

# Housing boom and burst as seen from the Spanish Survey of Household Finances

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## PLAN FOR THIS TALK

### 1. Recent developments in the Spanish housing markets

**Evidence from the Spanish Survey of Household Finance**

### 2. Housing in Spanish household wealth

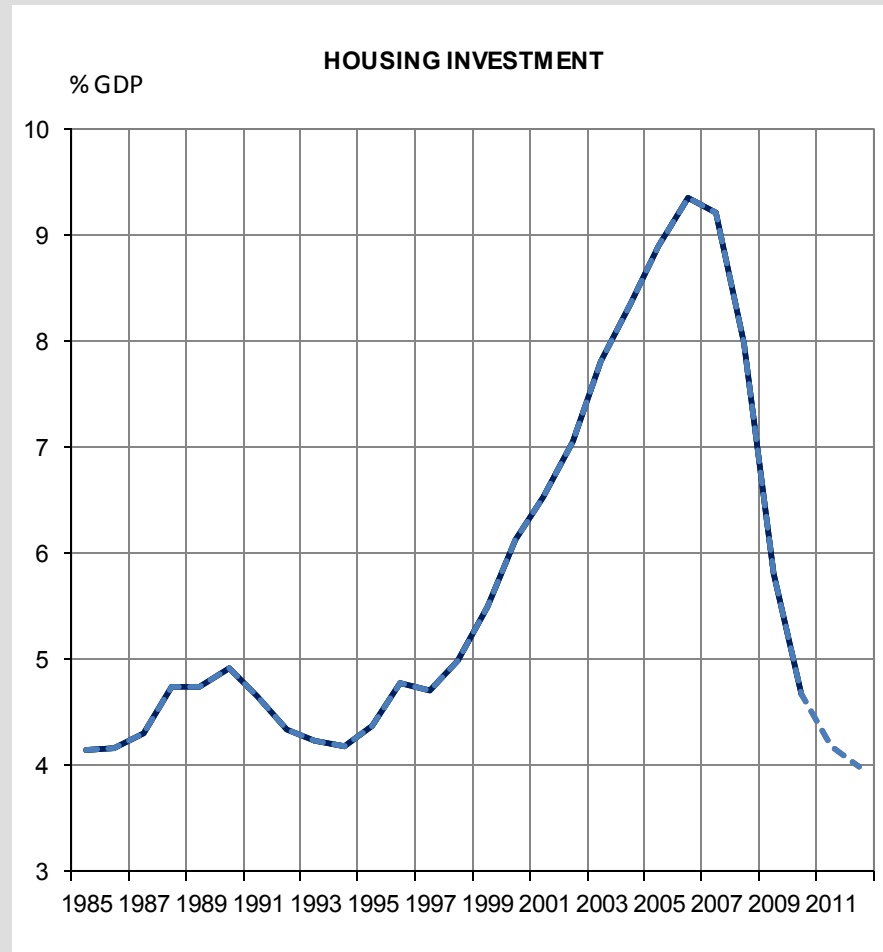
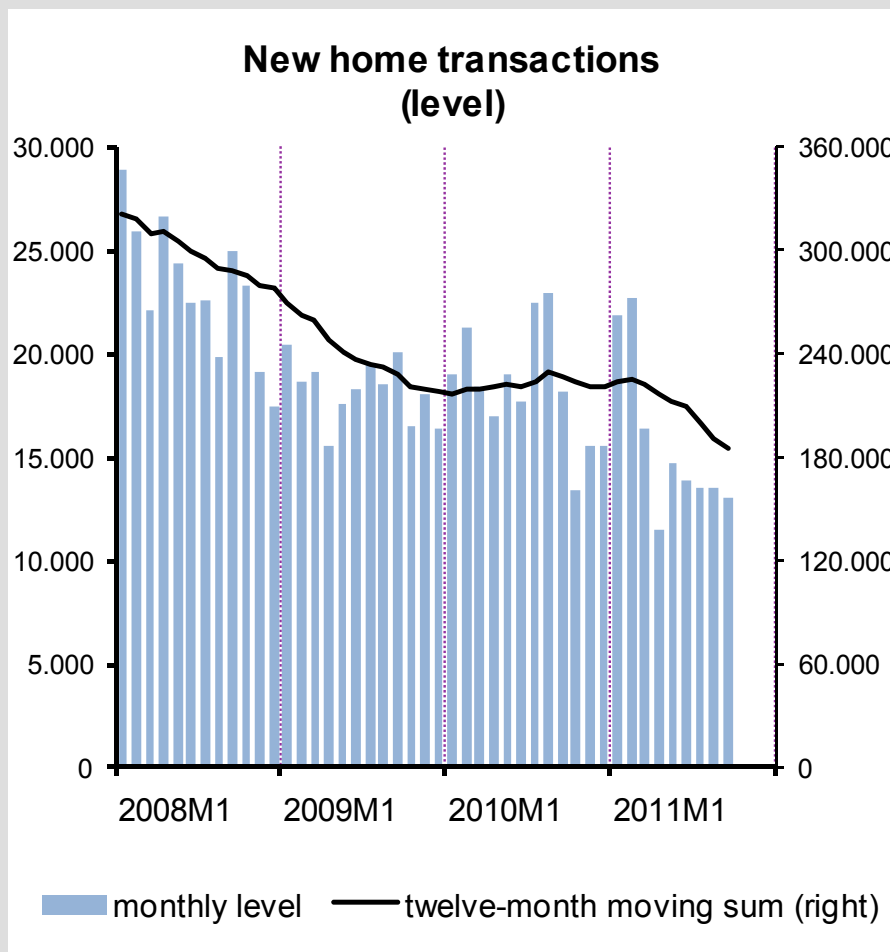
### 3. Evidence on self-assessed housing valuation by households

