

# Making Sense of Increased Synchronization in Global House Prices

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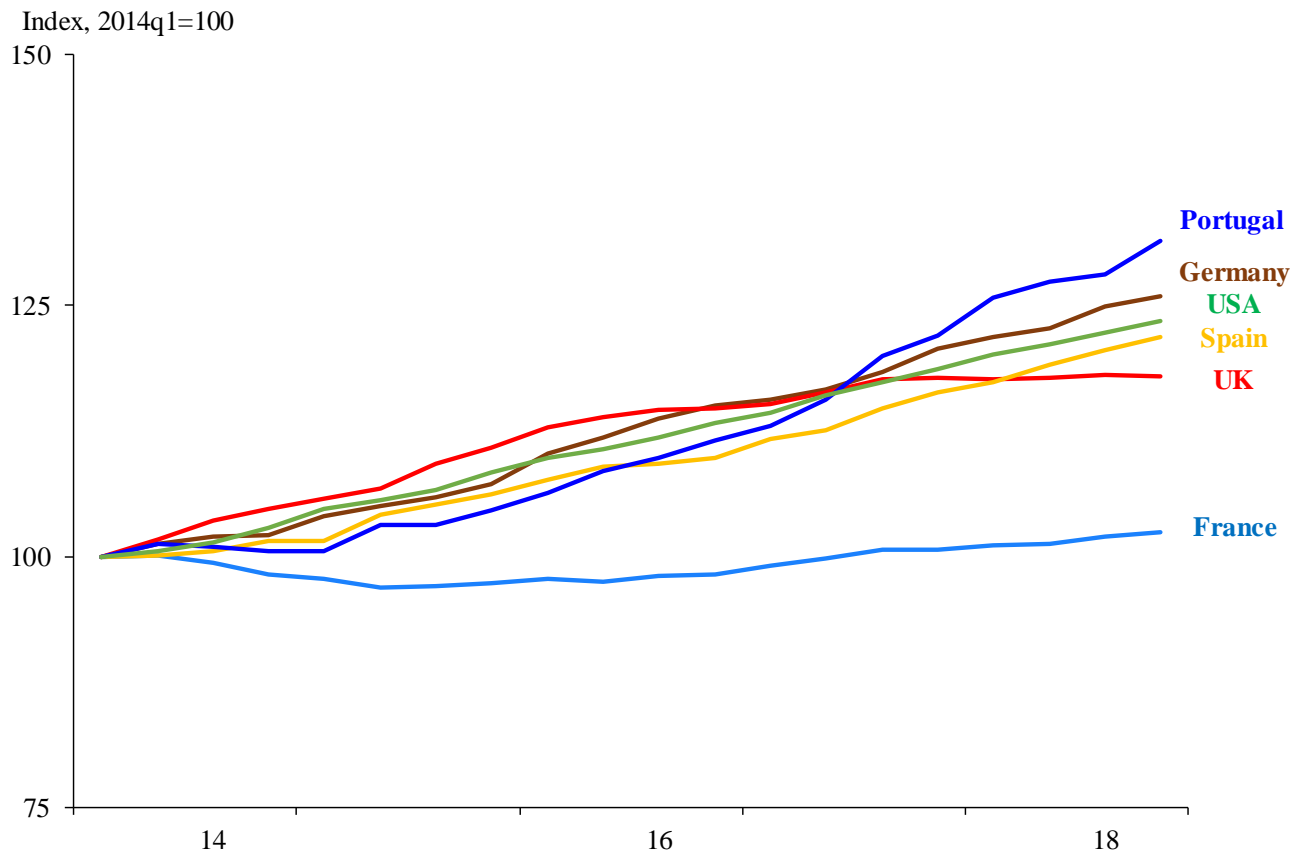
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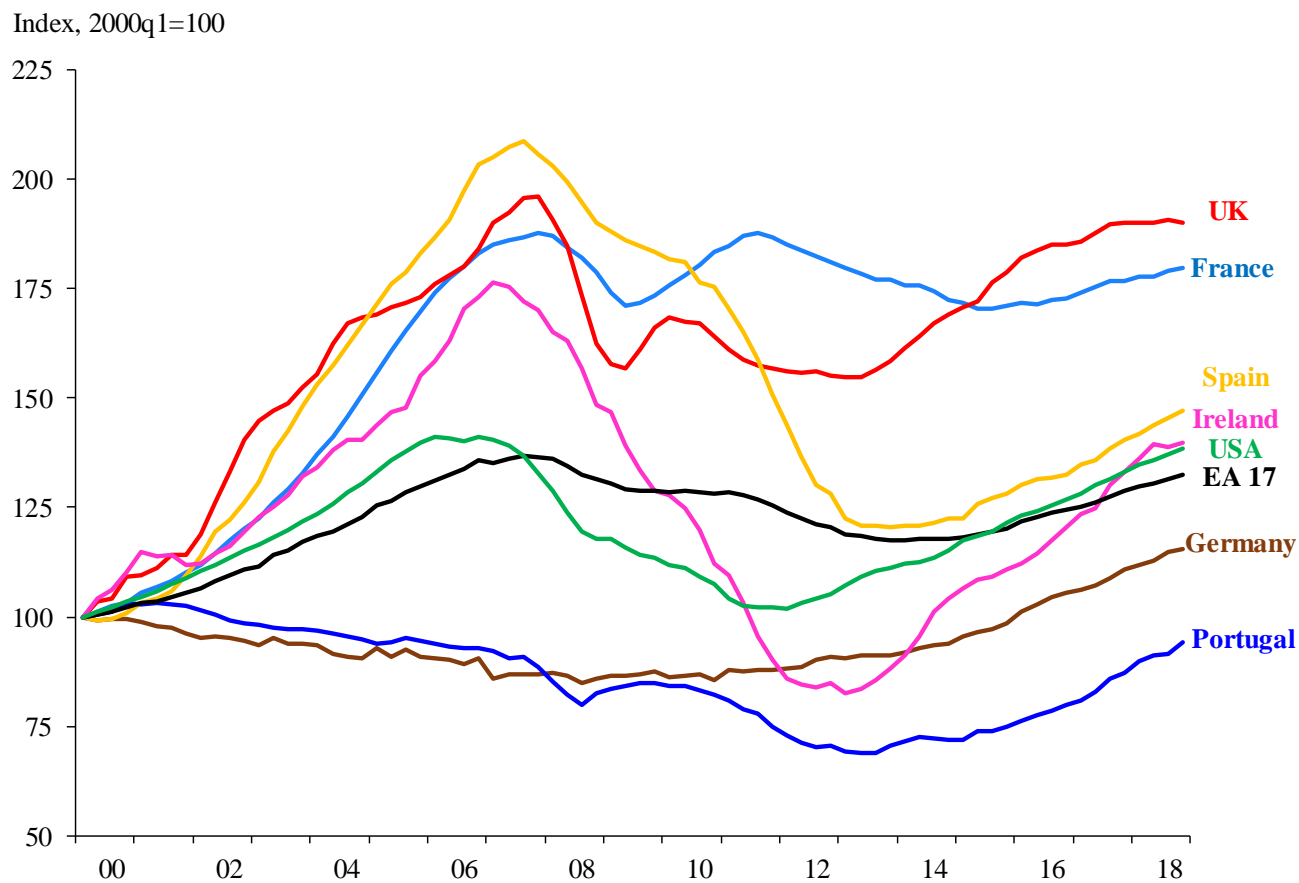
# Introduction

