

When Shelter Becomes Strategy: Housing as an Asset

Francisco Amaral

University of Zurich, Department of Finance and CUREM

Zürich, 15 December 2025

A Simple Investment Choice in 1970s America

A Simple Investment Choice in 1970s America

New York City



A Simple Investment Choice in 1970s America

New York City



Small town in rural Wyoming



New York, Ny vs Casper, Wy

New York, Ny vs Casper, Wy

Casper, Wy

Annual real capital gain = **1.7%**;

Rental yield: 2021 = **5.8%**

SEE BEN
"A LOOK MEANS A LOT"

Two east front lots on corner of Melrose and Twelfth; one block from bus line, size 80x122 feet, price \$500, easy terms. Complete little home of three rooms and bath, lights, water and gas, located on South McKinley street; bus service; price \$2,500, terms \$500 cash, balance monthly.

An attractive home of four nice rooms, water, lights and gas; gas stoves connected and go with house; located on South Jackson; price \$3,500, terms \$700 cash, balance monthly.

Completely furnished home of six rooms and bath; water, lights and gas; three rooms on first floor, three rooms in basement; monthly income \$90; located on Fourteen the street, south of GY avenue; price \$3,900; terms \$700 cash, balance monthly.

distance from business center as low as \$100, on easy terms with city water, lights and gas as low as \$250.

"A LOOK MEANS A LOT"

SEE BEN REALTY CO.

201-203 Midwest Bldg. REALTORS Phone 1480



Zillow Save Share More

\$285,000 4 bd | 2 ba | 2,830 sqft
Price cut: \$4K (5/20)
115 E 13th St, Casper, WY 82601
Est. payment: \$1,171/mo [Get pre-qualified](#)

Contact Agent Take a Tour

History Monthly cost Rental value Nearby schools Similar

Rental value

Rent Zestimate®
\$1,400/mo

Nearby schools in Casper

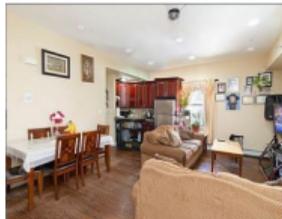
New York, NY

Annual real capital gain = **2.2%**;

Rental yield: 2021 = **3.4%**

Bronx For Sale.

142D, 516 EAST-25x100; three-story one-family dwelling, nine rooms, vacant, price \$7,000, mortgage \$3,000, five years, cash \$2,500, balance easy terms. Hugh O'Reilly, 203 West 19th.



Zillow Edit Save Share More

6 bd | 3 ba | 2,050 sqft
516 E 142nd St, Bronx, NY 10454
\$2,100/mo
Sold: \$735,000 Sold on 11/24/20 Rent Zestimate®
Est. refi payment: \$3,244/mo [Refinance your loan](#)

Home value [Owner tools](#) Home details Neighborhood details Similar home:

Why Wyoming Can Outperform New York — The Risk–Return Logic

- ◆ Housing as an investment faces a risk–return trade-off
- ◆ New York: high demand → stable rents & prices → safer asset → lower returns
- ◆ Wyoming: uncertain demand → rental & resale risk → riskier asset → higher returns

Central theme

housing: consumption good & financial asset



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Why care about housing markets?

- ◆ The market most of us participate in — as renters or owners — far more than in the labor or stock market
- ◆ For most households, buying a house is the most important financial decision
- ◆ Major driver of wealth inequality across households and generations
- ◆ Core to the financial system: main form of bank collateral and central in past financial crises

⇒ Need to understand prices and returns

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Roadmap

Superstar Returns?