### 4. Housing wealth effects on consumption

### 5. House purchases and the dynamics of housing wealth

# 1. RECENT DEVELOPMENTS

(I)

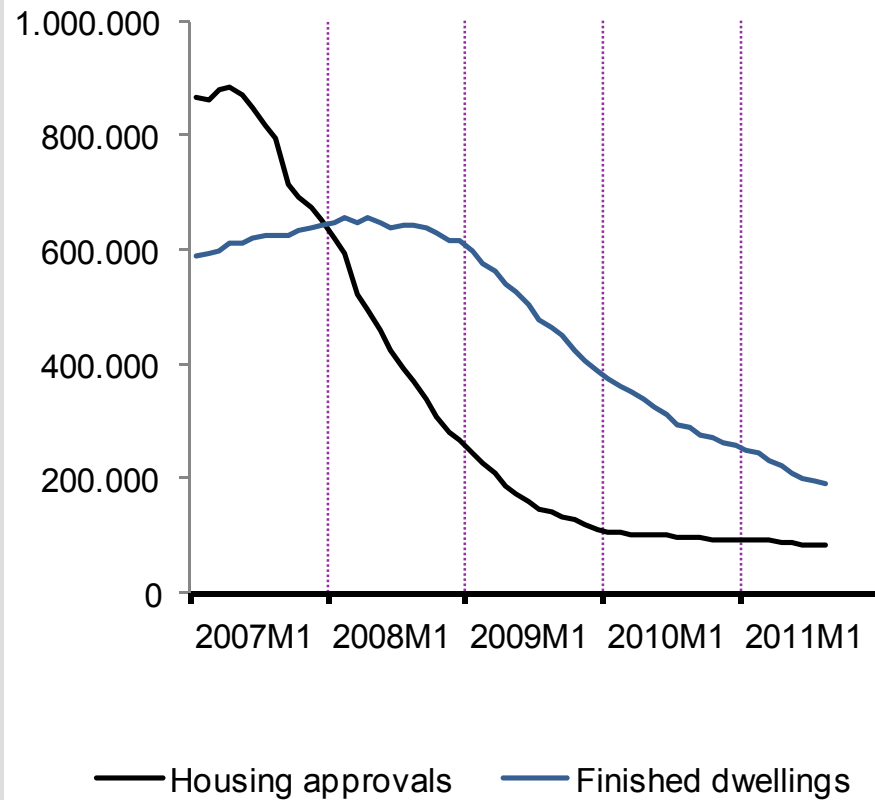


# 1. RECENT DEVELOPMENTS

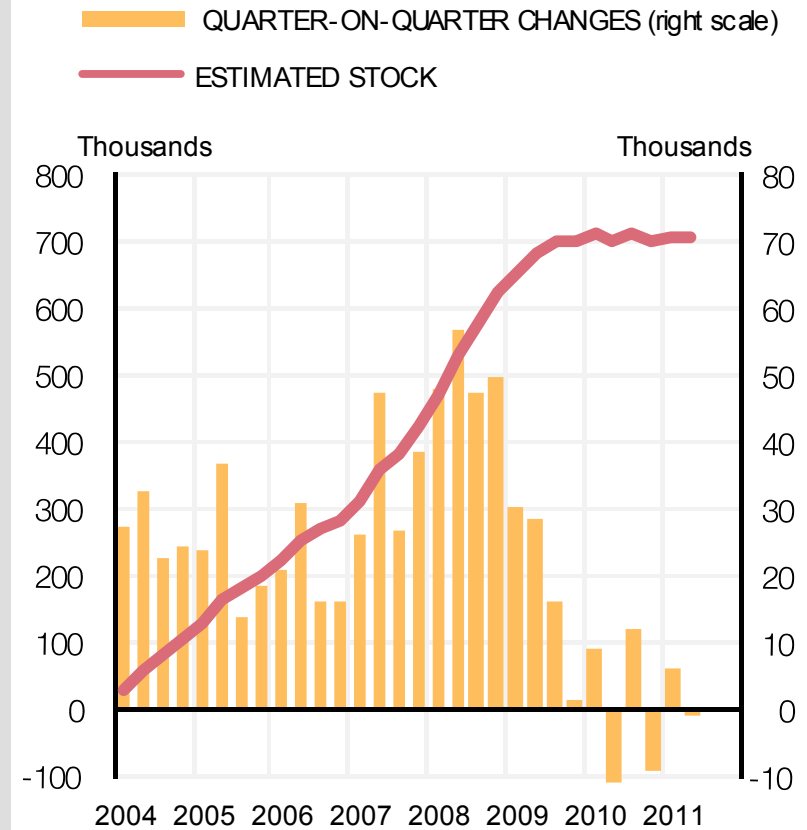
