Evolution of China’s Financial System

- Before 1983
  - Monobank: People’s Bank of China (PBOC)
  - Both the Central Bank and a commercial bank
  - Subordinated to the Ministry of Finance
- After 1983
  - PBOC becomes the Central Bank
  - Four state-run “specialized banks”
    - Industrial and Commercial Bank of China (ICBC)
    - Agriculture Bank of China (ABC)
    - Bank of China (BoC)
    - China Construction Bank (CCB)
  - Urban and Rural Credit Cooperatives

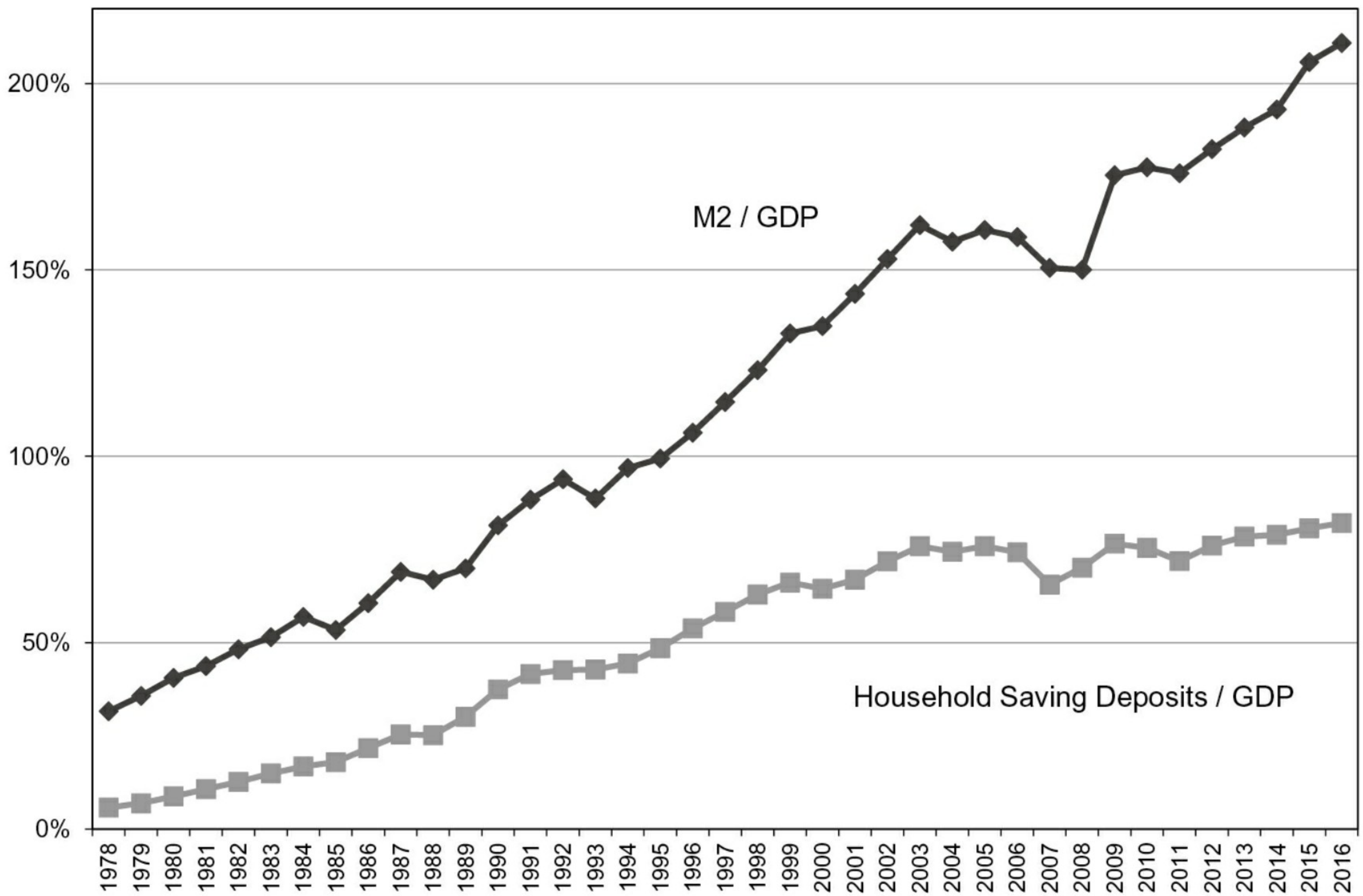
Evolution of China's Financial System

- In the 1990s
  - Two stock markets opened (Shanghai and Shenzhen)
  - Three policy banks established
    - State Development Bank
    - Export-Import Bank
    - Agriculture Development Bank
  - Central Bank Law and Commercial Bank Law passed
  - PBOC reorganization
  - Credit plan abolished
  - More banks established, but the big four continue to dominate

Financial Deepening

- Concept of Money
  - M_0 = Cash in circulation (narrow money)
  - M_1= Cash + all demand deposits
  - M_2= Cash + all demand deposits + all time deposits (broad money)
  - Household Bank Deposits (household demand deposits + household time deposits)
- Financial deepening
  - Increase of financial assets as share of GDP
  - 2001: household savings deposits achieved more than 70% of GDP and remained around that ratio
  - Very little broadening (bonds and stocks small relative to bank deposits)

Trends of Financial Deepening



Financial Instruments

- Debt: fixed payment obligations
  - Bonds in securities market (government bonds, municipality bonds, corporate bonds)
  - Bank deposits, bank loans
  - Maturity mismatch problem
- Equity: no fixed payment obligations
  - Shares in stock market

Financial repression

- Interest rates for deposits lower than market interest rates, and households have limited choices.
- Normally, discourages households from savings, but Chinese savers were protected against inflation and did not suffer from negative real interest rates.
- In Eastern Europe, inflation wiped away savings of population.

Costs of financial repression

- Investment misallocation. With lower than market interest rates, rationing of credit. Rationing is a universal phenomenon, but when there is misallocation, debtors (SOEs) benefit from an implicit subsidy.
- Depresses consumption as lower interest rates lower interest incomes.