Price Uncertainty

Spatial Distribution of Liquidity

Interest Rates and Spatial Polarization

Superstar Returns? Spatial Heterogeneity in Returns to Housing

FRANCISCO AMARAL, MARTIN DOHMEN, SEBASTIAN KOHL,
and MORITZ SCHULARICK*

ABSTRACT

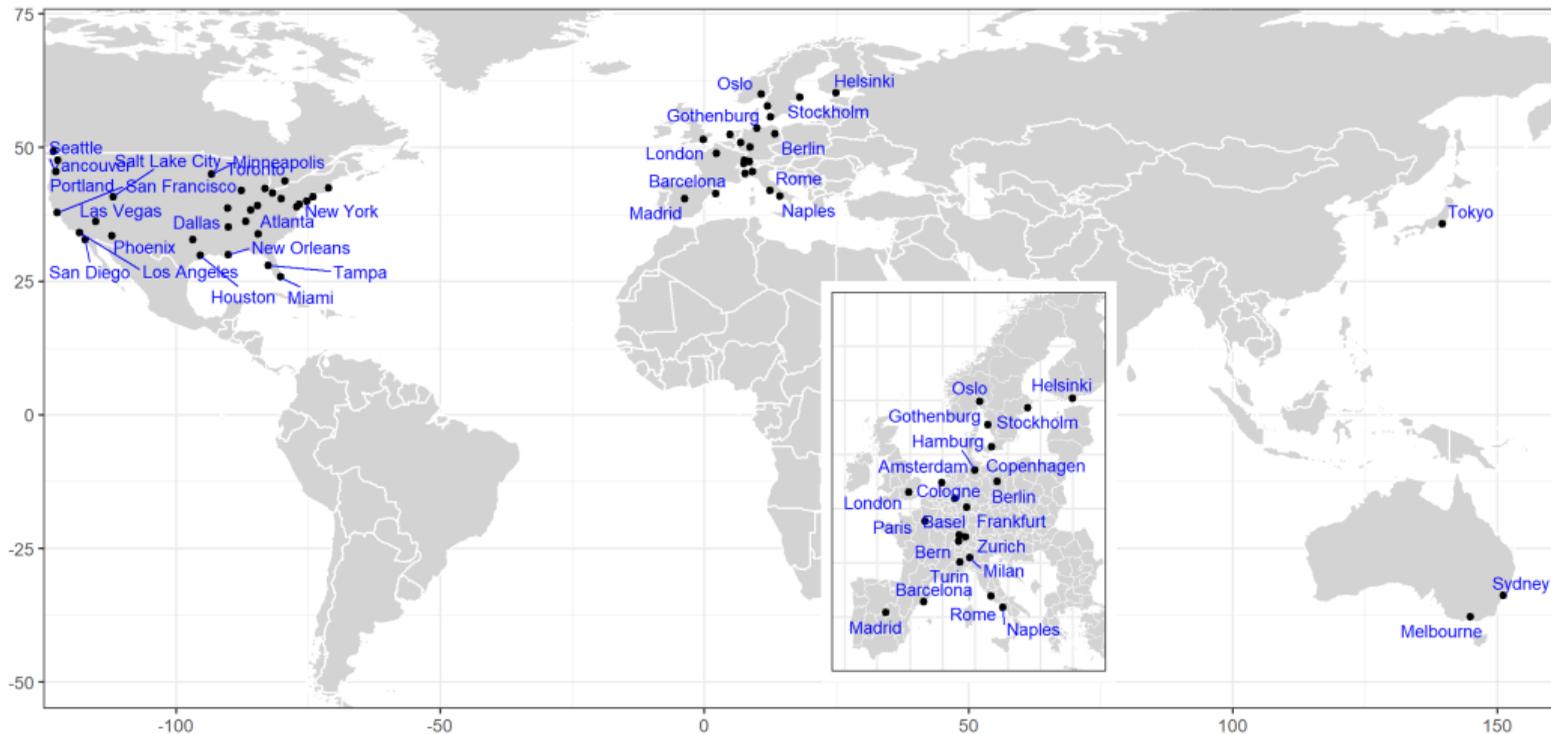
This paper makes the first comprehensive attempt to study within-country heterogeneity of housing returns. We introduce a new city-level data set covering 15 OECD countries over 150 years and show that national housing markets are characterized by systematic spatial variation in housing returns. Total returns in large agglomerations are close to 100 basis points lower per year than in other parts of the same country. Excess returns outside the large cities can be rationalized as compensation for higher risk, especially higher covariance with income growth and lower liquidity. Real estate in diversified large agglomerations is comparatively safe.

What we did

- ◆ Study long-run returns to residential real estate in 50 "national superstar cities" in 15 advanced economies since the 19th century
- ◆ Compare to returns in the rest of the country
- ◆ Analyze the drivers of within-country variation in returns

A new dataset on returns to housing (1870-2018)

▶ sample selection



What we found

National superstars feature significantly *lower* long-run housing returns

- ◆ Capital gains are higher, but rent returns considerably lower
- ◆ Taken together, we estimate a *negative* superstar return premium of about 90-100 bp annually

Differences in housing returns are likely a function of risk

- ◆ Characteristics that make superstar cities also make them financially "safer"
- ◆ Less concentrated labour markets and more liquid housing markets

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Negative return premium - city vs national

