

Inflation Targeting and Financial Stability

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(Based on work with Jae Hyoung Kim and Ansgar Walther)

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Introduction

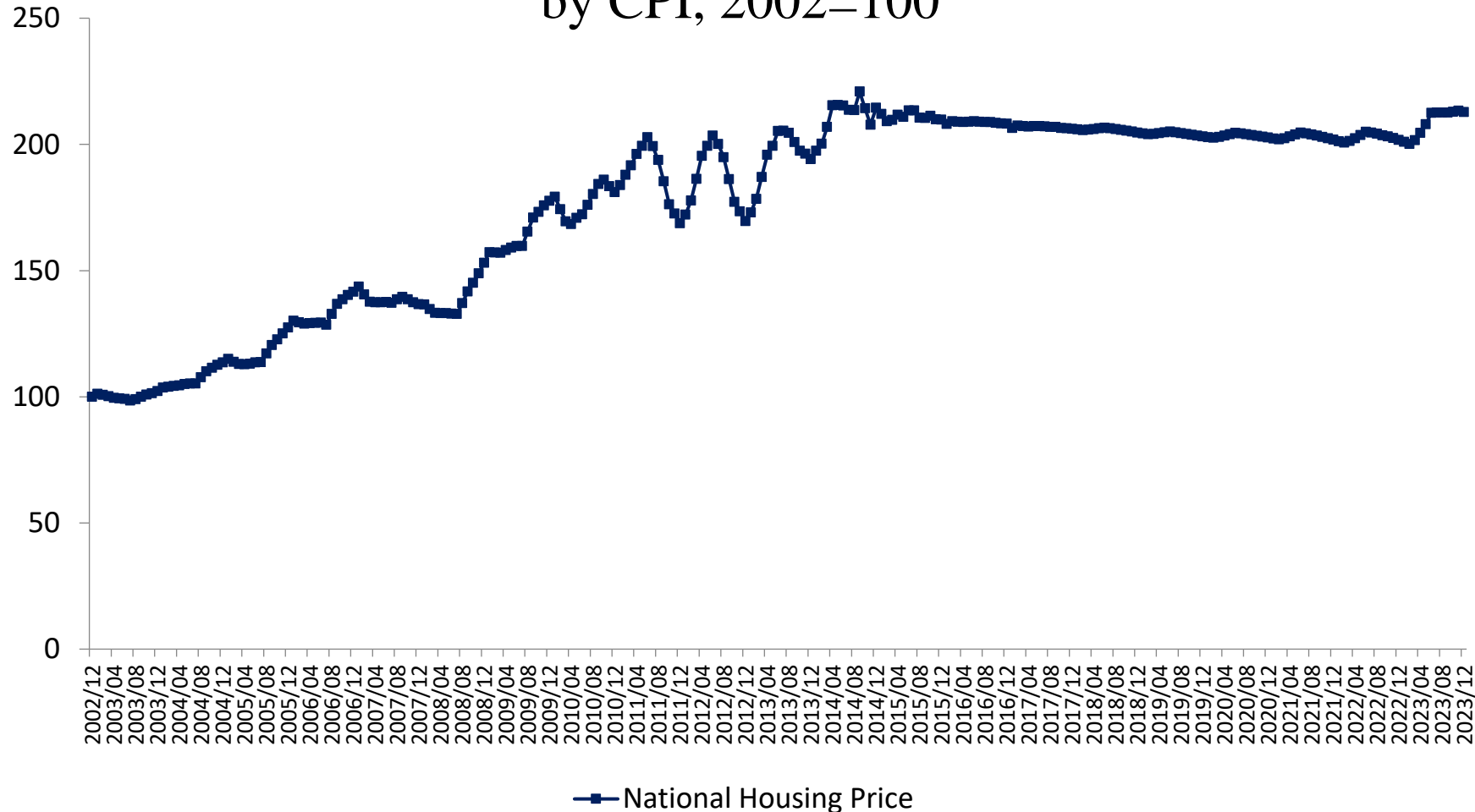
- The traditional view: regulation of individual banks would prevent systemic risk and monetary policy could focus on inflation targeting
- The 1997 Asian and other crises were difficult to reconcile with this view, but were regarded as emerging country problems
- Borio and Lowe (2002) documented a relationship between credit growth, real estate/asset price increases and subsequent collapses and financial instability and suggested central banks should “lean against the wind” by raising rates but this view was not widely accepted
- 2007-09 Global Financial Crisis led to a re-evaluation of the traditional view and raised the issue of maintaining financial stability