- Opening of other avenues for savings (housing, stocks) can lead to bubbles and volatility

Flow of funds

- China is a high savings economy.
- Flow of funds gives view of GDP on the income side, displaying distribution of income between households (includes individual businesses), businesses and government.
- Businesses pay wages to household and taxes to government.

Table 19.1
Simplified flow of funds.

	Household (trillions of RMB)	Business (trillions of RMB)	Government	Total domestic
Value added	15.7	43.9	4.8	64.4
Total disposable income	39.1	13.2	12.2	64.5
Savings	14.9	13.2	3.6	31.7
(Saving rate)	38%	100%	29%	49%
Gross capital formation	7.7	19.3	3.4	30.3
Net financing + acquisitions	7.2	−5.6	−0.2	1.4

Source: *SYC* (2016, table 3-21).

Remarks on flow of funds

- Very high savings rate of households. High surplus to be invested.
- Business needs to borrow from households.
- Government has a small budget deficit, but is saving via other means (social security funds balances).
- Overall, very high savings (49% of national income.

Why does China have a high savings rate?

- High household savings via unincorporated businesses.
- High income growth leads to high savings (permanent income theory) + low consumption growth due to habits.
- High precautionary savings as one child policy and urbanization reduce expectation of support from children in old age.
- Unbalanced sex ratio leads to competition for wives through increased savings.

The Banking System

- The most important part of China's financial system
- The banking system is dominated by the "big four"
- State banks are state-owned enterprises, subject to more government intervention
- Banks are special financial intermediaries with liquidity provision function
  - Investment firms are financial intermediaries without that function
- Deposit side: very impressive and successful
- Lending side: very problematic and fragile

Policy banks

- State development bank:
  - Specialization in financing long term infrastructure and in industries relevant for development
- Export-Import Bank
  - Provides loans for export or import operations, export credit insurance and guarantee
- Agriculture Development Bank
  - Loans in agriculture
- Asian infrastructure investment Bank
  - First multilateral infrastructure bank. Connection to Belt and Road Initiative.