- Int'l house price cycles somewhat more synchronized since 2000
  - House price appreciation rates more synchronized to a statistically significant, but small degree (Miles, 2017)
  - House price deviations from trend more synchronized Alters, et al. (2018)
  - Others: house prices more sensitive to int'l capital flows & global liquidity
- European house prices highly correlated during last 5 years
- Partly reflects stronger correlations in long-term interest rates and macroeconomic cycles, stemming from trends in:
  - Globalization, migration, monetary policy, int'l portfolio diversification
- Avoid over-interpreting as house price fundamentals vary much
- Indeed, Alters, et al. (2018) find more synchronizations the more similar are underlying fundamentals; and markets that are more open to capital & migration more sensitive to international factors
- Moreover, short-run synchronization can mask divergent trends—recall Alters, et al. results allow for different trends across areas

# Figure 1: Real House Prices Highly Correlated for Many Western Economies Since 2014



## Figure 2: Real House Price Levels Not Highly Correlated Across Western Economies Since 2000



Sources: OECD and author's calculations.

# Main Drivers of House Prices

Supply & demand (Poterba, 1984) imply house prices (HP):

## Demand-side:

- Rise with income (more so permanent income)
- Fall with factors reducing effective demand: user cost/interest rates (e.g., Hendershott) and credit constraints (e.g., Mian and Sufi (2009) and Duca, Muellbauer, and Murphy (2011, 2016))

## Supply-side:

- Higher if supply *ins*ensitive to prices (Saiz 2007, 2010; Glaeser, Gyourko, & Saiz 2008; Gyourko, Saiz, & Summers, 2008).
- Low supply elasticity amplifies demand—little supply offset

Let's review if each factor is becoming more/less synchronized

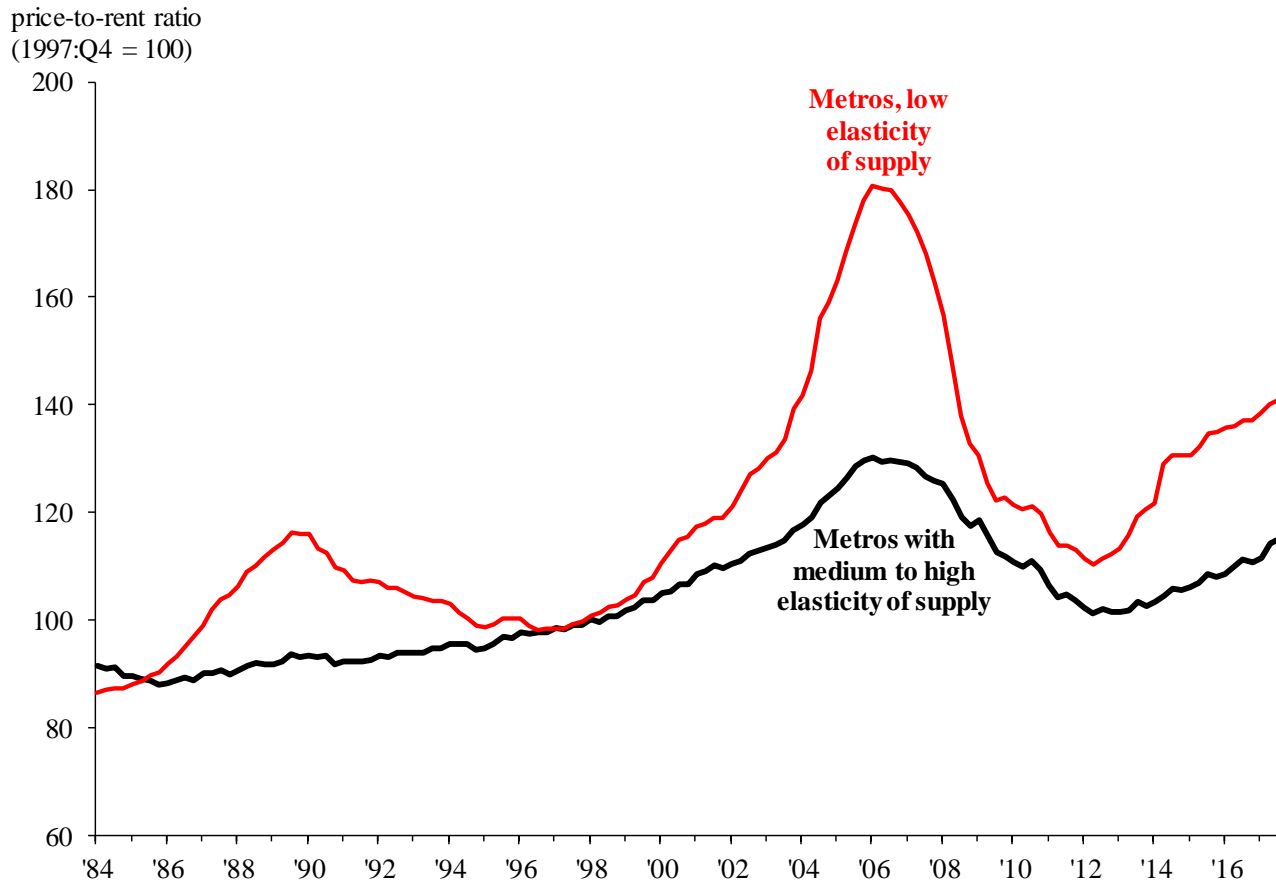
# Implications of Main Drivers of House Prices (continued)

