

A recuperação do Real Estate no Mercado Internacional, quais os principais drivers da retomada?

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Schedule

- What we have learned about real estate market collapse
- Drivers for the recovery
- Situation in Spain

Introduction

- 1st wave of crisis:
- The 'subprime' crisis reduced the collateral value of mortgage back securities as US housing prices fell.
 - A special effect was on financial vehicles (CDS and CDO) losing their value == huge losses in International risk-averse funds
 - Those dragged the confidence at international level which stopped the flow of funds
 - dooming banks, institutions and countries to face a long lack-of-credit period.
- 1st EU reaction: regulation to guarantee the bank system stability... Basel II and III

Introduction

- 2nd crisis wave affected the sovereign debt in some European countries
 - Peripheral, by order: Ireland, Greece, Portugal, Spain/Italy,
 - Central: The Netherlands, France, UK, ...
- Euro stability and system was discredited and called in question
- EU policy: expanded in two ways:
 - ECB ... protecting the euro ... guarantee the debts in euro issued from any EU country (eurozone)
 - EU .. Stressing fiscal measures to reduce and re-finance debt .. Austerity policy

Introduction

- Reduction on debt meant a fall in public expenses ...
 - Austerity had strong macro economic effects on each economy
 - Reducing transfers and employment
 - All sectors affected
- At the same time than.. less credit flows
 - Banks could not find liquidity due to the international financial market failure
 - EU Authorities required them sistematically larger capital requirements to European saving banks
 - Not to the Germans....
 - No financial facilities from ECB in the beginning....

Introduction

- **Final results: lack on credit**
 - prolonged along 5-6 years
 - Stremelly strong in some sectors: real estate, housing market specially (in Spain)
 - Economies sized to the available amount of capital (received for decades)
- **Consequences: Economies without capital**
 - Fall in demand (all sectors but some were helped like cars, appliances... durable consumption goods)
 - Fall in production: GDP
 - Reduction on market size
 - Fall in prices (all assets)
 - Internal devaluation (wages/costs falling at all levels)

Introduction

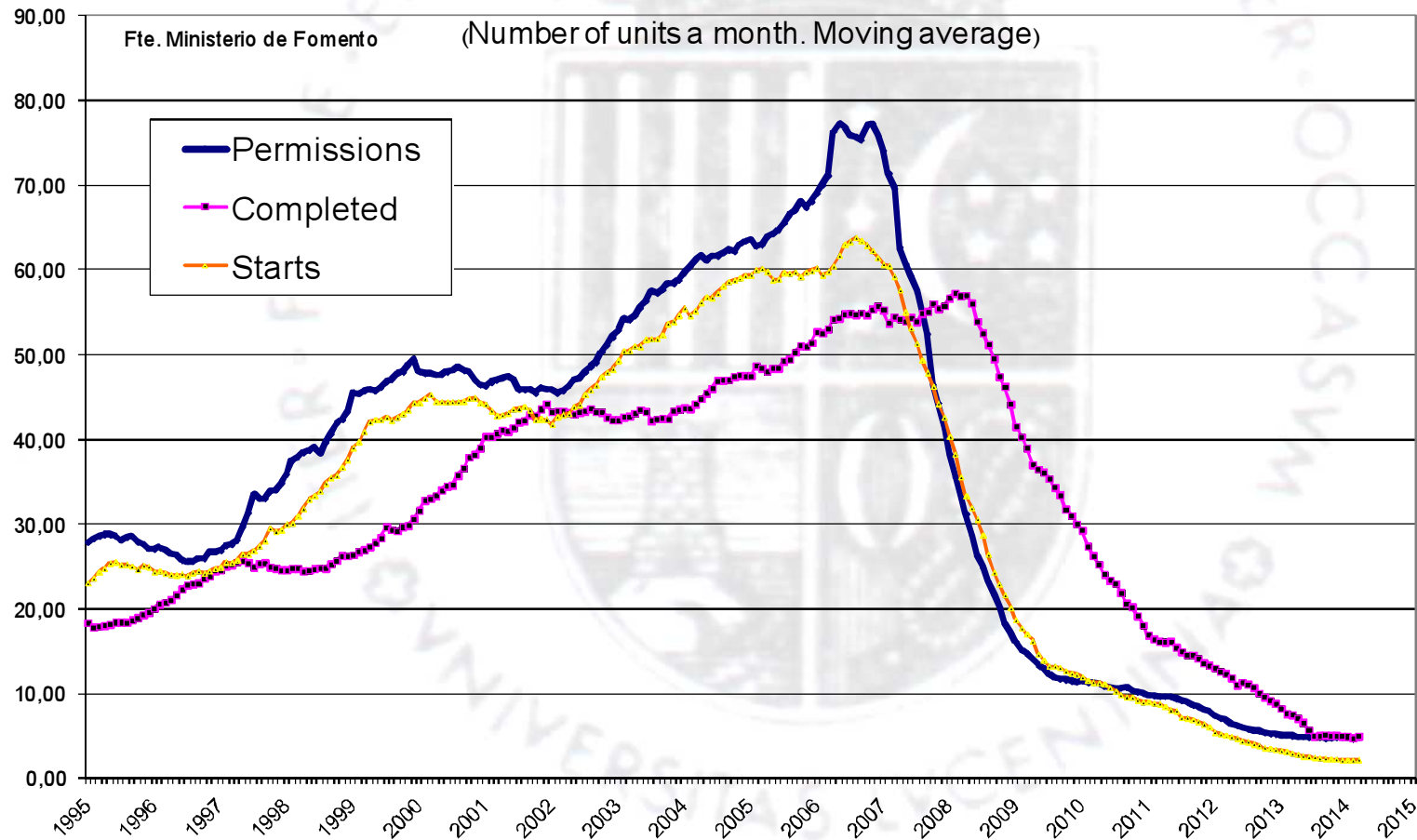
- First driver in the crisis was a Credit constrain.
 - But at all levels, all sectors... DOMESTIC domain
 - Including those doing well like export industries

**Consequences: drivers of
crisis in Housing market (and
real estate) in Spain**



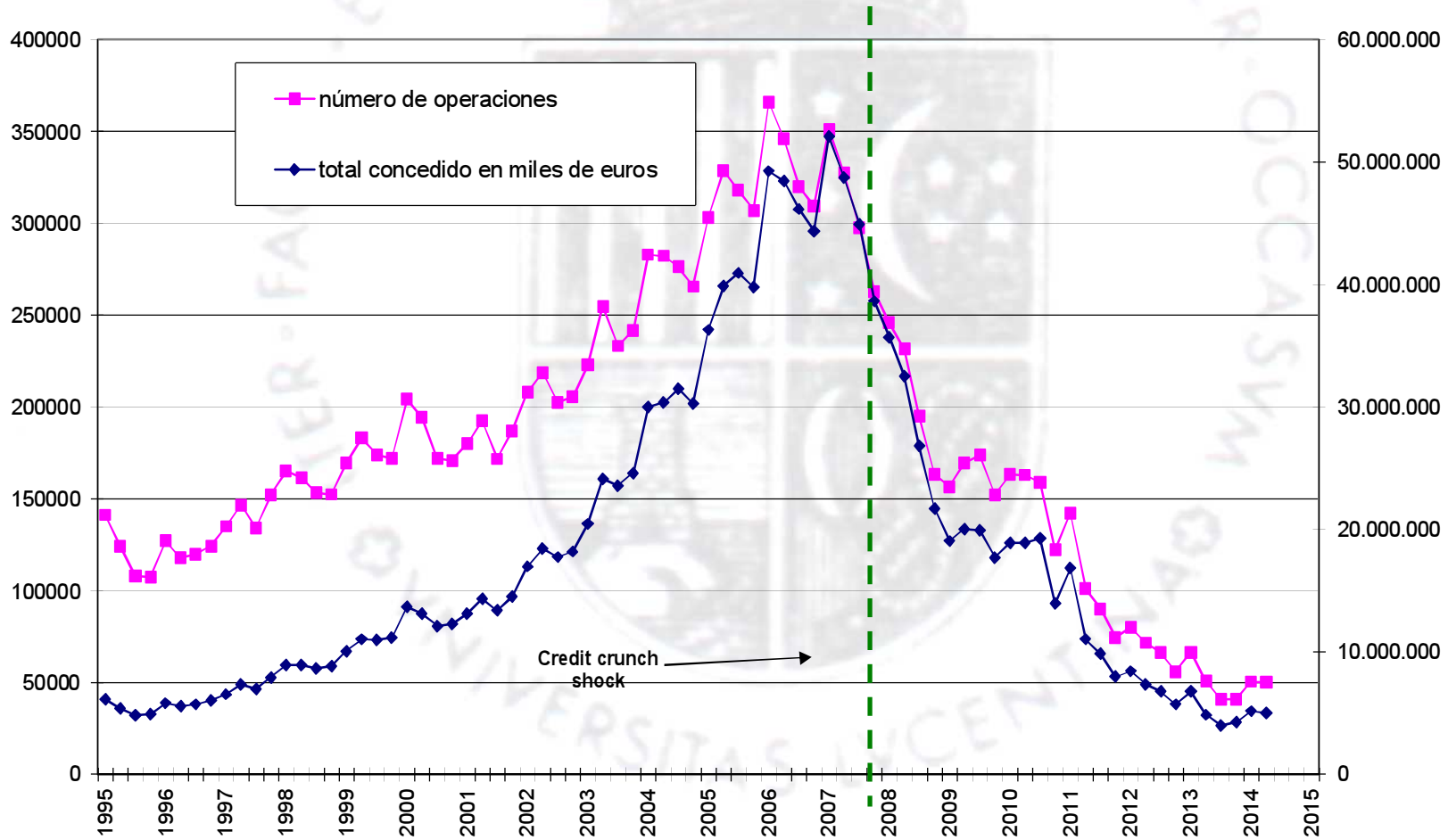
Inmediate impact on housing construction