The Deposit Side

- Vast deposit facilities all over China
- Chinese households trust state banks for safety
- Why?
  - State banks never collapsed before
  - Inflation was generally moderate, only two brief periods had annualized inflation rates above 10%
  - Real interest rates on deposits are generally positive
  - In these periods (1988 and 1993), bank deposit rates were indexed to inflation to prevent real rates from falling below zero
  - "Anonymous household banking" (until April 2000) to protect depositors' privacy

The Non-Performing Loan (NPL) Problem

- The stock vs. flow problem
- How large is the stock of non-performing loans of SOEs?
  - Hard to estimate
    - In state banks
    - Some transferred to assets management companies
    - In credit cooperatives
  - Used to be 30-40% of total outstanding loans, very high by international standard but declined to less than 10% in recent years.

Table 19.3

Nonperforming loans in China's banking system.

	Large state-owned banks*			All commercial banks		
	Billions of yuan	% of loans	% of GDP	Billions of yuan	% of loans	% of GDP
2002	2,088.0	26.2	17.3			
2007	1,115.0	8.1	4.2	1,270.2	6.1	4.7
2008	420.8	2.8	1.3	563.5	2.4	1.8
2012	309.5	1.0	0.6	492.9	1.0	0.9
2015	700.2	1.7	1.0	1,274.4	1.7	1.9
2016				1,512.3	1.7	2.0

Sources: China Bank Regulatory Commission website, CBRC.gov.cn; and CBRC *Annual Report* (various years).

*Includes Bank of Communication after 2010.

The Non-Performing Loan Problem

- China’s difference (as compared with other East Asian countries experience financial crisis)
  - Banks are state owned
  - All deposits are implicitly insured by the state
  - No possibility of bankruptcy, very low possibility of bank run, because the central bank can always step in
  - Bad loans are essentially government public debt
  - Capital controls (domestic financial instruments insulated from international financial instruments)
  - The real questions are
    - How large is public debt?
    - Consequences of foreign bank entering the banking sector

The Capital Adequacy Problem

- The Basel Accord: 8% (the share of own capital in total assets)
- Balance sheets of banks

Assets	**Liabilities**
Own capital	Deposits
Outstanding loans	Equity
Provisions	
Reserves with PBOC	

- Steps of re-capitalization of banks to improve balance sheets

Asset Management Companies (AMCs)

- Four AMCs were created (one for each big four bank) in 1998 and 1999
- Bad loans (prior to 1996) were transferred from banks to AMCs at book value (1.4 trillion yuan, or 17% of 1999 GDP)
- The U.S. created "Resolution Trust Corporation" (RTC) to solve Savings and Loans (S&L) crisis in the 1980s (a loss of US$500 billion)

Asset Management Companies (AMCs)

- What do AMCs do?
  - Sell them to a third party such as foreign investment and asset management companies
    - Disposed 182.7 billion yuan
    - Recovered 46.2 billion yuan (recovery rate: 25%)
  - Debt-equity swaps: AMCs converted the debt into equity stakes in the debtor SOEs
    - Reduced leverage ratio of SOEs (debt to equity ratio)
    - Sell the equity to buyers
- The costs are borne by the Ministry of Finance, and ultimately by tax payers

Examples of Foreign Strategic Investors in Other Chinese Banks

- Bank of Communications
  - HSBC: $2.225 billion (19.9%)
- Shanghai Pudong Development Bank
  - Citigroup: $73 million (5%)
- Shenzhen Development Bank
  - Newbridge Capital: $149 million (17.9%)
- Bank of Beijing
  - ING: $215 million (19.9)
- Hangzhou City Commercial Bank
  - Commonwealth Bank of Australia: $76 million (19.9%)

Huarong, the AMC “gone rogue”

- Huarong was not satisfied with just being a “hospital bank”.
- Raised money on global markets, lending to high-risk companies, using its AMC position to get cheap financing.
- Benefited from post 2008 stimulus and debt-driven growth.
- Investment became ubiquitous, but eventually lost $16 bn.
- Chairman Lai Xiaomin accused of taking $277 millions in bribes was executed in January 2021.
- Huarong was bailed out by State-Owned banks and PBOC for “too big to fail”.