- Real user cost of capital, moves with after-tax real interest rate:  
 $(1 - \text{tax rate}) \times (\text{long-term interest rate})$ 
  - expected HP appreciation
  - + insurance and depreciation

Real long-term interest rates: evidence  $\Rightarrow$  more synchronized

Expected HP appreciation: evidence  $\Rightarrow$  generally tracked by average 4-year past appreciation (Muehlbauer and many authors across many advanced economies). Thin trading + transactions costs  $\Rightarrow$  correlated returns, tempts many to extrapolate the past. Helps increase synchronization if more common demand shocks & similar supply elasticity, but reduces synchronization if supply elasticities differ, amplifying price swings from D shocks

# Figure 3: Price-to-Rent Ratios of U.S. Metros Vary More for Cities with Low Price Elasticities of Housing Supply

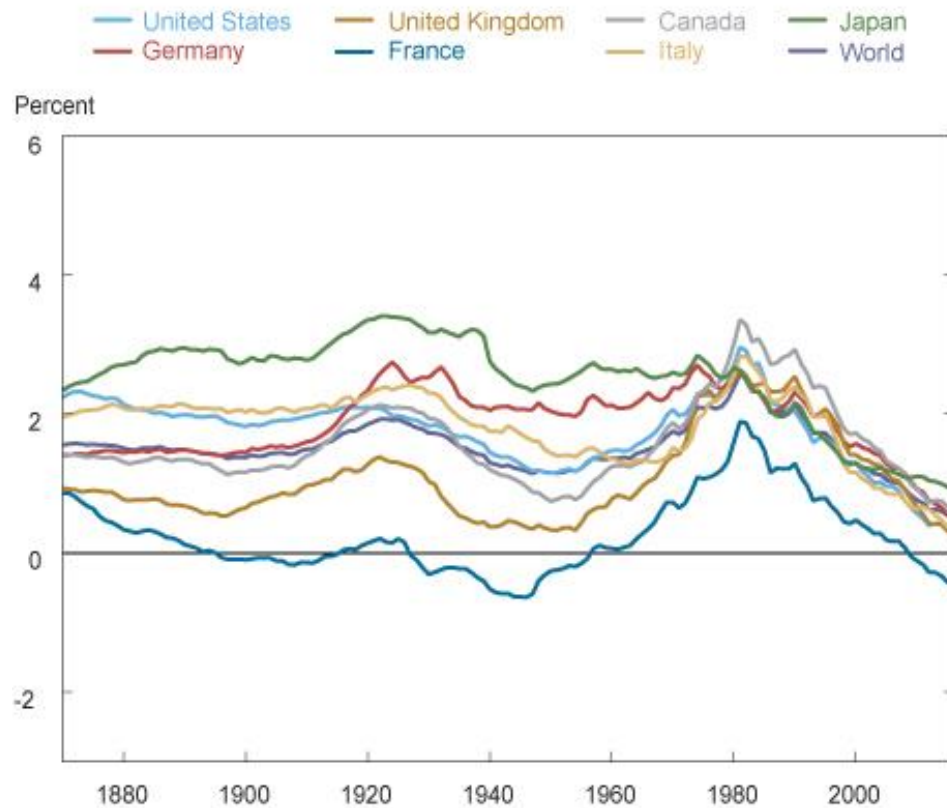


SOURCES: Federal Housing Finance Agency; Bureau of Labor Statistics; "The Geographic Determinants of Housing Supply," by Albert Saiz, *Quarterly Journal of Economics*, vol. 125, no. 3, 2010, pp. 1253-96; authors' (Duca, Muellbauer, and Murphy, 2019) calculations.

# Figure 4: Real Interest Rate Convergence

(Source and Reproduced from: Del Negro, et al. (2019))

Real Interest Rate Trends Have Converged across Countries since the 1980s



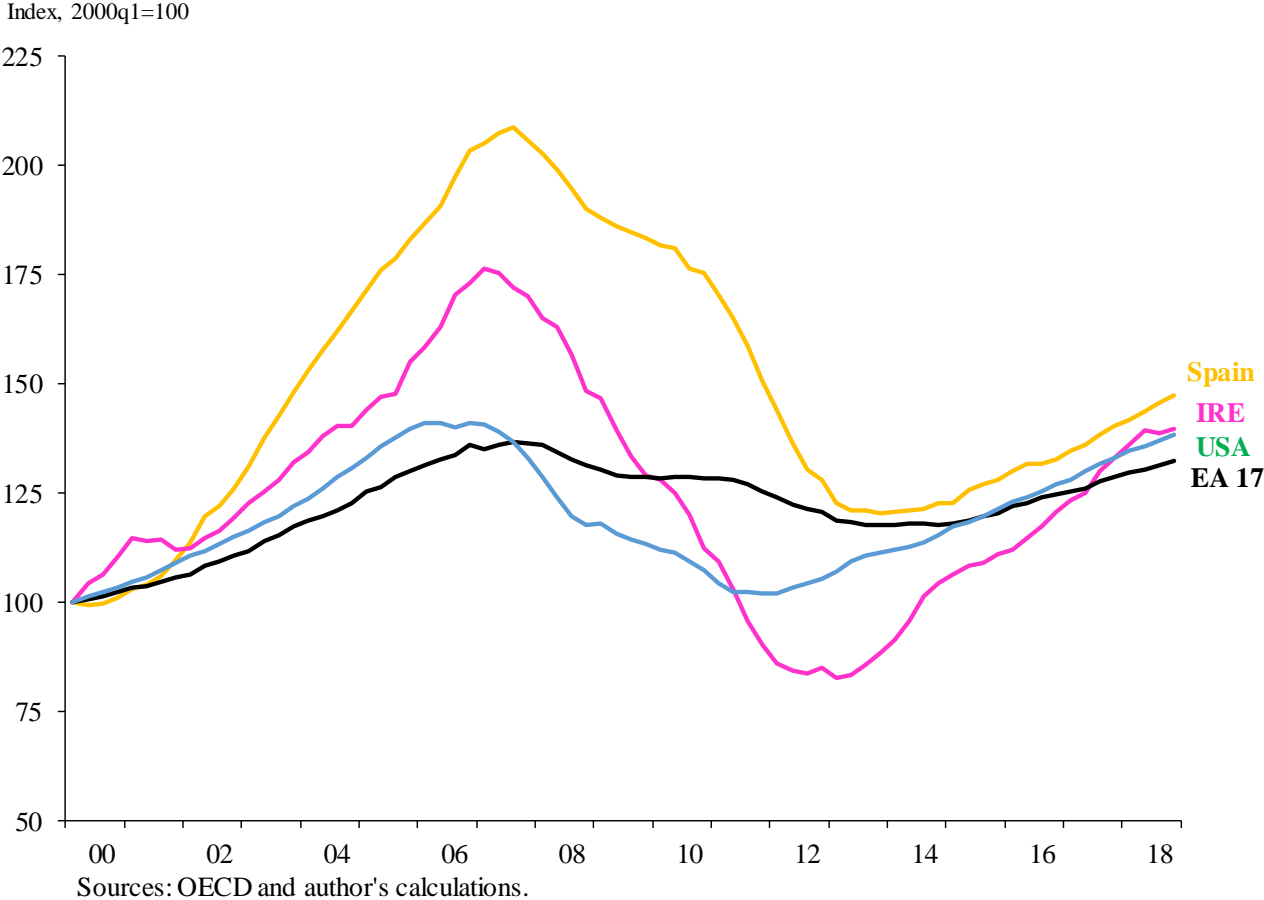
Source: Authors' calculations.