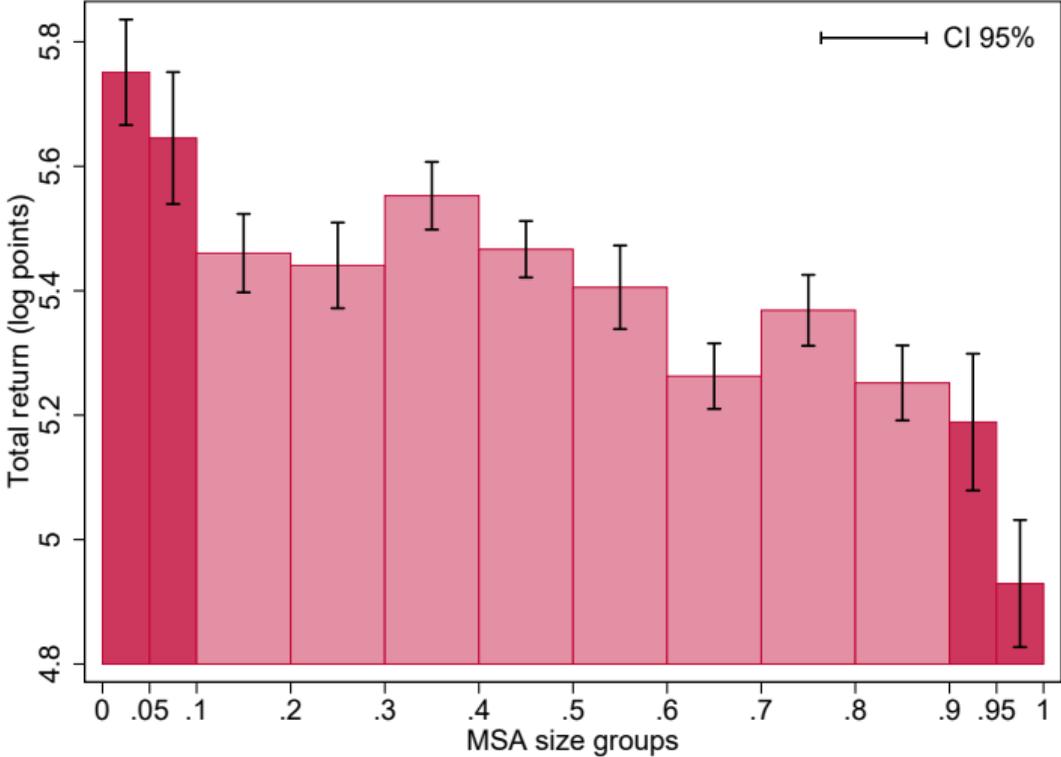
Average yearly returns (log points), 1950-2018

	national superstars		
	Cities	National	Difference
Capital gain	2.25	1.82	0.43* (0.23)
Rent return	3.55	4.94	-1.39*** (0.04)
Total return	5.72	6.68	-0.95*** (0.23)
N	1767		

- ◆ Higher capital gains in cities, but considerably lower rent returns
⇒ National superstar cities have lower housing returns

▶ Robustness

Within country comparison - 317 MSAs US (1950-2018)



Spatial equilibrium and housing risk

- ◆ **Asset market equilibrium** – higher returns outside large cities compensate for higher risks
 - ⇒ Study housing risk across space
- i) **Co-variance risk** – co-variance between income and housing returns is higher in small cities
 - ⇒ Small cities with concentrated labour markets might be more exposed to industry-specific shocks
- ii) **Idiosyncratic risk** – property-specific price volatility is higher in small cities
 - ⇒ Small cities have less liquid housing markets, thereby increasing the uncertainty about the matching process

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Price Uncertainty and Returns to Housing *

