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Banco Santander

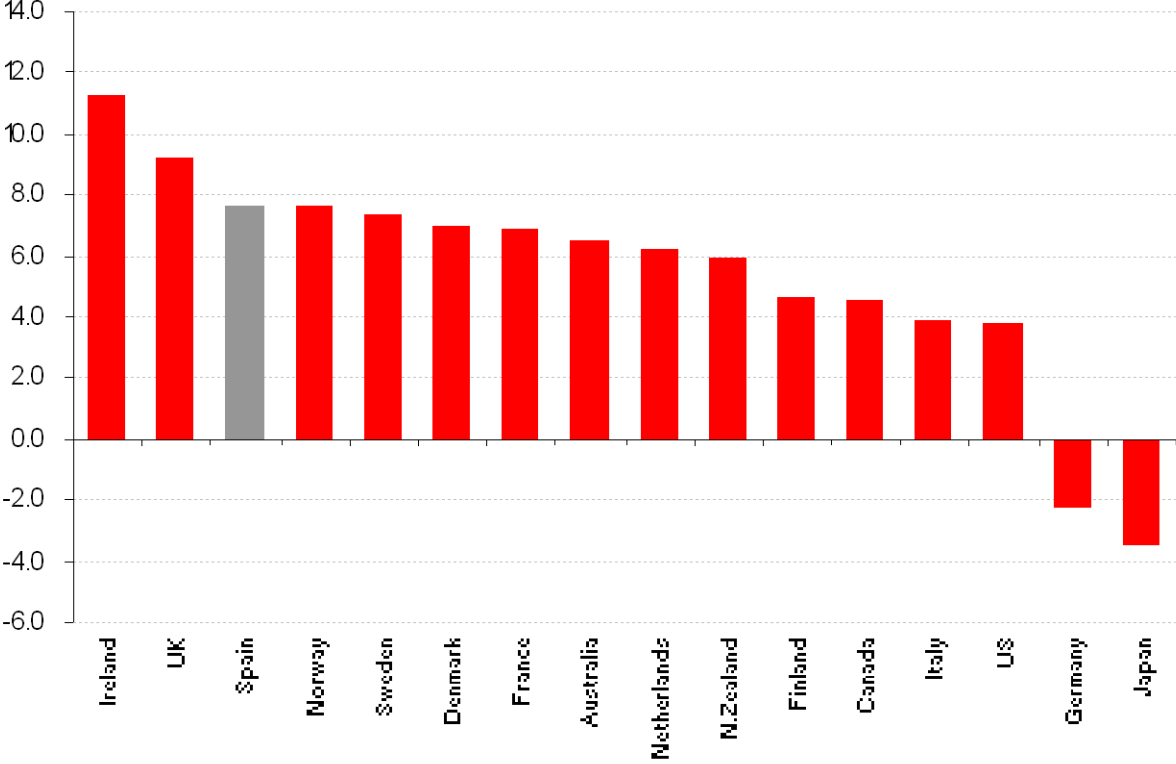
# **The Residential Boom and its Consequences: a View from a Spanish Bank"**

SUERF  
Helsinki, June 5th 2009

1. **The worldwide housing boom**
2. Spanish is somewhat different
3. Spain: larger adjustment
4. Crisis lessons from the banking point of view
5. Conclusions

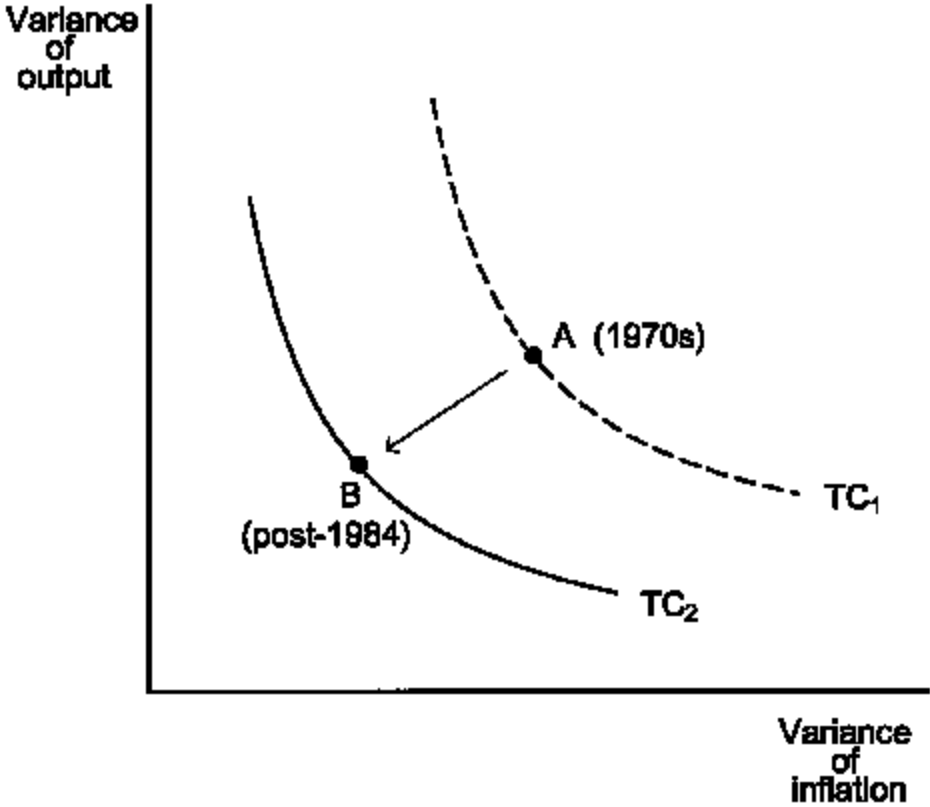
## Housing real prices

(average growth 1997-2007)



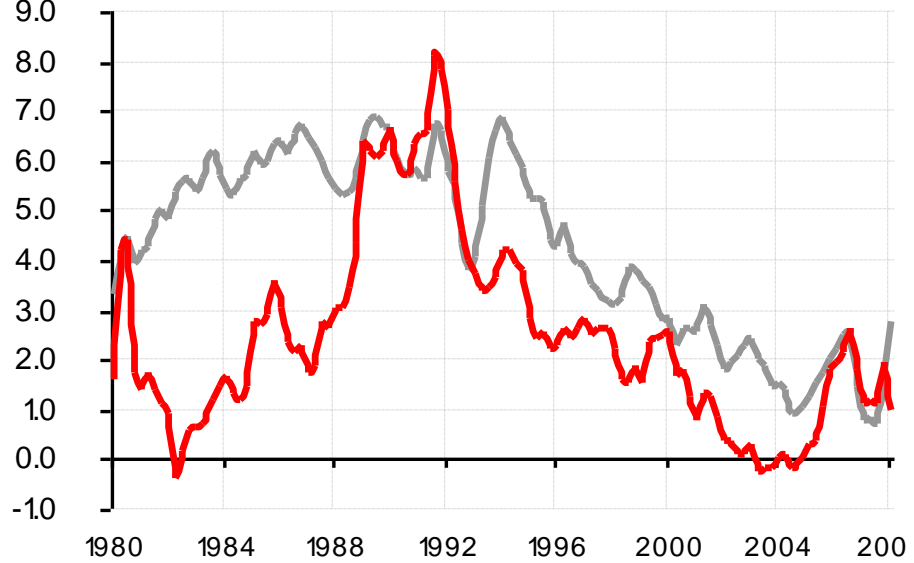
Source: OECD, may 2009

### Figure 1 Monetary Policy and the Variability of Output and Inflation



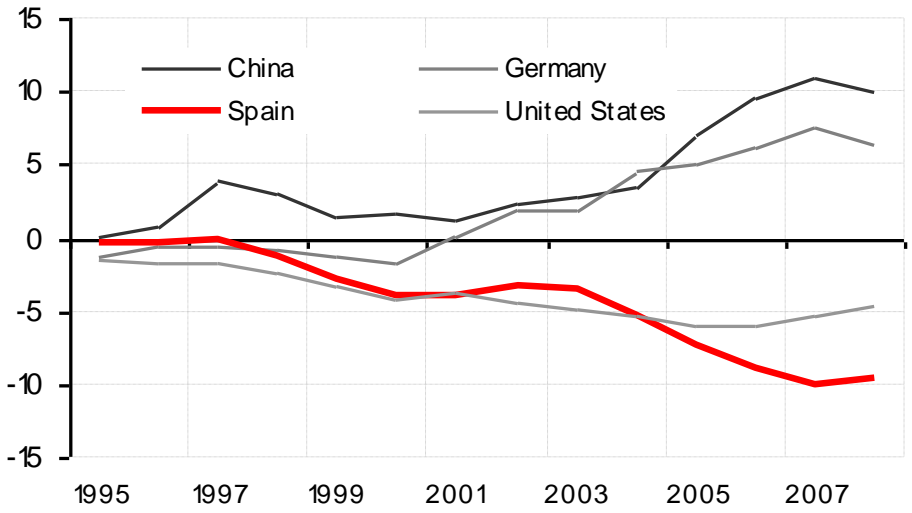
Source: Bernanke, B. Speech "The Great Moderation", Washington, DC, February 20, 2004