Securities Markets

- Starting from trading of government bonds in late 1980s
- Two major stock markets: Shanghai and Shenzhen
- Peculiarities
  - Three classes of shares: state, institutional (legal person), personal
  - Personal: A-share (RMB) and B-share (forex)
  - Only personal shares are circulating
  - Almost all IPOs are former SOEs, the state retains a majority of the equity, not circulating
  - Almost all of the very largest SOEs have been listed
  - Government bonds: most held by institutions, not traded

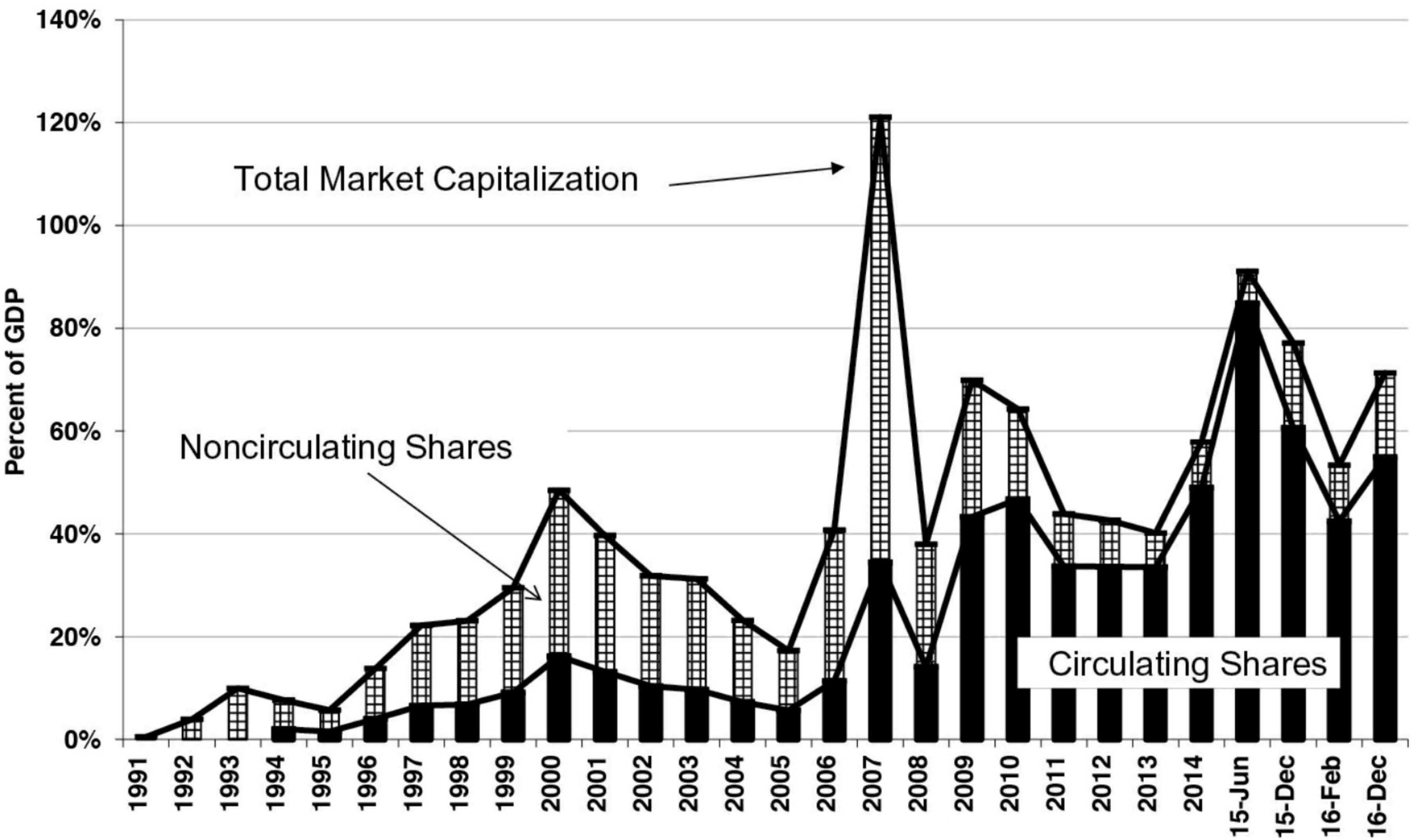


Figure 19.2

Stock-market capitalization as share of GDP.