Francisco Amaral

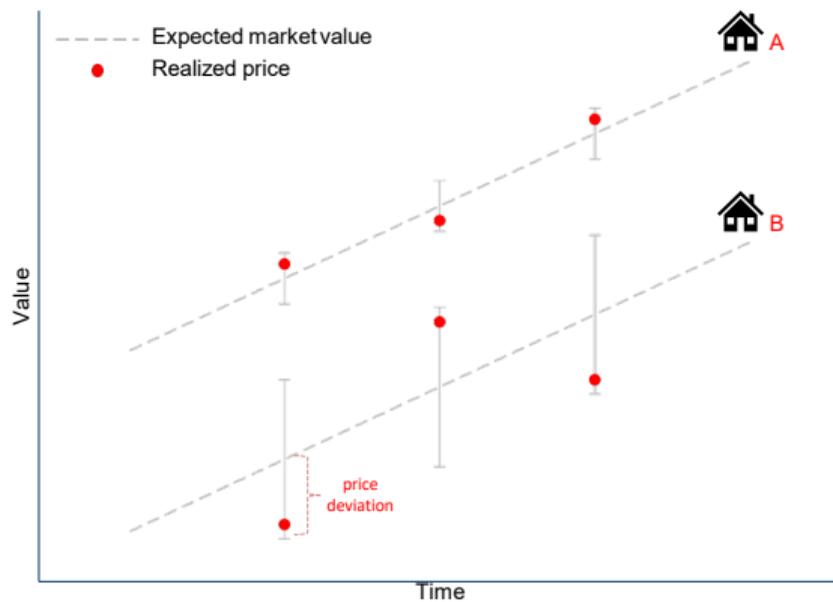
2025

Using a novel micro-level dataset that encompasses the universe of housing transactions in major German cities and spans the past four decades, I document significant differences in the predictability of sales prices across individual houses. On average, residential properties with greater price uncertainty have lower transaction prices, generate higher net rental yields, and yield larger total returns. These properties are traded in smaller and more illiquid markets, implying that price uncertainty and, consequently, idiosyncratic return premia arise in markets with less efficient buyer-seller matching. I rationalize these findings within a bargaining model where a risk-averse investor faces greater resale price uncertainty due to higher matching frictions.

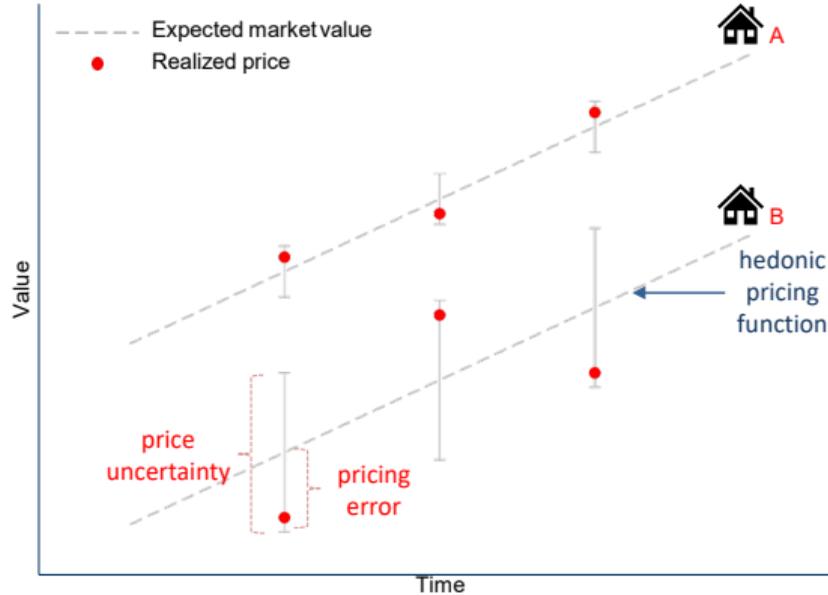
Keywords: housing markets, liquidity, asset returns

JEL codes: E21, G12, G51, N90, R21, R31

Price uncertainty - intuition



Price uncertainty - definition



Definition: Expected variance of distribution from which price is drawn

Empirically: Predicted variance of pricing errors from hedonic housing price model

Idiosyncratic risk is significantly priced in (Germany, 1990-2024)



