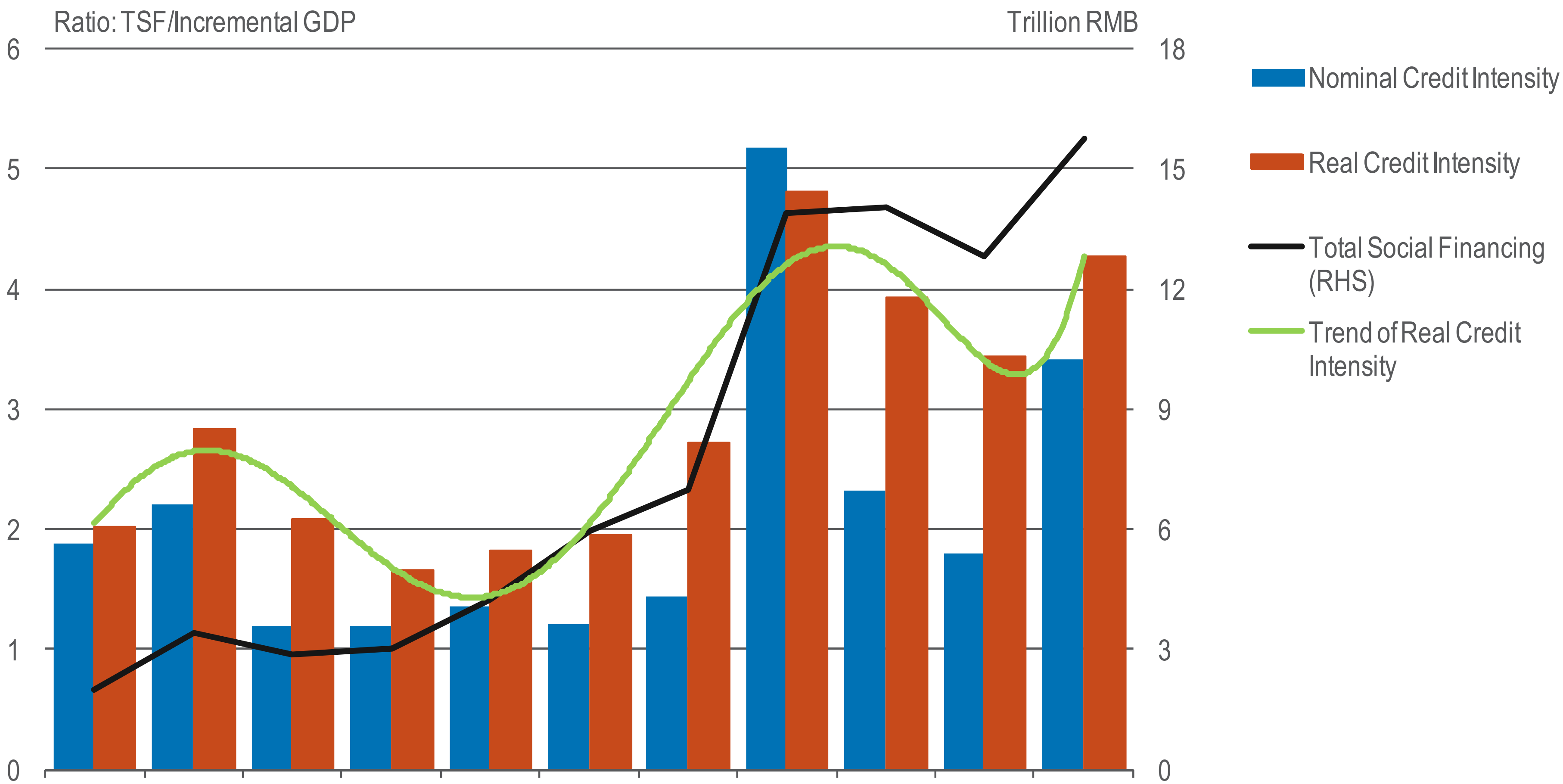
Catalysts for Crisis

Conditions for Crisis

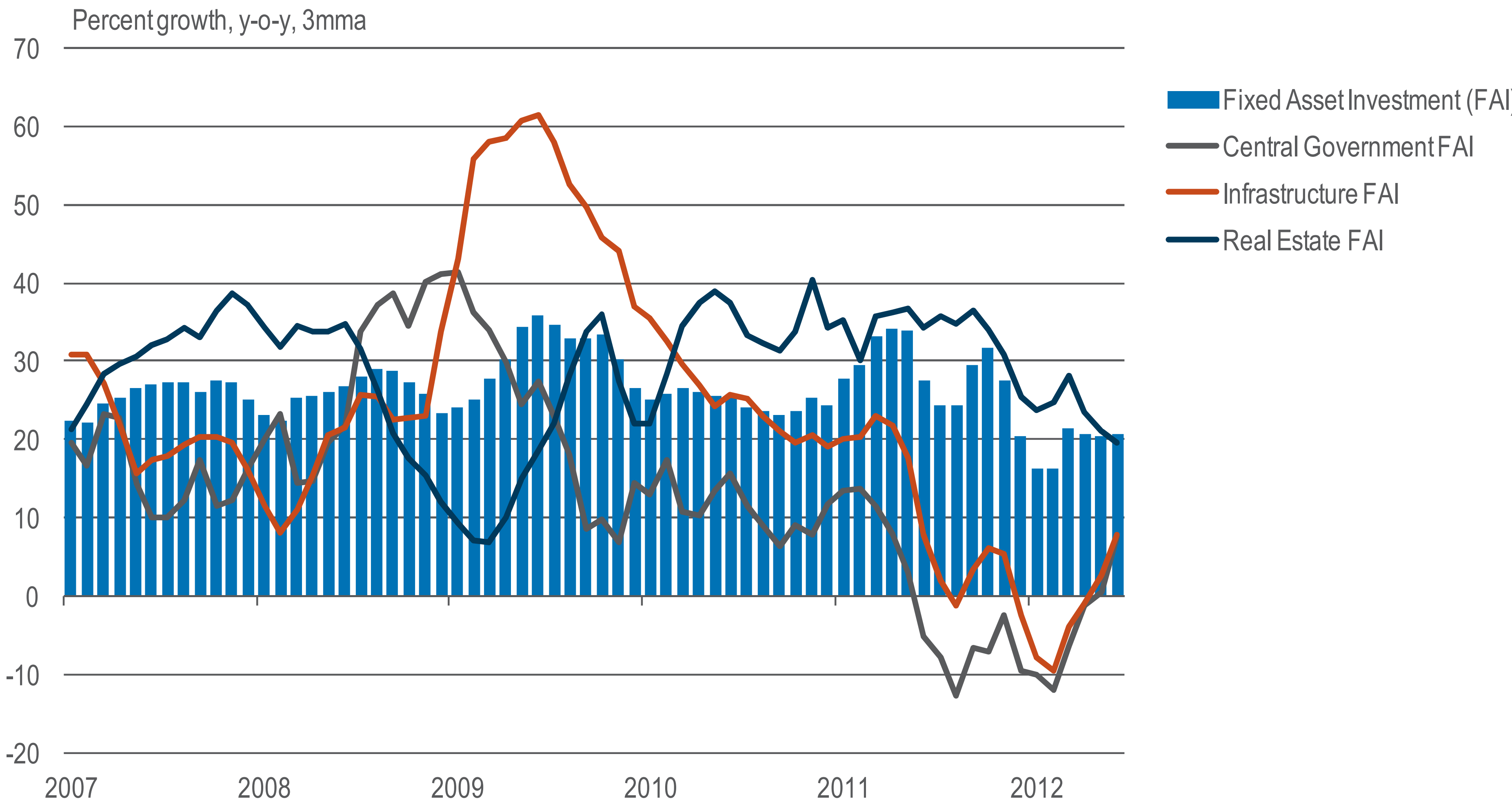
- Total indebtedness is about 200% of GDP
  - Corporate debt: 130%
  - LGFV debt: about 90%
  - Government: about 26%
    - But these categories overlap
- Meanwhile, industrial production is slowing:
  - 2013 power output growth <5%, coal output 2%, steel up 2%, cement flat
- And real credit rates are high, perhaps average 20%.

Less Growth from More Credit



Sources: PBoC, NBS, CEIC, The Conference Board

Using Infrastructure Investment to Drive Growth



Sources: NBS, CEIC, The Conference Board

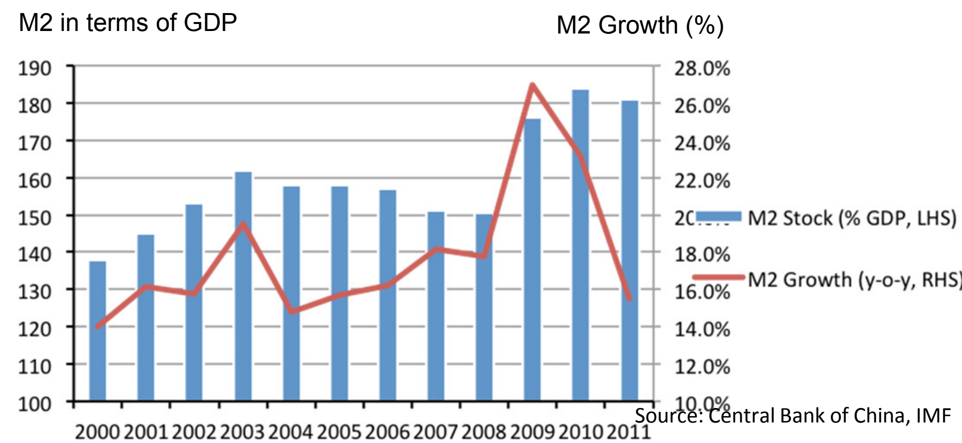
Bank lending, total social capital, and money supply

- TSF & M2:Total Social Funding surged as % of total, eclipsing bank lending. Bank lending was 38% of new lending. M2 money supply exceeded 200% of GDP
- Deleveraging: Substantial deleveraging going on across China. Severe in benchmark cities such as Wenzhou, Ordos, Changsha. Ordos has rapid exodus of wealthy individuals, many leaving substantial liabilities behind
- Local Government Finance Vehicles (LGFV): Being privatized and their paper securitized to reduce the “on balance sheet” debt of local governments & banks. Local governments now selling future tax revenue to private investors. Wenzhou is selling off their Audi fleet

