stimuli, but their resources are limited

## Investment sponsored by central / local governments and SOEs (% GDP)



Source: CEIC. Last observation 2010.

## Local government revenues and expenses (% of GDP)



Source: CEIC. Before the central government transfers and rebates, exclude land sales.

# Stimuli: impact on the banking system

## Impact of the loan financing of the stimulus package

(RMB trn, otherwise indicated)

	Official data		Scenario A	Scenario B	Scenario C
	PBC	National Audit Office	Optimistic	Baseline	Pessimistic
<b>Assumptions</b>					
Recognized loans to LGFVs (as of Dec-2010)	14.4	8.5	14.4	14.4	14.4
Default ratio (% of LGFV loans)	26%	26%	26%	39%	50%
Nominal GDP growth (2010-20)	11%	11%	16%	13%	9%
<b>Results</b>					
Loans default	3.7	2.2	3.7	5.5	7.2
Loans default (USD bn)	551	325	551	815	1059
New NPLs (% 2010 GDP)	9.4	5.6	9.4	13.9	18.1
New NPLs (% 2020 GDP)	3.3	2.0	2.1	4.1	7.6
Δ NPL ratio (2015)	4.6	2.7	3.7	6.3	9.8
Δ NPL ratio (2020)	2.8	1.6	1.8	3.4	6.3

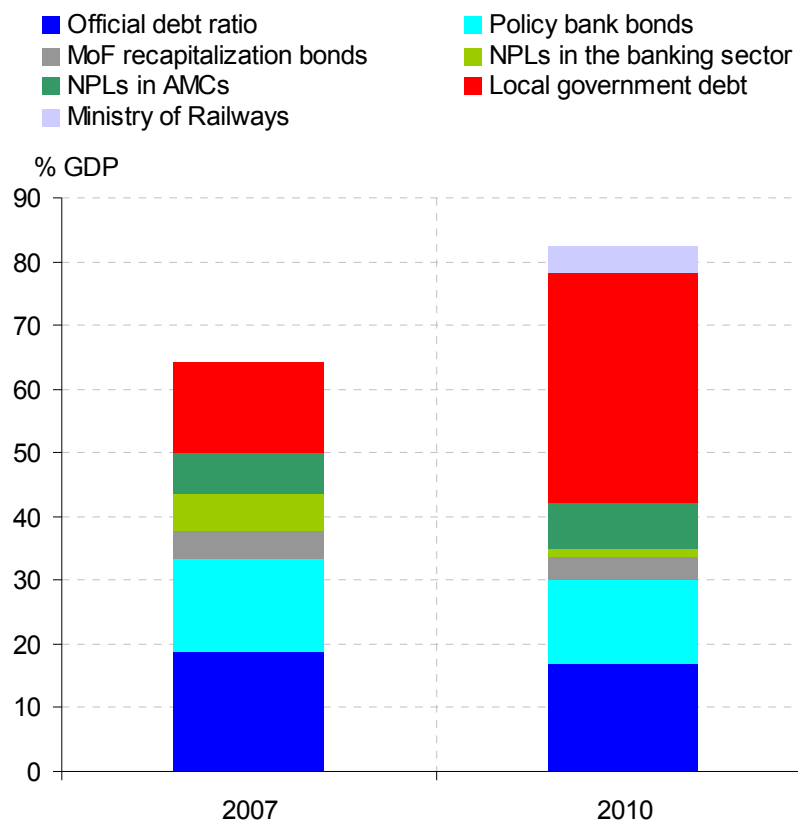
Source: Authors' calculations based on PBC, NAO, China Securities Journal and CEIC

- China Securities Journal: 26% of LGFV loans will be very difficult to recover and other 50% could be only paid back using external sources of finance
- The size of new NPLs could be significant but manageable in the mid term
  - around 14% of 2010 GDP,
  - but around 4% of GDP in 2020 as consequence of the high nominal GDP growth

# But stimuli is a pseudo-fiscal issue

- The root of current problems is the lack of local governments' funding and the stimuli-driven nature of lending.
- The central government should
  - provide local governments with additional sources/revenues or
  - transfer the LGFV loans from banks' balance sheets to a 'bad bank'
- If government recognize all the contingent liabilities in the financial sector, debt to GDP ratio could raise over 80% (18% officially reported)
- If the losses were mainly borne by commercial banks, it would damage their private shareholders and tarnish the efforts carried to set up a commercial banking sector in China