### EMU: real interest rates (CPI adjusted)



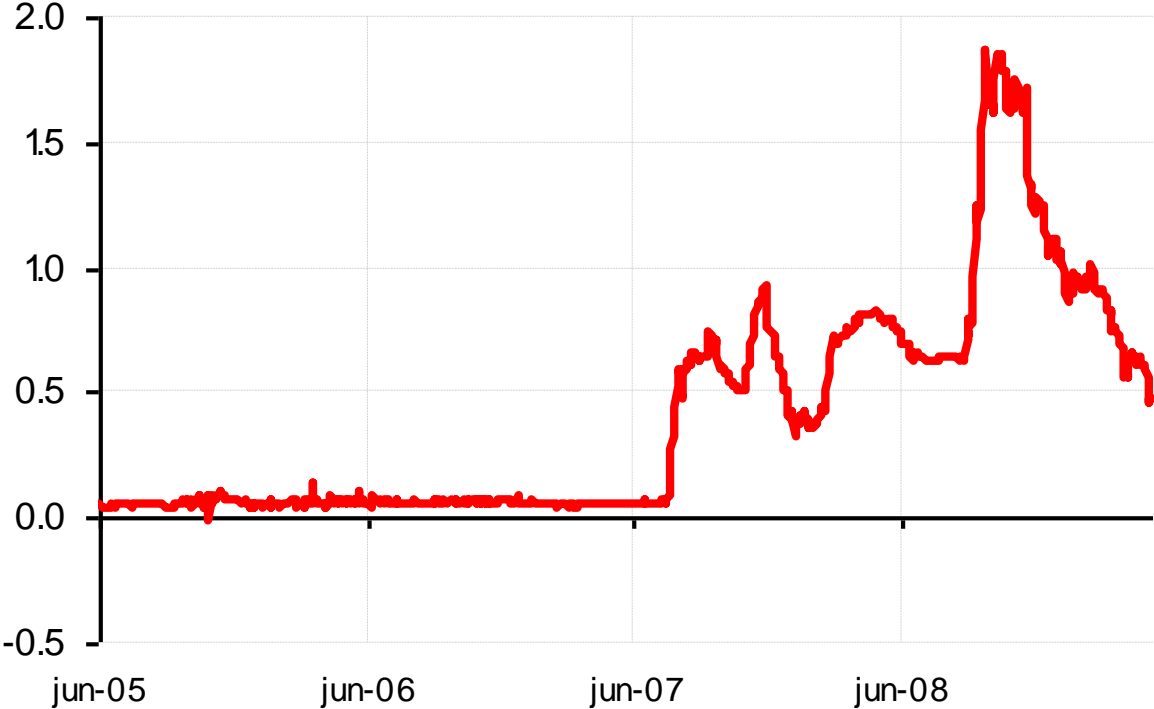
Source: OEF, may 2009

### Current account balance (% of GDP)



Source: IMF, WEO April 2009

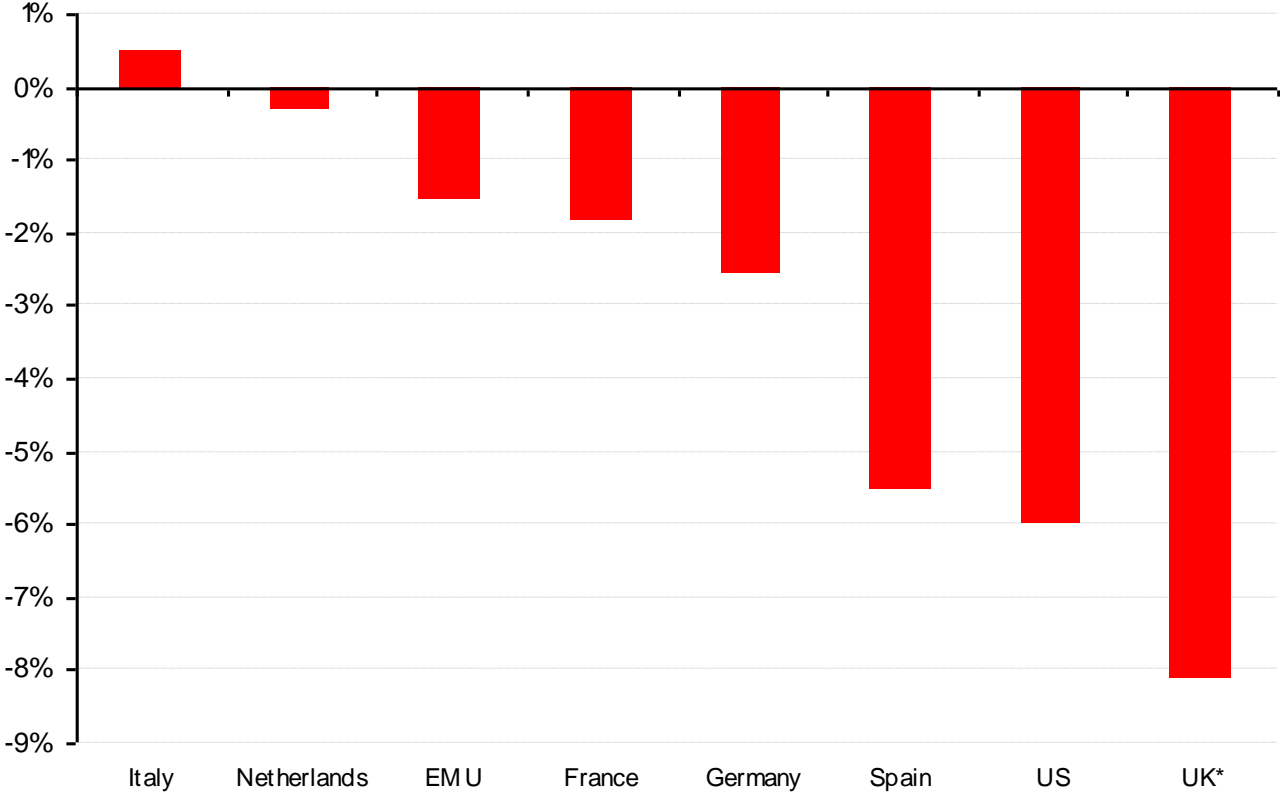
## Eurozona: spread eurobor- 3 month eonia pp