(II)



**Housing approvals and finished dwellings  
(twelve-month moving sum)**



**UNSOLD HOUSING**

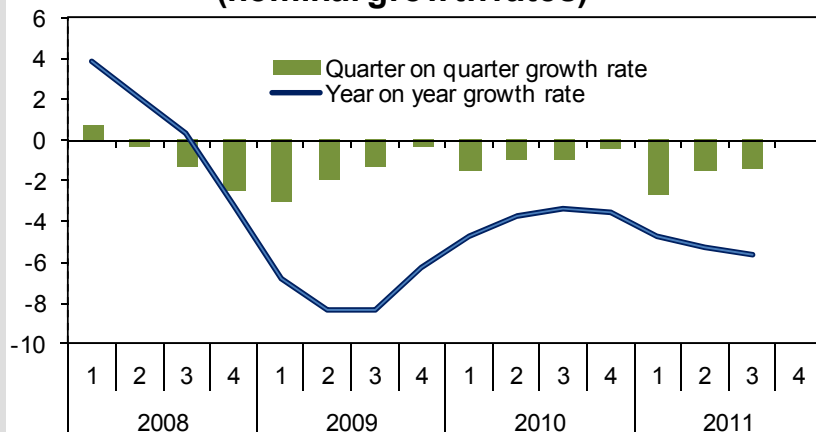


# 1. RECENT DEVELOPMENTS

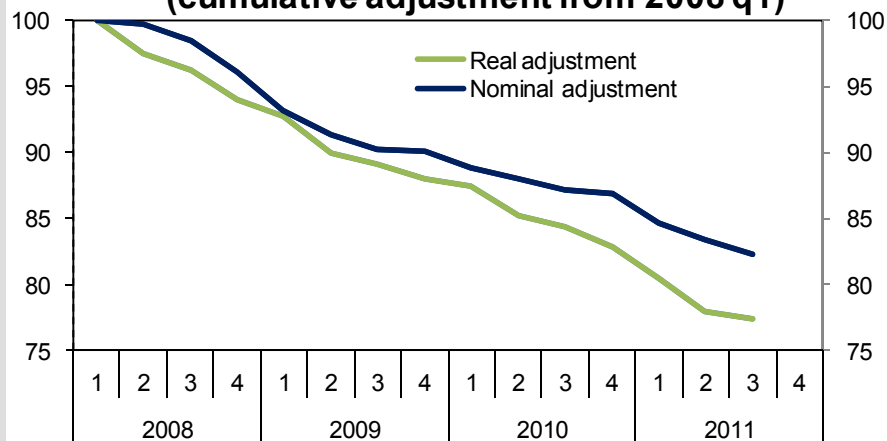
(III)



