FEDERAL RESERVE BANK *of* NEW YORK

Comments: Session 4 – "Housing Prices and Implications for Long-Term Economic Growth"

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Overview to comments

- "Housing prices and their implications for long-term economic growth"
- Embedded issues:
  - Housing prices: Are they too high? Is there a bubble? How far might they fall?
  - Implications: Do prices have a causal relation to growth?
  - Growth: How sensitive is economic growth to the housing sector?
  - Long-term: Might there be differential effects on growth in the short- versus long-term?
- This session addresses some of these issues:
  - Correlations of real estate (RE) sector with other sectors
  - Analysis of differential influence of RE on other sectors
  - Risks (through bank exposures) to decline in RE
  - RE (through land supply) role in China's long-term growth model in the past, and in the future

Housing prices – the bubble debate

- Trajectory of house prices has been a perennial topic of debate since at least the early-2000s
- Some analysts claim there is a "bubble", others claim "no bubble", and all have data to support these views
- A reasonable middle view:
  - Rate of price growth excessive in certain cities, but perhaps not nationally. Price levels and growth are distorted by government policies everywhere, however
  - Clear evidence of speculative behavior at times and places
  - Level of prices and rate of price growth exacerbates income inequality
  - Price volatility is directly linked to local government finance inefficiencies
  - Historical rate of appreciation is not sustainable or desirable
- Therefore: it is prudent to understand implications of prices on growth in the near- and long-term

Real estate and macro interlinkages

- Composite indicators (using principle components) are constructed for real estate prices, sales, and construction and development

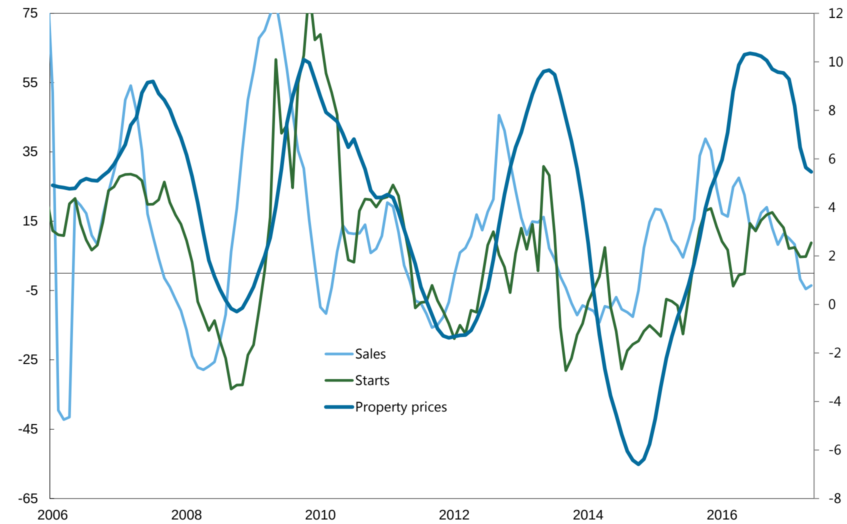
- Home sales lead most sectors, while prices lag most sectors

- Comment:
  - These lead-lag relationships are consistent with investment bank analysts’ “rules of thumb” for China’s real estate market
  - Of course, correlation does not imply causation

Lead-lags are similar in PCA and "headline" data

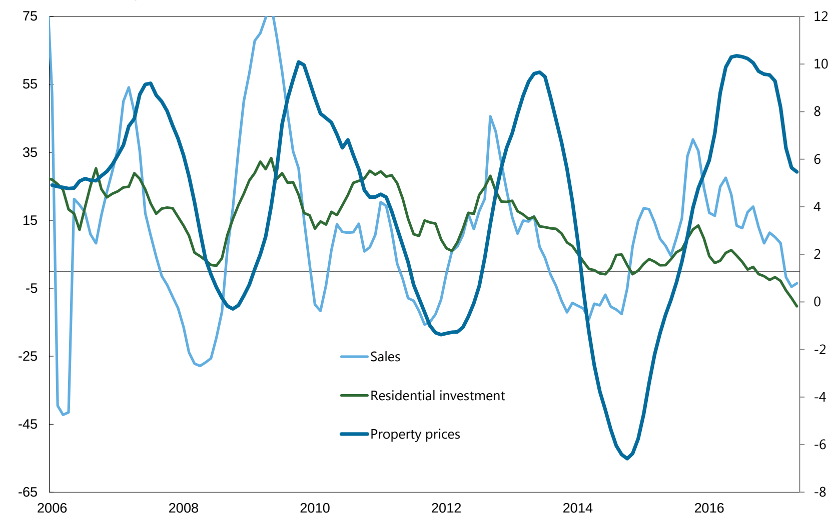
- Sales lead starts (by ~6 months) and show a small lead (~1 month) with investment
- Sales and investment lead prices
- Strong demand (sales) today boosts economic activity in the future because of pre-sales of not yet built units and because developers anticipate future demand
- Strong demand boosts prices, encouraging further demand

