

Does MSA Location Matter as Much as You Think?

Can “Wining” MSA be Predicted by the Experts?

The Value of Location?

- Best known adage in real estate...
 - “The three most important determinants of property value are **location, location, and location**”
- So....investors “pay” for the location attributes of a property at acquisition
 - Hard to “get something for nothing” unless you know more than the seller & other buyers/bidders

Prime Example: “Gateway Cities”

- NY, Boston, DC, Chicago, San Fran, & LA
 - “We only invest in supply constrained markets...”
- Purported advantages of Gateway cities are not “free”
 - You pay for them at acquisition
- **Example:** prominent apartment REIT “selling at 7.0% cap rates (in Raleigh NC) & buying at 4.5% cap rates” (in New York area)
- With such a strategy, REIT was **betting on** significantly more rent growth in the “supply constrained” NY MSA

Prime Example: “Gateway Cities”

- Simple model of expected total return: $r = R + g$
 - ❑ r = unlevered discount rate (required IRR) over expected holding period
 - ❑ Largely determined outside of CRE markets
 - ❑ R = acquisition cap rate
 - ❑ g = expected (constant) growth rate in NOI & price

Prime Example: “Gateway Cities”

- Assume unlevered discount rate (required IRR) for apartments was 9.0% in Raleigh and 8.5% in NY:
 - Required rent growth in Raleigh

$$r = R + g$$

$$9.0\% = 7.0\% + \mathbf{2.0\%}$$

- Required rent growth in NY

$$r = R + g$$

$$8.5\% = 4.5\% + \mathbf{4.0\%}$$

Required annual growth rate in NOI & price



Prime Example: “Gateway Cities”

- Conclusion?
- You should **not expect** higher **total** returns on NY acquisitions!
- In fact, you should **expect lower returns** to the extent NY is perceived as less risky (more predictable) than Raleigh

Changes in Value of MSA Locations

- So...**expected** benefits of a location are priced at acquisition
- But...**realized** CRE returns do vary significantly across MSAs & over time....
- Why?
 - Because **relative values** of MSA locations **change unexpectedly** after acquisitions
 - Supply restrictions are unexpectedly tightened further in Boston
 - Federal government unexpectedly cuts jobs in DC
 - Boeing announces relocation from Seattle area to Atlanta
- But...can this variation in (realized) MSA returns be predicted?

Timing MSA Investments

- Many in CRE industry clearly believe **relative** MSA returns **are** predictable
 - Large amounts of time/money spent on analyses of MSAs
 - Is now a good time to buy apartments in Atlanta?
 - Do supply restrictions in Boston make it an attractive MSA?
 - Is there too much supply of office space coming on line in Houston?
 - What are the 10 hottest industrial markets?
 - Should you sell NY apartments now that there is an excess supply?

But What Does the Research Show?

- Despite intense industry interest in picking “winning” MSAs....
- No statistical/empirical evidence exists on extent to which:
 - MSA locations of portfolio properties affect portfolio returns
 - We hear stories & antidotes
 - Portfolio managers can time MSA entry & exit
- Why?
 - Adequate data on the MSA locations of portfolio properties have not been available until recently

Objective Today?

- We have recently completed 3 studies on impact/ importance of MSA location on CRE portfolio returns
- My plan is to:
 - Summarize main findings of this research
 - Discuss implications for CRE portfolio decisions

“Asset Location, Timing Ability, and the Cross-Section of CRE Returns”

by David C. Ling, Andy Naranjo, and Benjamin Scheick

Quick Background/Summary

- First to quantify extent to which individual REIT MSA allocations explain variation in REIT returns
 - Each REIT holds a different portfolio of properties
- Also examine ability of REIT managers to time MSA entry/exit

Why Real Estate Investment Trusts?