◆ Moving from first to last quintile of price uncertainty

⇒ increase 50 b.p. in annual total returns

▶ Robustness

Sources of idiosyncratic risk

Typical house



Your house



Price fairly predictable

Atypical house



Price very uncertain

ABSTRACT

SPATIAL DISTRIBUTION OF HOUSING LIQUIDITY*

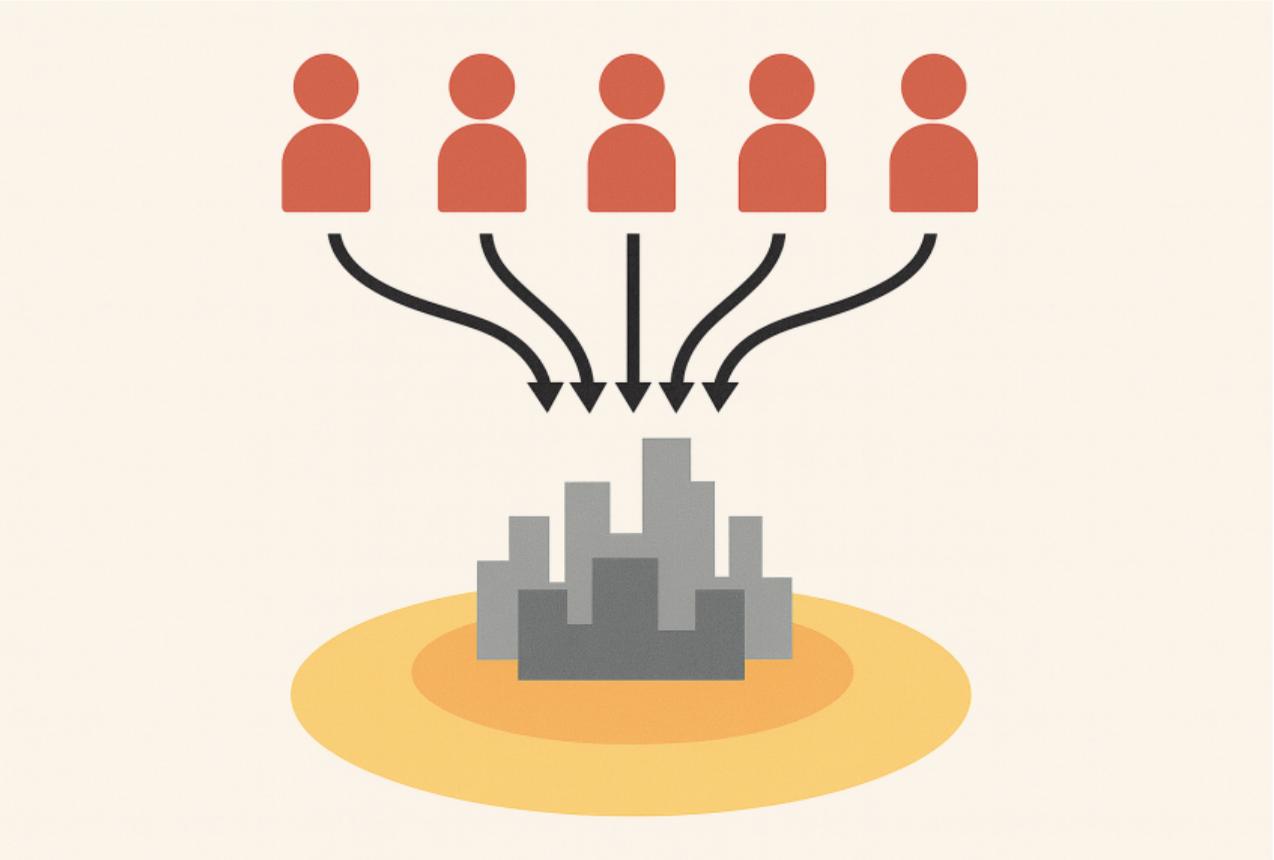
Francisco Amaral, Mark Toth, and Jonas Zdrzalek

First Draft March 2025; This Draft September 2025

This paper examines the relationship between location, liquidity, and prices in housing markets. We construct spatial datasets for German and U.S. cities and show that liquidity and prices decline with distance to the city center. To rationalize these results, we build a structural model with spatial search frictions. We argue that location preferences concentrate buyers in central areas, making markets tighter, more liquid, and driving up prices. Counterfactuals show that suppressing search frictions raises welfare and prices, especially in peripheral areas. Our findings highlight the importance of demand-side preferences and search frictions for understanding liquidity and asset prices.

Keywords: housing liquidity, housing prices, cities, spatial equilibrium, housing demand, asset pricing

JEL Classification: G12, G51, R21, R30



Loose Market



Buyer power
& slow matches



Tight Market



Seller power
& fast matches



From intuition to testable predictions

- ◆ Two reinforcing mechanisms:
 - i) Classic: location preferences \Rightarrow higher demand \Rightarrow higher prices
 - ii) This paper: location preferences \Rightarrow tighter markets \Rightarrow shorter selling times \Rightarrow higher prices
- ◆ We formalize this in a spatial search model and test it in the data
- ◆ Predictions:
 - a. Central locations: high price, high liquidity, low vacancy
 - b. Peripheral locations: low price, low liquidity, high vacancy

From intuition to testable predictions

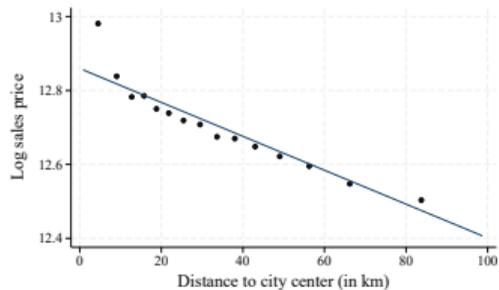
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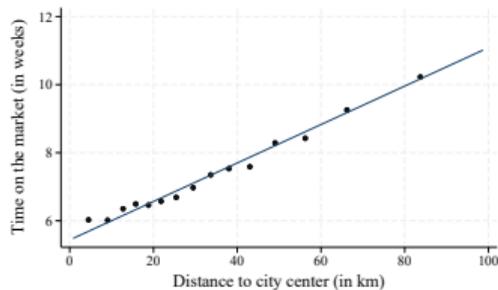
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Liquidity spatial gradient (U.S., 2012-2023)