BUILDING CYCLE IN SPAIN: 1995-2014



Due to restrictions in credit flows to demand and supply at the same time

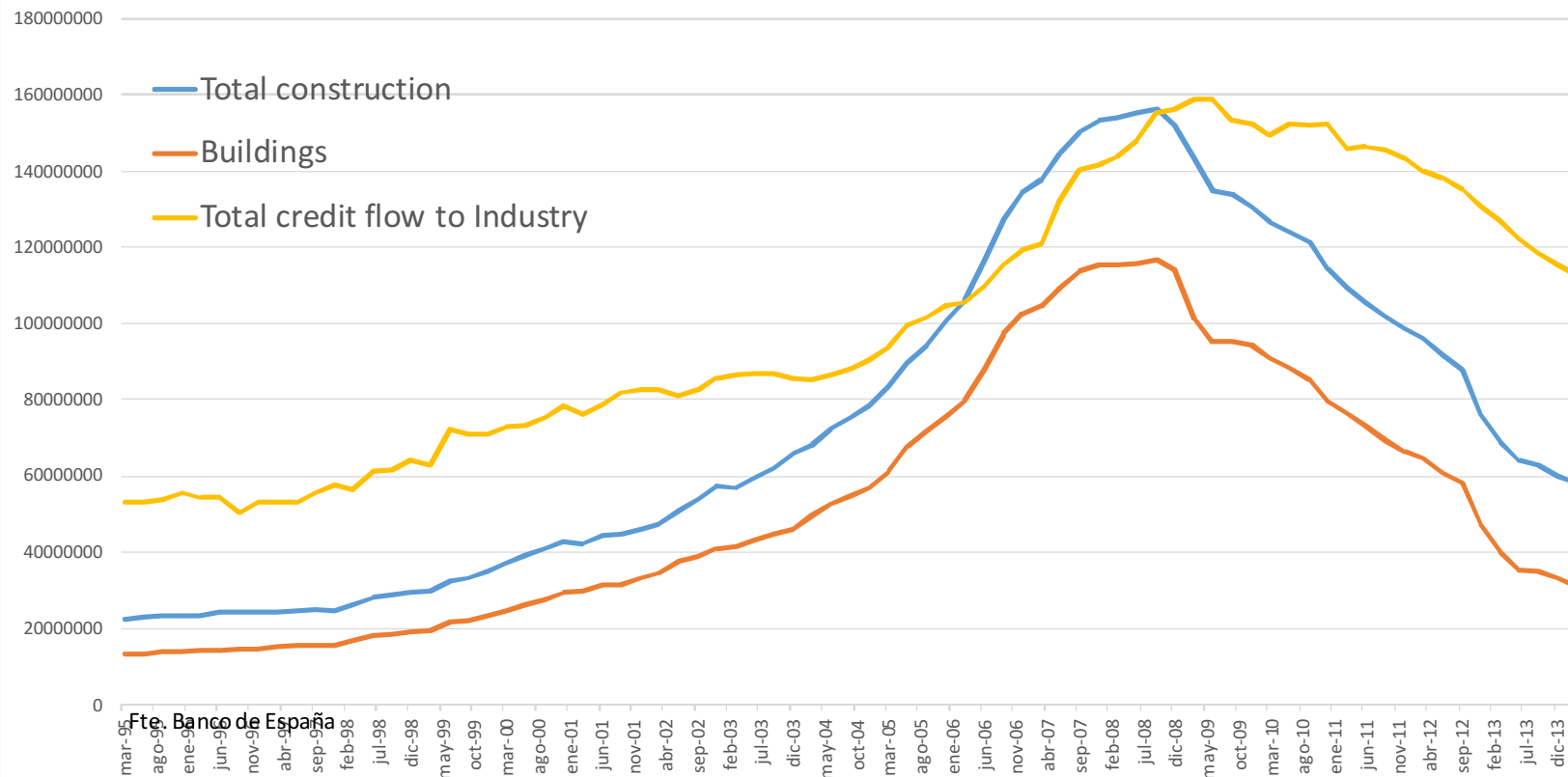
HIPOTECAS URBANAS CONCEDIDAS EN ESPAÑA. NÚMERO E IMPORTE



Fte. INE

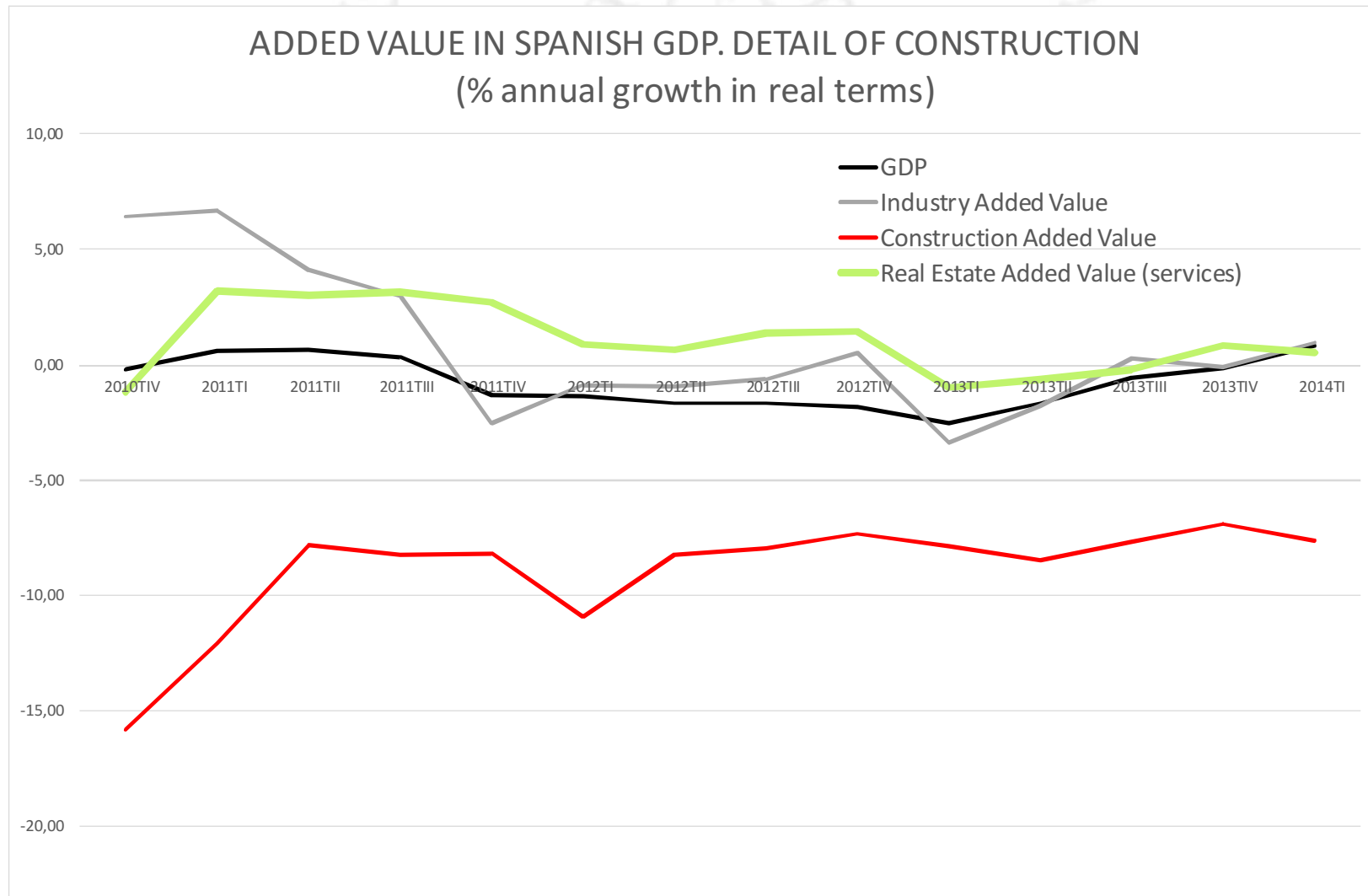
And to the supply side

OUTSTANDING CREDIT IN CONSTRUCTION AND INDUSTRIAL ACTIVITIES. SPAIN
(euros, nominal)



