

# Discussion

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## 1. Jie Gan\*

### Securitisation and the Commercial Property Cycle

Frank Packer and Tim Riddiough have written an important paper on the role of securitisation in the recent commercial property cycle (or more precisely, a lack of it).

The paper starts from an insightful observation. That is, compared with residential property, the commercial property market has experienced a much milder cycle in the 2000s. This conclusion is well founded. First, compared with the 50 per cent to 75 per cent price drop in the residential market, commercial property prices declined by only 25 per cent from the 2007 peak. More importantly, prices had recovered to the 2007 level by the end of 2011, whereas the residential market has stayed at its lows. The second piece of evidence is based on property (over)supply. The supply of commercial properties has been growing consistently below 4 per cent, and the growth rate of the existing stock has been 1.6 per cent since the 1990s. This is barely enough to cover depreciation. I agree with the authors that there exist structural differences between the two markets and their price movements. This is a point worth making because many analysts, including some well-known ones, believe that a boom and bust in the commercial property market occurred parallel to the one in the housing market.

The authors propose an innovative explanation. That is, publicly listed equity real estate investment trusts (REITs), through analyst coverage and credit ratings, facilitate information discovery of the state of the commercial property market and thus guide the supply of commercial properties. The authors then argue that, to the extent that REITs are securitised equity interests, securitisation can work, and should not be out of fashion, as it is now.

This is indeed a refreshing view. My comments below focus on three questions. How general is the REITs/securitisation explanation? How can the US empirical evidence, the main analysis of the paper, be strengthened? And finally, how should we interpret the international evidence?

### Generality of the REITs/securitisation explanation

One of the main points the authors attempt to make is that securitisation, if properly done, can facilitate rational or 'tamed' property supply. To make a case that this influence of REITs could apply to the residential market, one needs to answer this question: would the housing crisis have been avoided if there were equity REITs for residential property?

I first note a few key differences between residential and commercial markets.

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First, there have been non-market forces in housing, namely political pressures to increase home ownership and to extend lending to ‘underserved’ markets since the early 1990s. Second, the US housing bubble was due to misaligned incentives in the system, including the incentives of investors (searching for high yield in a low interest rate environment), banks (seeking higher returns), and rating agencies (eager to generate fees). Lax regulation also made excessive risk-taking feasible. Third, securitisation in housing was about the demand side – securitisation led to lower lending standards and the resulting increase in lending fuelled housing demand and thus price run-ups. Even if there were price signals similar to those the authors describe in the commercial market, they would not have prevented a bubble. Finally, REITs in the commercial market hold equity interest in properties, whereas the notorious residential mortgage-backed securities are debt and households cannot generate funds through an initial public offering.

It should also be noted that securitisation in the housing market worked for 30 years in the United States prior to the 2000s. Thus, the important question is not ‘can it work’ but ‘how to make it work’.

### Main evidence for the REITs explanation

The authors provide both qualitative and quantitative evidence. The qualitative analysis is obtained through a process of elimination, which contains a lot of institutional details. I find this part of the analysis interesting and insightful. My comments are mainly on the quantitative analysis, which I believe can be improved. Let me start with the identification strategy. The authors identify the role of REITs in property supply through time series variation in REITs’ market share. Specifically, they estimate the model below:

$$Y_t - Y_{t-1} = a\Delta P_t + b\Delta C_t + dSHR_t * UP_{t-1} + fSHR_t * DN_{t-1} + e_t \quad (1)$$

where  $Y$  is property supply,  $\Delta P$  contains changes in REITs prices,  $\Delta C$  is the change in construction costs,  $SHR$  is the market share of REITs, measured either by (i) total REIT market value (debt and equity included) over the total market value of office space; or (ii) net property investment of REITs over the total market value of office space.  $UP$  and  $DN$  indicate periods when prices were increasing and decreasing. The main coefficient of interest is  $d$ , which is expected to be negative. That is, higher REIT shares mean more attention, which moderates the impact of higher property prices ( $UP$ ) on supply.