Source: Thomson Datastream, may 2009

## Housing prices real growth 2008

subtulo

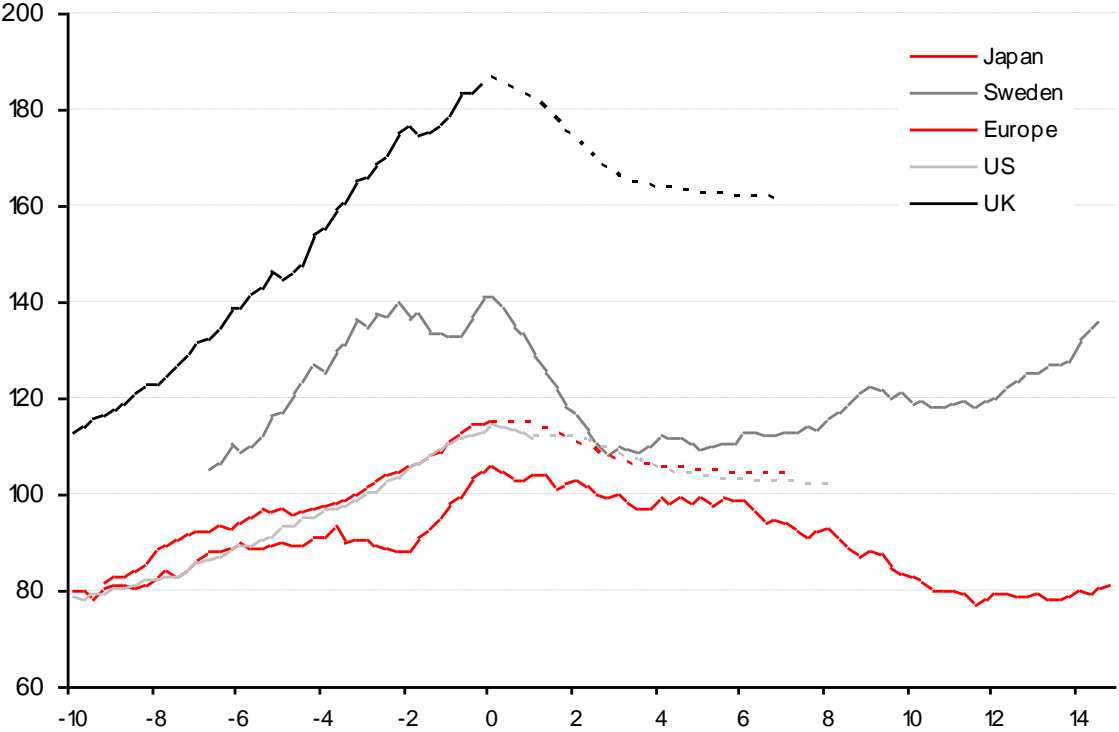


\* 3Q 2008

Source: Bank of Spain, may 2009

# Especially when de-leveraging

**Bank Credit to the Private Sector**  
(In percent of nominal GDP)

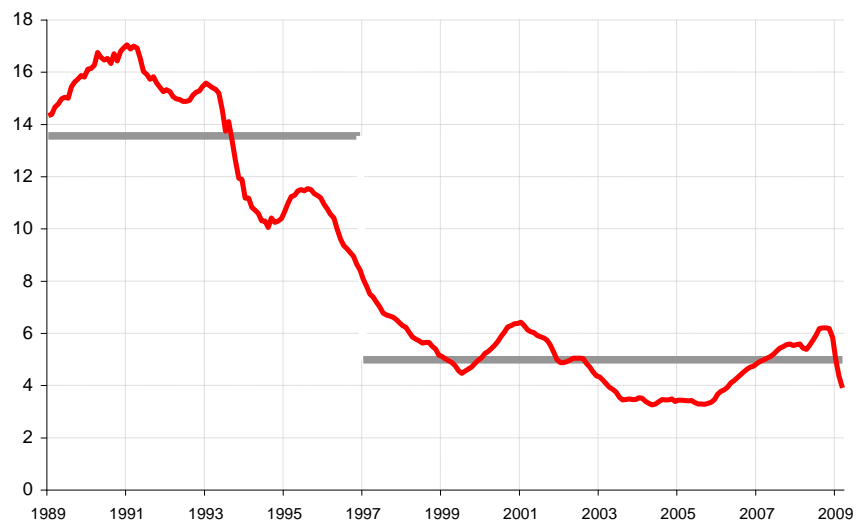


Source: IMF, Global Financial Stability Report, may 2009



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**Spain: Mortgages interest rates (new business)**  
(%)



Source: Bank of Spain, May 2009

### Typical Mortgage Term

	1995	2005
<b>Australia</b>	25 years	25-30 years
<b>Denmark</b>	60% 30-year bonds 25% 20-year bonds 10% 10-15 year bonds	83% 30-year bonds 13% 20-year bonds 2% 15-year bonds 2% 10-year bonds
<b>Finland</b>	15 years	20 years
<b>Germany</b>	20-30 years	20-30 years
<b>Greece</b>	15 years	25 years but available up to 50
<b>Ireland</b>		Average 26 years
<b>Netherlands</b>		30 years
<b>Portugal</b>	25 years	30 years
<b>Spain</b>	10-15 years	25 years but available up to 50
<b>UK</b>	20-25 years	25 years but available up to 50

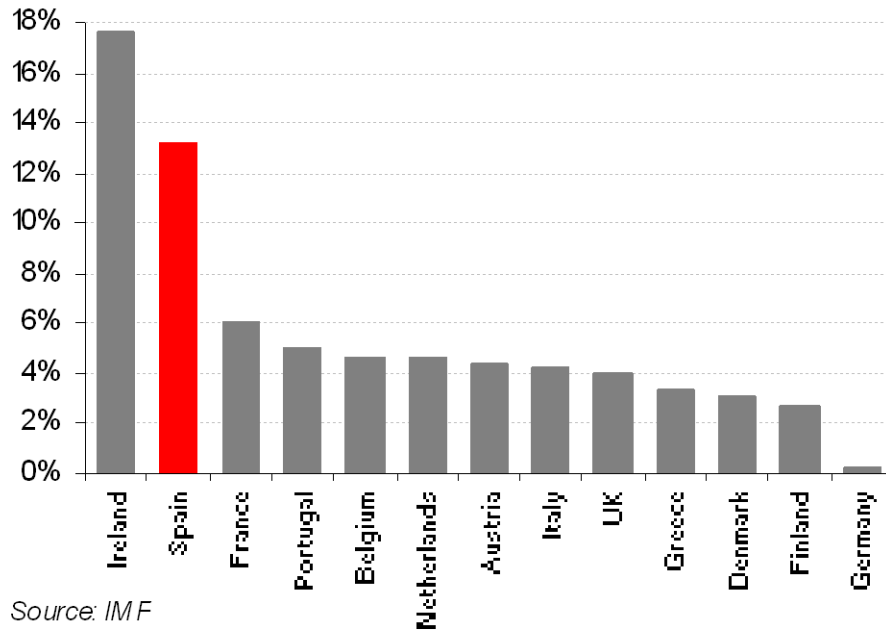
Source: EMF, Hypostat (2007)

# Spain somewhat different

Strong population growth in housing demand ages:

- Baby boom
- Immigration:
  - Working
  - “North birds”

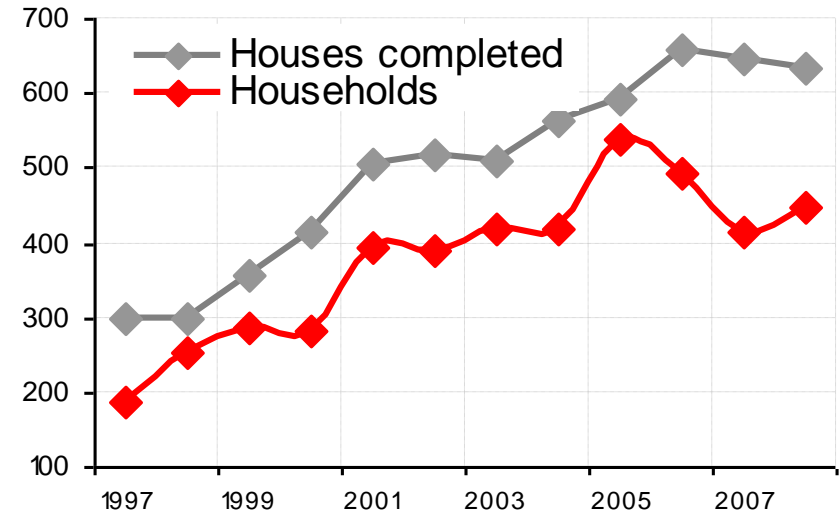
## Population growth, 1998-2007



Source: IMF

## Households and housing

(yoy net increase)