Fte. Banco de España

Aggregate Macro-economic effects

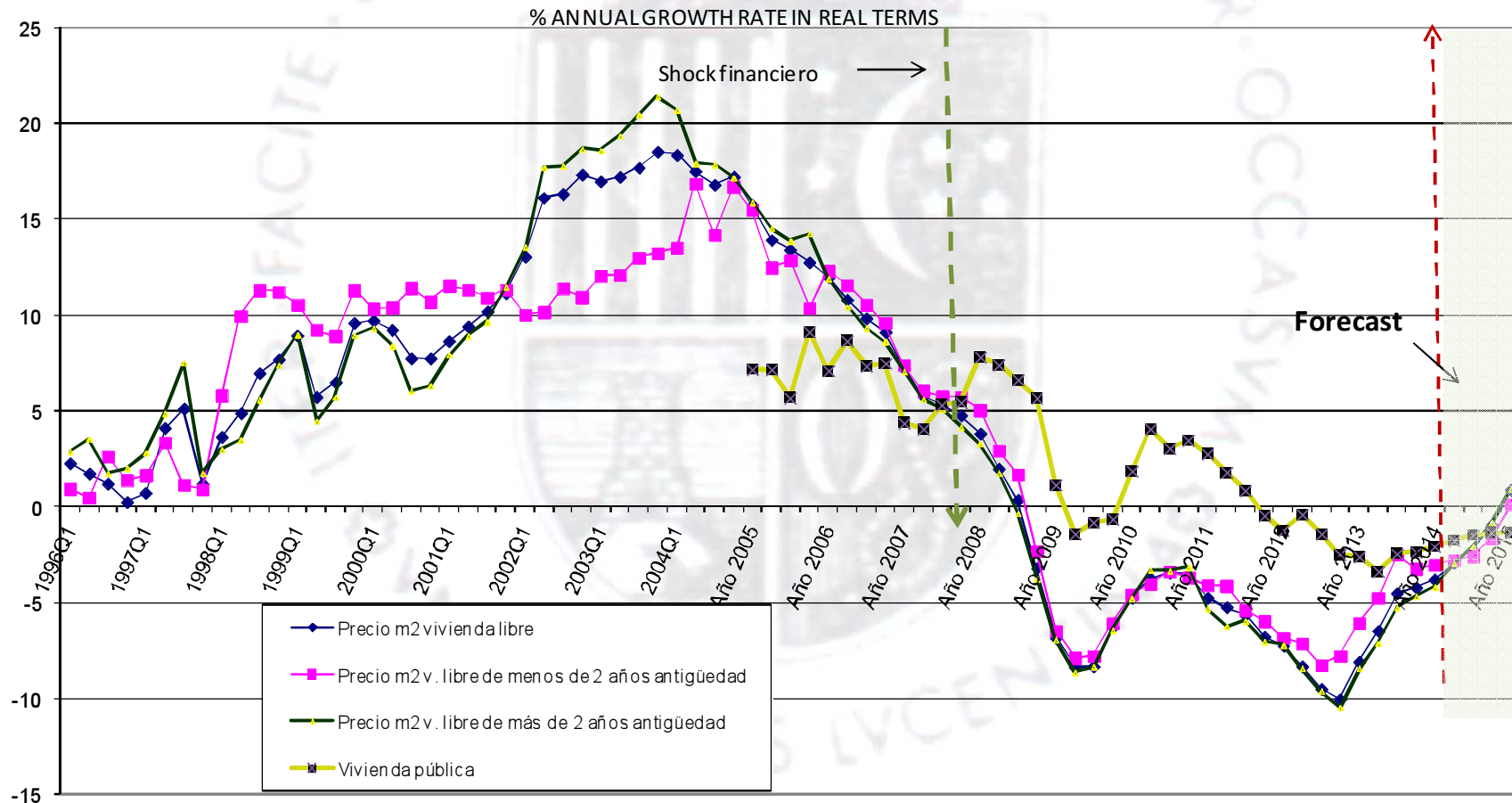


Macro economic effects

- Reducing the construction capacity to contribute positively to the economy
 - And employment
- Being a drag for the economic growth
 - Industry and exports were not enough to push the economic growth up at acceptable rates.