Choices facing the Chinese Government

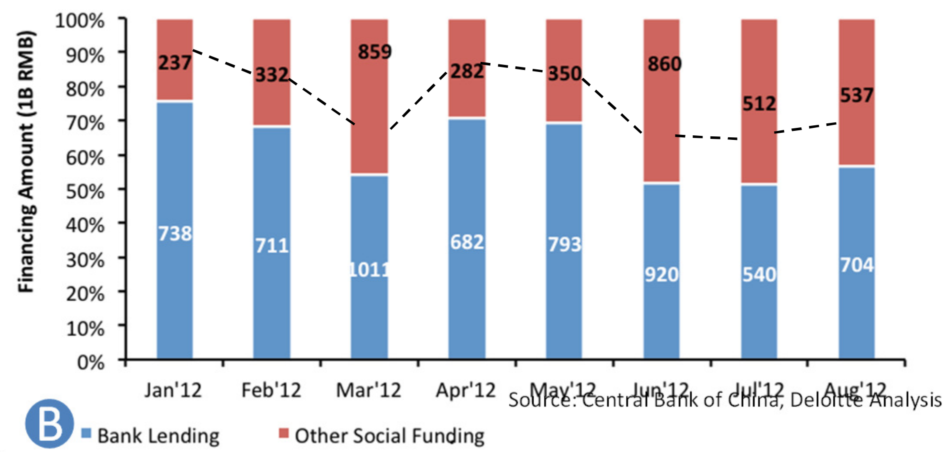
- Control M2 money supply
- Diversify, regulate, and supervise channels of capital to add transparency and restore confidence
- Maintain stability of RMB value through PBOC and Forex deployment