Problems

- Most large capitalization firms listed are SOEs.
- CPC does not want to lose control over SOEs, so stock market can never be allowed to feature takeovers. A large part of circulating shares are held by SOEs and hold on to them.

Stock Market Capitalization as Share of GDP

India 1994	44%
Indonesia 1994	28%
Korea 1994	50%
Philippines 1994	80%
China 1994 All	8%
China 1994 Circulating	2%
China 2001 All	45%
China 2001 Circulating	15%

Functioning of China's Stock Market

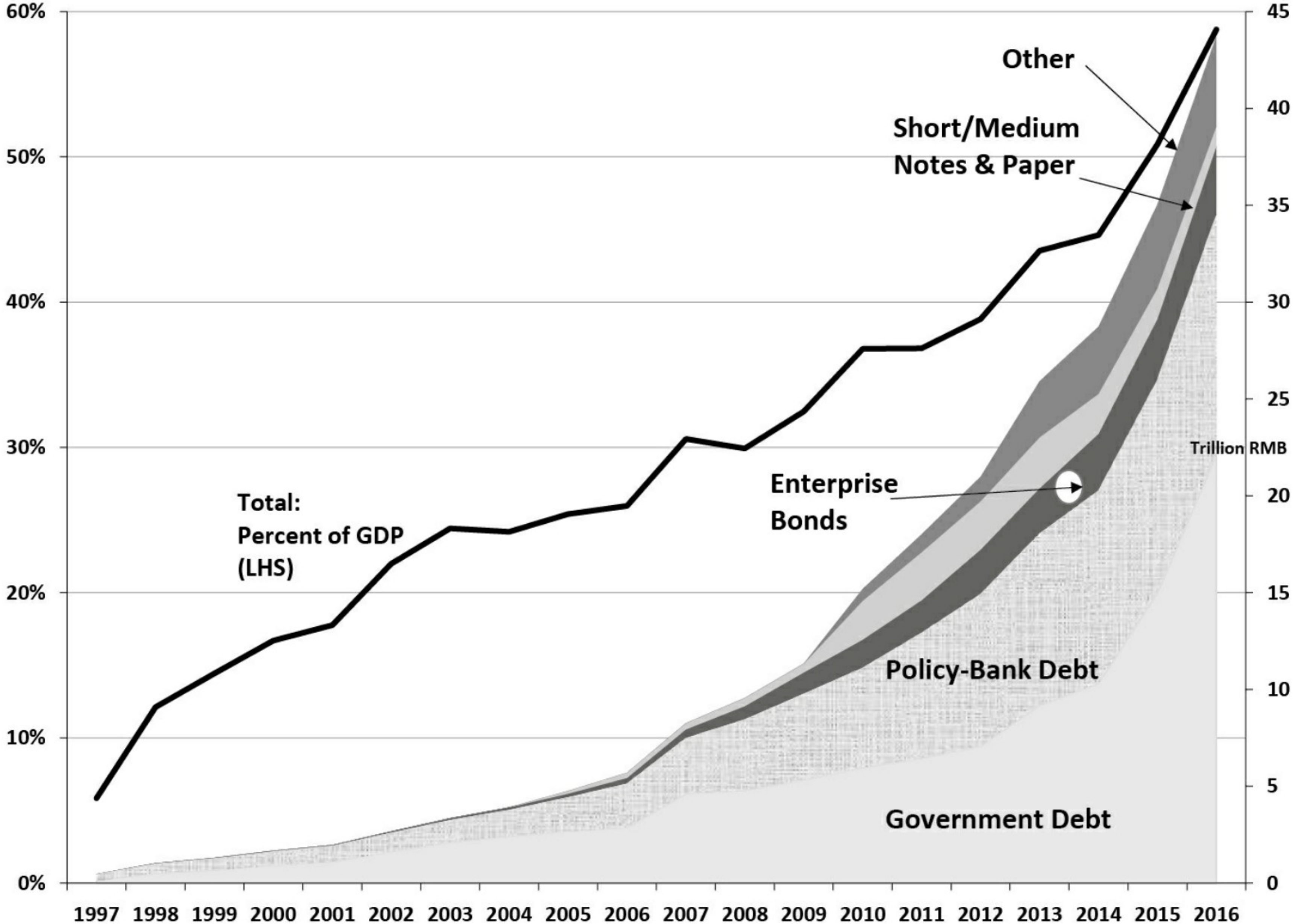
- Two purposes for developing stock markets
  - Diversify financing channels: Raising funds directly from private investors instead of through banks
  - Diversify ownership structure: Dilute government's shares and to improve corporate governance and control
- Because the state still controls majority shares, the second purpose has not been achieved
- The market is "thin"
  - High P-E ratio
  - High turnover
  - High volatility