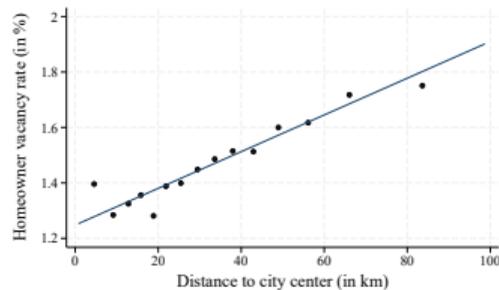
House prices



Time to sell



Vacancy rate



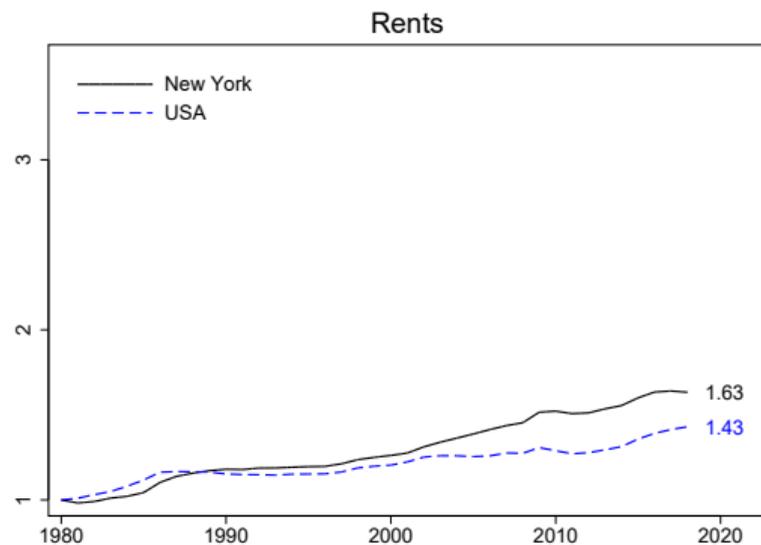
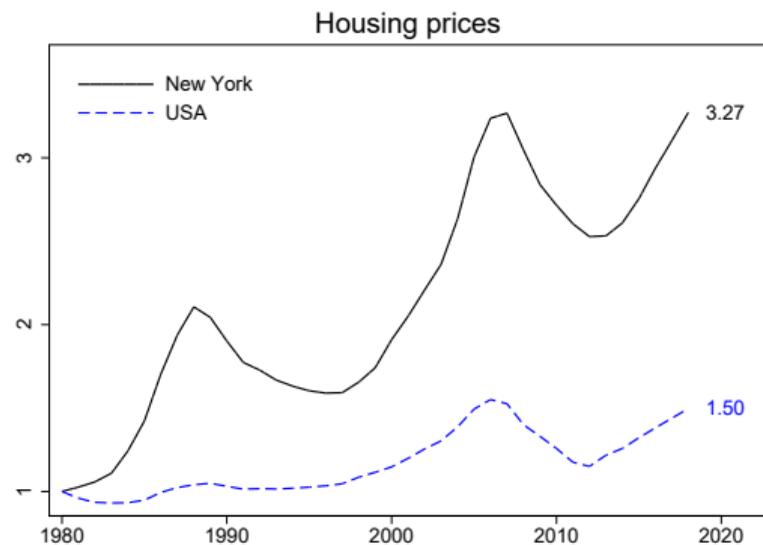
- ◆ House prices are smaller and markets are less liquid in the suburbs
- ◆ Similar houses have 45% lower probability of selling in the suburbs than in the city center

Interest Rates and the Spatial Polarization of Housing Markets[†]

By FRANCISCO AMARAL, MARTIN DOHMEN,
SEBASTIAN KOHL, AND MORITZ SCHULARICK*

Rising within-country differences in house values are a much-debated trend in the United States and internationally. Using new long-run regional data for 15 advanced economies, we show that standard explanations linking growing price dispersion to rent dispersion are contradicted by an important stylized fact: rent dispersion has increased far less than price dispersion. We propose a new explanation: a uniform decline in real risk-free interest rates can have heterogeneous spatial effects on house values. Falling real safe rates disproportionately push up prices in large agglomerations where initial rent-price ratios are low, leading to housing market polarization on the national level. (JEL E43, R21, R31)

New York prices leave the rest behind?



- ◆ Large increase in housing price divergence - not matched by rent divergence

Why has regional housing price dispersion gone up?