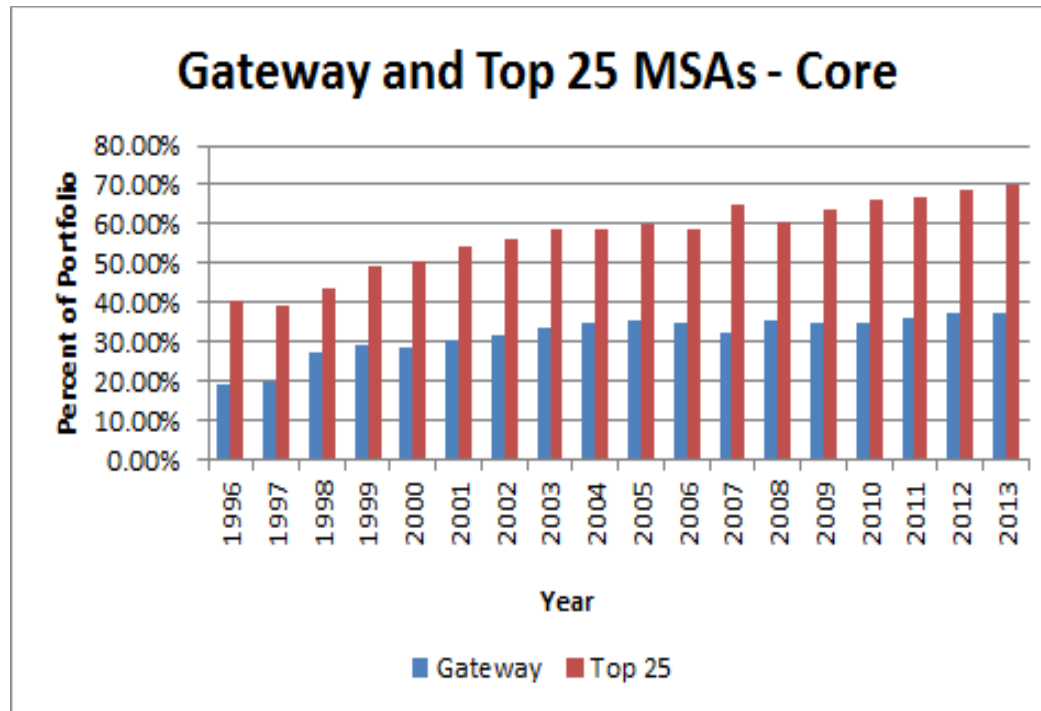
- High frequency total return data are available
 - Analysis can't be replicated for private portfolios
- Industry has equity market cap of approximately \$1.0 trillion
 - as of October 31, 2016
- With SNL, we know location & (book) value of **each property** held by **each equity REIT** at beginning of **each year**

Data & Variable Construction

- Measure portfolio concentrations for each REIT in the 25 largest MSAs (based on population)
 - Each year: 1996-2013
- % concentration in each MSA based on book value of each property in each MSA

MSA Concentrations

- On average, equity REITs held 60% of their portfolios in top 25 MSAs over sample period
- Industry's exposure to 25 MSAs increased over sample period
- Approximately half in “gateway” markets (i.e., NY, Boston, DC, Chicago, San Fran, LA)



MSA Concentration Regressions

- Estimate excess return regressions for each year with firm-level RHS variables:

$$RET_{i,t} = \alpha + \beta_1 SIZE_{i,t-1} + \beta_2 M/B_{i,t-1} + \beta_3 MOMENTUM_{i,t-1} + \beta_4 ILLIQ_{i,t-1} + \beta_5 LEV_{i,t-1} + \varepsilon_{i,t}, \quad (2)$$

Return on REIT i in yr. t

Usual set of explanatory variables (SOS)