The paper estimates the model for each country separately and finds strong evidence of this effect in the United States, weak evidence in Japan, and none elsewhere. My main concern is: to what extent can quarterly variation in REITs’ market share (which is rather small) affect supply? Indeed, there are at most 70 quarterly observations, where property supply takes a few years to complete. Further, quarterly variations in REITs’ market share mainly come from two sources. One is changes in REITs’ stock prices, due to changes in earnings, etc; the other is new investments made by REITs above the national average. Neither of these two measures captures ‘attention’ as the authors put it. Rather, they may pick up some other factors that affect property supply, for example, macroeconomic conditions, white-collar employment, etc. The authors need to at least control for these variables.

My suggestion is to explore other sources of variation. One source of variation is within-country cross-region variation, that is, do regions with greater REIT ownership exhibit less sensitivity of supply to prices? There is a challenge with this approach too: REIT ownership may not be exogenous if it is 'smart money'. But this is less of a problem if your focus is on the sensitivity of supply to prices, rather than the level of supply.

Another possible source of variation is cross-country variation. Is supply in countries with a greater REIT presence less sensitive to prices? Here the main challenge is that country-level institutional factors also matter for the sensitivity – one needs to be specific about how these factors work.

On model specification, the authors motivate their model with theories of property supply. Standard theory, however, is about equilibrium supply, which is unobservable. To make the theory operational, I suggest the authors use an adjustment model:

$$Y_t - Y_{t-1} = \lambda(Y_t^* - Y_{t-1}) \quad (2a)$$

$$Y_t^* = a\Delta P_t + b\Delta C_t + fX_t \quad (2b)$$

where  $Y^*$  is the (unobservable) equilibrium supply,  $\lambda$  is the adjustment speed,  $X$  contains other controls. Taking (2a) and (2b) together, one could estimate

$$Y_t = (1 - \lambda)Y_{t-1} + a\Delta P_t + b\Delta C_t + fX_t + e_t \quad (3)$$

Another advantage of this structure is that it could easily accommodate different adjustment speeds during up and down markets.

## International evidence

I find this part of the analysis a bit distracting. It is not clear what we want to examine here. Are there similar boom-busts (or a lack of them) in other economies? How does commercial property compare to housing?

The authors argue that the differences in results across economies are due to internal management in the United States versus external management, which is more common in other economies. But there are other possibilities.

First, the presence of REITs is very small in other economies. Other than Australia (19 per cent) and Belgium (9 per cent), 11 economies have shares that are below 6 per cent or have missing data, which probably indicates a less significant sector. More importantly, in other economies the property markets may have very different dynamics. For example, in Asian economies and some of the European cities, there are much more binding supply constraints. Further, in most Asian economies, real estate is more of a 'glamorous' industry. It may carry significant weight in stock market indices, for example the weight is 10 per cent in Hong Kong. This would affect beta comparisons. Most importantly, there might be structural differences in property valuation and thus REITs valuation and returns. For example, rentals are sluggish in Asia, and prices tend to be much more sensitive to fundamentals than rentals.

In these markets, property valuation is more about demand for properties, not for space. REIT valuation would have more emphasis on the ability to pick properties, rather than the ability to

manage them. Moreover, property markets may be segmented: there are multiple types and classes of properties, which makes price signals from REITs noisier. Overall, structural differences can hinder international comparison. It is thus imperative to sort through these differences in order to make any meaningful use of international data.

In closing, Frank and Tim have presented a very insightful piece of work, which I enjoyed reading. I believe the paper would benefit from some refocusing. It may be hard to draw parallels between publicly traded ownership (securitisation of equity interest) in commercial property and securitisation in housing. The identification of the role of REITs would be improved if the authors could (i) look for other sources of variation in supply and the presence of REITs both within country and across country; (ii) explore adjustment models of property supply; and (iii) examine cross-country institutional factors in more detail, particularly if they would like to pursue international comparisons. Nevertheless, the main point the authors are making is of first-order significance; that is, there is no parallel boom-bust in the commercial property market and housing. I predict that this will be an important paper for years to come.