Status quo

$$P_t^i = \sum_{j=1}^{\infty} \mathbb{E} \left(\text{Rent}_{t+j}^i * \left(\frac{1}{1+r_t} \right)^j \right) \quad (1)$$

P_t^i : Price level in city i at time t ; Rent_{t+j}^i : Rent level; r_t^i : Discount rate at time t

Existing explanations focus on differences in local housing demand (Van Nieuwerburgh and Weill, 2010) and supply fundamentals (Gyourko et al., 2013)

This paper

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Regional differences in the discount rate & fall in risk-free rate \rightarrow increasing price dispersion

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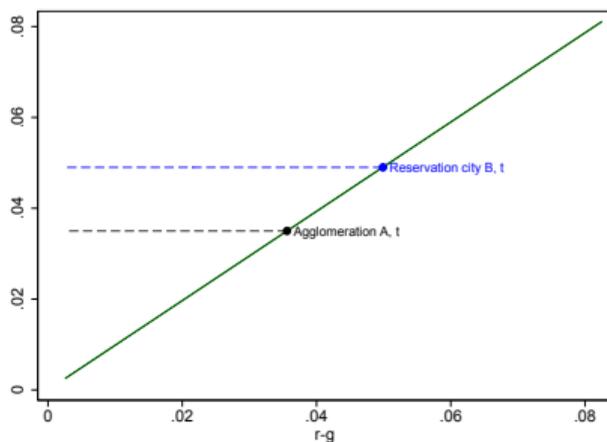
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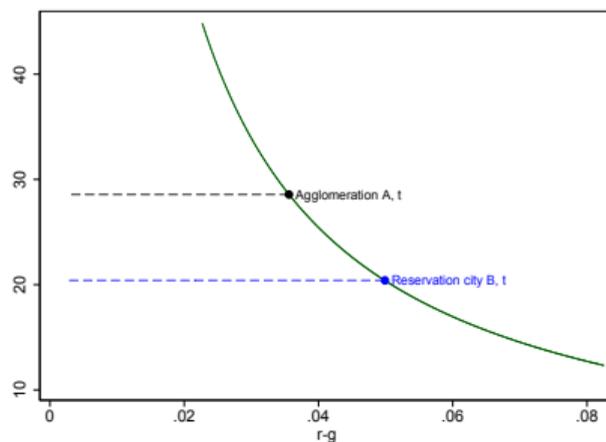
Mechanism - differences between cities A and B (t)

$$\text{Rent-Price ratio}_t^i = \frac{\text{Rent}_t^i}{P_t^i} = \frac{r_t^i - g_t^i}{1 + g_t^i}$$

(a) Rent-Price ratio



(b) Price-Rent ratio

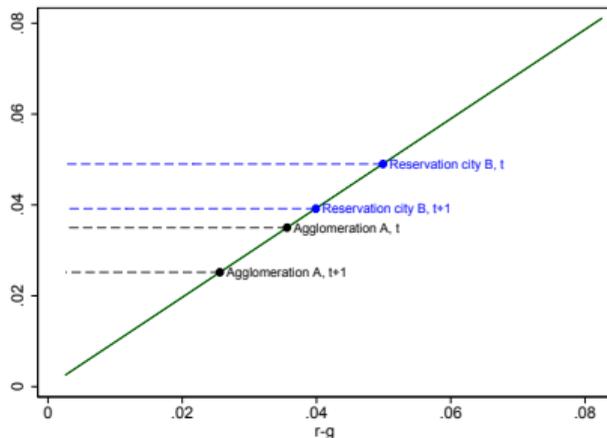


What happens if discount rates (r) fall by 1 pp everywhere?

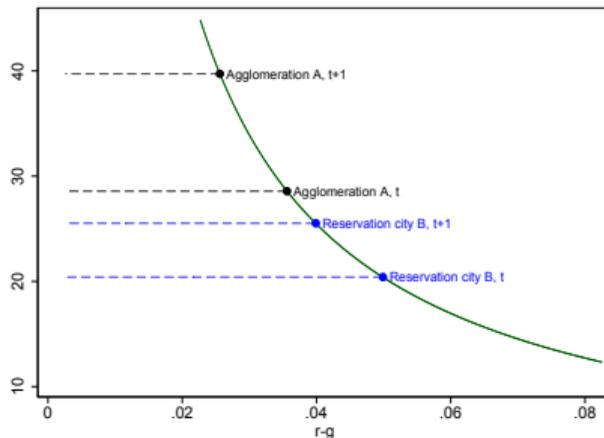
Mechanism - increased price dispersion after fall in $r(t+1)$

$$\text{Rent-Price ratio}_t^i = \frac{\text{Rent}_t^i}{P_t^i} = \frac{r_t^i - g_t^i}{1 + g_t^i}$$

(a) Rent-Price ratio



(b) Price-Rent ratio



- ◆ **Linear** effect on rent-price ratios, but **non-linear** effect on price-rent ratios \Rightarrow price dispersion

► calibration

Does this mechanism hold in the data?

