SEARCH FOR YIELD IN HOUSING MARKETS

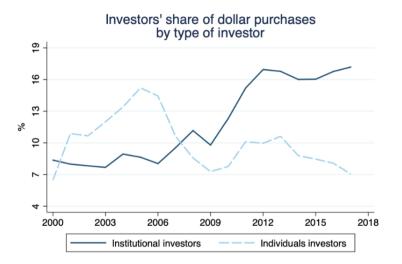
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This paper: Striking New Facts about Post-GFC Housing Market



• Main finding: big gain in institutional investor share from 2009 to 2012

Many open questions as a result of this paper

My main comments

- Peering beyond the "veil of secrecy" who are the investors?
- Are rental yields synonymous with safety/lower returns?
- Ocausal identification of effects on momentum and market tightness
- Ooing forward: what is driving time series and spatial trends in institutional investing?

Overall impression

- Difficult to interpret rise of institutional housing investments without knowing more about investors' identities and motivations
- Creating a company to execute sales helps preserve privacy of buyers
- ► Looking at total returns, tax/regulatory incentives may shed light

How do we define investors?

Many different definitions in the literature!

- ► Tax policy: separate rates for short-term sales/vacancies/non-residents/second homes
- ► Most common: owning property other than primary residence
- ► Can be speculators (Chinco & Mayer 2016) or middlemen (Bayer et al. 2020)
- Realized capital gains inform these definitions

Definition in this paper

- ▶ Must buy more than one property within the MSA within the given year and year before
- ▶ Institutions: exclude GSEs, govt., hospitals, banks, transport, non-profits
- ▶ Biggest \$\$\$ amount gains from Wall Street landlords, Blackstone, apartment REITs (top 1%)

CASE STUDY: CERBERUS AND MASSACHUSETTS HOSPITALS

• Problem: controlling interests may sell off RE assets and then new owner rents them back to the original nominal owner (common private equity strategy)



St. Elizabeth's Medical Center in Boston, MA

But almost as soon as the state monitoring period ended. Cerberus did what many private equity skeptics feared. In 2016, Steward sold off some of the hospitals' property for \$1.25 billion. The hospitals now had to pay rent to use buildings they once owned. That helped Cerberus extract a giant gain; one of its funds collected a \$484 million dividend, according to a confidential investor document. Mostly because of the real estate transaction, the fund tripled its money. The deal also enabled an acquisition spree. Steward now owns 34 hospitals in nine states, including Florida, Ohio, Pennsylvania. and Texas, as well as two in, of all places, Malta.

Source: "Life and Debt at a Private Equity Hospital," Bloomberg, 8/6/2020

RENTAL YIELDS VS. HOLDING PERIOD RETURNS

• Does the buy-and-hold strategy deliver superior returns?

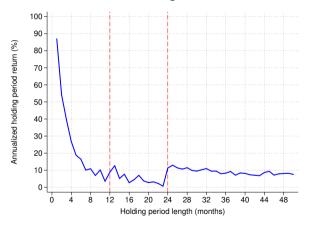
- Existing evidence: no!
- Term structure likely slopes down (van Binsbergen & Koijen 2017; Giglio et al. 2018)
- ▶ Implies large losses from forgoing ST cap gains

So then why forgo flipping?

- ► Safety: potential behavioral motive from extrapolation experience
 - Were investors who got burned by the housing bust more likely to switch to buy-to-let?
- ▶ Option value: may anticipate large price gains in future due to regulatory changes
- ► Tax incentives: preferential treatment of long-term cap gains
- Instrument from Gao, Sockin, & Xiong (2020): low state-level marginal cap gains tax rate predicts non-owner-occupied home sales volume

Downward-sloping term structure of tax-adjusted total returns

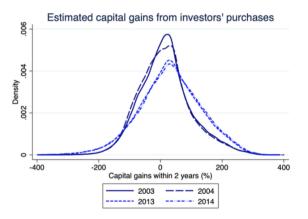
• My co-authors and I did this for Taiwan using tax returns of ind. housing investors



Source: Chi, LaPoint, & Lin (2020)

• Similar exercise can be done using Zillow data (without tax adjustment)

RIGHT-WARD SHIFT IN CAP GAINS POST-GFC



- ST cap gains on average greater, but higher variance \implies could be some element of safety in switching to buy-to-let (what about *realized* cap gains, and over time?)
- Hedonic model linear in size, age, reno dummies can improve R^2 by estimating translog production function in size/age/distance (Holger, Gordon, Sieg 2010)

WHAT ARE THE IDENTIFICATION CHALLENGES HERE?