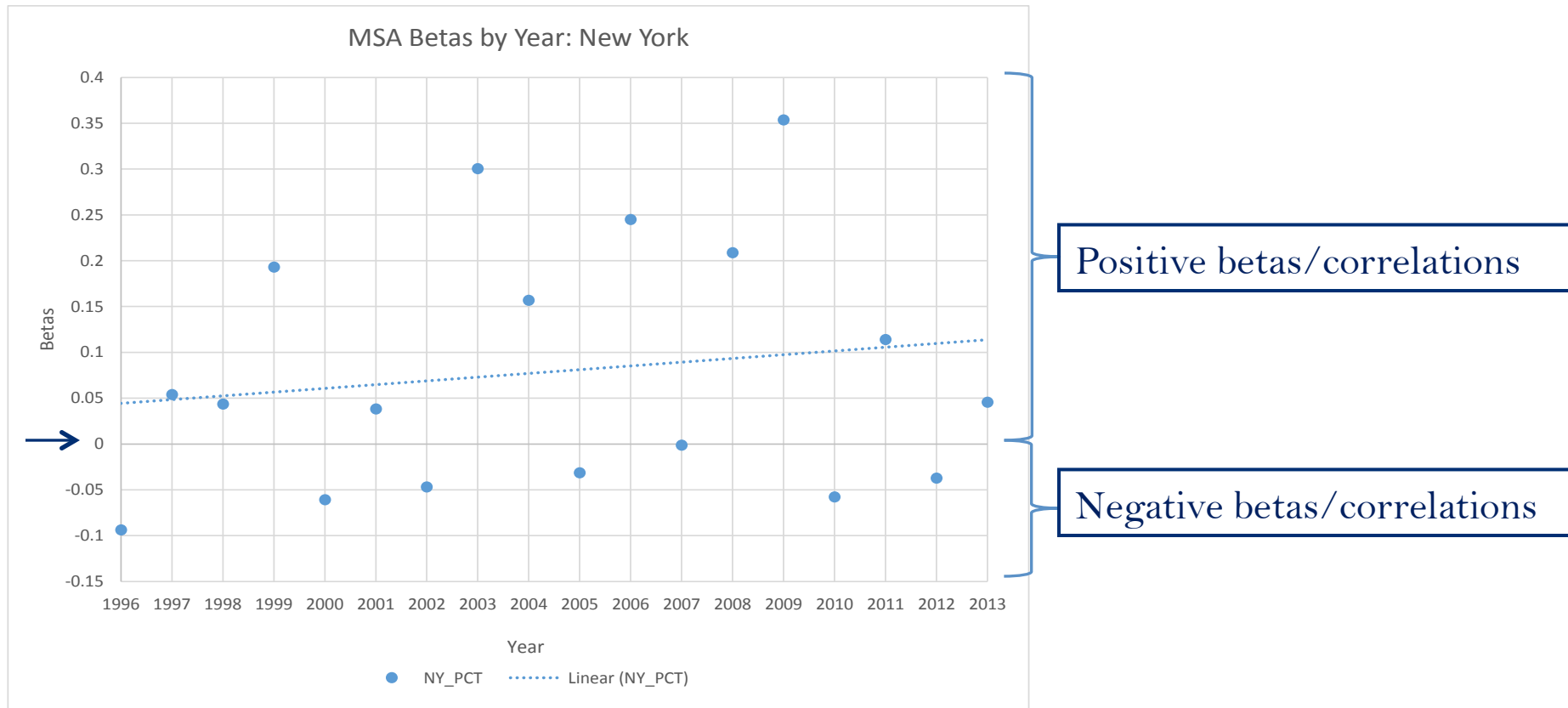
- First estimate **without** controlling for MSA concentrations
- Then...rerun return regressions adding portfolio concentrations in each of top 25 MSAs at beginning of each year
 - How much is explanatory power increased?
 - Which MSA concentrations/allocations add significant explanatory power to the model?

MSA Concentration Regressions-Results

- Adding (time-varying) concentrations in the 25 MSAs increases **average** adjusted R-square from 23% to 35%
- MSA concentrations that are significant in a given year vary substantially over 18-year sample
- And...many MSAs have
 - + / significant betas (“correlations”) in some years &
 - / significant betas (“correlations”) in other years