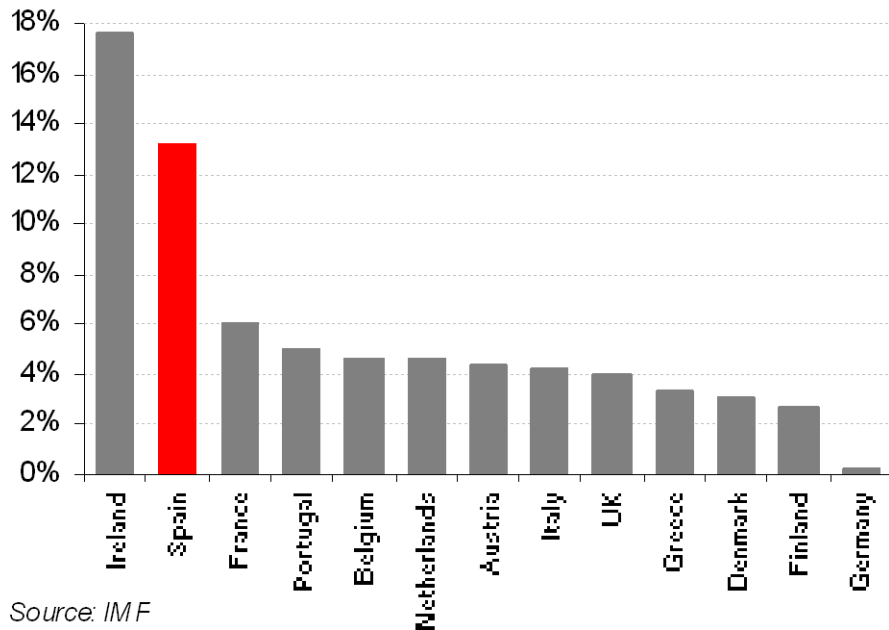
Source: INE and Ministry of Public Works, may 2009

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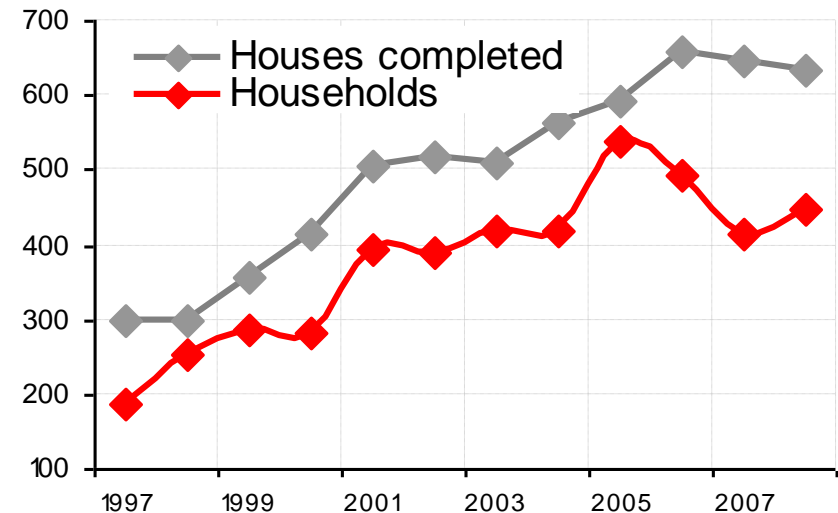
## Population growth, 1998-2007



Source: IMF

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Source: INE and Ministry of Public Works, may 2009

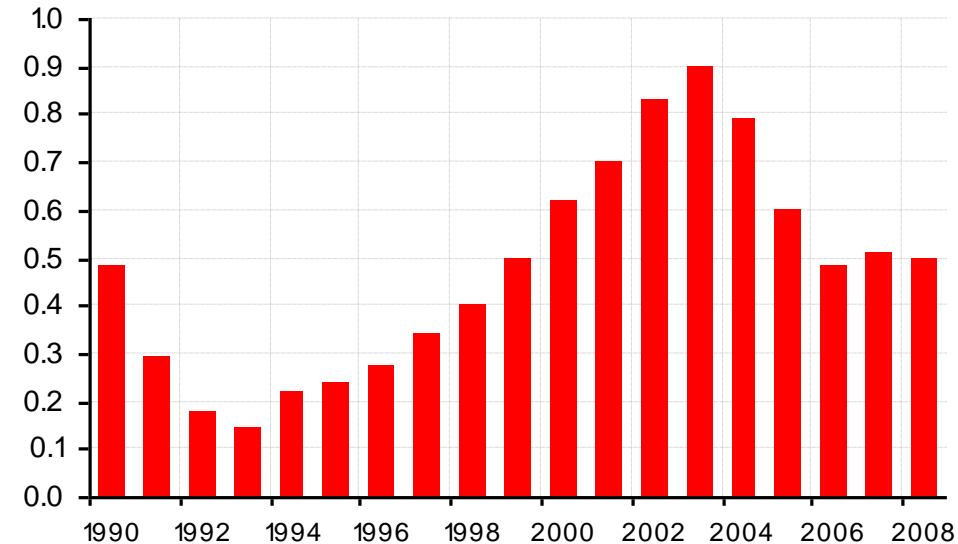
# Spain somewhat different

## Spain as the European Florida:

- Different demand factors / different cycles
- Short term outlook negative (housing prices, sterling pound)

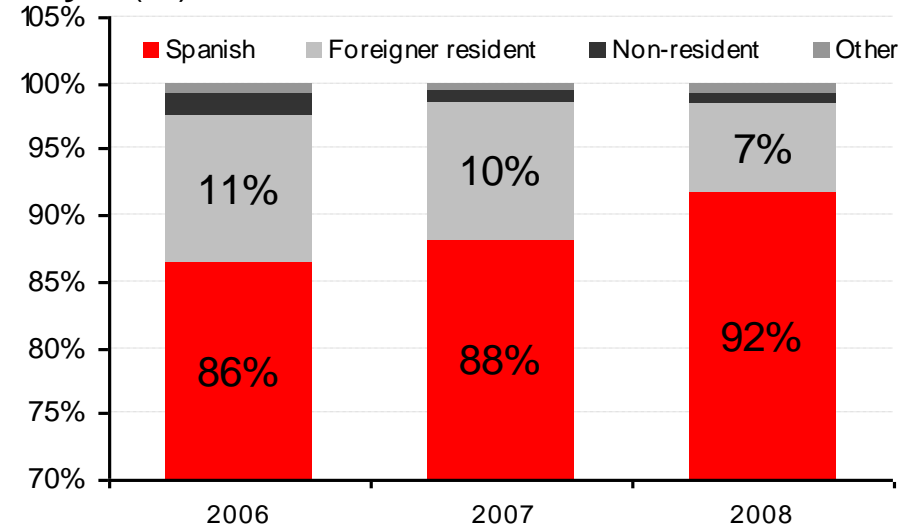
### Foreign Investment in Real Estate

(% of GDP)



Source: Bank of Spain, may 2009

### Housing sales: by residence of the buyer (%)



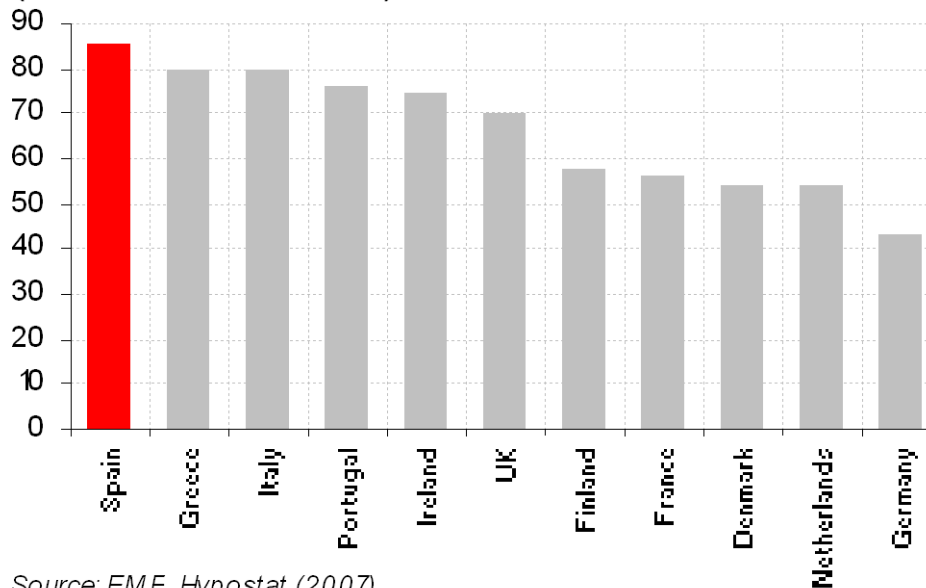
Source: Ministry of Housing, may 2009

# Spain somewhat different

## Proprietors

- Low rental market development
  - Legal aspects
  - Taxation
- 1 out of 5 households has at least 2 houses.