China Property Prices, Sales, and Starts
12 month % Chg



Source: CEIC

China Property Prices, Sales, and Residential Real Estate Investment
12 month % Chg



Source: CEIC

Price appreciation is unlikely to be *driving* growth

- Strong demand for urbanization, upgrading, and replacement of housing stock, with demand potentially exceeding supply in 1st tier cities

- Property investment and price cycles are highly “policy driven” in China, with growth boosted by quasi-fiscal stimulus at the local level

- Prices started from artificially low below-market base. Transfer of wealth to households from housing reform has been a key factor driving growth, not price speculation *per se*

But a future price shock could have consequences

- Housing’s share of household wealth is large and growing
- Impact of housing prices on equity market may be greater during times of bear market and/or financial turmoil*
- Weaker balance sheets for bank and non-bank financial institutions
- Downturn in the construction and real estate sectors

*“Time-varying causality between stock and housing markets in China”, Guangping Shi, Xioxing Liu, Xu Zhang, Finance Research Letters June 2017

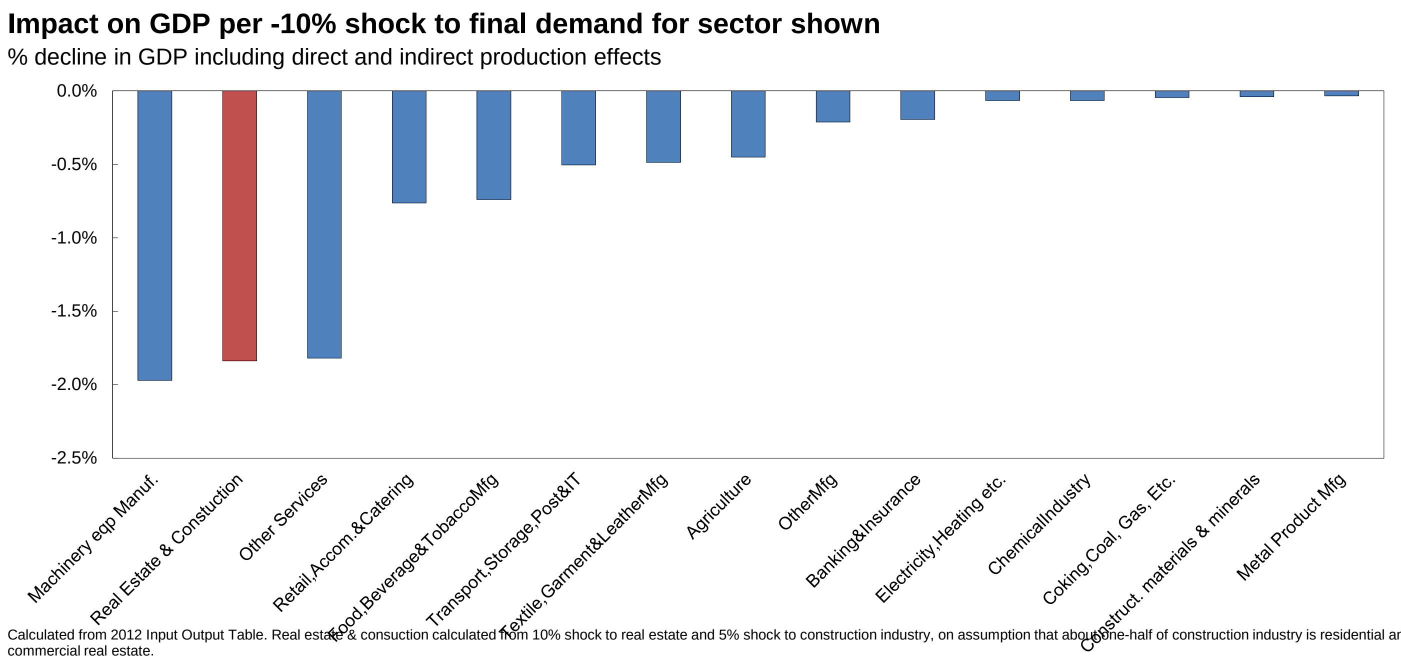
Property looms large in China’s growth

- Input-output analysis documents a structural shift underway in the interlinkages of China’s economy
  - Early-2000s: Manufacturing sector is ascendant, and it remains the most important sector to this day
  - Mid-2000s to present: Financial services and real estate take larger role, while relative importance of manufacturing declines
- Conclusion: the influence of the real estate sector on other sectors has increased significantly, but remains limited in terms of absolute size