M2 Level and Growth Rate



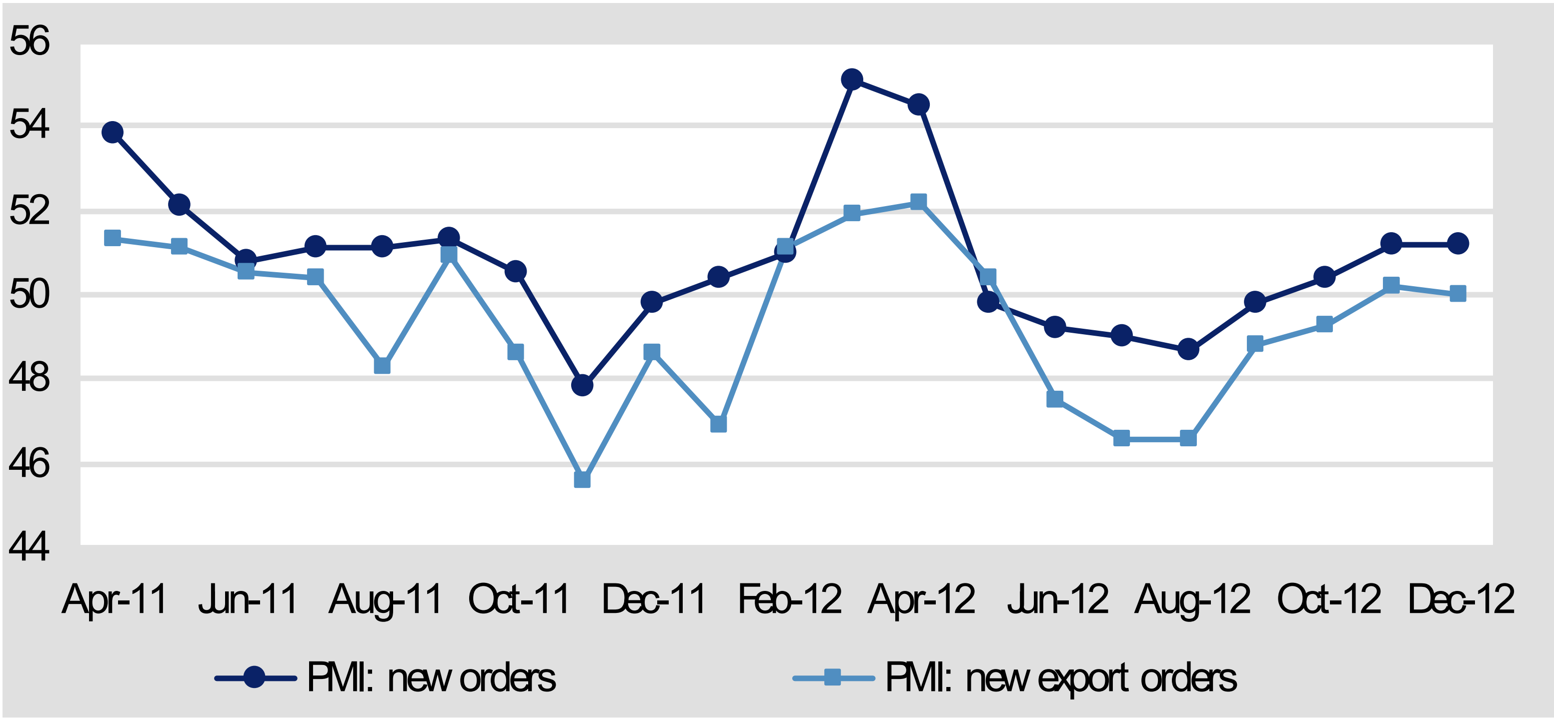
Source: Central Bank of China, IMF

TSF vs. Bank Lending

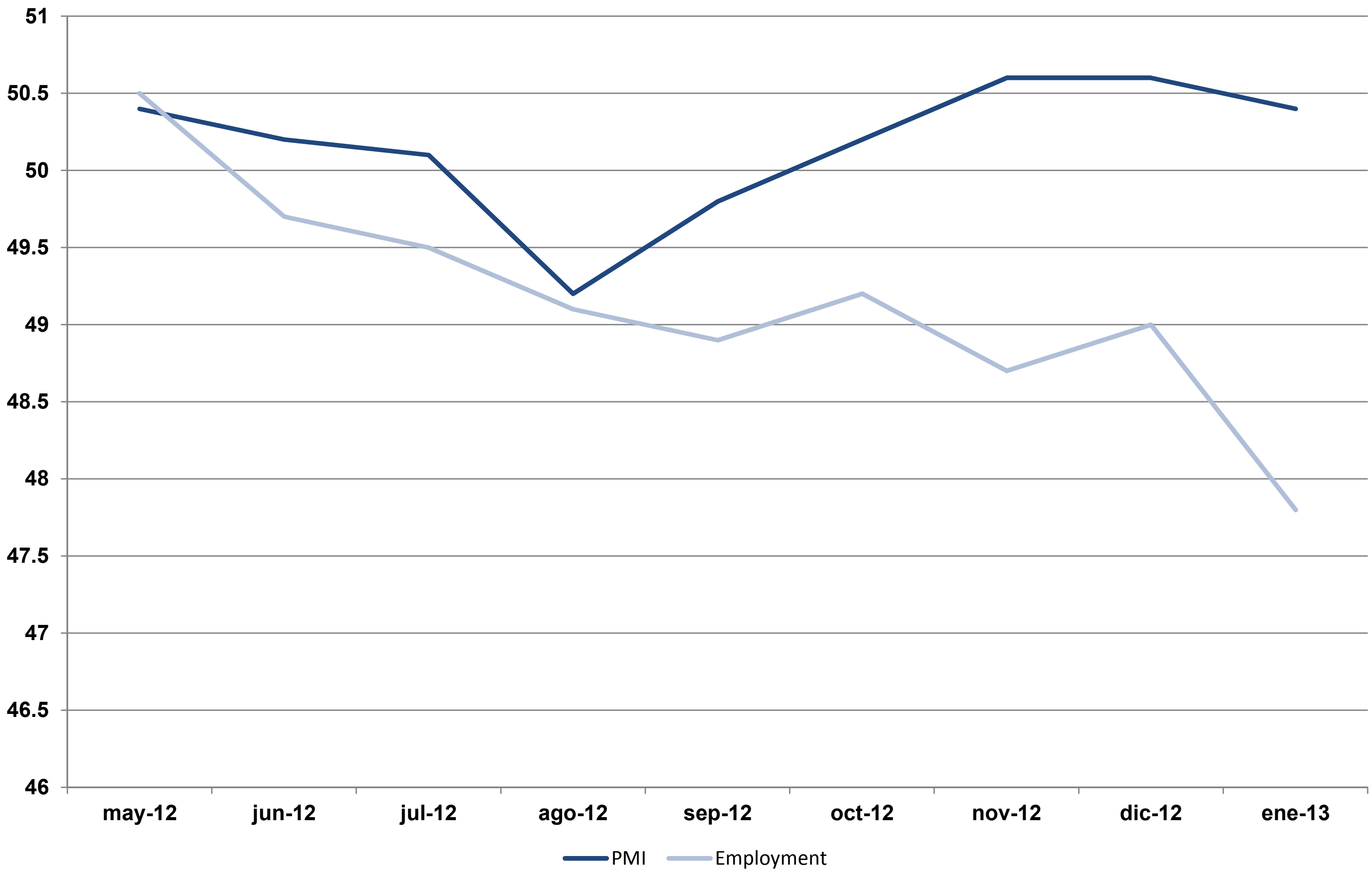