**Owner Occupation rate, %**  
(latest data available)



Source: EMF, Hypostat (2007)

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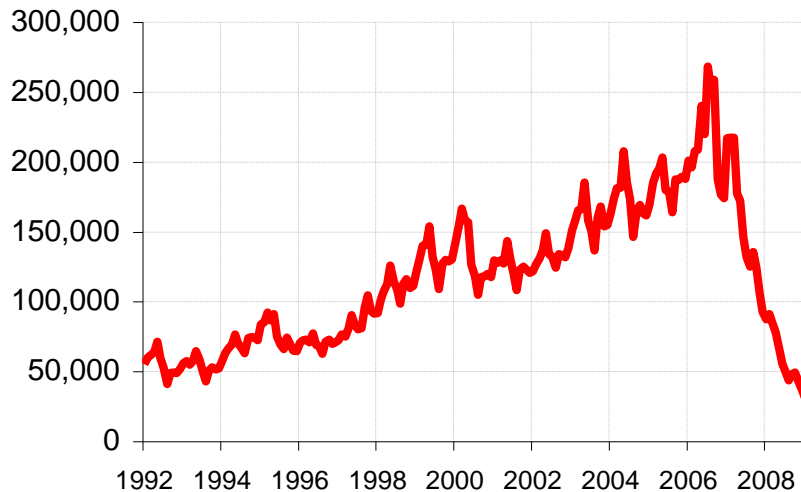
# Spain: larger adjustment

## Oversupply

- There are about 700 thousand new built unsold houses.
- Secondary market add more houses to oversupply.

### Housing permits

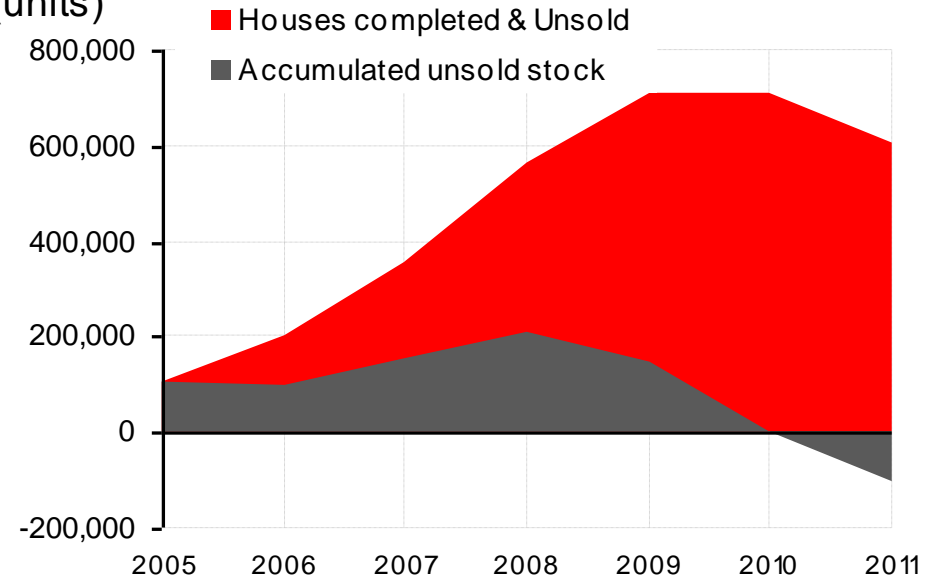
(units, 3month accumulated)



Source: Ministry of Public Works, December 2008

### Spain: New built unsold housing stock

(units)



Source: Santander Economic Research, may 2009



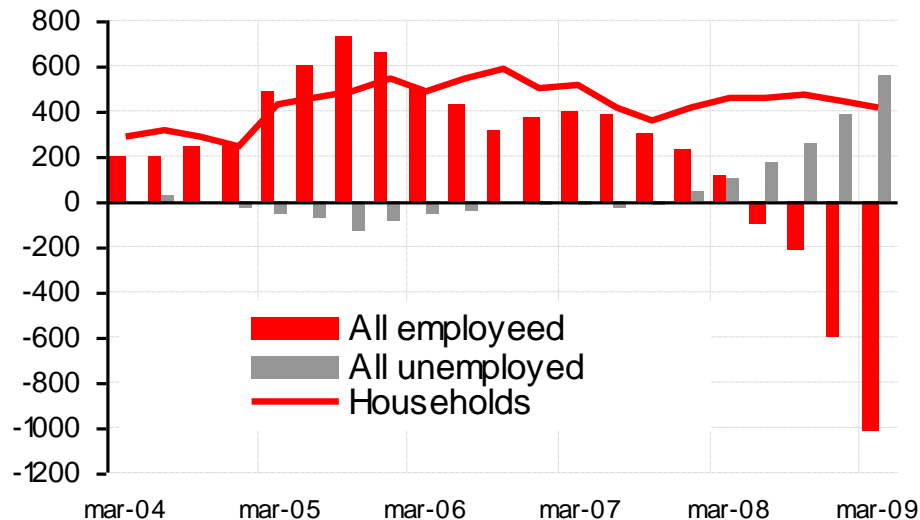
# Spain: larger adjustment

## Strong mid-term demand, weak in the short term

- According to IMF estimation it would be between two and three years of “demographic demand”
- However, “Economic demand” is lower.
- It is important to bear in mind Spanish dual market.

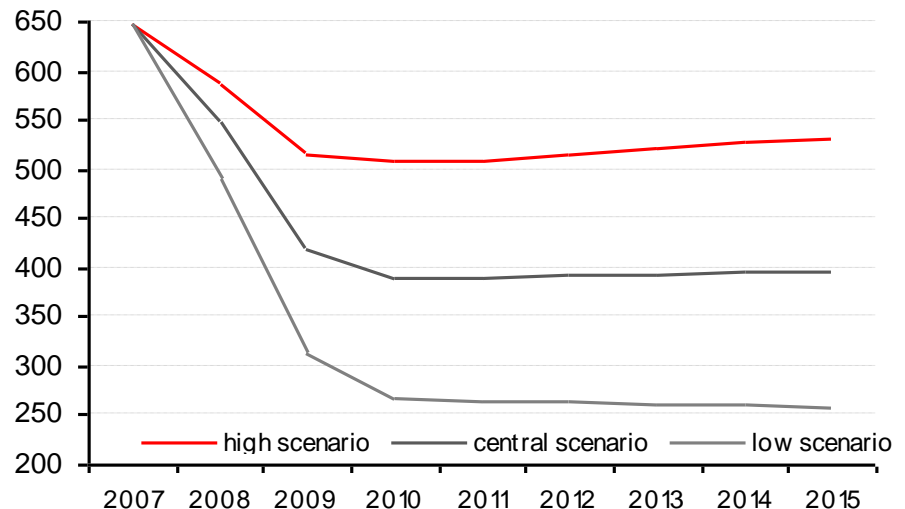
### Households

(net growth last 12 month)



Source: INE, may 2009

### Demographic Housing Needs, 2007-2015 (thousands)



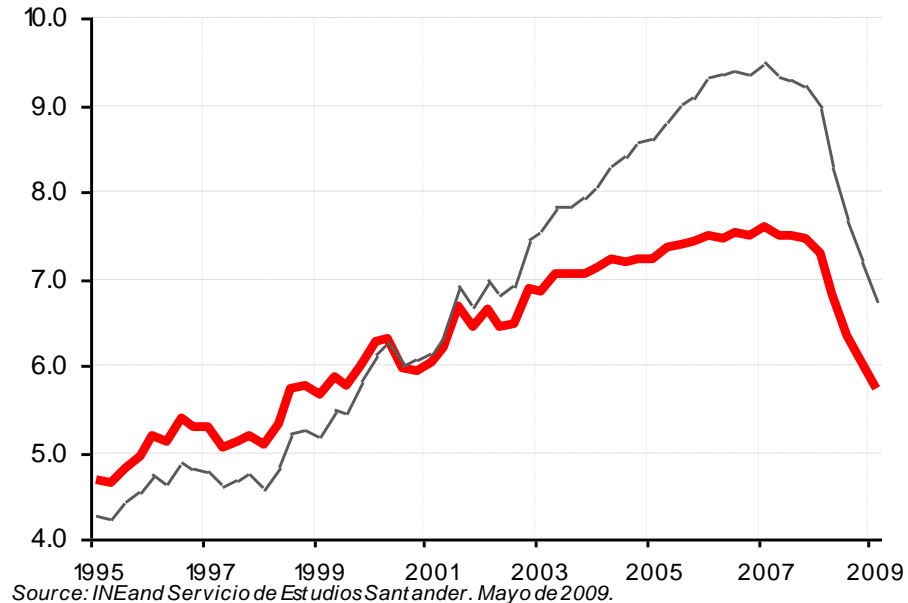
Source: IMF, "Spain: Selected Issues", april 2009 Cuntry Report No. 09/ 129