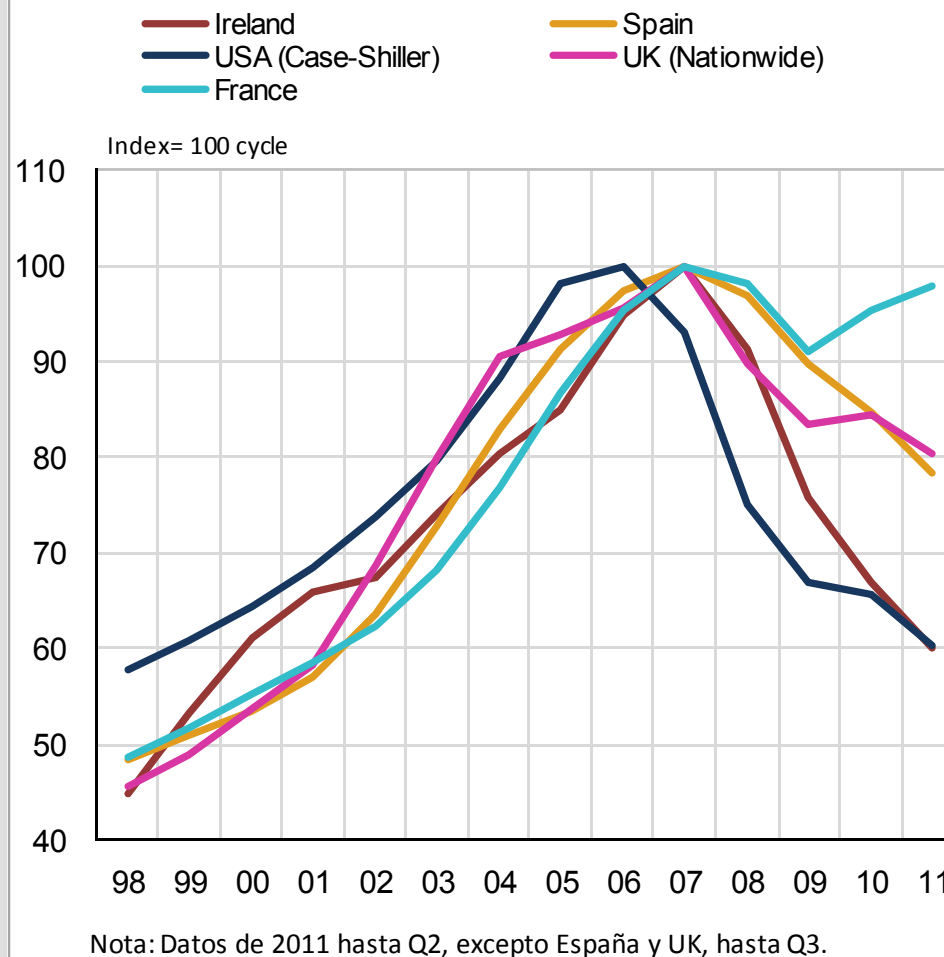
### House prices (nominal growth rates)