## Public debt and contingent liabilities (% of GDP)



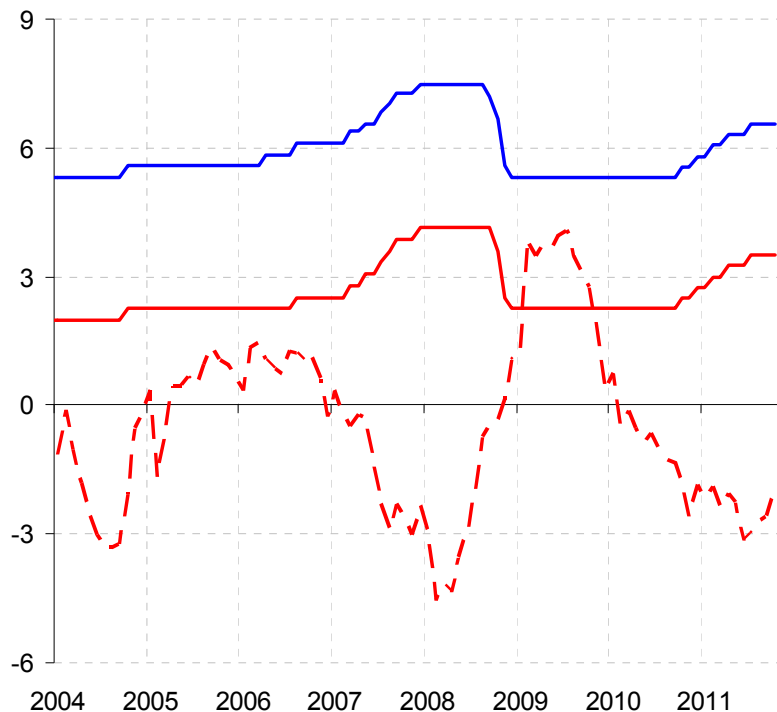
Source: Authors' calculations based on CEIC and Dragonomics (2011)

# 2. Asset price bubbles

- **Negative real interest rates** appear to have boosted asset price inflation

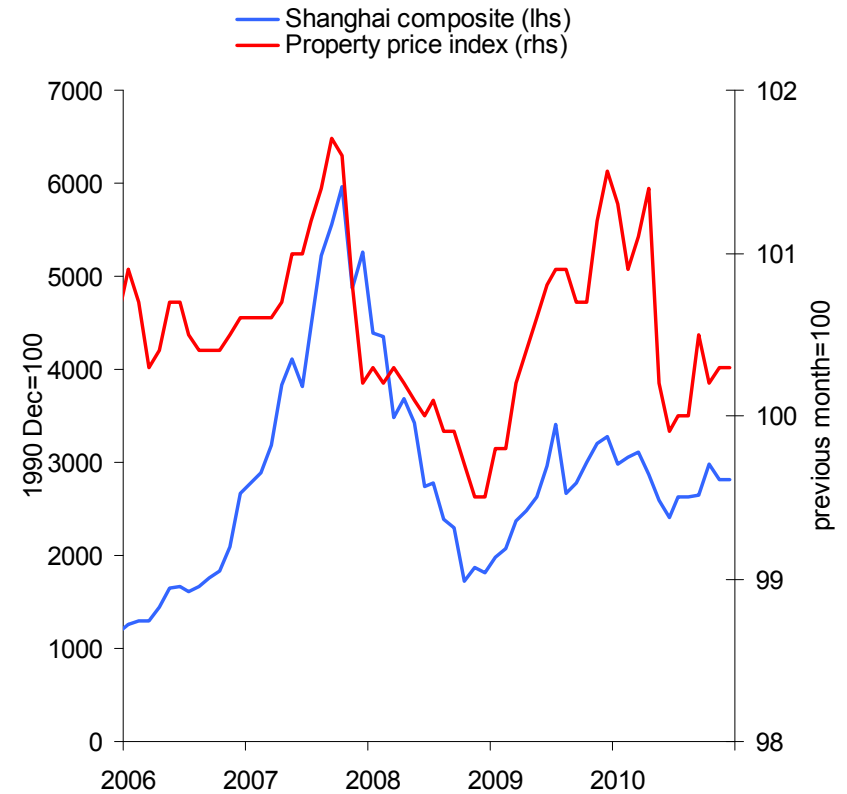
## 1-year reference deposit and lending rates (%)

--- 1-year deposit rate (real)      — 1-year lending rate (nominal)  
— 1-year deposit rate (nominal)



Source: CEIC.