Source: Central Bank of China, Deloitte Analysis

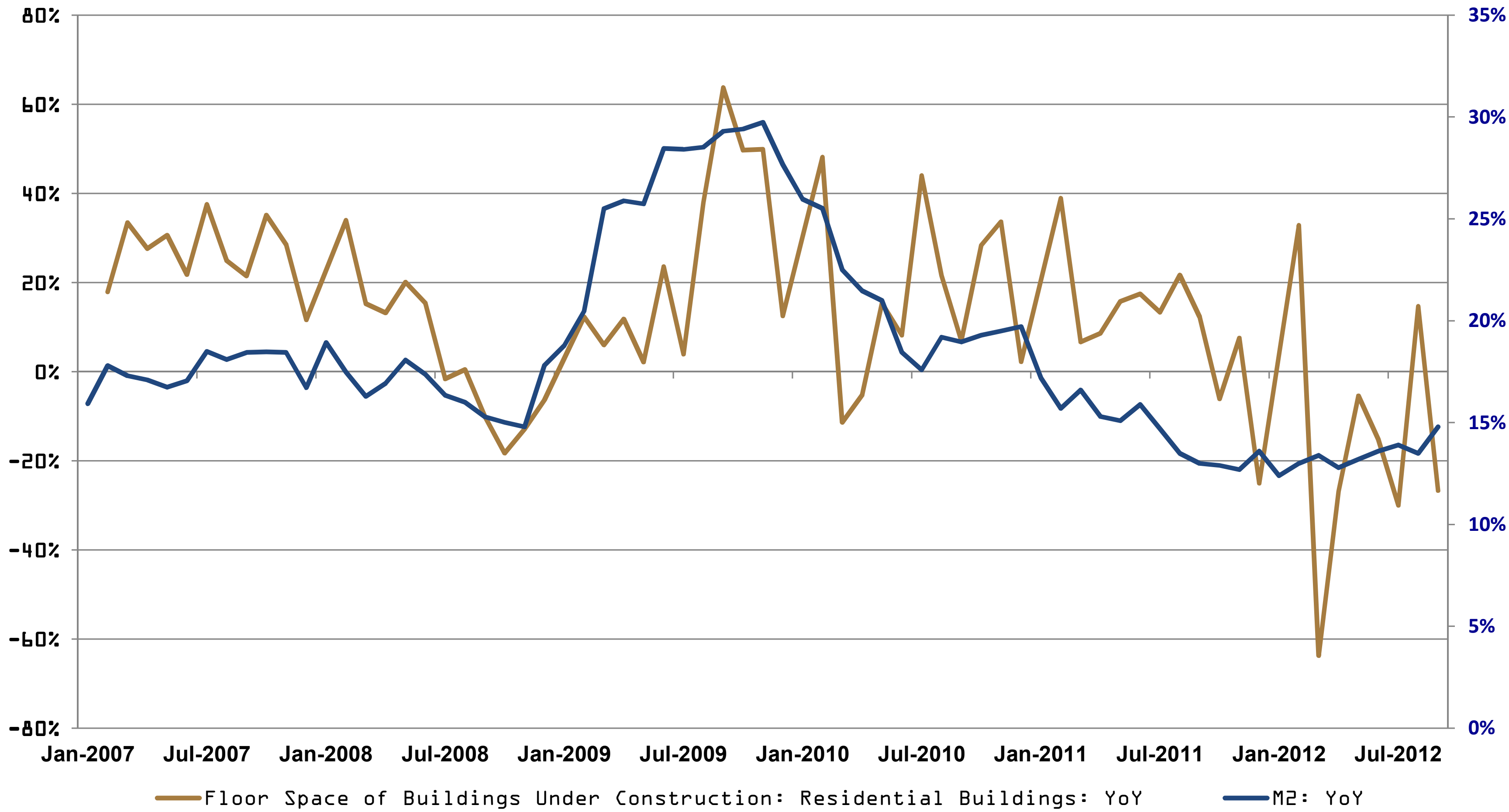
Recoveries Become Briefer and More Shallow