### House prices (cumulative adjustment from 2008 q1)



### HOUSE PRICES (real terms)

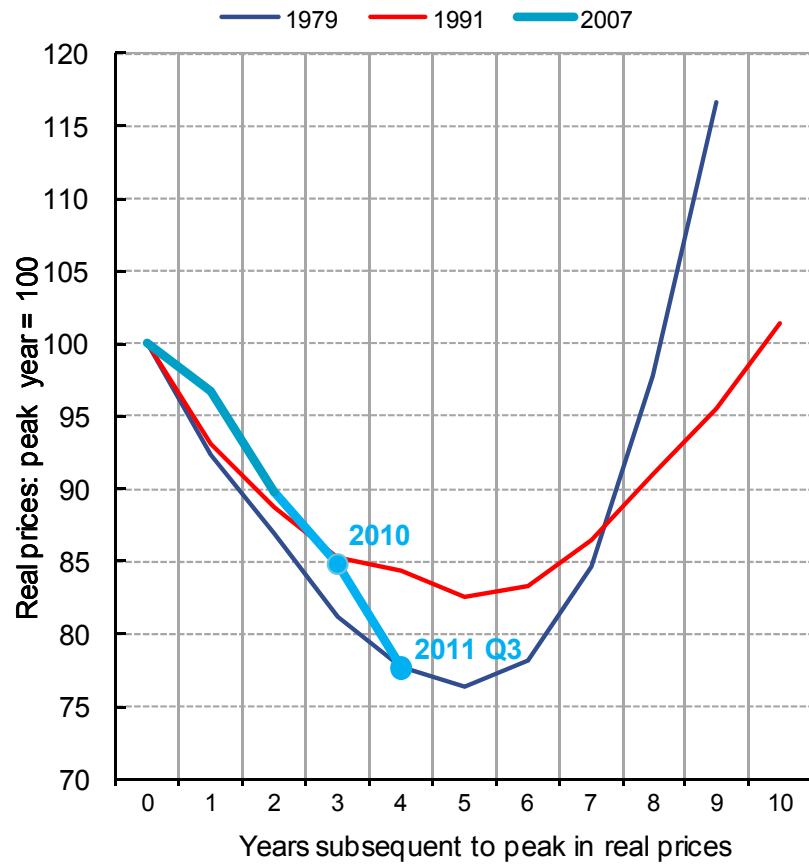


# 1. RECENT DEVELOPMENTS

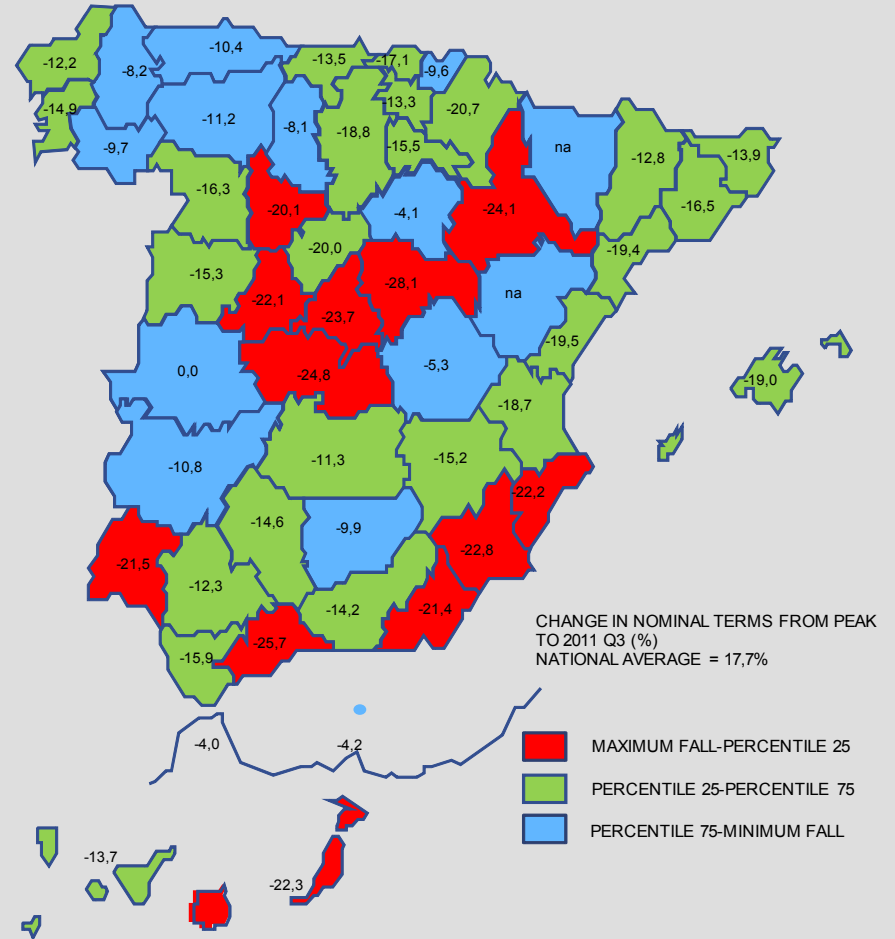
(IV)



**THE ADJUSTMENT OF HOUSING PRICES (In real terms)**  
COMPARISON BETWEEN THE CURRENT AND PREVIOUS CYCLES



PROVINCIAL BREAKDOWN OF ADJUSTMENT OF HOUSE PRICES



SOURCES: Ministerio de Fomento and Banco de España.