Prices growth under zero since late 2008

HOUSING PRICES IN SPAIN

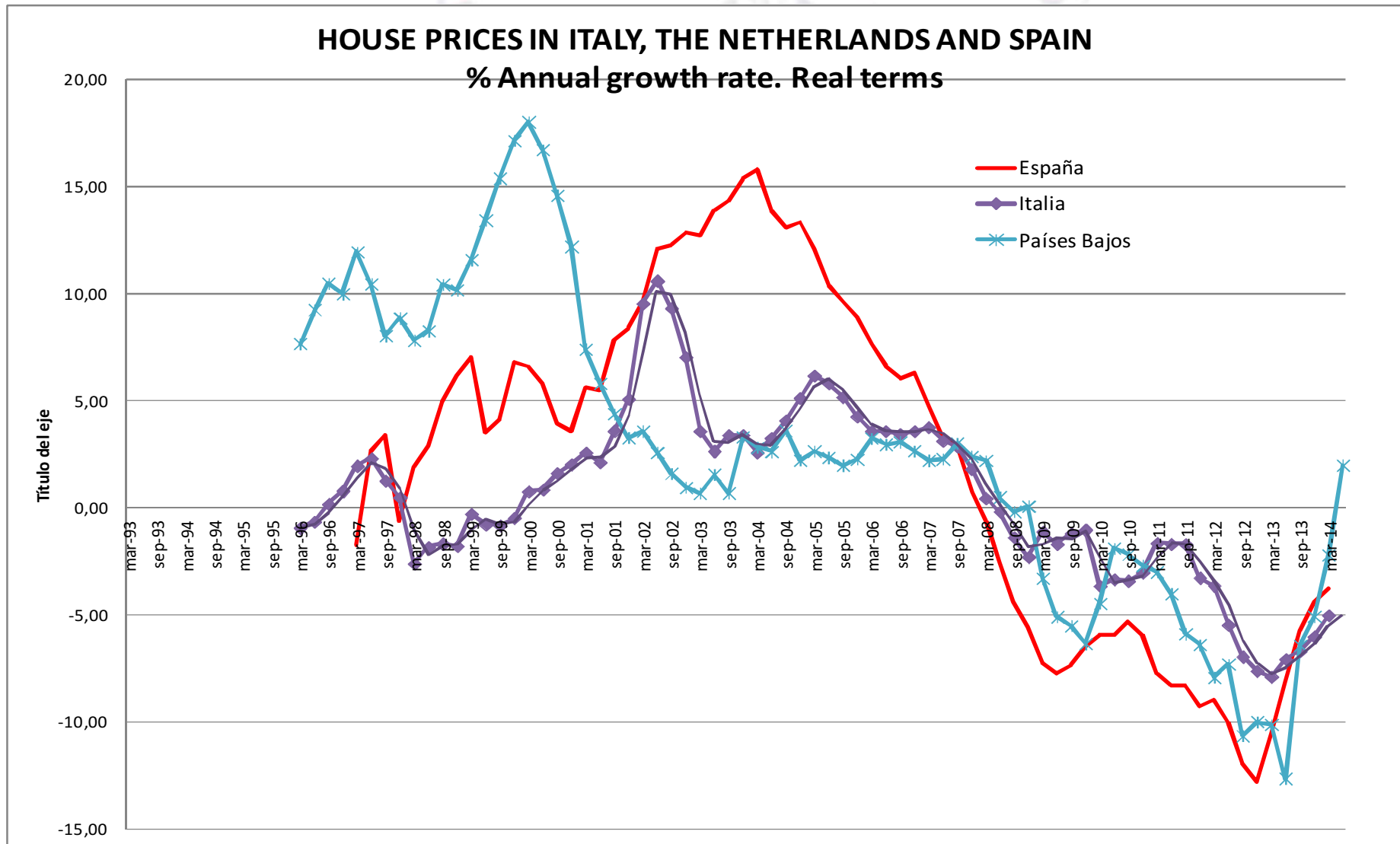


Fuente: Ministerio de Fomento / DG de Vivienda

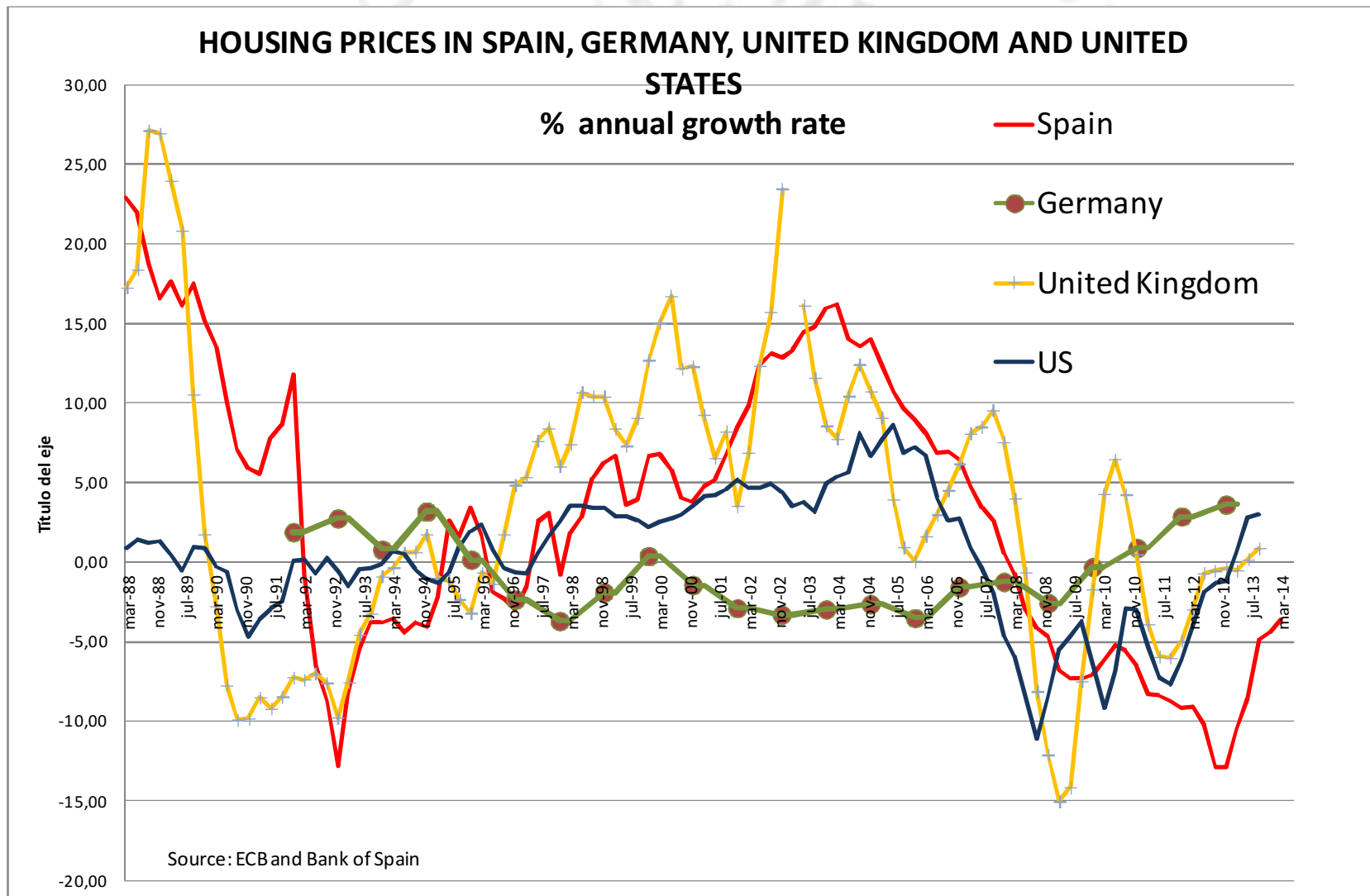
Housing prices

- Being a bad signal for investors
 - Reducing household wealth
 - Reducing the collateral value for mortgages
 - Around 25% of total homeowners are repaying their mortgages and less than a 13% have a new mortgage within last 5 years (census 2011)
 - Higher risk in the mortgage markets
 - Negative yields
 - Investors move to other assets
 - Reduce of demand for investment purposes
 - IT HAPPENS IN MOST EU ECONOMIES