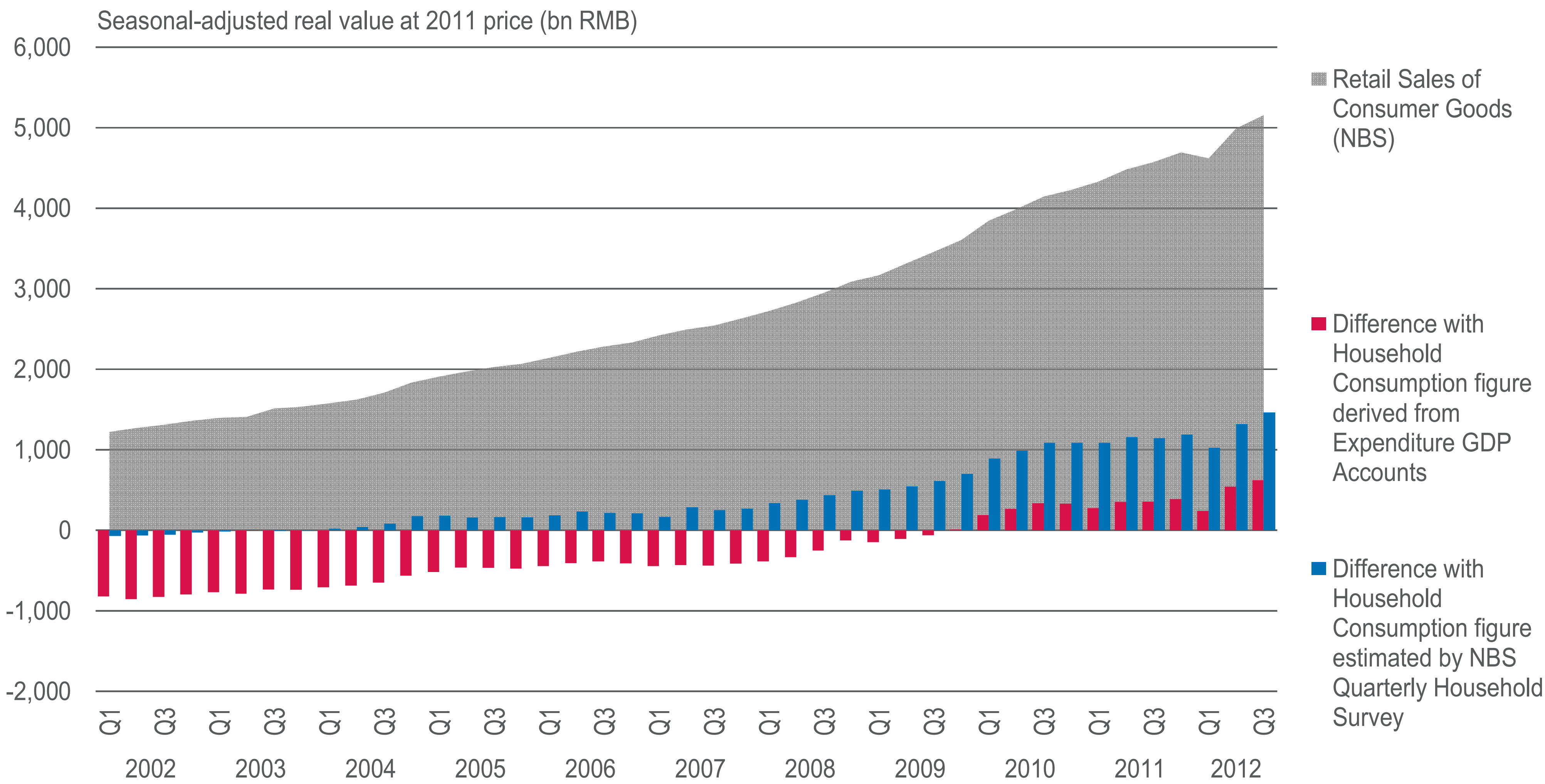
The PMI measure of employment shows a steady fall.