Functioning of China's Stock Market

- Who trades in the market?
  - > 60 million individual accounts
  - Institutional accounts: Securities firms, Trust and Investment Companies, funds management companies (government owned, but managers controlled)
- What do stock prices react to?
  - Not so much fundamentals about the economy and companies
  - Government policy shifts (e.g., reducing state shares, allowing or restricting bank loans to securities firms)
  - Consistent with empirical findings that stock price movements in emerging markets differ from mature stock markets
  - Morck, Randall K.; Bernard Yeung; and Wayne Yu. "The Information Content of Stock Markets: Why Do Emerging Markets Have Synchronous Stock Price Movements?" *Journal of Financial Economics*, 2000.

Bond market

- Virtually inexistent until 2006, has started to increase since.
- Involves mostly government actors: government debt (51% in 2016) and SOE debt (28%) + China development bank (16%). Corporate bonds only 5% (US: 50%).
- Most bonds held by banks.

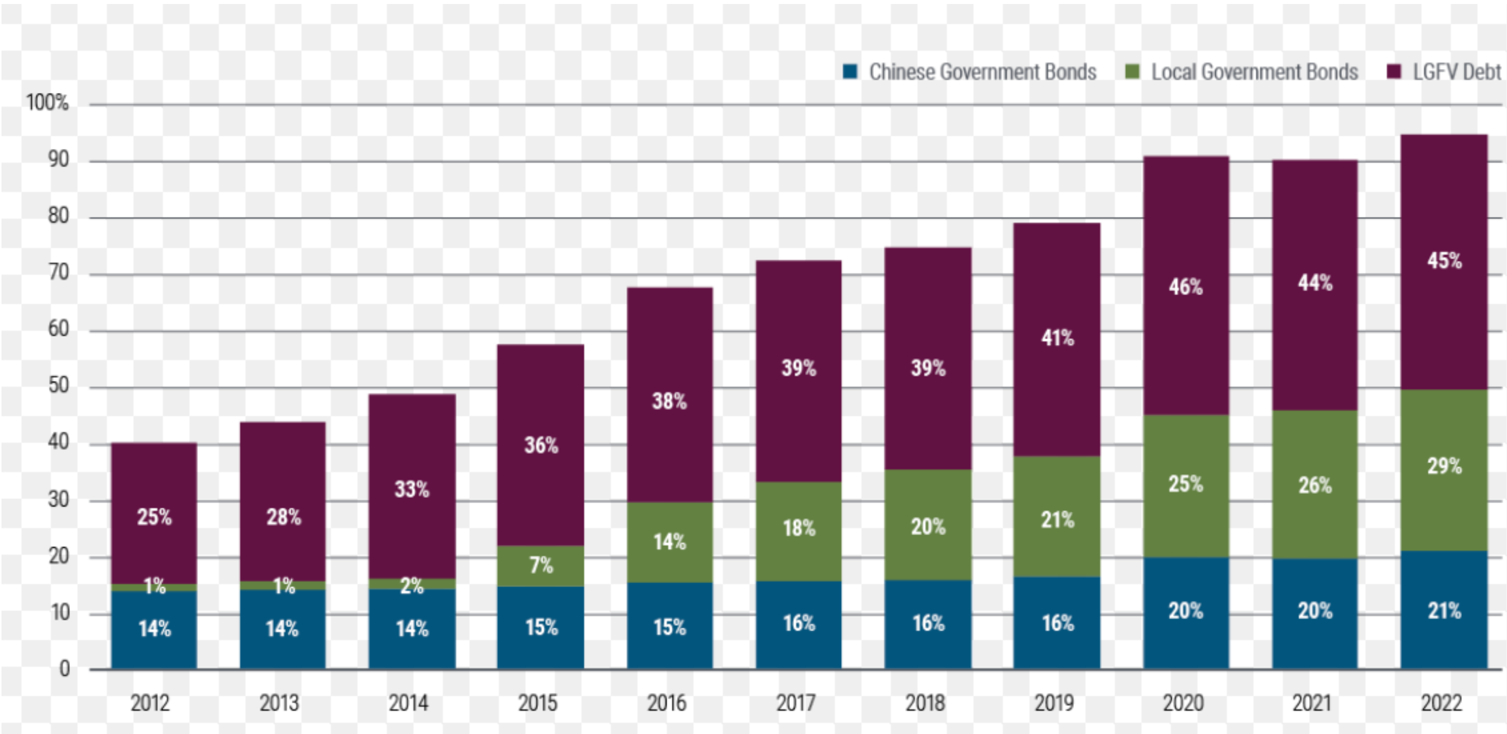

60%
50%
40%
30%
20%
10%
0%
45
40
35
30
25
20
15
10
5
0
Other
Short/Medium
Notes & Paper
Trillion RMB
Enterprise
Bonds
Total:
Percent of GDP
(LHS)
Policy-Bank Debt
Government Debt
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

Shadow banking

- Unregulated financial intermediation.
- Financial repression created a demand for diversification for households.
- Non bank financial institutions (trusts), and later banks started offering off balance sheet wealth management products (WMP) with higher returns but not covered by deposit guarantees.
- Alibaba proposed Yu'e bao (余额宝) a *money market mutual fund* to households.
- Chinese households lost in recent years $120 billion from fintech P2P schemes.

Local government debt

- 1993 reforms left local governments structurally in deficit, leading them to use "eminent domain" laws to evict farmers and sell land to developers.
- Central government tried to limit local government debt, but after 2008 crisis, created "Local government financing vehicles" (LGFV) to finance local government expenditures.