## 2. DISTRIBUTION OF HOUSEHOLD ASSETS IN SPAIN FROM EFF 2008



	Distribution of the value of households assets (%)					Percentage of households owning asset (%)	
	Main residence	Other real estate	Business and other real assets	Bank accounts	Other financial assets	Main residence	Other real estate
<b>All households</b>	54.8	24.8	9.2	5.3	5.9	82.7	36.1
<b>Income percentile</b>							
Less than 20	77.7	13.3	1.0	4.3	3.7	78.1	20.1
Between 20 and 40	67.5	20.7	4.7	4.3	2.8	78.7	29.7
Between 40 and 60	64.5	20.9	7.1	4.4	3.1	84.1	33.0
Between 60 and 80	56.3	26.3	6.9	5.4	5.1	83.1	42.2
Between 80 and 90	55.6	23.4	8.3	5.8	6.9	87.7	49.1
Between 90 and 100	35.8	31.6	16.5	6.2	9.9	91.3	61.8

### 3. EVIDENCE ON SELF-ASSESSED HOUSING VALUATION BY HOUSEHOLDS

- **EFF information contains information on self-assessed values of the main residence (and its change across successive waves)**
- **Change in the self-assessed value of the main residence :**
  - 2009Q1 vs. 2005Q4 -7% in real terms (in contrast to no variation according to appraisal based aggregate HP statistics)
  - 2005Q4 vs. 2002Q4 +68% in real terms (in contrast to +45% according to appraisal based aggregate HP statistics)

**> > looks as if self-assessments tend to amplify/overshoot trends**

- **Potential reasons**
  - appraisals (long term concept) vs. self-assessed value (short term)
  - not only houses that are sold but stock
  - different house types sold in periods of increasing prices

- **Importance of change in self-assessed value**

**> > This is the housing value that matters for wealth effects on consumption!**

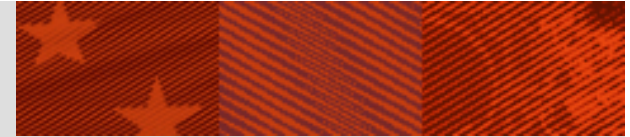


## 4. HOUSING WEALTH EFFECTS ON CONSUMPTION (I)



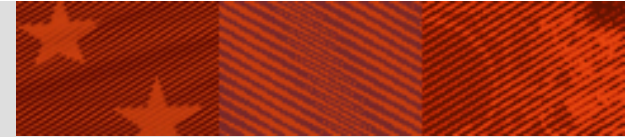
- **How much consumption will increase as a result of an exogenous increase in wealth**
  - **Problems with estimations of wealth effects based on aggregate data**
    - . instability over long periods due to changes in credit market
    - . potential reverse causality
  - **Estimating wealth effects at the micro level is important because of heterogeneity; they are expected to vary with age, composition of household wealth...**
  - **Aim to estimate a (non structural form) causal effect that is a useful input for policy**
- **Exogenous variation in wealth data comes from house price (HP) variation by locality and inheritance indicators; also include a rich set of controls**

## 4. HOUSING WEALTH EFFECTS ON CONSUMPTION (II)



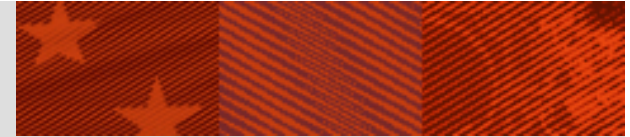
- Under certainty,  $\Delta$  (owner occupied) house prices may have no effects on consumption if moving costs are large and the borrowing possibilities for the liquidity constrained are limited (even in a model without bequests)
- The user cost of owner occupied housing rises with HP but increase in spending may occur if
  - (i) downsizing or (ii) reverse mortgages
  - But actual downsizing or reverse mortgages in Spain are uncommon
- However, possibility of downsizing in the future if needed may be sufficient for middle-aged homeowners to reduce the need for other precautionary savings
- Precautionary savings model has specific predictions about mpc
  - mpc out of housing wealth varies by age
  - mpc declining with wealth
- If precautionary motives strong, not only drop in consumption but also not enough precautionary savings in the future

## 4. HOUSING WEALTH EFFECTS ON CONSUMPTION (III)



- **Evidence mpc out of housing wealth  $\approx 0.03$** 
  - Real estate wealth of Spanish households end 2008: 5,500 to 6,000 billion €
  - Decrease 10% HP ie decrease 550 billion € real estate wealth x 0.03
  - means a decrease in 16.5 billion € in consumption
- **Partial equilibrium effects: insofar as changes in house prices were associated with changes in employment or interest rates, the general equilibrium effect could be more pronounced**
- **These figures mask important differences across groups of households**
  - . prime age households around 0.06
  - . vary from 0.035 at the bottom of the housing wealth distribution to 0.004 at the very top