Ensuring financial stability: Leaning against the wind versus macroprudential policy

- Borio and Lowe (2002) suggested raising interest rates to bring down asset prices and avoid subsequent financial stability issues (see also Woodford (2012))
- Most convincing argument against this is Svensson (2017) – raising interest rates to the level necessary to stop or reverse real estate price rises would cause a large recession that would be very costly
- One alternative is macroprudential policies that intervene directly in real estate and other markets to slow or reverse price rises
- Evidence is limited but suggests these policies are not that effective

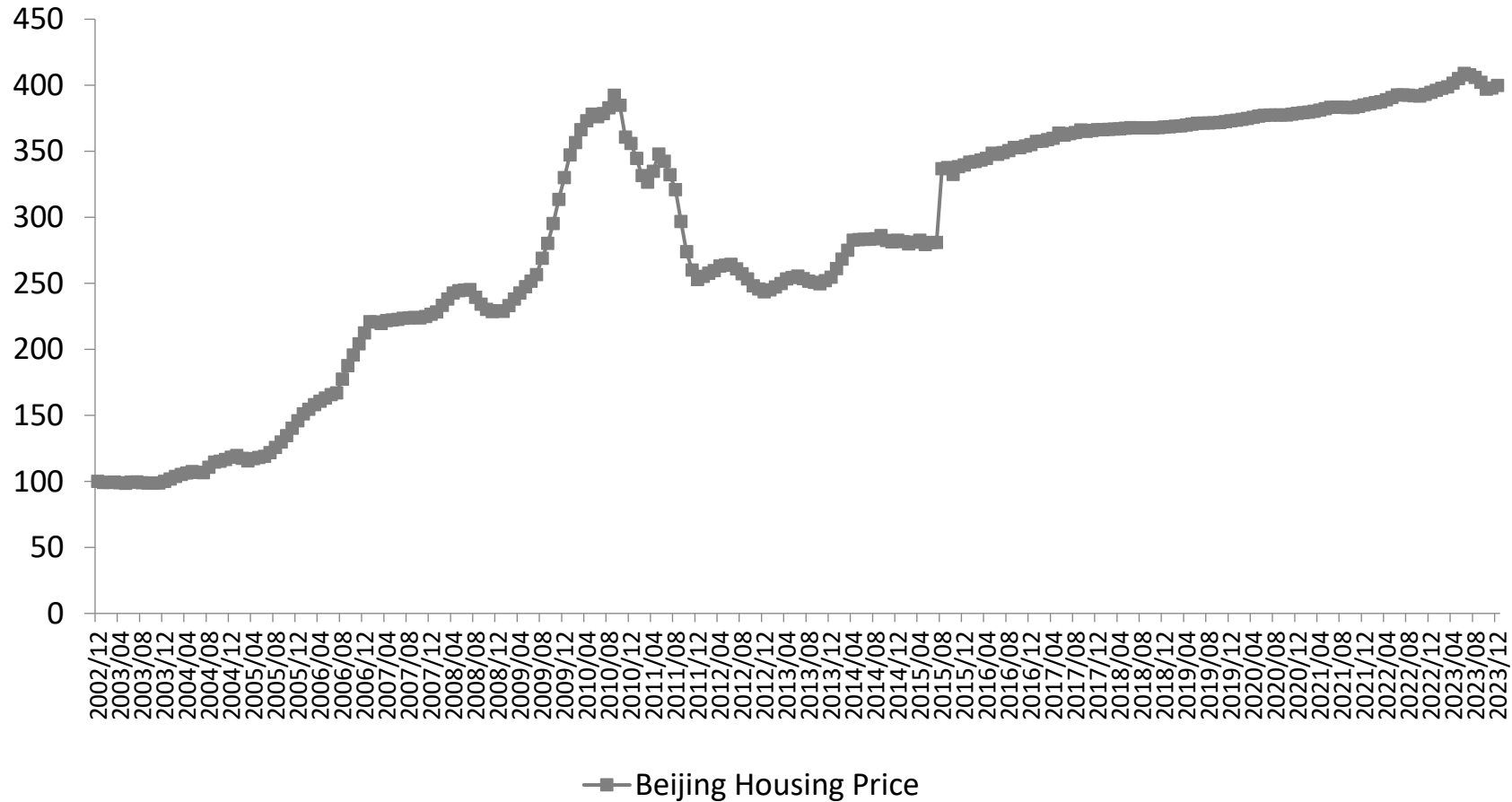
Example of China, which has used Macroprudential policies extensively