And the relationship to cash injections is very direct.

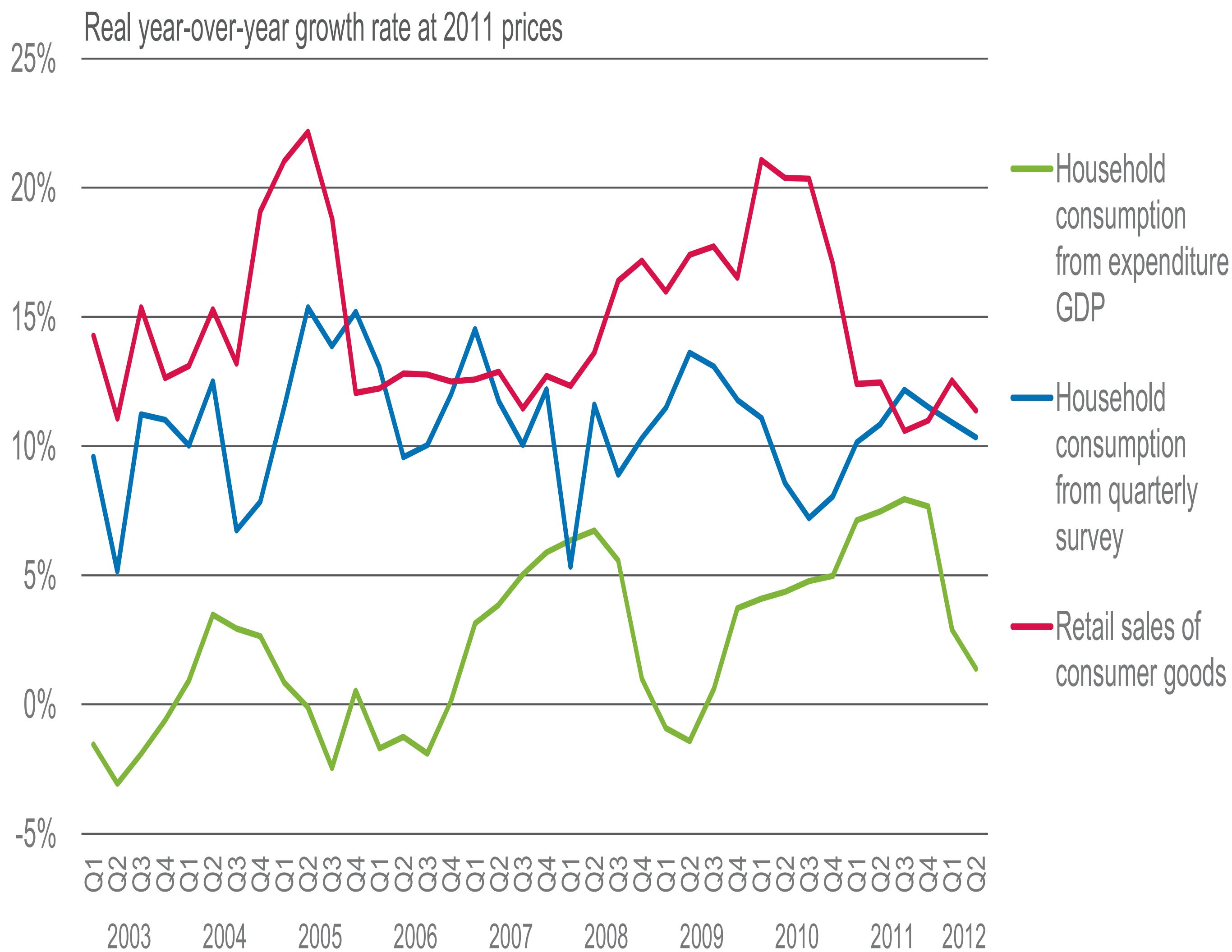


Why the consumer data is useless



Sources: CEIC, NBS, The Conference Board

But household consumption is shrinking in each quarter.



Sources: CEIC, NBS, The Conference Board

The Mechanics of Crisis

- Prices in certain locales increase yearly then monthly then weekly then daily.
- Speed of financial innovation exceeds regulators’ ability to control it and investors’ ability to understand the nature of their investments.
- Velocity of money accelerates.

The Mechanics of Crisis

- Early defaults undermine market confidence. Market participants begin changing their activity to focus on short-term payback.
- Lenders raise rates and shorten maturities
- Capital flight accelerates.
- Corporates engage in carry trade by borrowing USD and pledging RMB.
- Forbearance by some key financial institution ends.