European House price cycle

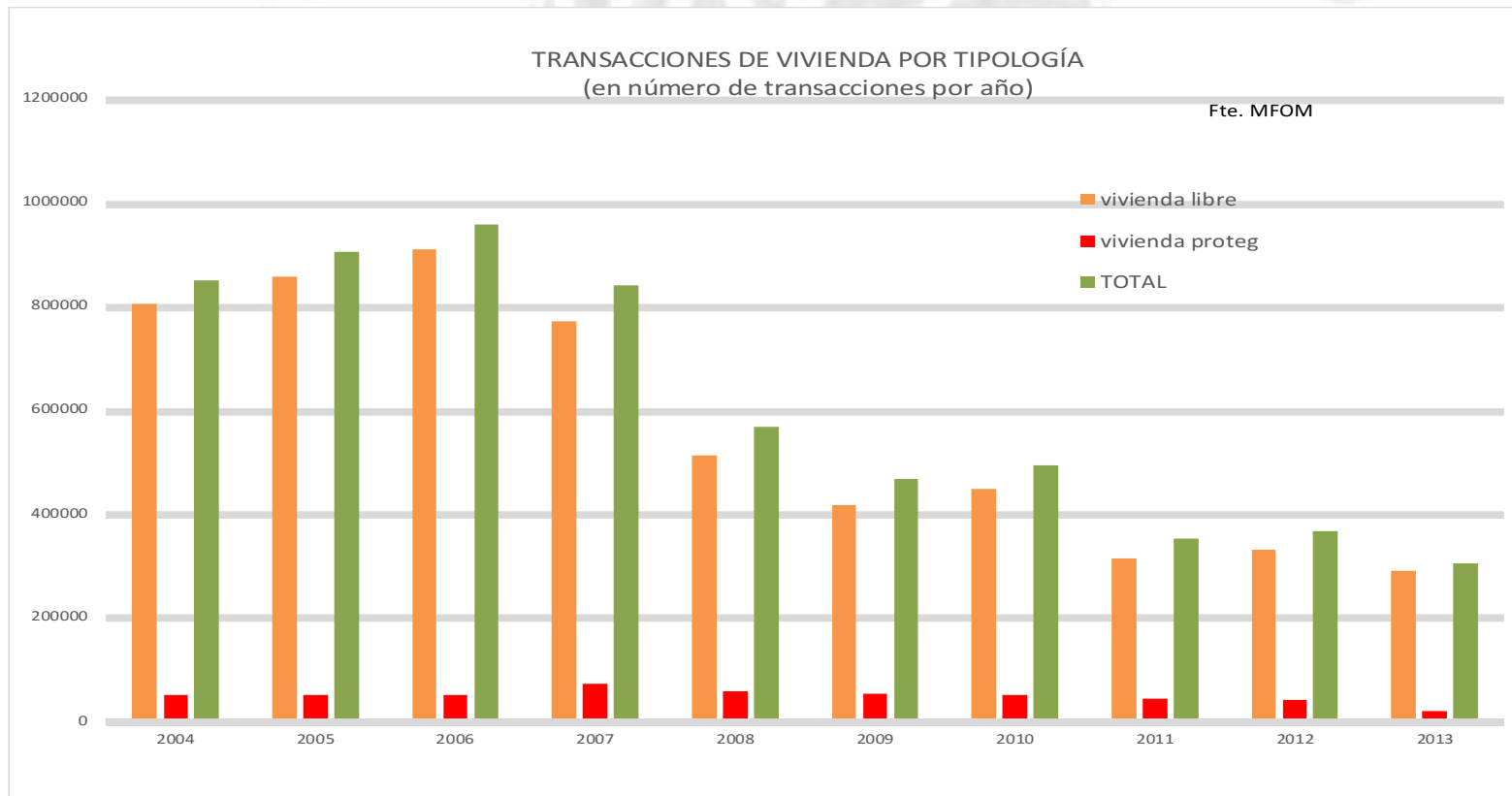


Lagged? house price cycle



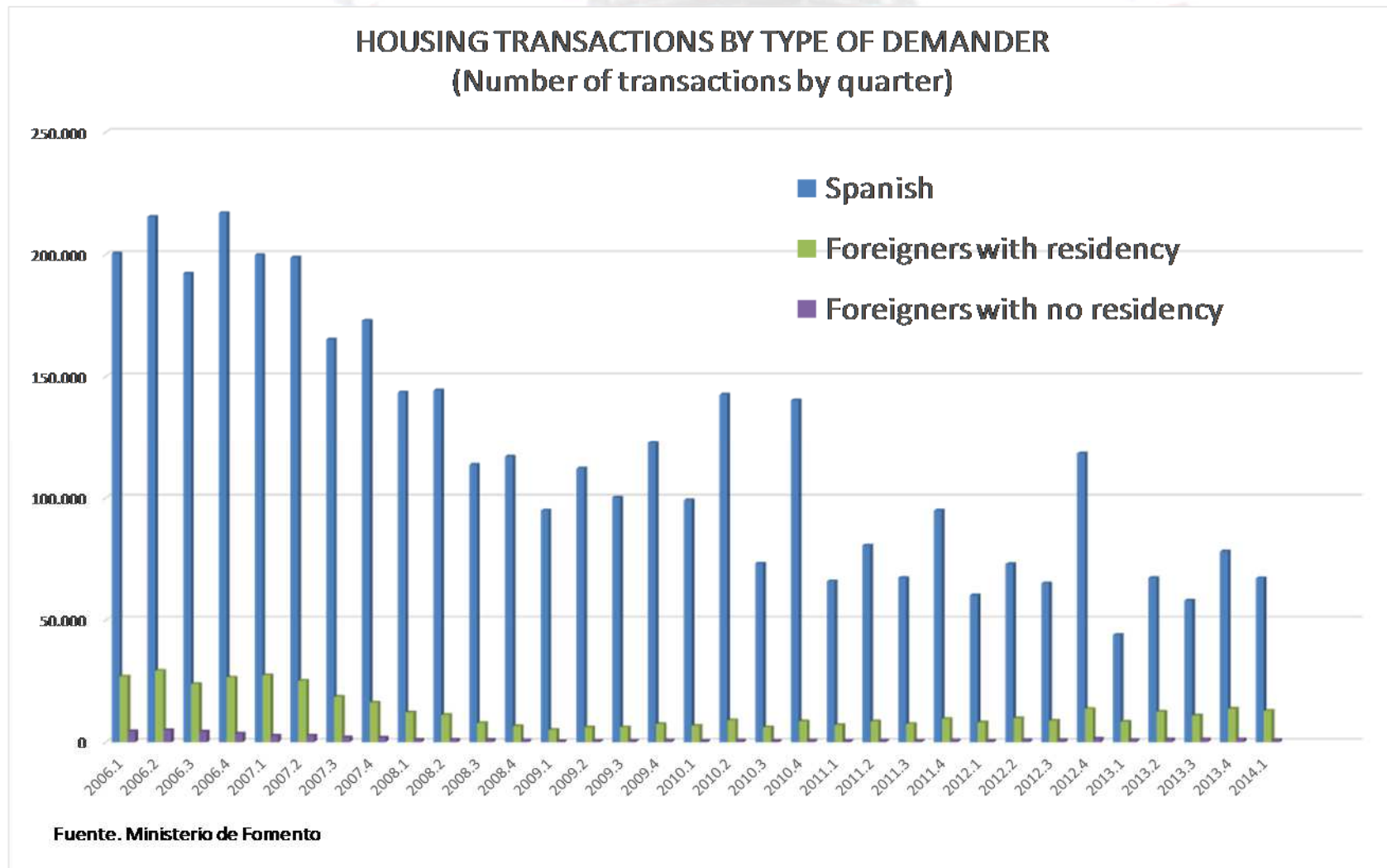
Market reaction (1)

- Market fell to the half in size (from the peak)
- Remaining stable



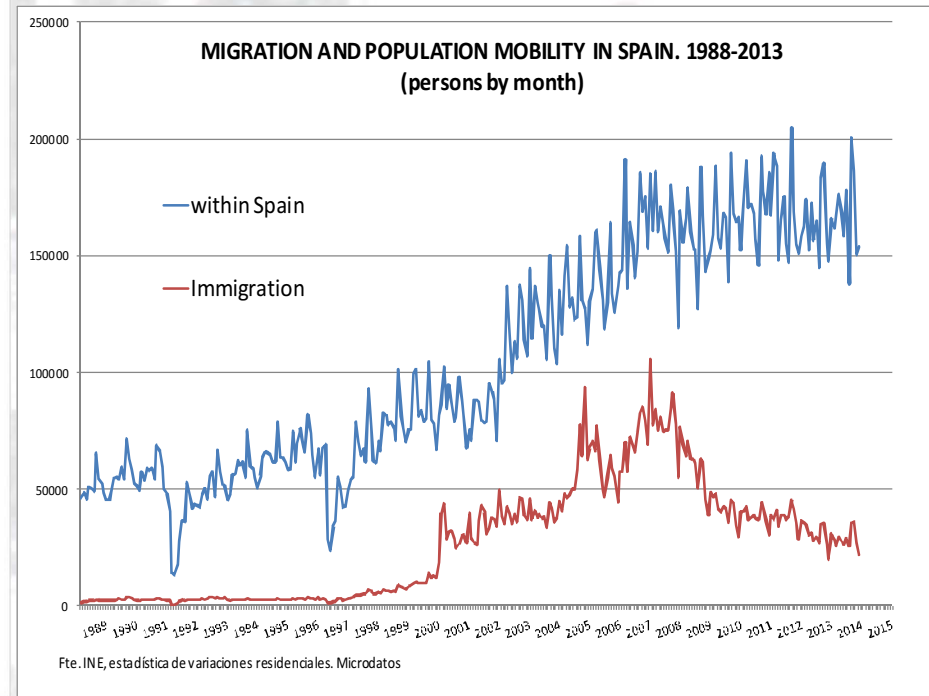
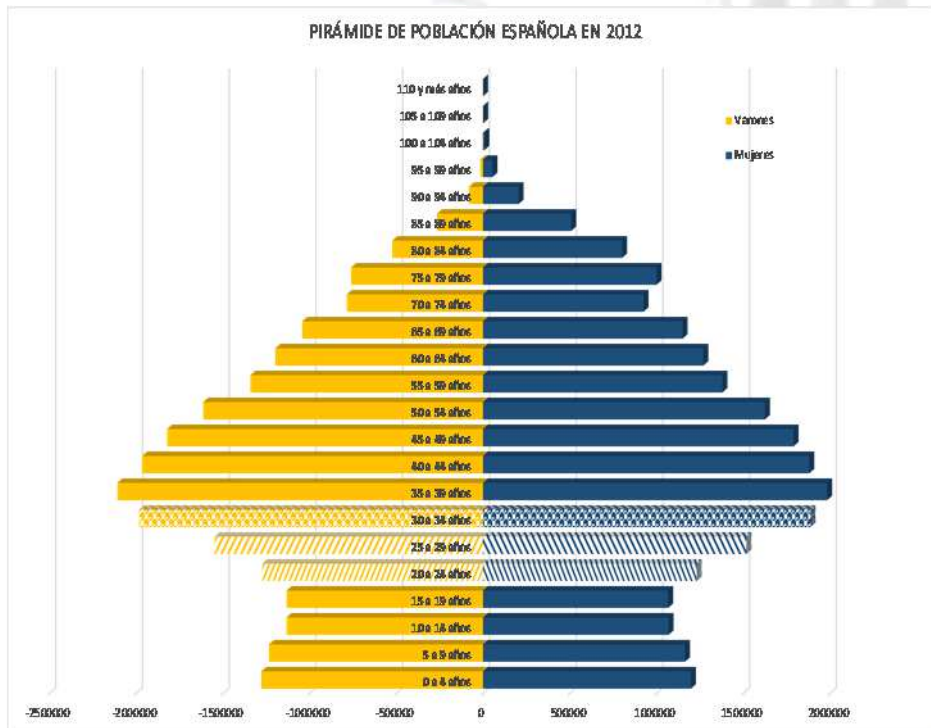
Market reaction (2)