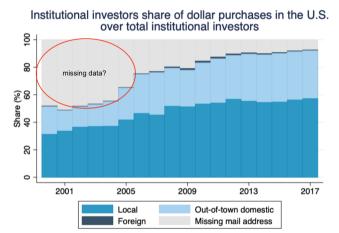
$$Y_{m,09-17} = \beta_0 + \beta_1 \cdot Inst_{m,09-17} + \gamma' \cdot X_m + \alpha_s + u_m$$

- Association between inst. investor share and momentum/tightness could be due to...
 - Omitted variable bias: common factor moving both driving down price momentum and pushing inst. investors into the market
 - ★ Key example: economies of scale + beliefs about future rental income stream
 - Reverse causality/simultaneity: if momentum is lower, housing considered "safe" inst. investors see a diversification opportunity
- Proposed IV: MSA-level share of pre-crisis business income from IRS SOI
 - Does this deliver a strong first stage and is there boom/bust asymmetry?
 - ▶ Economic intuition: why would business income not directly influence RE market?
 - ▶ I see how it takes care of reverse causality, but not OVB

Related point: what motivates buy-and-hold institutional investors?

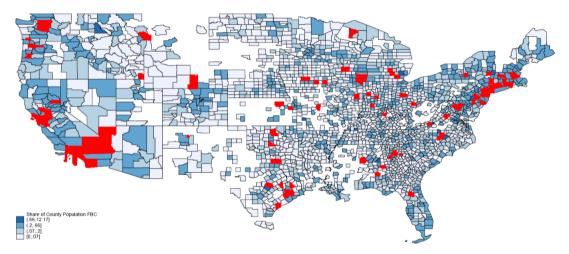
- Finding a suitable IV for institutional RE investing means taking a stance on root cause of upward trend beyond the big investors in major MSAs
- A few hypotheses...
 - Search for yield & monetary policy: low interest rate regime + high expected returns
 - ★ Related: why are REITs so expensive? (Van Nieuwerburgh 2018)
 - Plight to safety: since rents are sticky, income-generating properties viewed as safe
 - Regulation: lock-up periods preventing PE firms from early exits
 - Tax incentives: capital gains/sales taxes induce "lock-in" effects
 - "China shock": foreign investors using US housing as a tax haven (Gorback & Keys 2020)
- Compelling reasons in literature why such incentives might vary across MSAs

LOCAL AND NON-RESIDENT SHARE OF PURCHASES FAIRLY STABLE



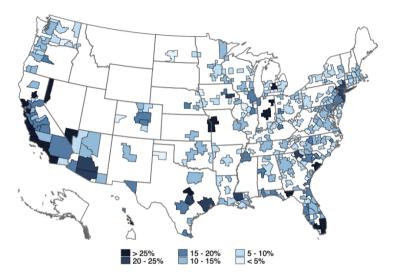
- Do we believe that the foreign *ownership* share is really that small?
- Does zip code distribution of foreign \$\$\$ match known enclaves of individual investors?

FOREIGN-BORN CHINESE POPULATION CONCENTRATED IN FEW KEY ZIP CODES



Source: Gorback & Keys (2020)

INST. INV. ALSO CONCENTRATED IN SIMILAR SET OF MSAS



• Caveat: data on institutions may be too thin to look at zip code level measures

FOREIGN INVESTORS ARE BUY-AND-HOLD INVESTORS!

	Short-term sale (sa	ale in two years from purchase)
Capital gain	0.210***	0.208***
	(0.034)	(0.028)
Capital gain \times Top investors	0.765***	
	(0.130)	
Top investors	-3.069***	
	(0.133)	
Capital gain \times Out-of-town buyer		-0.108*
		(0.060)
Out-of-town buyer		-0.041
		(0.088)
Capital gain \times Foreign buyer		0.098
		(0.080)
Foreign buyer		-1.200***
		(0.089)
County-level controls	Yes	Yes
Observations	946,797	858,567
Number of counties	892	823

Overall assessment

New facts about post-crisis RE market

Institutional investors associated with reduced momentum, higher rental yields

Raises an important question

Why did market share of institutional investors ↑ so dramatically?

My takeaways

- ► Trend likely related to issues of housing affordability/local supply inelasticity
- ▶ Identity of investors still shrouded in "veil of secrecy" (anything can be an LLC!)
- ▶ Need to look at return volatility to separate search for yield from flight to safety motives
- Many promising paths for future work studying root causes