# Spain: larger adjustment

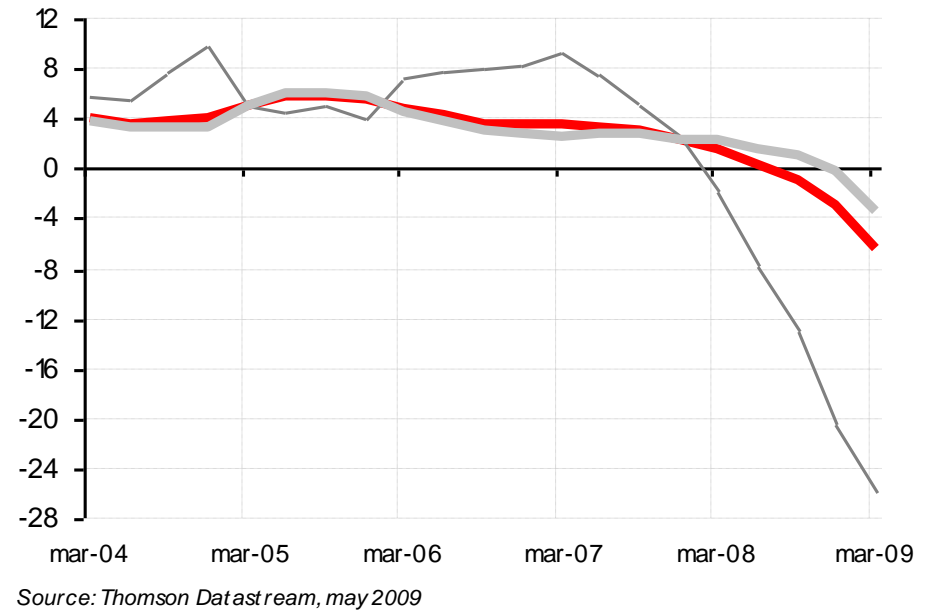
## The impact in the economy didn't help

- Economy dependency on the housing market generates a vicious cycle.
- New growth sources are needed to break it.

**Spain: housing invest**  
(% of GDP)



**Spain: Workers**  
(% yoy)

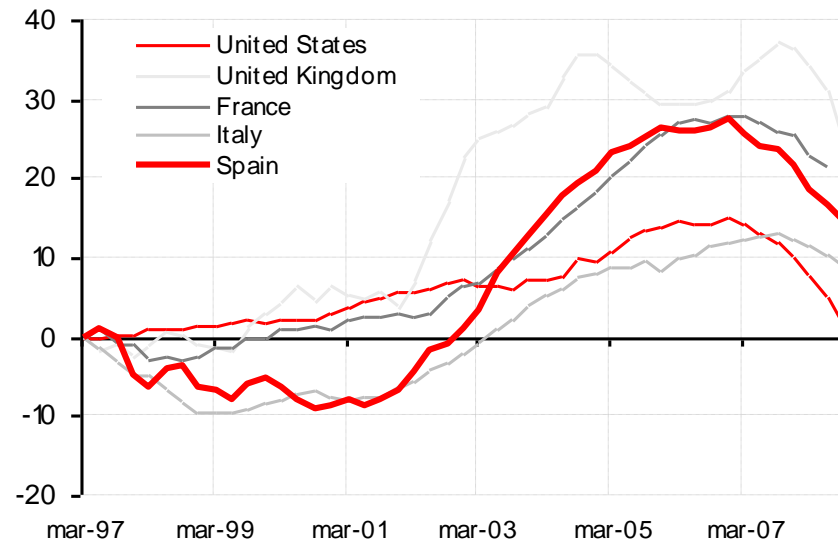


# Spain: larger adjustment

## Pressure on prices for a long time, despite affordability improvement

- Misalignment and affordability ratios point to a moderate correction of prices.
- But oversupply, housing developers imbalances and financial institutions put downward pressures.

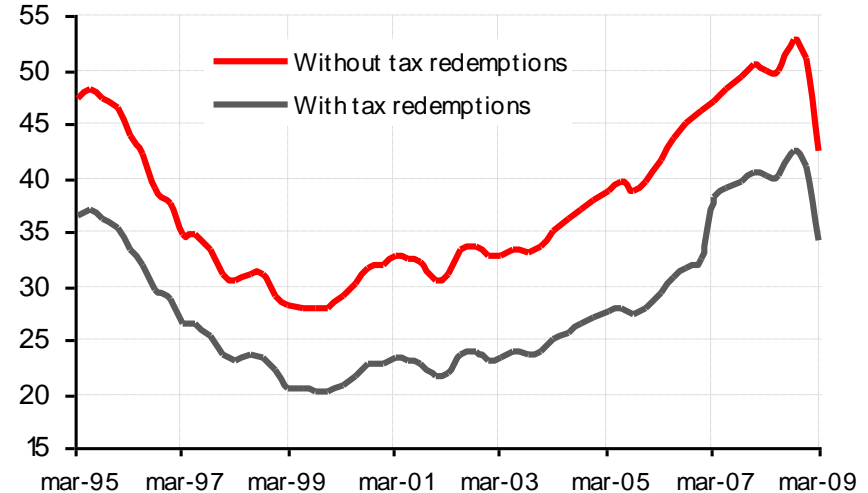
### House Price Misalignments



Source: IMF, may 2009

### Housing affordability ratio

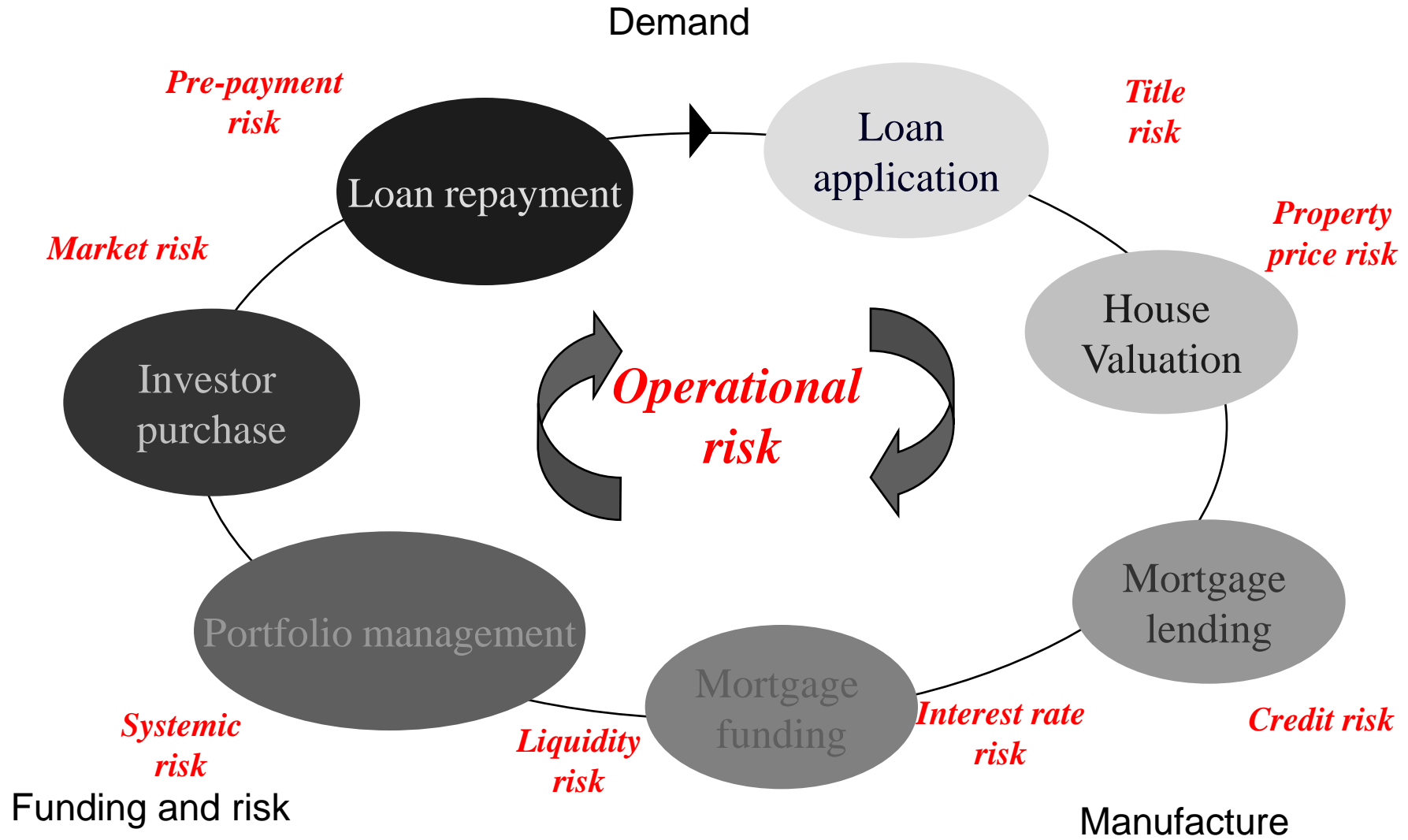
(Theoretical financial effort)