- Market dominated by domestic demand



Positive signs

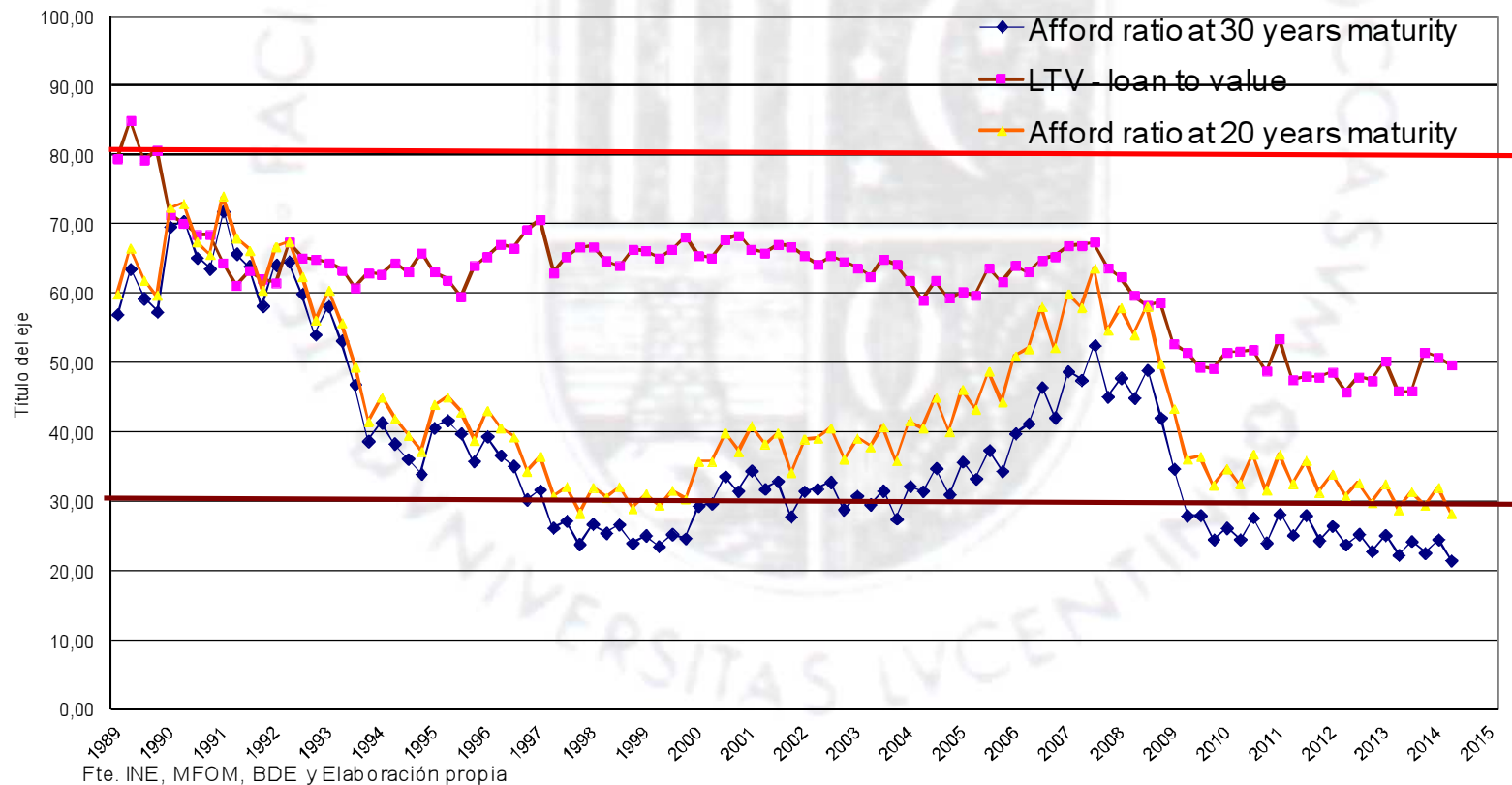
- Accumulating 'basic' demand : demographics
 - Household formation acc = 950 thousand



Positive signs

- Affordability (new homeowners) has good levels

AFFORDABILITY RATIOS FOR SPANISH ECONOMY
(%, 20 and 30 years maturity)



Is there a recovery and drivers

Recovery has to come from:

- Credit flows
- Domestic consumption ... purchase capacity
- Investment demand

Drivers in Spanish housing market

- Test the fundamentals and their predictive capacity
- 1.- Demand recovery
- 2.- Effect on prices
- 3.- Supply recovery

Demand
drivers

House prices

Supply
impulses

Demand fundamentals

- Long term components
- Determining the 'long and stable house value'
 - Olsen 1987, Hanushek y Quigley, 1979, Smith et al, 1988, Mayo, 1981, Wheaton, 1999,
 - Including flow of credit funds (Greiber and Setzer, 2007, Muelbauer, 2007, Duca, Muelbauer y Murphy 2012)
- $H^D = \Phi_1(\text{Pop}, y, f, P_h, \text{Cu}, \text{others})$
 - Inverse demand function
- $P_h = \Gamma(\text{pop}, y, f, \text{Cu}, H, \text{others})$

How it affects the supply

- Developer reactions to house price change
 - Or other incentives
 - Goodman, 2005, Meen, 2003, Malpezzi & Maclennan, 2001, Glaeser *et al.*, 2005
- $H^s = \Phi_2(C, ir, P_h, Re, \text{others})$
- $\beta = (\delta H^s / \delta P_h)$, is a measure of supply elasticity ...
 - Sensibility of reaction

Model in two successive steps

$$p_{ht} = [\alpha_1 + \gamma_2 \text{pop}_t + \gamma_3 y_t + \gamma_4 f_t + \gamma_5 ri_t] + \varepsilon_t \quad (1)$$

$$q_{hsi,t} = [\alpha_2 + \beta_2 p_{hi,t} + \beta_3 cm_t + \beta_4 cs_t + \beta_5 ri_t] + \eta [fe_t^k] + v_t \quad (2)$$

- Variable in logs
- Test for stationarity
- Long term relationships (two) in demand function : the role of fundamentals to explain house prices
- New supply equation follow results from Taltavull, 2014

The fundamentals of housing demand

- Final specification: VEC

$$\Delta \ln ph_t = \alpha + \rho_z \left[\sum_{n=1}^n \gamma_n X_{t-1} \right] + \sum_{i=1}^i \delta_i \Delta X_{t-i} + \mu_t$$

- With $X = \{\text{pop, income, mortgage funds, interest rates}\}$

Results

(variable in logs but interest rates and in real terms)

Dependent ΔPht

Long term relationship

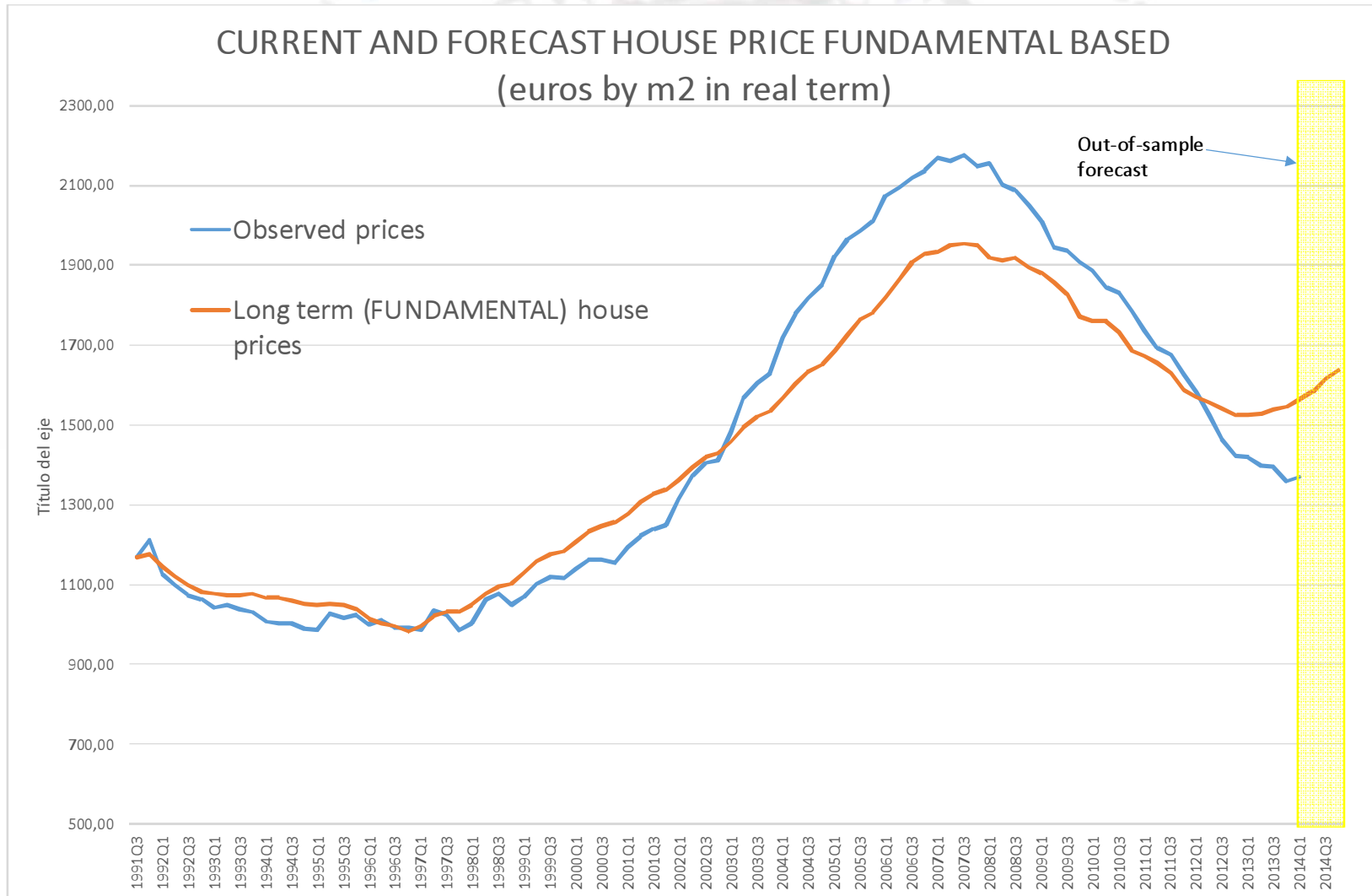
	Price equation			Income equation		
	coef	t-stat	prob	coef	t-stat	prob
Ph(t-1)	1			0		
Y(t-1)	0			1		
ir (t-1)	-0.096	-9.6	***	0.016	6.4	***
ExMig(t-1)	-0.02	-0.92		0.005	1.03	
Fmort(t-1)	-0.304	-11.3	***	0.001	0.192	
Trend	-0.011			0.00		
c	-1.1			-7.62		
Convergence parameter	-0.17	-4.37	***	-0.72	-4.24	***