National Housing Price (6-month average) adjusted by CPI, 2002=100



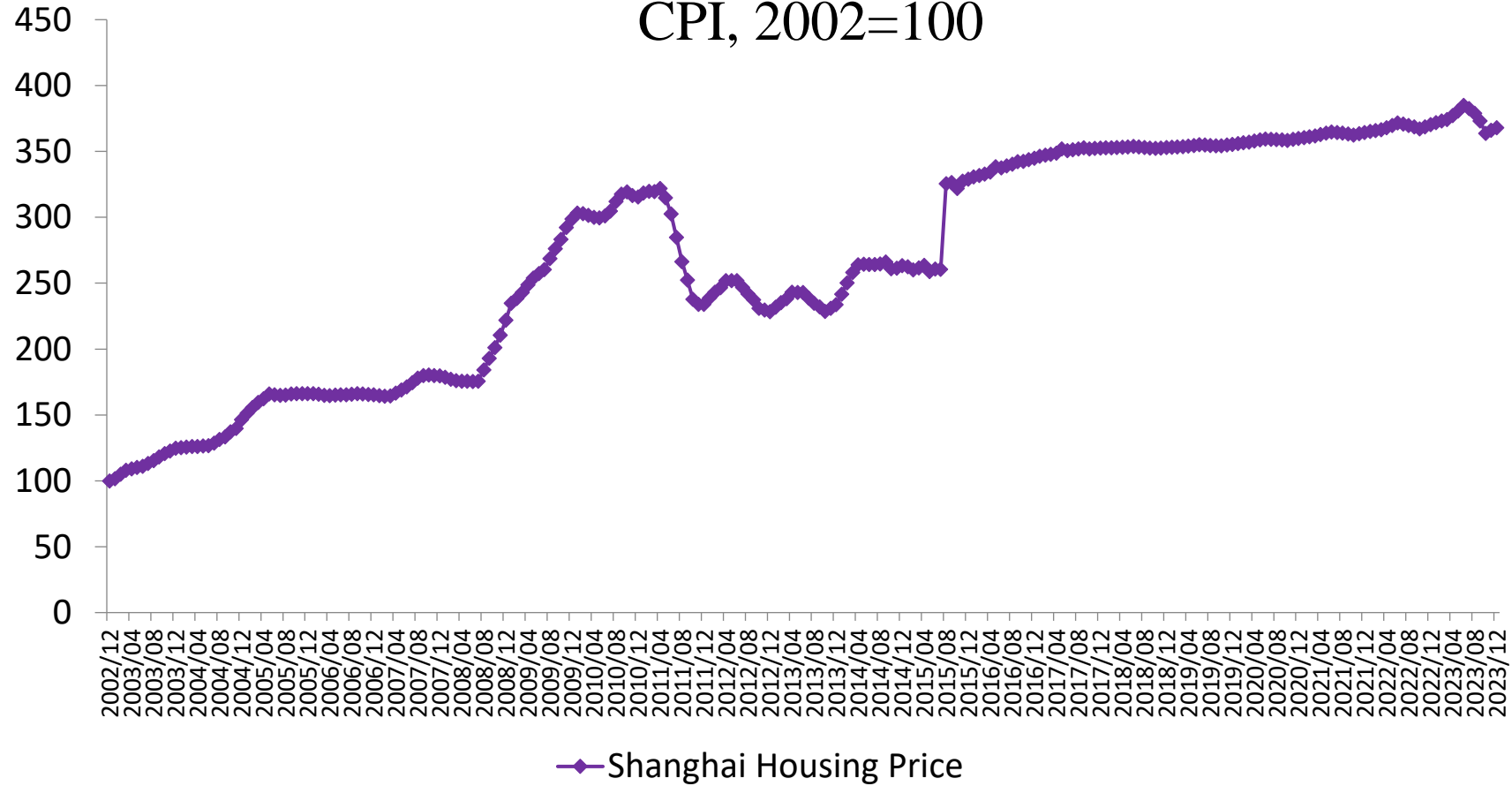
Source: Wind

Beijing Housing Price (6-month average) adjusted by CPI, 2002=100