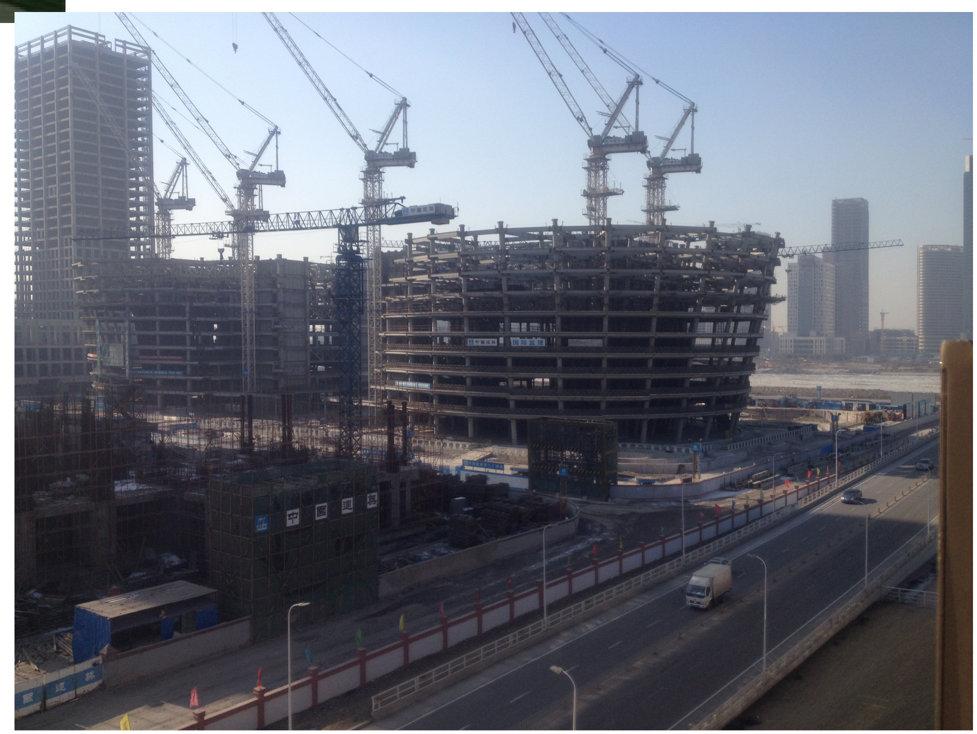
Some Aspects of the Bubble

- Art prices skyrocketing, even for known fakes.
- Fast growth in sales of luxury watches, luxury cars.
- Speculation in almost anything: garlic hoarding, $10,000 packets of cigarettes, tea selling for $100,000 an ounce, white spirits for 600,000 per bottle.
- “Land King” projects where prices spiral madly. Beijing property now selling for 600,000/m2, up by 10x since last year.

The Case of Ordos

- Universal participation in private lending funds.
- Housing prices rising monthly, weekly, daily, then hourly.
- Crash in October 2011. Banks needed bailout in February 2012.
- Property prices now 30-50% of what they were pre-crisis.
- Migrants, wealthy people have left the city. Retailing mostly closed. Unemployment very high.
- Local government borrowing from state companies to meet its fiscal needs.

New Manhattan: The Plan and the Reality



Meizhou LED Base

Taizhou Logistics Port

Over-development Everywhere

- No risk associated with over-investment.
- New developments destroy rather than create jobs
- Developments “cash in” dormant land resources and so expand the money supply before the economy is capable of absorbing it efficiently. The waste in future must be recognized as a reduction in GDP.

Some other bubbles

- Tulip Mania, The South Sea Scheme, Railway fever, 1929
- Each craze entailed the rapid expansion of credit
- There tend to be defaults then a long period of calm, while market participants wait to see whether the bubble will burst, Confidence declines, but people still want to take advantage of the bubble.
- There will be mini-recoveries but ever briefer
- Credit becomes shorter term and higher-cost
- When one market participant steps down, the circle breaks.

Tulips: 1630s

- Booming textiles trade creates major wealth expansion for the Dutch.
- Syndicates were forming to support voyages. Company shares were traded.
- As prices rose, the quality of the tulips declined.
- Annual average wage: 200 florins. Emperor Augustus tulip in 1637: 9,000 florins.

Edward Chancellor: “The Devil Take the Hindmost”

Souq al-Manakh, 1982

- Trade in Kuwaiti stock market was conducted using post-dated personal checks.
- In eight months, the value of the cheques exceeded $90 billion, and interest rates were 300%. The shares exchanged were nominally worth $200 million.
- Cheques were due at end of year. But in August, one speculator asked that a check be cashed early. The owner defaulted and the market crashed.

Edward Chancellor: “The Devil Take the Hindmost”

South Sea Mania, 1720

- The expansion of British trade combined with the murkiness of investment in colonial expansion to generate speculation in many traded companies.
- The South Sea Company bought British public debt in return for shares plus fiscal commitments to pay interest. Then it traded the shares actively to increase value.
- Copycat companies emerged. To protect the share price, the government passed the "Bubble Act" to curtail them—and this triggered a market sell-off.

Edward Chancellor: "The Devil Take the Hindmost"

Some Commonalities

- Pre-condition is expansion of the money supply. Money has to go somewhere.
- Forward delivery stretches out; the object of speculation is not actually being delivered.
- A confidence jolt is followed by a quiet scramble to recover value, then a decisive fall.
- There is always some specious argument about why the object of speculation is actually very valuable—Florida real estate has an ocean view. The internet will create phenomenal value. Urbanization will generate 20 years of growth.