THE ECONOMIC JOURNAL

The Rise and Fall of the Price-to-Rent Ratio:
Why Are Superstar Cities Different?*

Christian A. L. Hilber

London School of Economics,

University of Zurich & Centre for Economic Performance

and

Andreas Mense

Institute for Employment Research Nuremberg (IAB)

Future Work & Conclusion

Does it matter who owns the city?

Institutional ownership, housing affordability, and renter wellbeing

Francisco Amaral Andreas Fuster

Christian Hilber Maxence Valentin

December 8, 2025

A proposal for the SNSF project funding scheme

Abstract

Institutional investors in the private rental sector have become increasingly prominent, attracting political attention and media scrutiny. Yet, their effects on affordability and renter wellbeing remain insufficiently understood. Existing studies typically focus on either rent-setting or operational efficiency in isolation, overlooking the interaction between these mechanisms and their broader market consequences. Switzerland provides an ideal setting for a comprehensive analysis as it combines decades of substantial institutional participation with rich micro-level data. We propose linking rental contracts and building-level cost records to rental listings data, enabling us to quantify the role of operational efficiency and market power in rent determination. Causal identification draws on granular variation in the data and exogenous policy or market shocks, including the sharp discontinuity created by the 1965 *Stockwerkeigentum* (“Condominium Ownership”) law. To extend the analysis beyond market outcomes, we plan to conduct two large-scale surveys. The first questionnaire will measure how different types of landlords affect renter wellbeing. The second will take the form of an experimental survey to examine how public perceptions of institutional landlords are shaped.

Keywords: Rental Market, Institutional Investors, Housing Affordability, Rental Satisfaction

Landlords



Pension fund
long-term,
stable income



**Insurance
company**
risk management



**Small private
landlord**
bequest



**Cooperative/
non-profit**
social mission

**Rental
market
matching**

Renters



**Young mobile
households**
flexibility



Families
space, stability, schools



**Low-income/
vulnerable
households**
affordability, security



Elderly
barrier-free, reliable service

Large rental market characterized by high institutional ownership

Homeownership rate



Ownership of privately-owned rental units



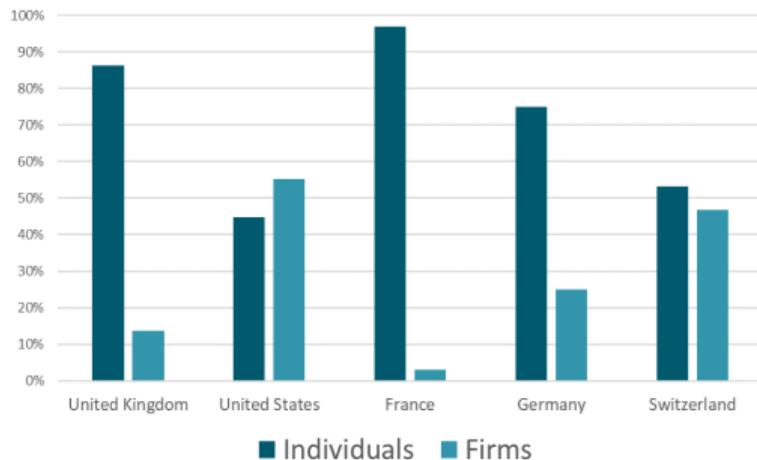
- ◆ Our project: link landlord type to rents to study affordability and renter wellbeing in the Swiss context

Large rental market characterized by high institutional ownership

Homeownership rate



Ownership of privately-owned rental units



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Conclusion — When Shelter Becomes Strategy

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- ◆ The places most attractive to live in — superstar cities, central locations — are also safer assets
- ◆ The resulting risk–return trade-off shapes long-run price appreciation and wealth inequality
- ◆ As with other asset markets, most of us benefit when housing markets are transparent and competitive, with limited scope for market power

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Thank you!

And two more important notes...

1. A Real Estate Competence Center for UZH and Switzerland

Why a real estate competence center for UZH?

- i. Education: ensuring in the long term that the quality of education meets the standards of UZH
 - ii. Research: need for fundamental and independent research to understand and help shape an asset class of the highest political, economic, and social relevance
 - iii. Policy: evidence-based policy advice – empirical findings are still rarely incorporated into practice, policymaking, and the media
- ◆ Our funding partners help us make cutting-edge research and first-class teaching in the field of real estate economics and finance a reality:

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2. Der Apéro!!

Everyone is invited to the 'Apéro' in the Lichthof!

Courtesy of:



**Universität
Zürich**^{UZH}

CUREM – Center for Urban & Real Estate Management