Source: Bank of Spain, may 2009

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# Inherent risks in the mortgage value chain



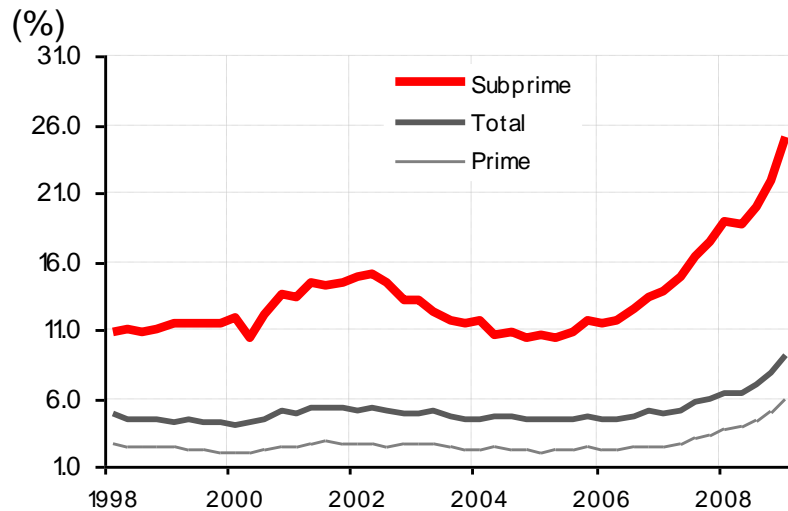
Source: Mercer Oliver Wyman: "Risk and Funding in European Residential Mortgages, April 2005"

# Inherent risks in the mortgage value chain

## Loan application

- Know your client!
- New segments needs new scoring calibration
- Competition and herd behavior risk

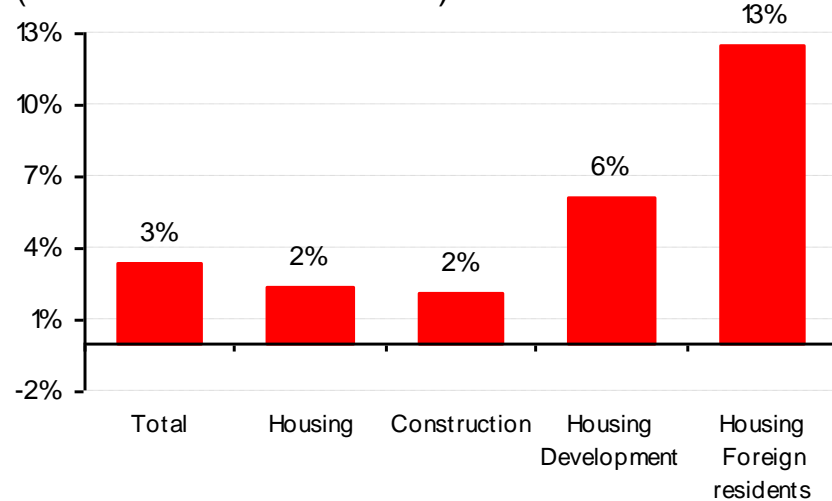
### US: Delinquency rates



Source: Bloomberg, may 2009

### Spain: Non-performing loans

(doubtful loans/total loans)



Source: Bank of Spain, may 2009

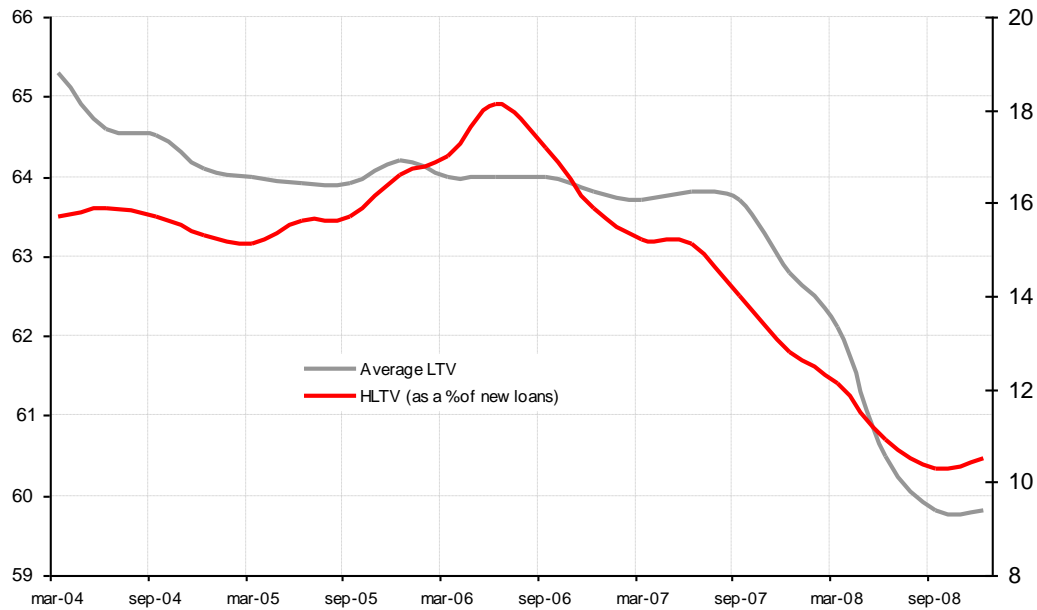
# Inherent risks in the mortgage value chain

House  
Valuation

*Property  
price risk*

- Procyclicality of LTVs
- The procyclicality non-recourse mortgages (not in Spain)

**Loan-to value**  
(loan/house value)



Source: Registry, may 2009

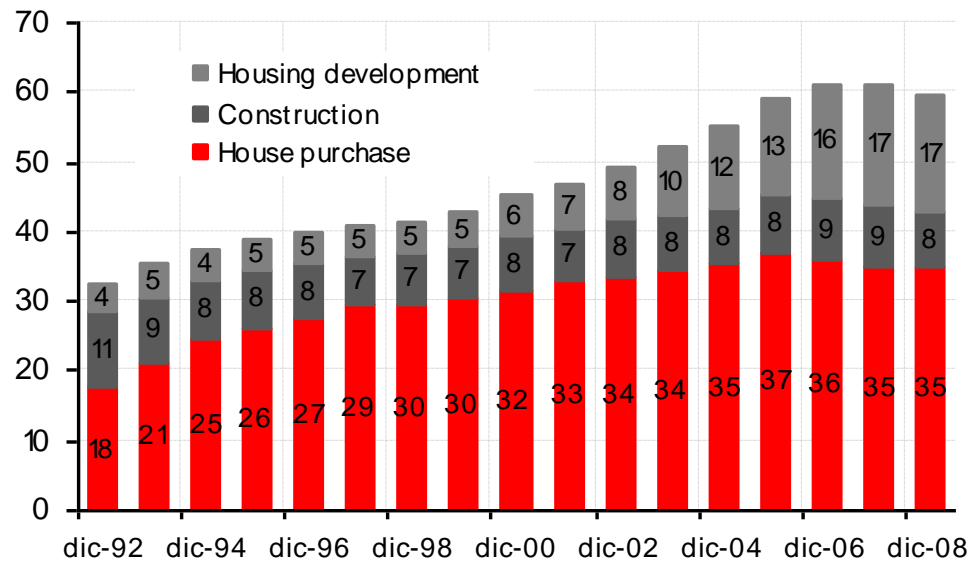
# Inherent risks in the mortgage value chain