# Implications of Main Drivers of House Prices (continued)

- Credit liberalizations and easier credit standards make credit constraints less binding, boosting effective housing demand (especially from first-time buyers) and thereby house prices.
- Early evidence from Muellbauer and Murphy (1990) on UK, predating Mian and Sufi's (great) work on the U.S. and others (Duca, Muellbauer, and Murphy, 2011, 2016) by two decades.
- Implication: cross-country variation in credit standards makes house prices less synchronous across countries
- Evidence: 3 countries with pre-GFC weakening of credit standards (and later tightening) saw worse-than-average house price swings
- Post-GFC reforms—mainly under Basel 3 (DFA in U.S.) arguably make credit standards more uniform, increasing synchronization

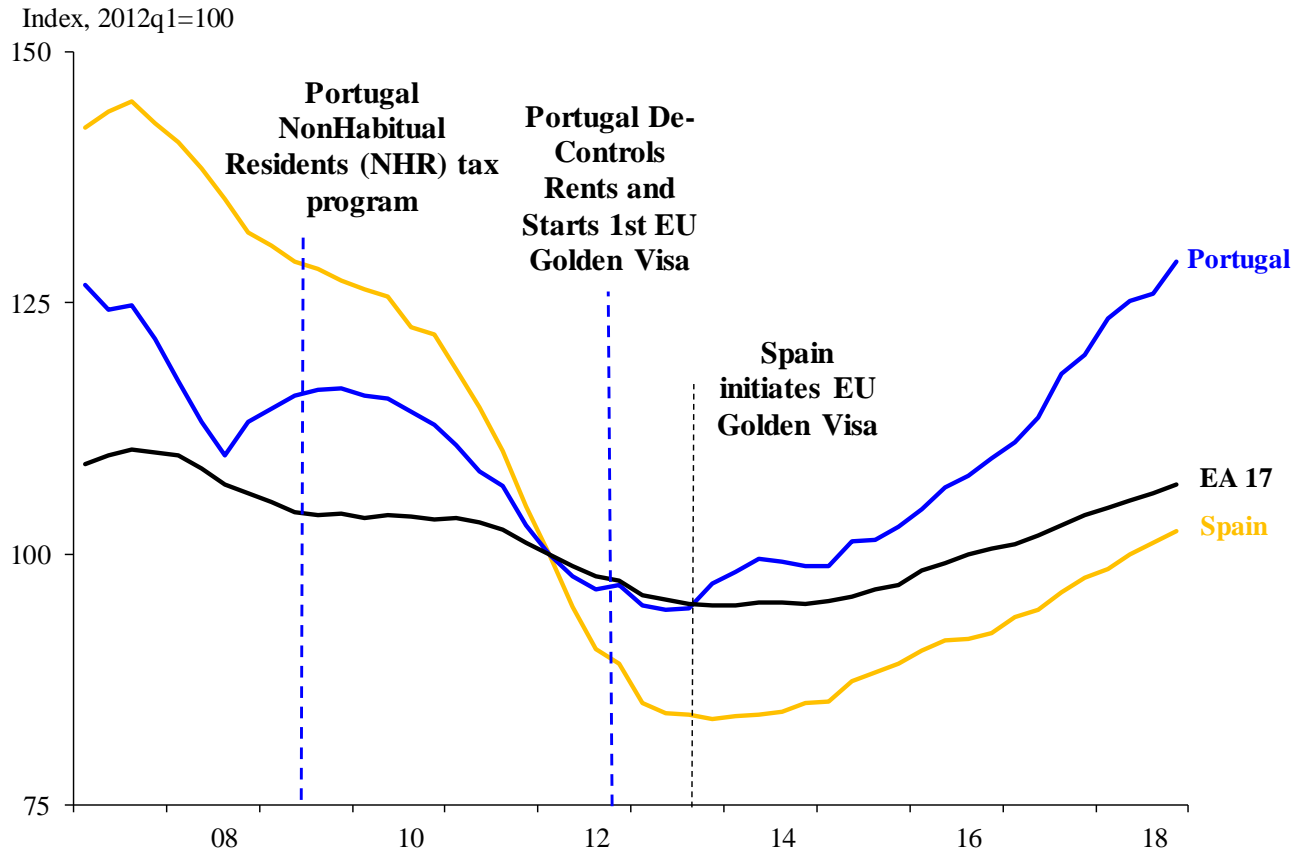
# Figure 5: Real Price Booms and Busts in Nations With Somewhat Elastic Housing Supply and Large Swings in Effective Credit Standards