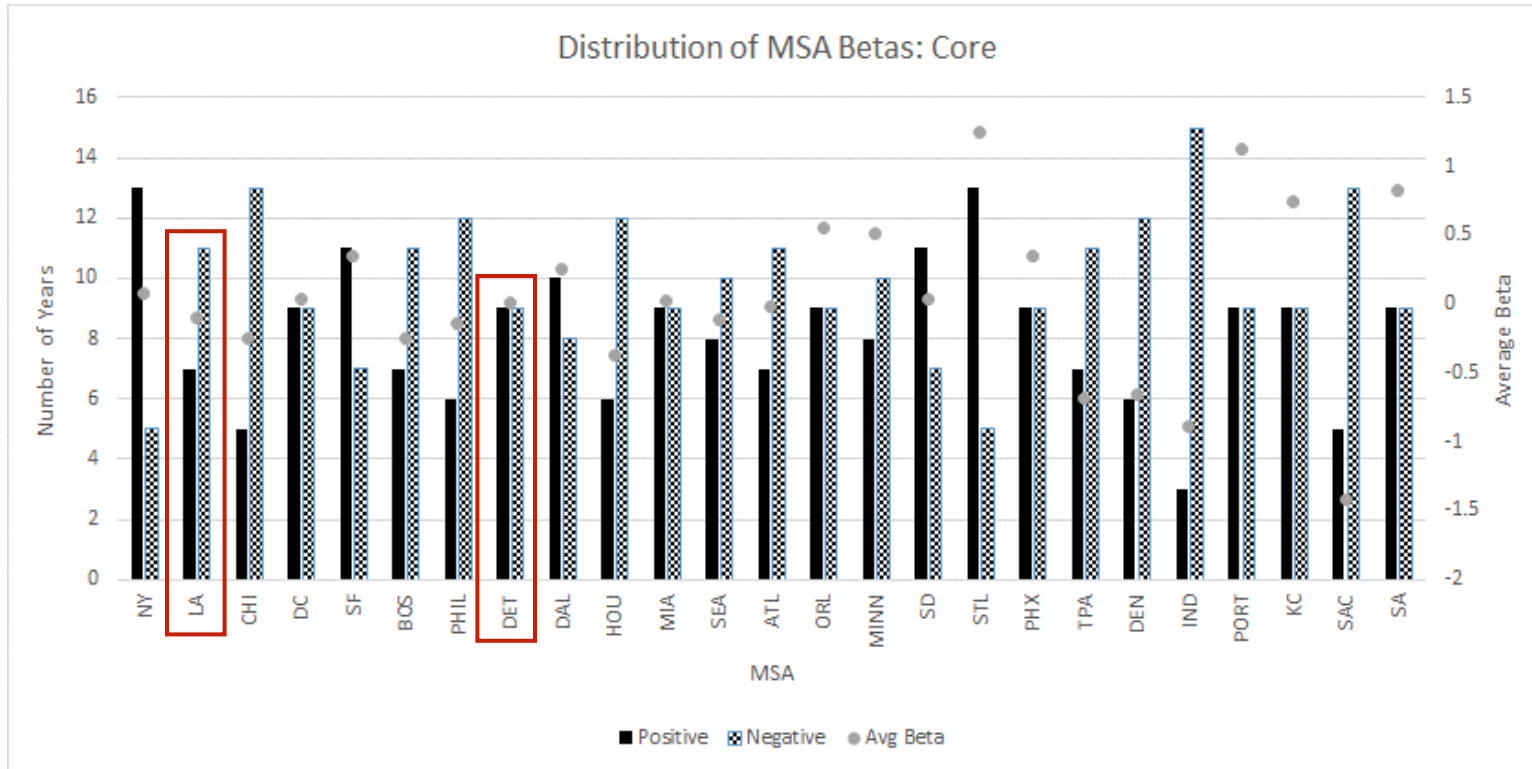
MSA “Betas”-Annual Cross Sections

- Betas (“Correlations”) Over 18-Year Sample – New York



MSA Exposures-Annual Cross Sections

- Cross-Sectional Distribution of MSA Betas (“correlations”)



- Ex.: 7/18 betas for LA are positive; 11 negative (left-hand axis)
- Average betas (correlations) tend to center around zero (right-hand axis)

MSA Exposures-Annual Cross Sections

- Overall...
 - results suggest MSA locations of portfolio properties **do matter**
 - But...return enhancing (or destroying) abilities of **particular** MSAs appear to **change rapidly**

Can Portfolio Managers Time MSA Entry/Exit?

- Can REIT managers:....
 - Increase or maintain portfolio concentrations in MSAs that outperform the next year?
 - Decrease concentrations in MSAs that underperform the next year?

Impediments to Market Timing?

- Even with local market knowledge & deal execution experience, lag between decisions to increase/decrease a MSA allocation & completed acquisitions can be substantial

Impediments to Market Timing?

- Potential **information disadvantage** non-local investors face given lack of local market knowledge
 - REITs often attempt to overcome this disadvantage by hiring local talent and/or by engaging in JVs with local experts

Impediments to Market Timing?

- **Lack of scale economies** also a concern
 - Fixed costs associated with acquiring local market knowledge & assembling a management team
 - Not true with stock purchases
 - Efficiency is gained when fixed costs are amortized over a larger portfolio
 - Result?
 - REITs generally prefer to hold portfolios of some minimum size in each MSA in which they have a presence
 - Also true of pension funds, foreign investors, RE private equity funds...

Impediments to Market Timing?

- In summary....
- Even if portfolio manager is able to identify mispricing in a MSA, costs/delays associated with entering/exiting MSAs make it difficult to exploit any perceived mispricing

Can REITs Market Time? Our Empirical Approach

- Employ a regression/statistical analysis designed to test whether REITs, as a group, are able to
 - **increase** their concentrations in MSAs that subsequently **outperform** and/or
 - **decrease** concentrations in MSAs that subsequently **underperform**

Can REITs Time “Up” Markets?