- Comments:
  - Note that this type of analysis accounts for direct and indirect production effects, but not induced consumption or financial channels
  - The influence of China’s real estate and construction sectors are quite substantial. A shock to property should have a large impact on GDP, *ceteris paribus*

Additional perspective on size of real estate

- Real estate, leasing, and commercial services and construction industries total combined value-added shares of GDP are 15%, but final expenditures on these sectors comprise about 30% of GDP (from 2012 I-O tables)
- Final demand expenditure on real estates services and residential & commercial construction industry comprises roughly 15% to 20% of GDP



Calculated from 2012 Input Output Table. Real estate & consuction calculated from 10% shock to real estate and 5% shock to construction industry, on assumption that about one-half of construction industry is residential and commercial real estate.

Property cycles have had limited impact in past

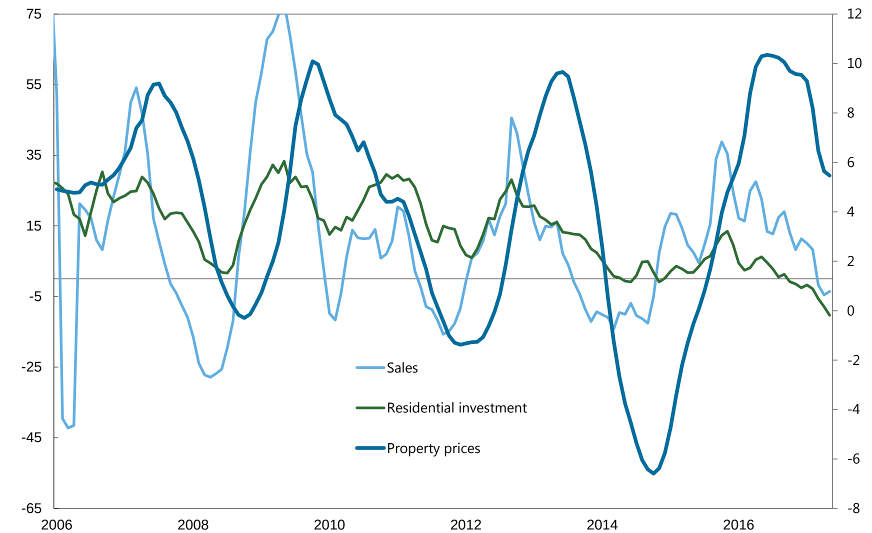
- China's property sector has experienced notable cycles in the past
  - Large swings in price growth, including periods of nationwide declines
  - Large swings in sales, starts, and investment

- Surprising that there's been limited macro impact, despite importance in China's economy

- Comment: Is risk to near-term growth underappreciated?
  - Falling investment expenditure
  - Nascent signs of downturn in prices and sales
  - Government is tightening property policies

China Property Prices, Sales, and Residential Real Estate Investment

12 month % Chg



Source: CEIC

China's real estate and banking systems

- Focusing on loans and distributions of loans of listed banks:
  - Loans are shifting toward financial and business services
  - Dispersions have increased, including to financial and real estate sectors

- Comments:
  - Financial system exposures to property are large and growing, so this is an important area for close monitoring and future research
  - Growth impact from falling prices through collateral channels is ***not*** likely to be significant, since there is little evidence for this channel in China*
  - Ironically, financial reforms could increase the collateral effect channel!

*"Real estate collateral value and investment: the case of China", Jing Wu, Josheph Gyourko, Yongheng Deng, Journal of Urban Economics, 2015

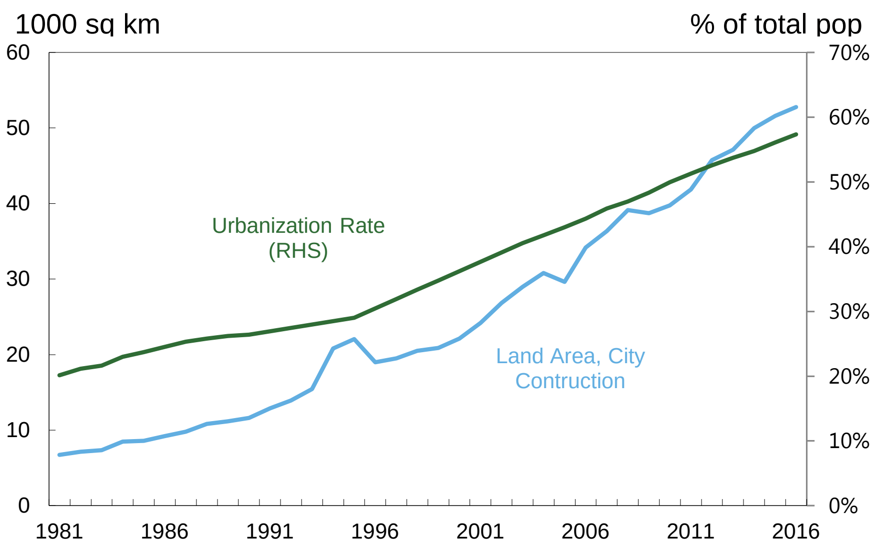
What about long-term growth?