# Other Drivers of House Prices

- Tendency: stronger uptrends & bigger price swings in metros with better amenities that are often correlated with inelastic supply (by coasts) or demand exhausting land supply. “superstar”/gateway city phenomenon (Gyourko, Mayer, and Sinai, 2013)
- Real currency appreciations and current account deteriorations (ostensibly via capital inflows funding mortgages) linked to house price booms (Cerutti, Dagher, and Dell’Ariccia, 2017).
- Greater global liquidity boosts HP, stronger effects in EME’s than AE’s (Tillmann, 2013; Cesa-Bianchi, Cespedes, & Rebucci, 2015)
- Shifts in restraints on rents, immigration, international investment, and tax incentives matter. In Portugal, several reforms boosted HP:
  - 2009 tax incentives (NHR (NonHabitual Residents) Tax Program)
  - 2012 lifting of rent controls + easing of immigration rules (“Golden Visa”)  
See Montezuma and McGarrigle (2018) for details.

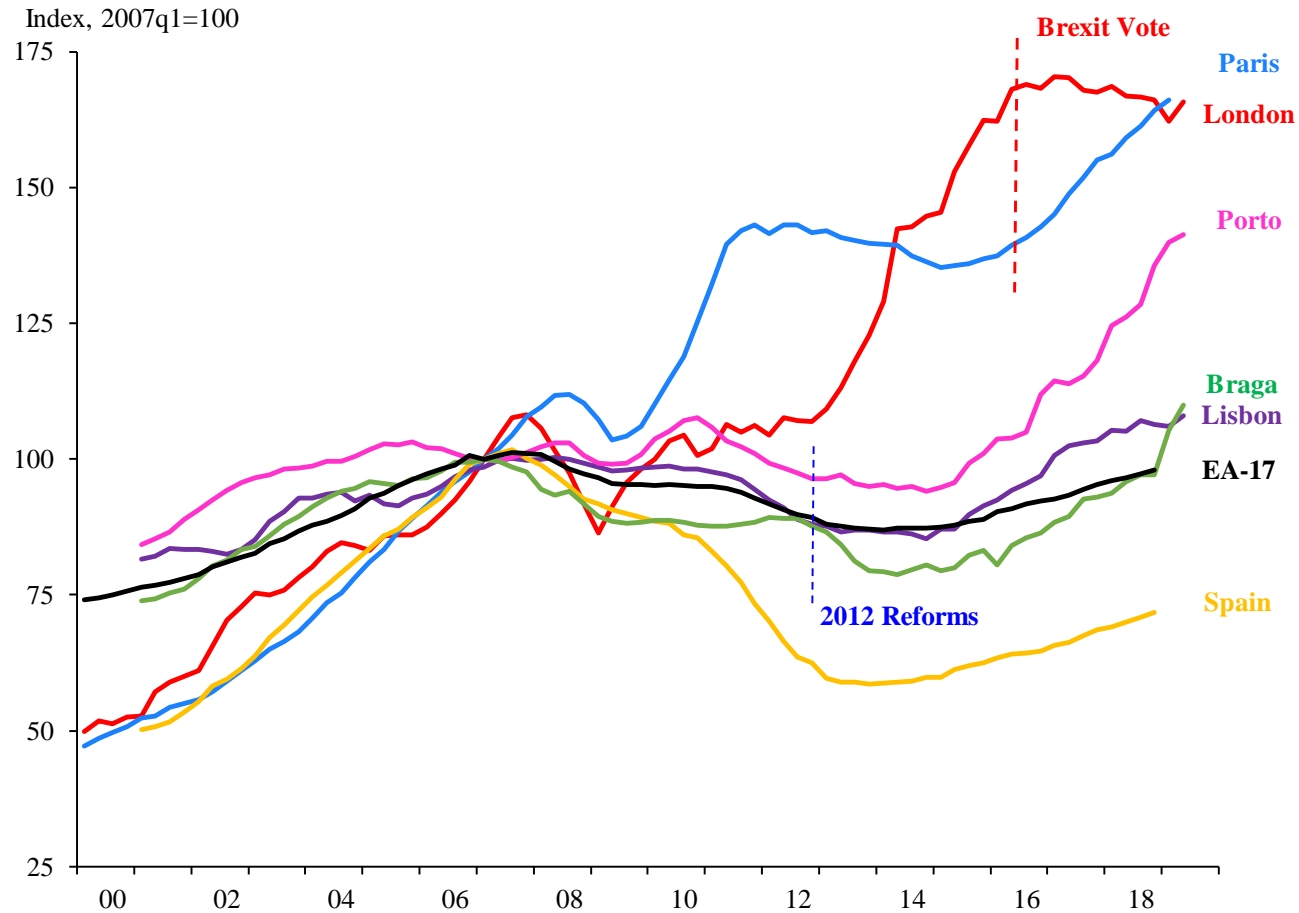
# Figure 6: Portuguese Real House Prices Outstrip EA-17 Prices Since Post-2008 Reforms



# Other Drivers of House Prices: Some Uncertainties

- Hard to gauge long-run effect of shifts in “other” drivers of house prices—as such shifts are rare.
- This plus lagged adjustment in housing markets implies uncertainty about how long transitions will be.
- But shifts in immigration and investment policies may increase congestion and may make housing much less affordable to native populations. Backlash against such policies could reverse earlier policies (e.g., UK with Brexit and New Zealand’s new restrictions on foreign home purchases), causing shifts in price appreciation trends (e.g., London and Paris)

# Figure 7: Removing Versus Imposing Barriers to Foreign Homeowners



# Concluding Comments

- Changes in the synchronization of international house price cycles stem from variation in not only traditional HP drivers, but also others, such as shifts in international investment and public policy.
- Some factors, such as more correlated business cycles, more correlated real interest rates, and more coordinated mortgage regulation, are likely bolstering synchronization.
- But differences in housing supply responses to prices can cause house prices to diverge across areas—especially long-run levels.
- Other developments such as increased income dispersion within countries and across different metros can cause prices to diverge.
- Although there are signs of somewhat more synchronization of house price cycles, sound investment still needs to be guided by careful analysis of the main drivers of house prices, particularly of housing demand, supply, and public policy.