Two paths to crisis

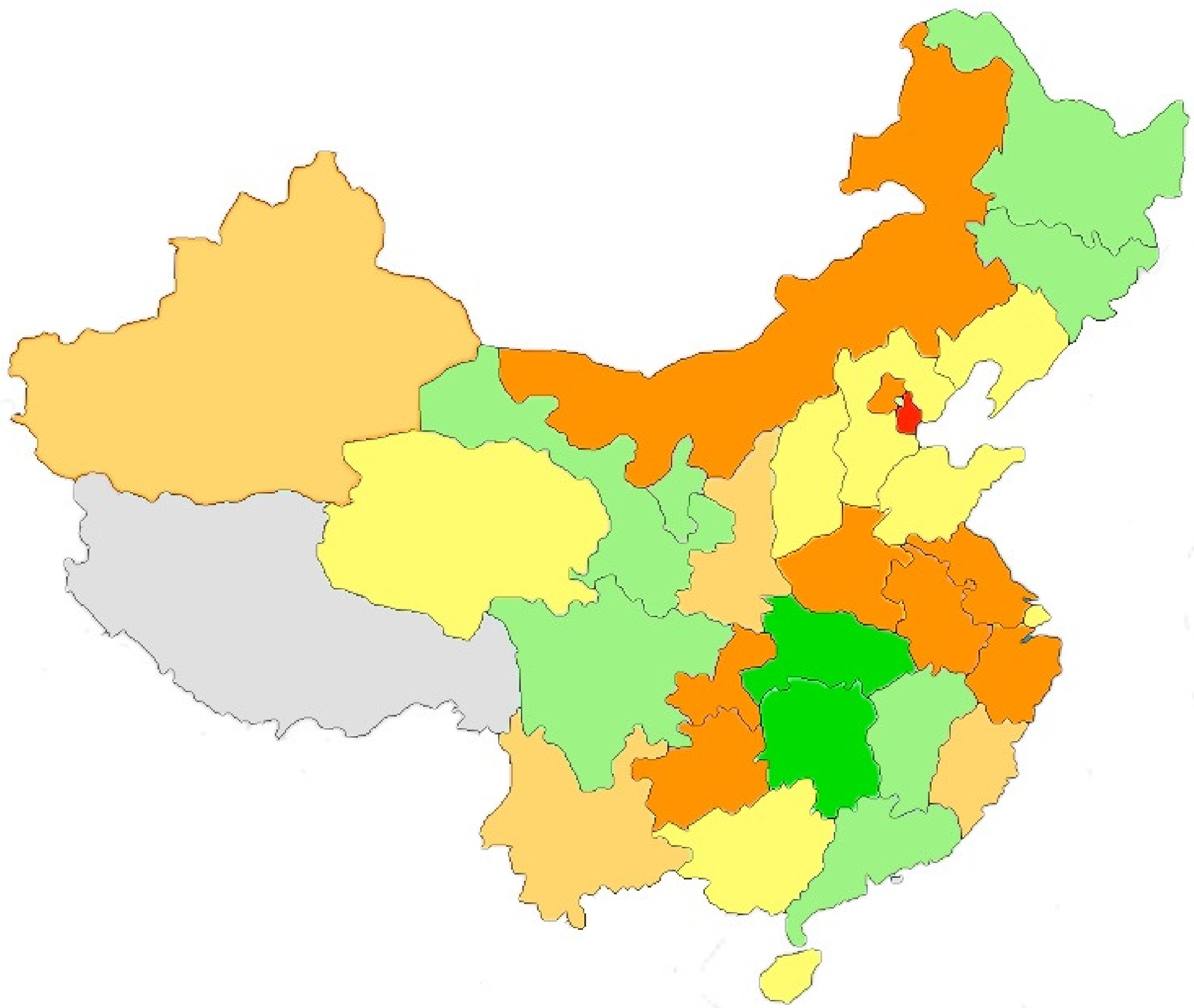
- Probabilistic
  - The system develops multiple areas of instability. Odds are that some external shock will trigger a panic.
  - Types of triggers:
    - Large and politically sensitive default
    - Bank run
    - Pre-paid apartments are not delivered, owners protest publicly
    - Significant fall-off in exports or major devaluation by a trading competitor
    - Big default by a debtor nation

Two paths to crisis

- Deterministic
  - The banking system reaches the end of its ability to kick the can down the road.
  - Types of triggers:
    - Term deposits, wealth management products default en masse; investors lose their principal.
    - Cash runs short; banks do not have money to lend. Economic activity grinds to a halt.
    - Government tries to ease cash shortage by printing money and generating hyper inflation.

The Most Vulnerable Regions

- Inner Mongolia
- Zhejiang
- Jiangsu
- Hefei/Bengbu
- Guiyang
- Tianjin



Post-Crisis Scenarios

Scenario 1: *Lost Decade*

- Gradual deleveraging and absorption of over-capacity means that the economy sees very low growth, under 3% annually, for a very long time.
- Deflation. Consumers hoard cash.
- Growth drops even lower. Unemployment is high.

Scenario 2: Tabula Rasa

- Deflate asset value through high inflation, significant devaluation of the currency, and opening of capital account or re-issuance of a new currency.
- De-legitimate the gray market, rewrite the rules.
- Use aggressive government buying to defend against attacks on the stock market.
- Freeze deposits, out conditions on their withdrawal.
- State assets are auctioned off.

Scenario 3: *Fragmentation*

- Governments, under pressure to find cash for their own operations, begin freelancing. They privatize whole functions and farm taxes. They impose fees on services and unofficial tariffs on products from other regions. Eventually, some issue their own currencies.
- Some regional economies improve, some see negative growth. Investment capital follows the growth and exacerbates the imbalances.

Scenario 4: *Dramatic Reform*

- Its back to the wall, the central government initiates sweeping reforms in financial services, health, education, and distribution. Unrestricted private ownership is permitted. Growth in services sectors over time lifts the banks out of the crisis and recapitalizes them.