- Over our 18-year sample...
- REIT managers as a group exhibited some ability to time entry or maintain positions in 9 MSAs that outperformed over next year
 - L.A., Philadelphia, Dallas, Seattle, Orlando, Minneapolis, San Diego, Phoenix, Indianapolis
- But...REIT managers actually **reduced exposures to 8 MSAs** that subsequently **outperformed** over the next year
 - New York, Chicago, San Francisco, Detroit, Houston, Tampa, Portland, Sacramento
- Hard to conclude REIT managers have displayed an ability to time “up” markets
- Similar inability to time “down” markets...?

What About the Gateway Markets?

- With respect to six Gateway MSAs:
 - NY: lower exposures in up markets; higher exposures in down markets
 - L.A.: higher exposures in up markets; neutral in down markets
 - Chicago: lower exposures in up markets; neutral in down markets
 - San Fran: lower exposures in up markets; lower exposures in down markets
 - DC & Boston: neutral in both up & down markets

What About the Gateway Markets?

- Clearly...ability to time markets is concentrated in non-Gateway markets
- Potential explanation?
 - Fewer foreign/institutional investors allocate capital to non-gateway MSAs

What About the Gateway Markets?

- Clearly...ability to time markets is concentrated in non-Gateway markets
- Potential explanation?
 - Fewer foreign/institutional investors allocate capital to non-gateway MSAs
- Result?
 - Less liquidity & information flow (& potential competition?)...and therefore less certainty about “true” market values



Greater ability to acquire a property for less than true market value


Other Interesting Results?

- Firm characteristics associated with better market timing ability?
 - More diversification
 - Lower leverage & fewer financial constraints
 - i.e., more “dry powder”

There's No Place like Home: Local Asset Concentrations & Information Asymmetries

by David C. Ling, Andy Naranjo, and Benjamin Scheick

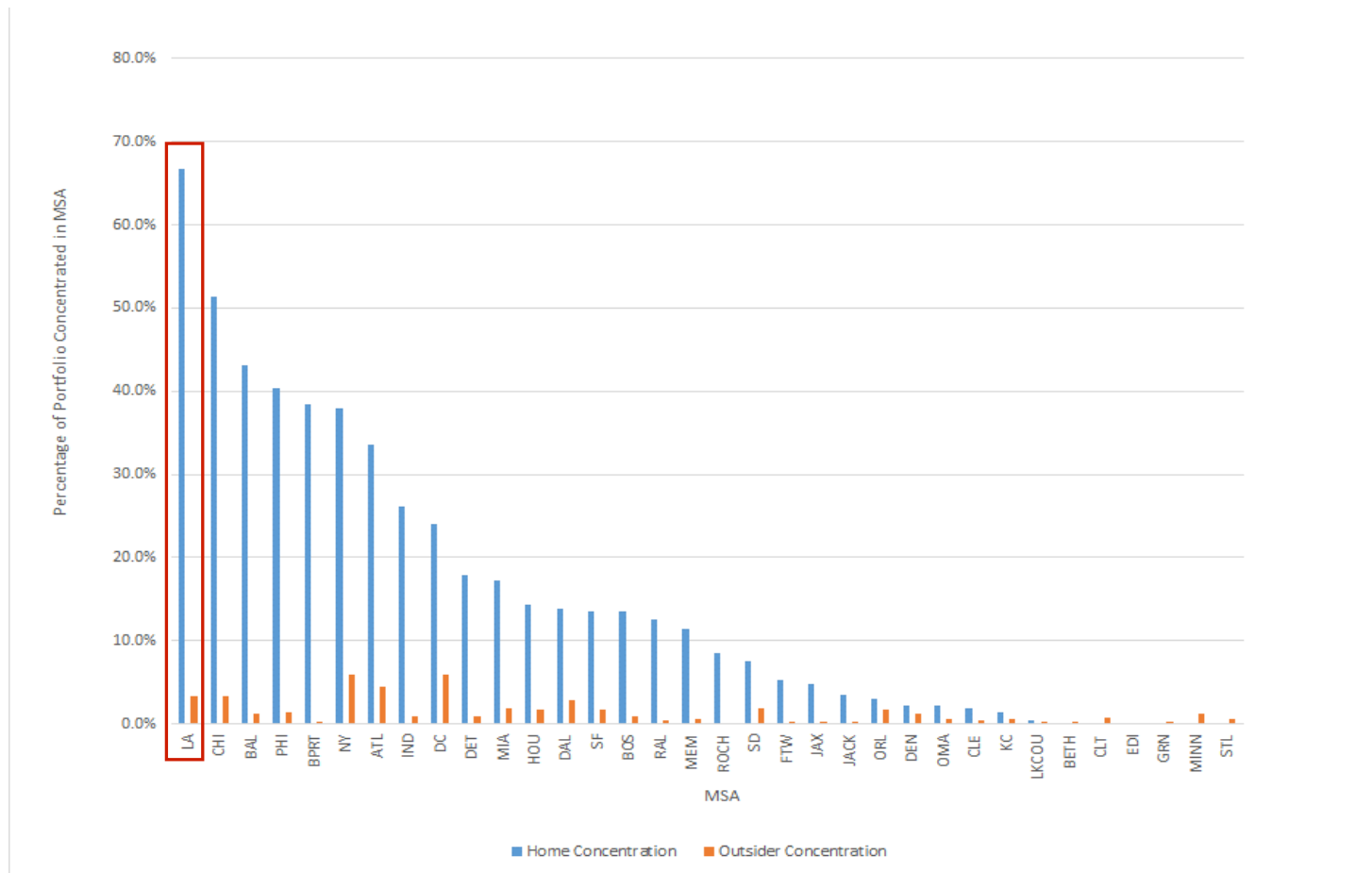
What is “Home Bias?”