## Property and stock prices (month-on-month growth rates and levels)



Source: CEIC.

# Is there a property market bubble?

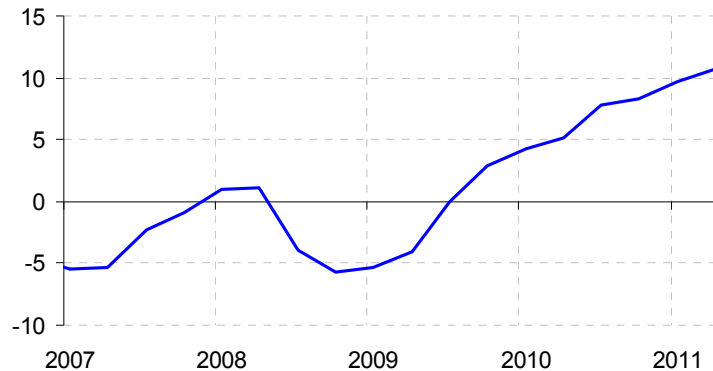
## Property prices misalignment

Dependent variable: Log Implicit house price index		GMM estimator
Log Disposable income per capita (*)	0.508*** (0.000)	
Log Ratio of urban population	0.815*** (0.001)	
Log Loans per capita (*)	0.150*** (0.000)	
Lending rate (*)	-0.0117*** (0.000)	
Changes in the log stock of houses (-1)	-17.68** (0.023)	
Constant	-2.784*** (0.000)	
Observations	398	
Number of regions	28	
Hansen test	(0.809)	