- LGFV debt now roughly at 60 trillion RMB and has been constantly growing.



Source: Ministry of Finance of the People's Republic of China, Wind and PIMCO estimates. As of 31 December 2022.

LGFV

- Default of LGFV would trigger a severe financial crisis given their importance in China's financial sector.
- Most likely scenario is gradual central government bailout (soft budget constraint).
- The structural imbalance in local governments' accounts remains unsolved.
- Possible solutions?
  - Property tax
  - Decentralize tax revenues.

Real estate debt-driven growth

- Evergrande is second biggest real estate developer in China. Owns 1300 real estate projects in 280 cities, has property management services in 310 cities, has diversified in other sectors in the economy, claims to create 3.8 mln jobs every year.
- Evergrande financed its growth through debt and is affected by government's "three red lines".
- Has been playing a bit of a Ponzi game selling unbuilt apartments to service its debt. Has been on the brink of default.

Evergrande stock in Hong Kong

Year-to-date moves in HKD

Real estate debt-driven growth

- Other real estate companies have been in a similar situation (Country Garden). New apartments stay unsold, debt cannot be serviced. Danger of financial contagion in China, but also via Hong - Kong.
- There will most likely be bailouts, restructuring of firms and punishment of management and owners. Hui Ka Yan (Evergrande founder) urged to pay debts with his own money.

Aggregate risks

- Changes in the financial sector (shadow banking and fintech) can lead to higher aggregate risks.
- Total debt is now around 250-300% (household + business + government) of GDP. Government debt only at 50%.
- Many examples of bailout already in the financial sector.
- Most of the debt is domestically held. Little danger of financial crash, except for non protected fintech but likelihood of bailouts and more soft budget constraints.

China's debt was stabilized before trade tensions and the Covid-19 pandemic

Total real economy debt as a percentage of GDP