Source: Wind

Shanghai Housing Price (6-month average) adjusted by CPI, 2002=100

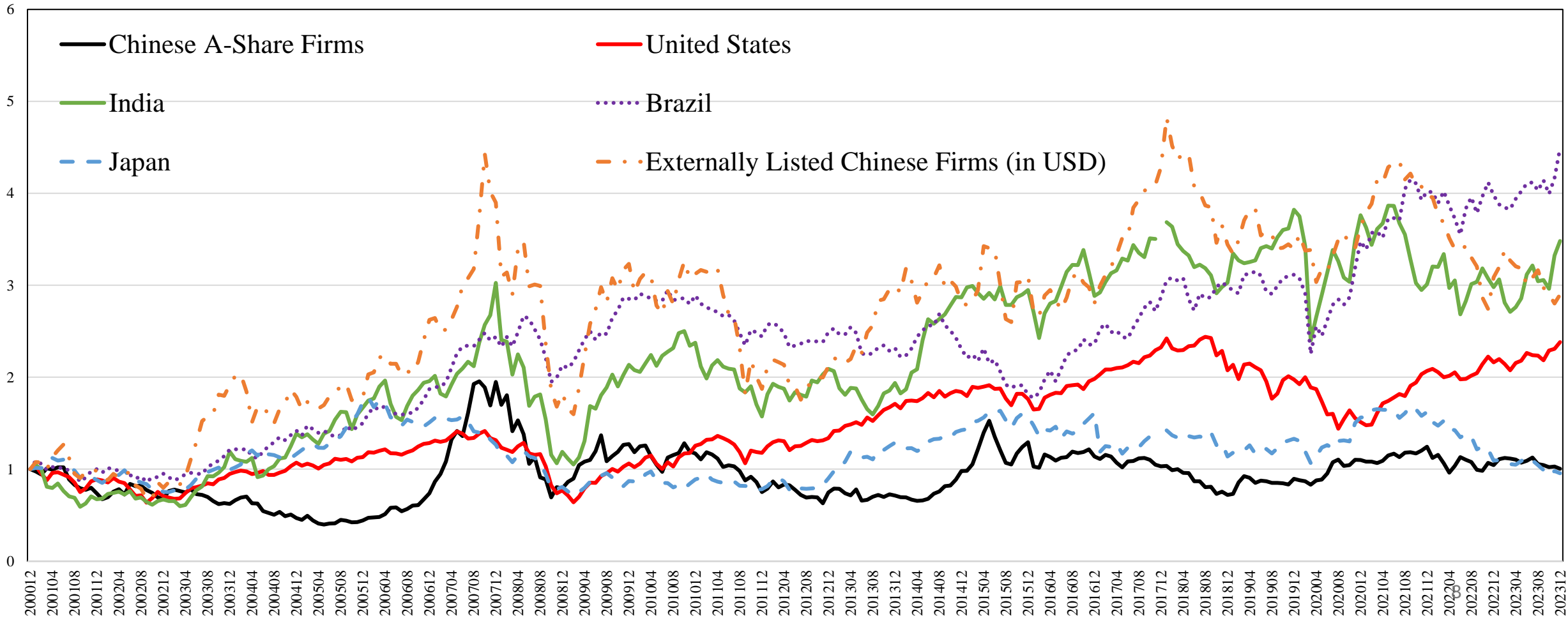


Source: Wind

Why are macroprudential policies not very effective?