## 4. HOUSING WEALTH EFFECTS ON CONSUMPTION (IV)



- **Given high % of home-owners and owners of other real estate, HP fluctuations may significantly affect aggregate expenditure even with relatively low average mpc**
- **The estimated non-linearity and age pattern of wealth effects confirm our a priori that our estimated wealth effects reflect precautionary saving motives**
- **When these effects reflect changes in precautionary savings:**
  - . severe busts may seriously affect retirement plans and expectations of middle age households in so far as they are counting on housing equity gains in the face of personal negative shocks when old.
  - . it is those holding less housing wealth that may see their retirement plans and expectations more affected (due to nonlinearity of effects)

## 5. HOUSE PURCHASES AND THE DYNAMICS OF HOUSING WEALTH (I)



- **Develop empirical models of purchase behaviour of main and secondary housing by Spanish households to identify determinants of house purchases and housing wealth**
  - **Particular attention to the relationship between expected house prices and purchases**
  - **Exploit (current and retrospective) information from the first two waves of the Spanish Survey of Household Finances (panel component only)**
  - **Attention to transactions involving secondary housing since these account for more than one third of housing transactions**
- **heterogeneity across countries: Greece, Portugal, Spain vs. Netherlands (30-35% of housing stock is secondary housing vs. 1%)**

## 5. HOUSE PURCHASES AND THE DYNAMICS OF HOUSING WEALTH (II)



### MAIN DETERMINANTS OF PURCHASE PROBABILITY

- **Strong effect of expected housing return measured by  $E_t(\Delta \ln HP_{t,t+5}) - i_t$** 

For each household in the sample we calculate the probability of purchase in 2005 using the estimated effects. We then replace its expected return (0.088 on average) by the one in 2009 (0.015 on average). This predicts a 61% fall in the number of purchases between 2005 and 2009. Interestingly, according to the National Stats Office the aggregate number of housing transactions fell by 58%
  - **Income, University education**
  - **Being married (but no effect of children)**
- **Therefore, changes in expectations of rates of return are able to predict the fall in aggregate purchases between e.g. 2005 and 2009**

### USE S-s RULE MODELS TO DISENTANGLE THE EFFECTS BETWEEN

- **effects on the desired share of housing in household wealth**
- **effect on the width of the inaction range**

## 5. HOUSE PURCHASES AND THE DYNAMICS OF HOUSING WEALTH (III)



- **Effects on the target i.e. on proportion of wealth in housing households aim to hold**
  - Positive and well determined effect of return on housing  
→ the size of the effect implies that the increase in the rate of return that occurred between 2002 and 2001 (around 2%) increased the target housing wealth ratio in 2.2 percentage points
  - Income and wealth have a negative effect: diversification for high income and wealth households (housing as a necessity in terms of life-cycle wealth)
  - Negative effect of being self-employed (probably due to wealth invested in own business)
  - No life-cycle effects
  
- **Effects on the inaction range i.e. on time to reach target**
  - Negative effect of income and wealth pointing to the importance of fixed transaction costs
  - Housing returns do not affect the inaction range

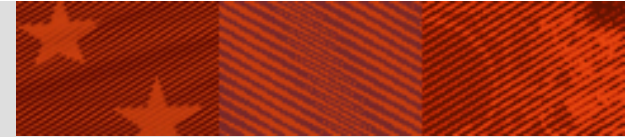
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- **Expected housing returns affect desired housing wealth target but not the inaction range. This implies that when expected returns drop there is a reduction in the desired amount of housing wealth not just a delay in purchases**
- **Estimated association between housing demand and recent house price growth is revealing about how price frenzies may develop**



## SOME LINKS



### **Bulletin Article with main results from EFF2008**

**<http://www.bde.es/webbde/SES/Secciones/Publicaciones/InformesBoletinesRevistas/BoletinEconomico/11/Jul/Files/art3e.pdf>**

### **Wealth effects on consumption**

**[http://www.olympiabover.name/Housing%20wealth\\_June07.pdf](http://www.olympiabover.name/Housing%20wealth_June07.pdf)**

### **Housing purchases and the dynamics of housing wealth**

**[http://www.olympiabover.name/Housing-demand\\_October2010.pdf](http://www.olympiabover.name/Housing-demand_October2010.pdf)**



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