Short term. Error correction

$\Delta Y(t-2)$	0.835	2.50	***
$\Delta Y(t-3)$	0.818	2.66	***
$\Delta Y(t-4)$	0.614	2.13	***
$\Delta Fmort(t-5)$	0.056	2.88	***

Adj R2	0.701
Se2	0.010
Log Likelihood	278.67
F-stat	7.53

Price forecast



Developers reaction

- Final specification includes break points and control by regional differences.
- Method: panel with regional data (Taltavull, 2014)

$$q_{hsi,t} = [\alpha + \gamma_2 p_{hi,t} + \gamma_3 cm_t + \gamma_4 cs_t + \gamma_5 ri_t] + \eta [fe_t^k] + v_t$$

- Interested in γ_2 along time: how developers react to market signals

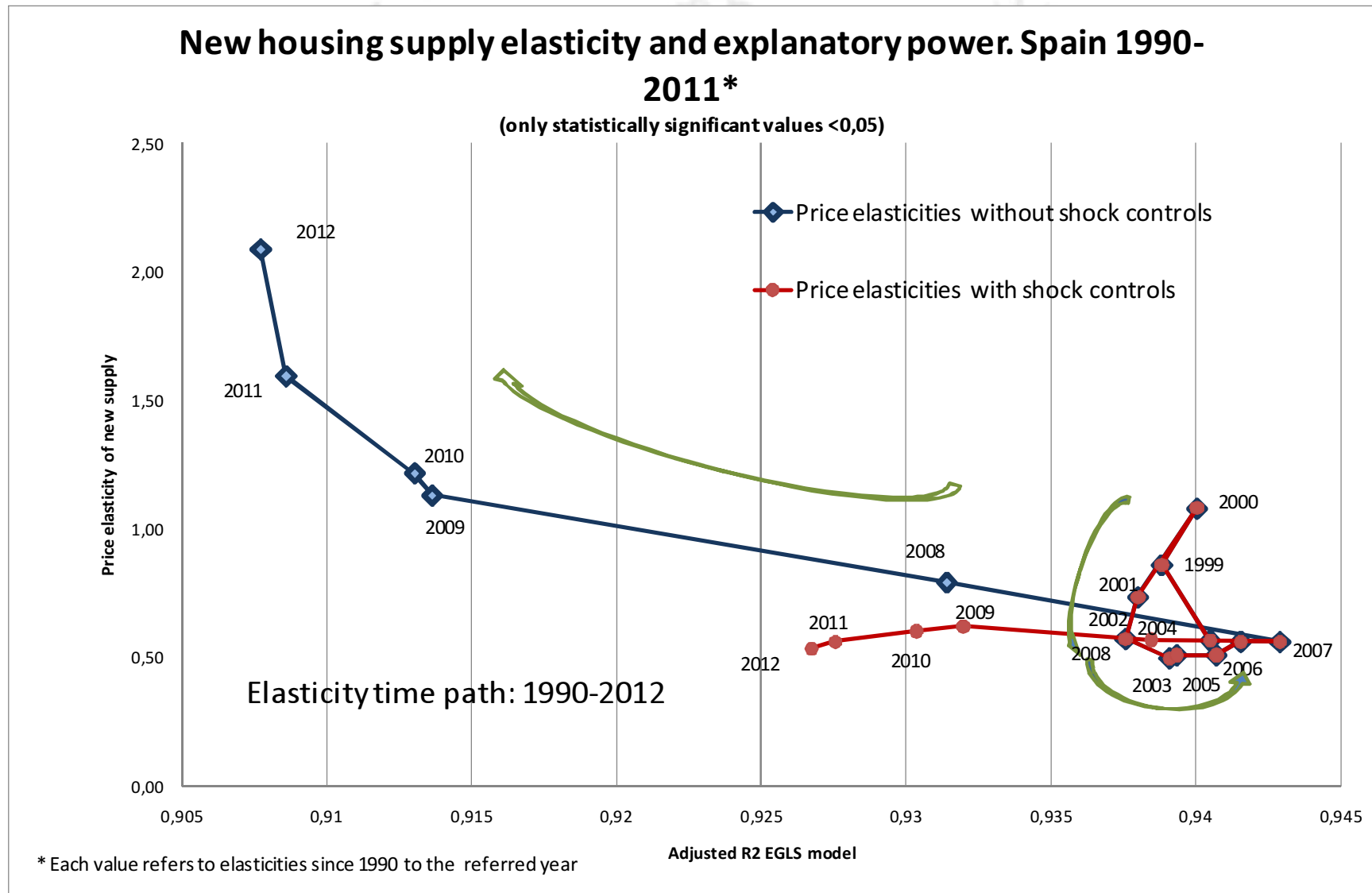
New supply results

Table 3. Pool EGLS parameter new supply model estimated. Controlled and uncontrolled by structural changes