- CRE markets: illiquid, highly segmented, heterogeneous assets
 Investors with a “home” market” information advantage may choose to overweight local assets in their CRE portfolio
- Evidence of “home bias” in investment decisions has been documented among
 - individual stock investors
 - managers of mutual funds & hedge fund portfolios, and
 - lenders
- No rigorous analysis of home bias...and its effects on returns... exists for real estate assets

What Do We Do?

- Measure extent to which
 1. REIT managers exhibit home bias
 2. home bias affects portfolio returns

Evidence of Home Bias in REIT Portfolio?



- On average, REITs hold 20% of their portfolio in their home MSA
- 7 REITs headquartered in LA
- These firms hold 66% of their portfolios in LA
- REITs not headquartered in LA hold just 2% of their portfolios in LA

Effects of Home Bias on Returns?

- Sort REITs by property type into 3 home concentration “buckets” (low, medium, high) as of beginning of each year
- Calculate monthly returns for each portfolio/bucket

	Low	Mid	High	High-Low
<i>Home Market Concentration</i>	0.919	1.091	1.353	0.434***

- REITs with high home concentrations outperform low concentration REITs
 - 43 basis point monthly (5.2% annually) return difference is
 - economically large & statistically significant
 - consistent with a local market information advantage

Effects of Home Bias on Returns?

- Also estimate a portfolio regression model to determine a **risk-adjusted “alpha”**
 - Controls for exposure to other common risk factors
- Positive & significant “alpha” for high home concentration REITs
 - abnormal (risk-adjusted) returns of 0.4% monthly (**4.8% annually**)
- So...home bias “pays”...

Implications/Key Takeaways?

- Anything you know about relative value/attractiveness of a MSA is probably known by other market participants...and already reflected in market prices
 - Hard to “*get something for nothing*”
 - Especially if coming from outside the MSA
- Positive/negative **shocks** to the economies of MSAs **do occur** but are difficult to predict
- Difficulties/costs associated with entering new MSAs make it hard to benefit from any perceived mispricing
 - Benefits of positive shocks likely accrue to existing owners, **not new investors**

Implications/Key Takeaways?

- MSAs that outperform in one year frequently underperform in next year
- Ability to time markets is concentrated in non-gateway MSAs
 - Reflects less research & information flow

Implications/Key Takeaways?

- Superior performance of a portfolio is driven by property selection & management **within** MSAs, not by selection of MSAs
 - Submarket & property selection matters more than MSA selection
- Diversification is a powerful tool for increasing the risk-adjusted returns of portfolios
 - Is the one “**free lunch**” in financial economics...so geographic diversification is important
- But...a **naïve** diversification strategy may be as effective, and much less expensive, than **strategic** diversification

Implications/Key Takeaways?

- REIT managers, as a group, display a significant “home bias”
 - And...greater home bias **is predicative** of superior (risk-adjusted) return performance
 - Consistent with an information advantage
- But...locally concentrated portfolios increase risk at portfolio level
 - Inconsistent with a well diversified portfolio...?

Implications/Key Takeaways?

- Investors should focus on effective property selection, deal execution, and management
 - i.e., analysis of immediate market area, due diligence & underwriting, negotiations, etc.
 - A “bottom up” investment strategy
- Valuable resources **should not** be expended on acquisition & analysis of MSA level data & forecasts

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