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## 2. General Discussion

Jie Gan's discussion prompted one participant to pursue the question of how the moderating effect of securitised equity interests in commercial property can be generalised to the housing market given that securitised equity interests do not work in the housing market. They indicated that although attempts have been made to devise ways to trade equity in housing, they have not gone beyond government pilots with government subsidies. In response, one of the paper's authors, Tim Riddiough, said the findings were applicable to the housing market because of the potential for the credit default swap (CDS) market to provide price information. Dr Riddiough said these swaps are an effective way of shorting housing and the price effect of these contracts could become a standard piece of information in the market. He said the current structure of the CDS market is, however, inappropriate, and that regulation would be necessary to ensure the CDS market has a moderating effect on housing supply analogous to the REIT market's effect on commercial property.

One participant agreed with the paper's message about the usefulness of securitisation and cautioned against using the recent US experience to conclude that securitisation was intrinsically bad. During the financial crisis in the United States there was a failure of a debt securitisation system, not an equity securitisation system such as REITs, they said. Part of the reason housing debt securitisation failed in the United States was because there were guarantees from the government that produced moral hazard. In the absence of these distortions, one way equity securitisation moderates the amplitude of cycles is that it can be shorted if agents think market pricing is too high.

Another participant sought to abstract from the supply-side effect of REITs and offered an alternative hypothesis for the subdued supply response in the commercial property market relative to the housing market in the most recent US cycle. They suggested a memory effect could be operating, with agents in the United States having learnt from the commercial property

market's boom-bust cycle in the early 1990s and instead choosing to focus their attention on the housing market in the most recent cycle. The participant said while the recovery has been faster in the US commercial real estate market relative to the housing market, the recovery in commercial real estate markets outside of the United States has not. From this they concluded that one could not draw a general proposition that commercial real estate is less risky.

There was also some discussion about the appropriateness of comparing an index of home builder share price performance to an index of REIT share prices as per Figure 1 in the paper. One participant said there were difficulties making comparisons because REITs are owner-operators and therefore have a long-term interest in the management of their properties. At the same time, there is little scope for further development and trading of these properties if they are to maintain their REIT status under US law. In contrast, home builders are more leveraged than their balance sheets show and this, in turn, makes the share price performance index for home builders potentially more volatile. Another participant asked for clarification on the comparability of the commercial property and housing prices series shown in Figure 1 of the paper. They did not recall that there had been a complete recovery in US commercial property prices based on a commercial property series that is most comparable with housing price estimates.

Picking up on the theme of measurement, another participant suggested the authors use an alternative measure for the peak in housing prices which should be dated at the time participants within the home building industry started selling shares outside pre-announced plans. They said data on this should be available because it is compulsory to declare these sales under US law.

Discussion then proceeded to the quantitative results. Abstracting from statistical insignificance, clarification was requested in interpreting the positive REIT market share coefficient in periods of relative price declines for the United States. Dr Packer said the economic interpretation was that REIT market share, as a proxy for market attention, moderates the decline in commercial property supply that occurs in response to asset price declines. The same participant suggested that it would make more sense to include the change in commercial property starts as a dependent variable rather than the change in commercial property completions, given lags in commercial property construction. Dr Riddiough said their model took account of this by including lags of up to two years for all of the explanatory variables. Finally, the interpretation given to the negative coefficient on REIT market share was questioned on the basis that if REIT market share reduces the supply response to prices then this should decrease rather than increase stability in commercial real estate markets. With a stickier supply response to prices it will take longer to converge back to equilibrium, they argued.

Alternative modelling strategies were then discussed. One participant wanted to see results for the United States within different markets. In particular, they were interested to compare the price cycle of REIT-owned properties within each of the office, retail and industrial markets, with the average for the particular market as a whole. Another participant suggested that a more specific mechanism through which securitised equity interests in a firm moderate the cycle should be introduced into the model. They suggested that a variable capturing the relationship between commercial property prices and firm-specific net asset values would be a possible candidate. The rationale is that the market disciplines this ratio to be greater than one and, therefore, suppliers will moderate activity when this ratio goes below one in anticipation of reduced demand.

## DISCUSSION

Finally, on the topic of international comparisons, one participant questioned why the authors only focused on the listed REIT market. In Japan, for example, they indicated that the private REIT market was much larger than the listed REIT market and activity in this market picked up substantially in 2007 which coincided with an anecdotal increase in commercial property prices. In response, Dr Riddiough said there is also a large private REIT market in the United States, but that there are a lot of structural flaws associated with this market, making it inappropriate to put them in the same category as the US publicly traded REITs.