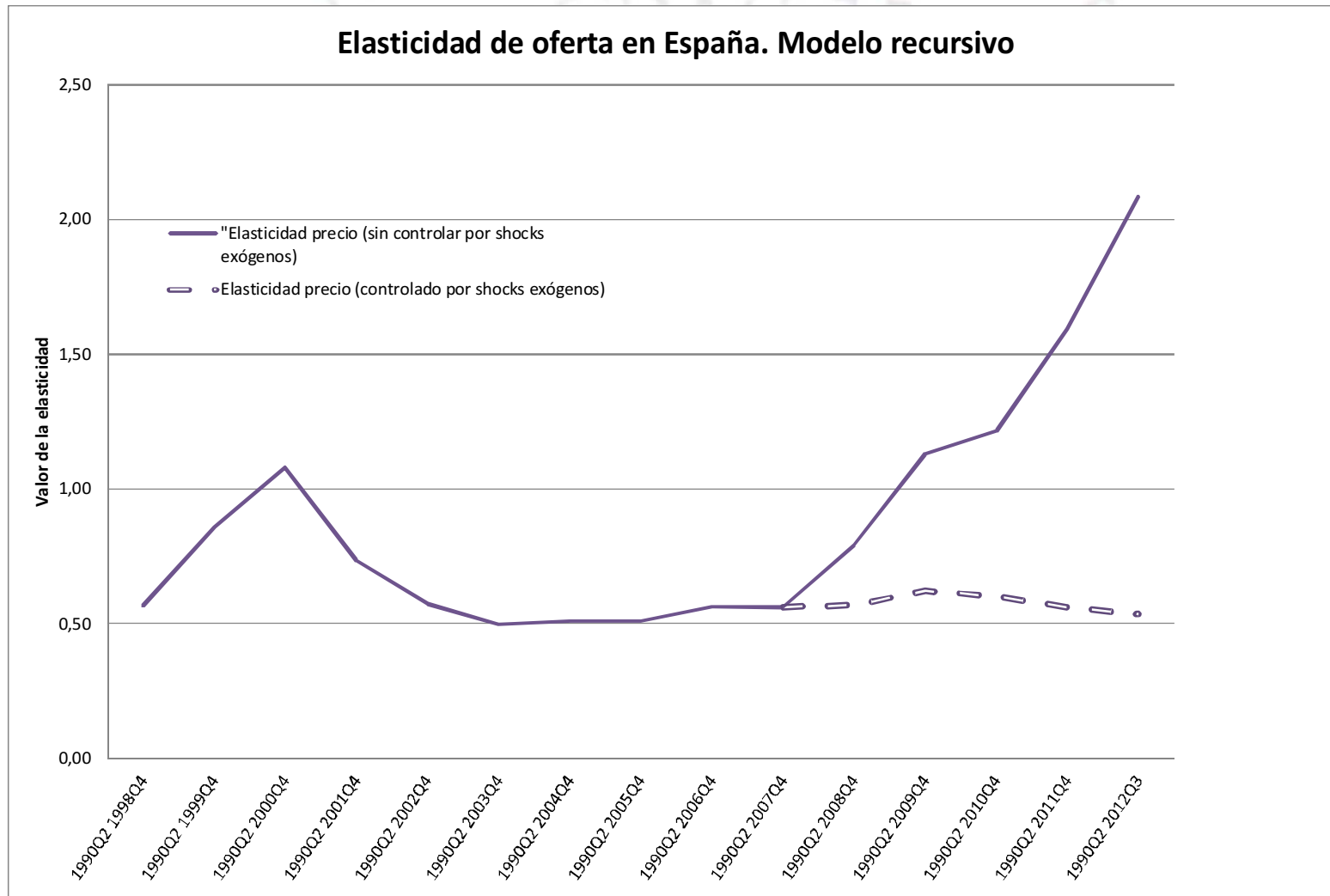
All variables are in logs	No controlled by shock's model						Controlled by shock's model											
	Dependent variable is log of starts	CM	CS	Ir	RHP	AdjR2	DW	CM	CS	Ir	RHP	D2008	D2009	D2010	D2011	D2012	AdjR2	DW
1990 1998	0,03	-1,4	-0,5***	0,57	0,94	2,14	0,03	-1,4	-0,5***	0,57							0,94	2,14
1990 1999	0,39	-1,2	-0,4***	0,86**	0,94	2,15	0,39	-1,2	-0,4***	0,86**							0,94	2,15
1990 2000	1,04	-1	-0,4**	1,08***	0,94	2,18	1,04	-1	-0,4**	1,08***							0,94	2,18
1990 2001	1,25	-1,2	-0,4***	0,73***	0,94	2,18	1,25	-1,2	-0,4***	0,73***							0,94	2,18
1990 2002	1,16	-1,7**	-0,5***	0,57***	0,94	2,22	1,16	-1,7**	-0,5***	0,57***							0,94	2,22
1990 2003	0,79	-2,5**	-0,4***	0,5***	0,94	2,27	0,79	-2,5**	-0,4***	0,5***							0,94	2,27
1990 2004	0,61	-2,9***	-0,4**	0,51***	0,94	2,27	0,61	-2,9***	-0,4**	0,51***							0,94	2,27
1990 2005	0,53	-3,1***	-0,4**	0,51***	0,94	2,27	0,53	-3,1***	-0,4**	0,51***							0,94	2,27
1990 2006	1,23	-2,9***	-0,3	0,56***	0,94	2,26	1,23	-2,9***	-0,3	0,56***							0,94	2,26
1990 2007	1,04	-2,9***	-0,37***	0,56***	0,94	2,24	1,04	-2,9***	-0,37***	0,56***							0,94	2,24
1990 2008	-0,7	-3,8***	-0,57***	0,79**	0,93	2,28	0,86	-3***	-0,4***	0,57***	-0,28***						0,94	2,24
1990 2009	-3,5**	-3,9***	0,14	1,13***	0,91	2,42	0,46	-3***	-0,33**	0,62***	-0,29***	-0,63***					0,93	2,22
1990 2010	-4,4***	-3,5***	0,31	1,22***	0,91	2,48	0,38	-2,9***	-0,32**	0,6***	-0,29***	-0,63***	-0,78***				0,93	2,24
1990 2011	-4,2***	-3,8***	0,14	1,59***	0,91	2,54	0,66	-2,8***	-0,36***	0,56***	-0,29***	-0,63***	-0,80***	-0,93***			0,93	2,26
1990 2012	-3,6***	-3,3***	0,16	2,09***	0,91	2,65	1,01	-2,5***	-0,39***	0,54***	-0,30***	-0,65***	-0,83***	-0,97***	-1,17***		0,93	2,28

** p-value < 0.05, *** p-value > 0.01

Developers reaction



Developers reaction. New supply elasticity in Spain

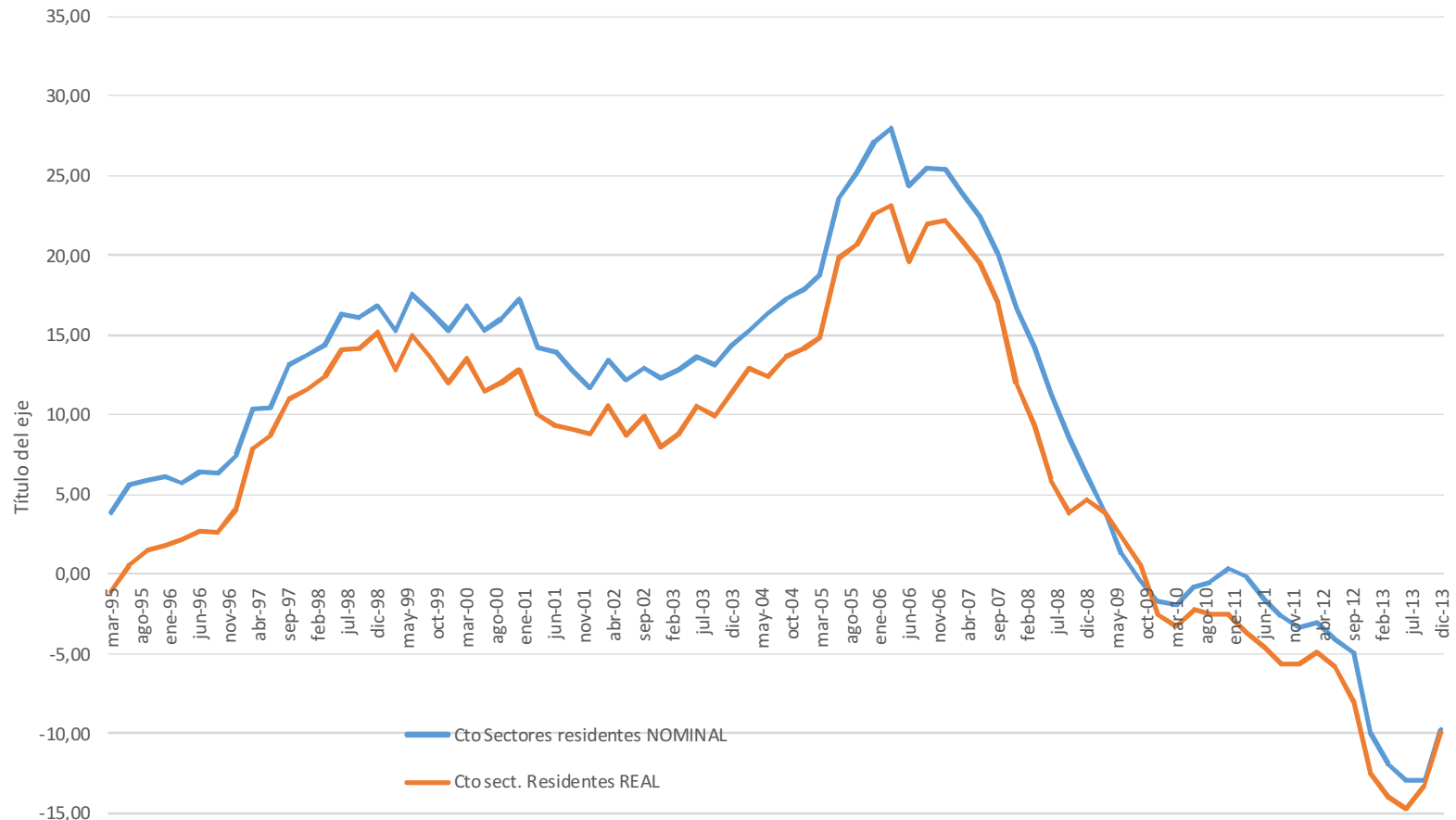


Conclusions

- Demand fundamentals .. Mixed signals
 - Basic demand is accumulating
 - Small recovery in employment... lack on new household purchase capacity
 - But, good situation for those who are working
 - Instead the low salaries
 - Expectations about future (labor market) are key
 - Shortage in credit
 - Still strong, diminishing and to the whole economy

Outstanding Credit in Spain. Private sector

(annual growth rate. Real terms)



Fte. Banco de España

Conclusions

- Developers react very quickly to shocks.
 - When prices recover New promotions
 - Stopping the fall in building
 - But, there are no signals at the moment but prices stabilization
- **TIME FOR HOUSING POLICY**

Conclusions

- Other real estate sectors?
- International investors are moving in
 - Office market
 - Logistics
 - Shopping areas
- Following the potential recover of domestic demand?

**Thanks for your
attention**

