

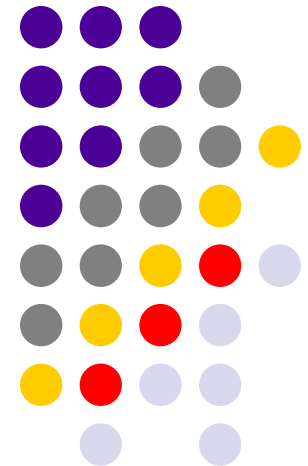
# Is There Excess Co-Movement in the US Real Estate Markets?

By  
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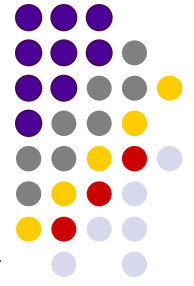


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# The Background

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- If the 1990s was a period of concern over stock market bubbles, now its the turn of the housing market (a worldwide phenomenon at that) to get all the attention
  - Unique data set
  - Clever approach: contagion type effects
  - Good news? There is no bubble!
  - Quibbles and questions but mainly a nice paper

# Data

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- CSI: Case-Shiller Index
  - Unique with careful measurement that permits serious empirical work
  - Not likely found elsewhere (e.g., euro area where this might be a serious need for it – e.g., Ireland and Spain)
  - Give more detail... its more than just your average price index
- [http://www2.standardandpoors.com/spf/pdf/index/SP\\_Case\\_Shiller\\_Home\\_Price\\_Indices\\_Methodology\\_Web.pdf](http://www2.standardandpoors.com/spf/pdf/index/SP_Case_Shiller_Home_Price_Indices_Methodology_Web.pdf)

# Methodology

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$$r_{kt} = \alpha_{kt} + f_t \beta_{kt} + e_{kt}$$

$\therefore$  If  $\rho(r_{kt}, r_{nt})$  is 'excessive' if,  
conditional on  $f_t$ ,  
is significant (?) or just  $\neq 0$  ?

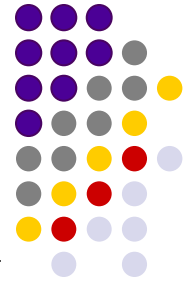
- Borrows idea from contagion literature
- What's crucial is what's in  $f_t$
- Not the only way (e.g., convergence/cointegration), need to make a more compelling case



## What's in $f_t$ ?

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- Basic macro variables
- All are contemporaneously related. Why?
- Why not more forward looking variables (other than stock market which is questionably so)?
- Do local conditions not matter at all?
- Why not an EC type model. I would expect some 'equilibrium' underlying relationship



## Estimation & Robustness I

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- SURE. May be OK but is it still valid when variables in (2) are endogenously related?
- Would GMM make a difference/ FA-VAR?
- M-GARCH & SV models are dismissed for good reason but since univariate results are also generated and discussed the univariate equivalent of these might be useful
- Its not clear that rolling SD are to be preferred over say Rigobon-Sack or Markov switching. I am not terribly convinced



## Estimation & Robustness II

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- Why are breaks tested on the correlations? Would it not make more sense to find breaks in(2), or some variant, and then evaluate the correlations?
- I don't quite get the NBER dummy. The sample consists of 2 short recessions (8 months each, in early 1980s and then again in 2000). There may be better ways to get at asymmetries
- I don't quite get momentum dummy. Why is the housing market like the stock market?
- If you want robustness you want to estimate correlations for a market where we 'know' (ex post of course) that there was a bubble (e.g., UK, Ireland, Spain)

# Results

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- Bottom Line: there is no bubble
- $f_t$  explains close to 70%
  - but if you look at the time series there appears to be trend like behavior + seasonals (?) in some and its not clear these are dealt with appropriately
- You need to dig (too) deep to find results that are general versus regional differences.
  - Why not present results as in (1): (i) what's common across all regions; (ii) regional variations
  - There are regional variations: maybe there is no 'national' bubble but there may be local/regional ones!