- Some examples of such policies such as leverage restrictions can be fairly easily avoided but others such as annual real estate taxes or transfer taxes are more difficult to avoid
- Another, perhaps more plausible, possibility is that real estate investments are so attractive relative to other investments that macroprudential policies cannot prevent them dominating alternatives
- In China (and many other places) the main alternative is the stock market

Chinese Stock Market: Buy-and-hold returns of listed firms in large economies (2000-2023; inflation adjusted; cash dividends included) (Allen, Qian, Shan, and Zhu 2024)



Problems with macroprudential policies

- Real estate has clearly performed much better than the stock market
- This provides a good explanation of why Chinese household portfolios have, on average, 1% in equity and 59% in real estate
- Macroprudential policies have been overwhelmed because the stock market is relatively unattractive, so money goes into real estate - it's a financial system issue because stocks are relatively unattractive
- It's not just the possibility of a financial crisis – there is a misallocation of resources in that too many savings flow into the real estate sector and too little into productive firms – Rogoff and Yang (2022) find that in China including direct and indirect effects, 25% of GDP is devoted to the real estate sector

Importance of considering financial system as a whole

- To design effective policies, we need to think more in financial system terms rather than considering the different sectors separately
- It's necessary to change the relative attractiveness of real estate and equity to divert funds from the real estate sector to the stock market by, for example, improving corporate governance, reducing behavioural factors, and improving listing and other stock market features
- More funds need to flow to the stock market to ensure they are used to create new firms and expand existing ones rather than simply transfer resources from buyers of the land component of real estate to sellers without increasing the productive capacity of the economy (Allen, Barlevy, and Gale (2022))

An alternative type of monetary policy to “leaning against the wind” to ensure financial stability

- Most theories of banking crises assume contracts are written in real terms (e.g., Diamond and Dybvig (1983), Allen and Gale (1998, 2000) and Diamond and Rajan (2001, 2005))
- With real contracts crises arise because banks may be able make promised payments
- In practice, contracts used in banking are in nominal terms
- This potentially means financial crises can be avoided because the central bank can always provide enough liquidity to allow banks to fulfil their contracts
- Allen, Carletti and Gale (2014) (ACG) provide a model to consider this type of policy

ACG model

- The focus is on the financial system
- The theory is based on a standard three-date banking model with aggregate liquidity and return risk but with nominal contracts
- The central bank passively supplies money in response to demand from the commercial banks
- Commercial banks take in deposits from consumers and make loans to firms
- Firms invest in a safe short asset and a risky long asset

The main results

1. A competitive equilibrium implements the same fully state-contingent efficient allocation as the planner's problem, not merely the non-state contingent constrained-efficient allocation, even though deposit contracts are non-contingent and involve a fixed claim (in terms of money) on the banks.
2. A central bank policy of passively accommodating the demands of the commercial banks for money is thus sufficient to eliminate financial crises and achieve the first best.
3. The quantity theory of money holds in equilibrium: the price level at each date is proportional to the supply of money extended to the commercial banks by the central bank.
4. The central bank can control the nominal interest rate and the expected inflation rate, but it has no effect on the equilibrium allocation of goods.

Comments

- In this model monetary policy eliminates financial stability but it doesn't eliminate inflation
- In fact, inflation is a good thing here because risk needs to be borne when there are shocks to the economy and inflation is the mechanism that allows this risk sharing
- There are no frictions in the model so the first best can be achieved
- In practice of course there are many frictions - in such cases the costs of financial instability may be larger than the costs of inflation – in such situations this type of policy can be advantageous

The Covid-19 pandemic

- The pandemic provided an illustration of a similar type of alternative approach to the use of monetary policy to ensure financial stability
- When it became clear that large interventions were necessary to prevent major recessions and associated financial instability many countries effectively printed money to finance governments' expenditures
- At the time this was not too inflationary because there were a limited number of goods that could be bought – the inflation didn't come until later
- This type of inflation appears to be not well understood and this has led to problems forecasting and reacting to it

Conclusions

1. Macroprudential policies have not been very successful – one important reason is that our policies assume that if increases in real estate prices are the problem then we need policies to reduce them - but it's necessary to take a systemic view and it can be the problem is in the stock market not the real estate market
2. There is an alternative monetary policy to raising interest rates to slow down asset price increases - this is to provide the liquidity banks need and have inflation as the risk sharing mechanism so as to avoid the banking system collapsing with all the associated costs involved

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