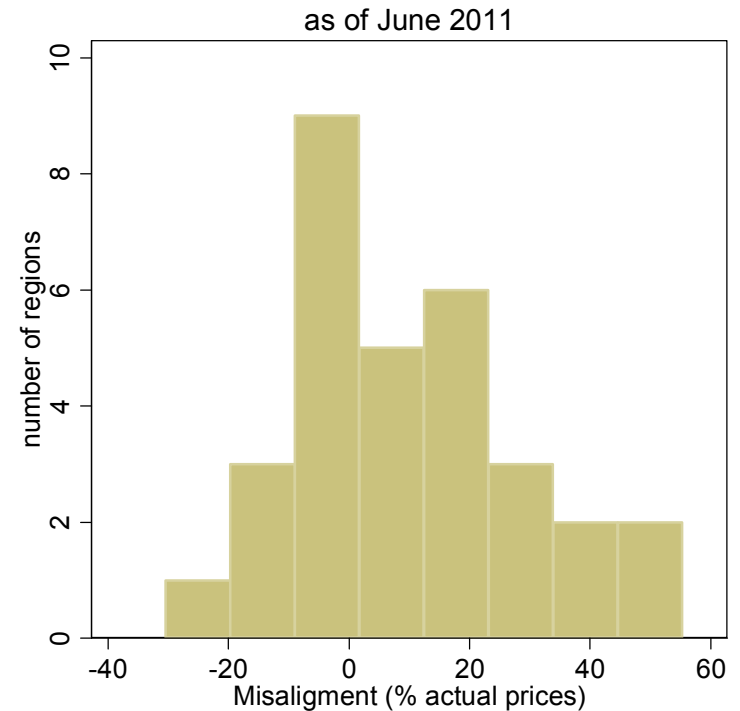
Robust p values in parentheses

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

— Misalignment from structural determinants



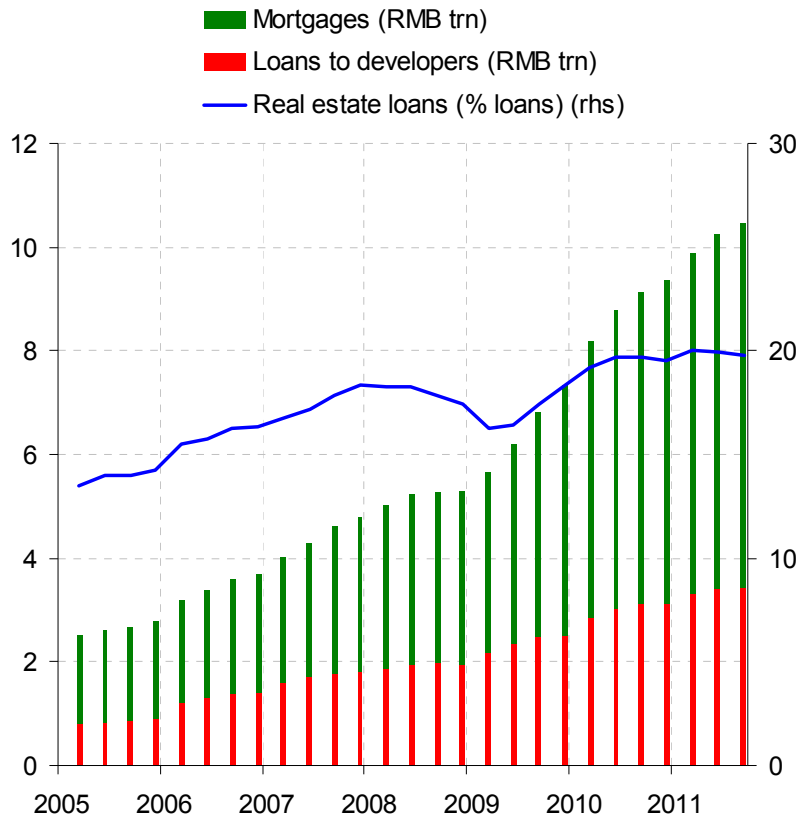
## Distribution of regional property prices misalignment



Source: Santabárbara (2011).

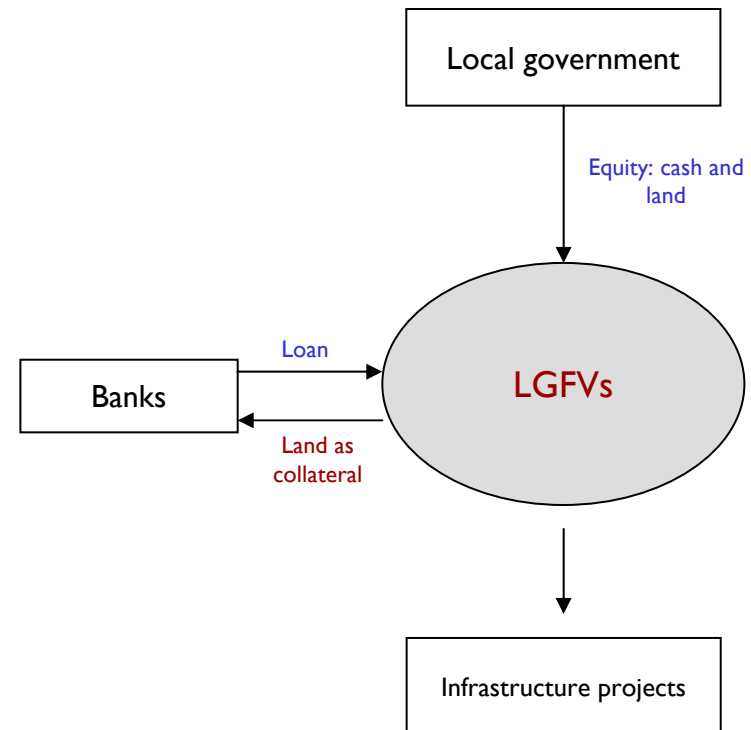
# Banking sector direct and indirect exposure to the property market is increasing

## Real estate loans (RMB trn, %)



Source: CEIC.