- Professor Liu addresses property's role in growth from a long-term perspective

- China's growth model
  - Liberalization of agricultural, industrialization via TVEs, SEZs and export-oriented manufacturing
  - Transfer of surplus labor in agriculture to higher productivity industry
  - Rural to urban, intraregional migration of population from interior to coastal provinces
  - Rapid GDP growth accompanied by rising share of investment in GDP, rising household saving

- Examines this model *viewed through the lens of land supply*
  - More efficient use of agricultural land
  - Vast transformation of land-use from agriculture to industry, from rural to urban

China Urbanization and City Construction

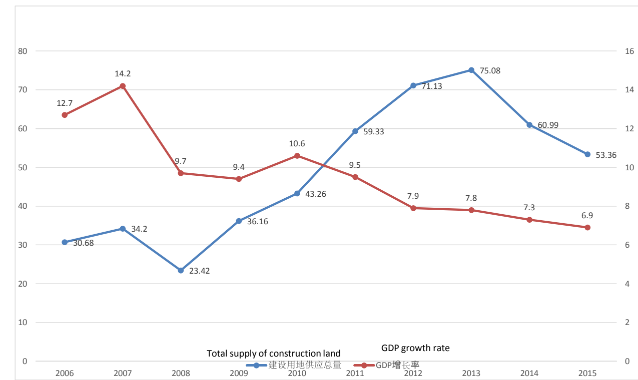


Source: CEIC

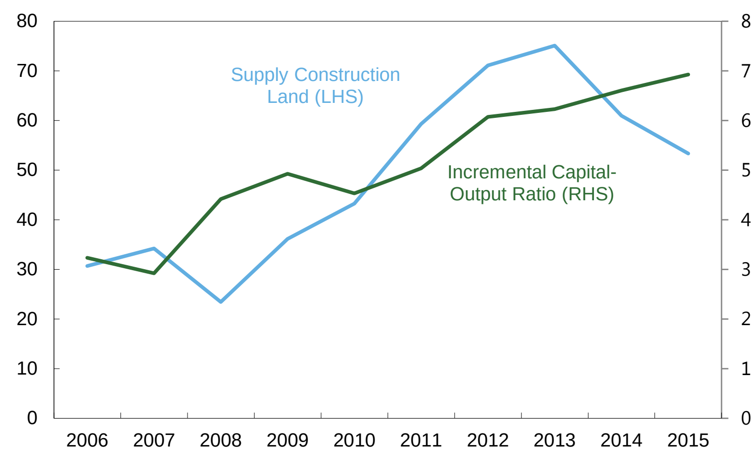
“Rebalancing” growth model

- High investment, low consumption to GDP ratios are natural outcomes of China’s successful growth model. But distortions are now evident
  - “…structural problems cause unsteady, unbalanced, uncoordinated, and unsustainable development.”
- Prof. Liu observes that land supply is no longer delivering faster GDP growth. Land supply now also coincides with lower economic efficiency
- Growth model must shift towards technology- and innovation-driven progress

1. Continued release of land has not pulled along growth



China's Land Supply and ICOR



Source: CEIC and author's calculatioln. Land supply from Prof. Shouying Liu "Bidding Farewell to the Land-Oriented Development model"

Comment: the goals of rebalancing

- Rebalancing goal should *not* be to *mechanically* lower the investment and raise the consumption to GDP ratios
  - Still incomplete urbanization process implies a higher than average investment ratio
  - Structural reforms should naturally lead to more stable development by "rebalancing" incentives at the local government, private and public enterprise, and household levels
- Key reform are widely discussed:
  - Increasing productivity in industrial sector
  - Increase profit remittances from SOEs to governments
  - Hukou reform would allow lower saving by migrant workers
  - Reduce over-investment in interior provinces
  - Increase central and local government expenditure on social safety nets

Comment: land reform's role in rebalancing

- Break the link between control of land supply and land sales in local government fiscal revenues
  - Local government land policy contributes to price volatility and/or excessive price appreciation
  - Reduces transparency in local government balance sheets, and hence fiscal discipline
  - Tight links between local governments and real estate facilitates rent seeking

- Establish property taxes as a dedicated local government revenue source

- Put agriculture and urban land rights on an equal footing

Thank You