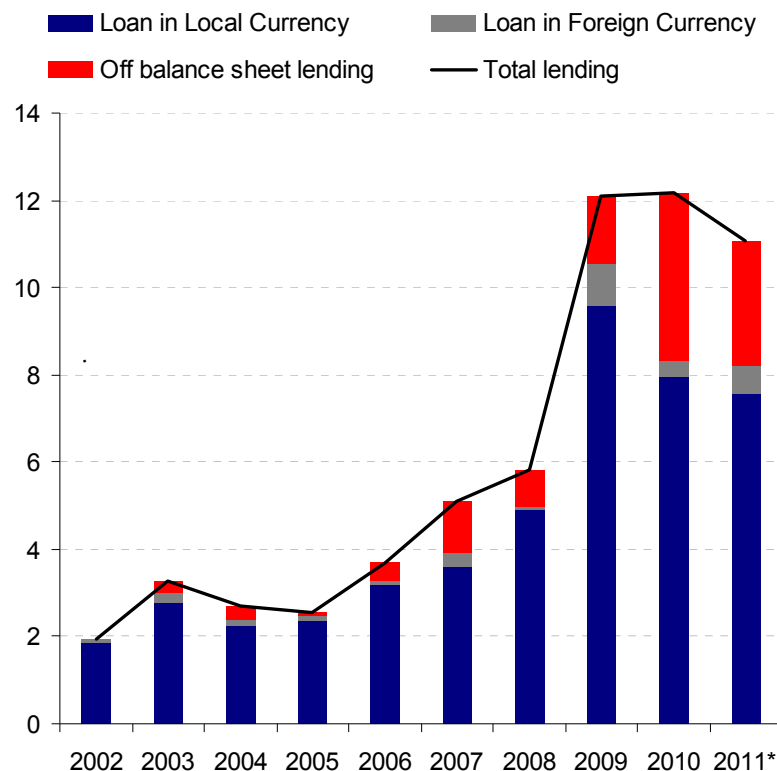
## Local government financing vehicles



# 3. Shadow banking system

- China's informal and unregulated shadow banking system has grown rapidly because of a 'de facto' financial liberalization
  - depositors to shift from bank deposits to higher yielding products
  - lenders to circumvent the tight access to the banking system
- Two kinds of shadow banking: informal lending and off-balance sheet lending
- The shadow banking system has played a useful function in the past, by channelling credit to profitable businesses, especially SMEs.
- Financial stability concerns related to risks of disorderly disintermediation (lighter regulation and supervision)
  - Lack of transparency / unknown exposures
  - Risk of liquidity squeeze

## Off-balance sheet lending (RMB trn)



Source: CEIC. Last observation Q3 2011. (\*) Annualized

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# How to succeed with the reform?

- Incentive structure needs to be more market oriented to prevent the build up of financial vulnerabilities
  - Ownership reform through more private ownership (more openness to foreign ownership would also help).
    - Avoid the use of the banking system as a policy tool
    - Improve the access to finance by SMEs and households
  - Market-oriented monetary policy tools:
    - Reduce the artificially low cost of capital
  - Interest rate liberalization:
    - Reduce precautionary savings
    - Improve the pricing of credit risk
    - Discourage risky 'de facto' financial liberalization
  - Promote financial development
    - Competitive discipline on the banks
- Expand the perimeter of financial supervision and regulation

# Interest rates liberalization: impact on profits

- Interest rates are not liberalized to shield the profitability of the banks
- A scenario analysis on the effect on profitability of liberalized interest rates
  - Net interest margin in China at the level of Emerging Asia, US or euro area before the crisis
  - Caveats: (i) adjustment through prices, no quantities; (ii) no model for the relationship between interbank interest rates and retail rates

Results (% changes from 2008 actual data)	Scenario 1 NIM China equals to ASEAN+Korea		Scenario 2 NIM China equals to the US large commercial banks		Scenario 3 NIM China equals to euro area historical average	
	2008	2007	2008	2007	2008	2007
	Net interest margin	-12.0	-6.9	-12.3	-9.2	-52.6
Profit before taxes	-21.8	-11.4	-22.4	-15.1	-95.6	-88.1
Pre-tax ROAA	-24.4	-17.0	-25.0	-20.7	-98.2	-93.7

Source: Authors' calculations based on Bankscope's balance sheet and income statement data of China's commercial banks

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# Conclusions

- As a general conclusion, **the reform is not over!**
  - despite the positive indicators, wrong incentives remain
- **Financial vulnerabilities** are building up:
  - recent credit surge linked to the **abuse of the banking system to pursue policy goals**
  - too loose liquidity conditions **fuelled asset prices**, which the banking system is increasingly exposed to
  - a **shadow banking system** is developing to circumvent the low cost of capital and credit constrains
- To complete the reform, **incentives have to change**
  - ownership reform
  - interest rates should play its signalling role under market forces.
- Market based incentives and competition are key to ensure good performance and will reduce the current financial repression

**Comments welcome**