Mortgage  
lending

*Credit risk*

- Risk concentration

## Spain: Weight of loans related with the housing market (as a % of total loans)



Source: Bank of Spain, may 2009



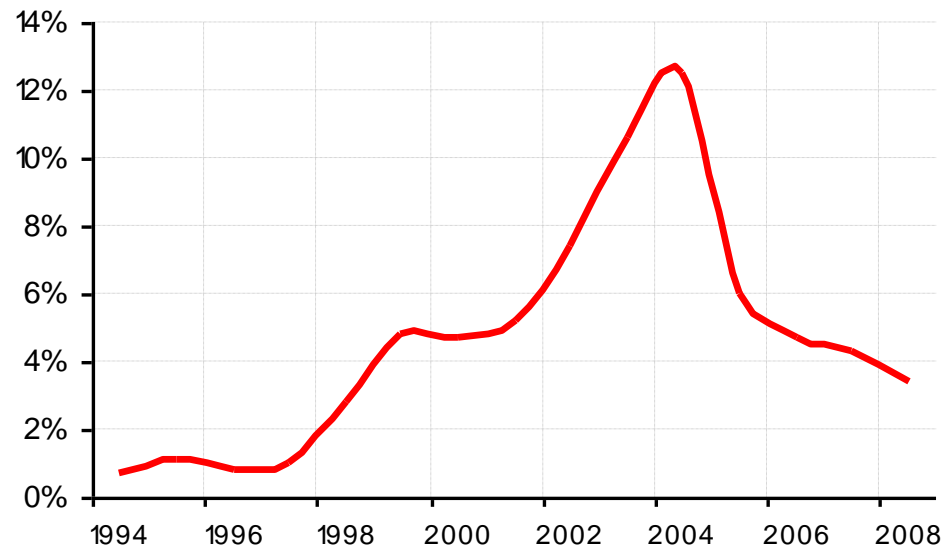
# Inherent risks in the mortgage value chain

Mortgage  
lending

*Credit risk*

- Incentives

## Off-balance mortgages (% of total)



Source: Banko of Spain, may 2009

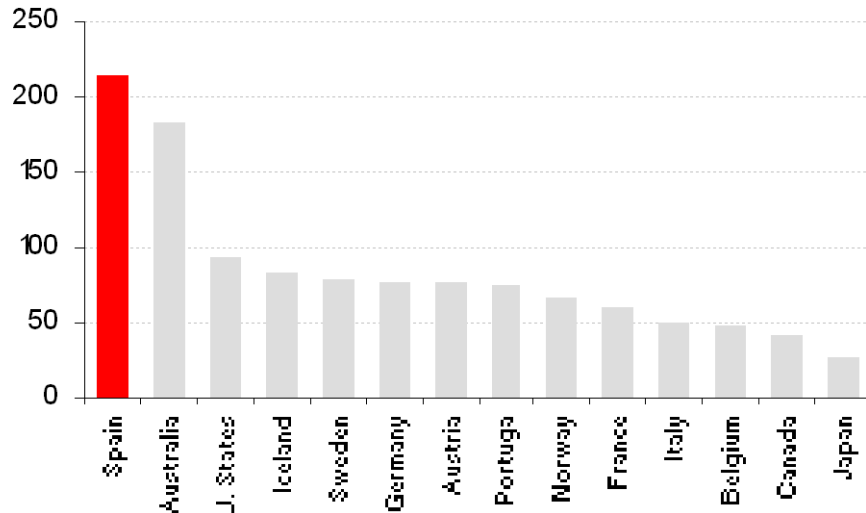
# Inherent risks in the mortgage value chain

Mortgage lending

*Credit risk*

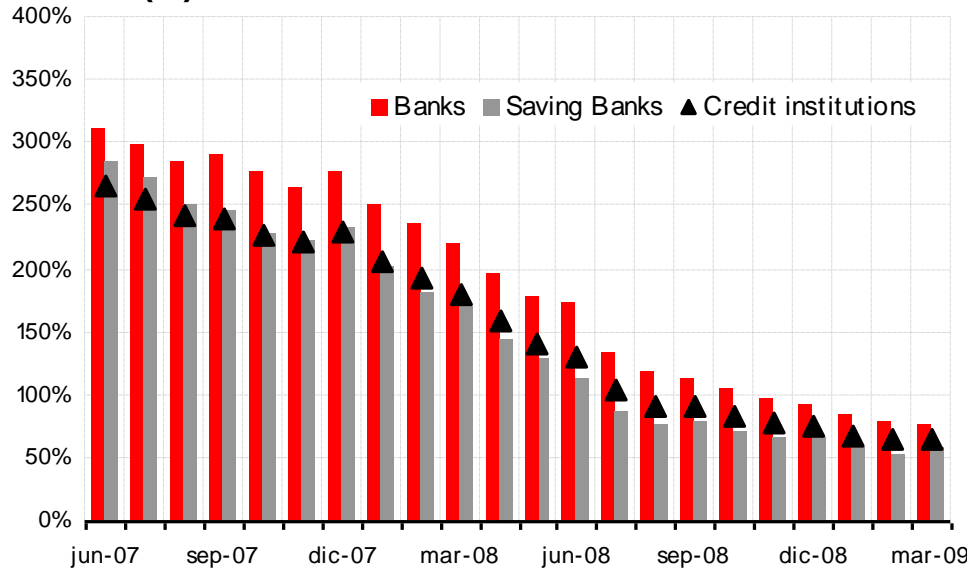
- Counter-cyclical buffers (General provisions)

Bank Provisions to Nonperforming Loans (2007, %)



Source: IMF, Global Financial Stability Report, may 2009

Bank Provisions to Nonperforming Loans (%)



Fuente: Bank of Spain and Santander, may 2009

# Inherent risks in the mortgage value chain

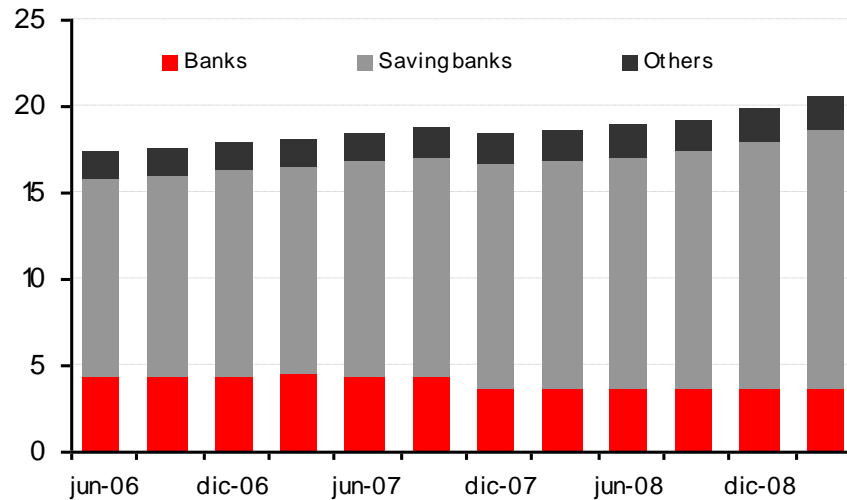
Mortgage  
lending

*Credit risk*

- Recoveries
- Banks as housing developers

## Real Estate assets of Credit Institutions

billions



Source: Bank of Spain, may 2009

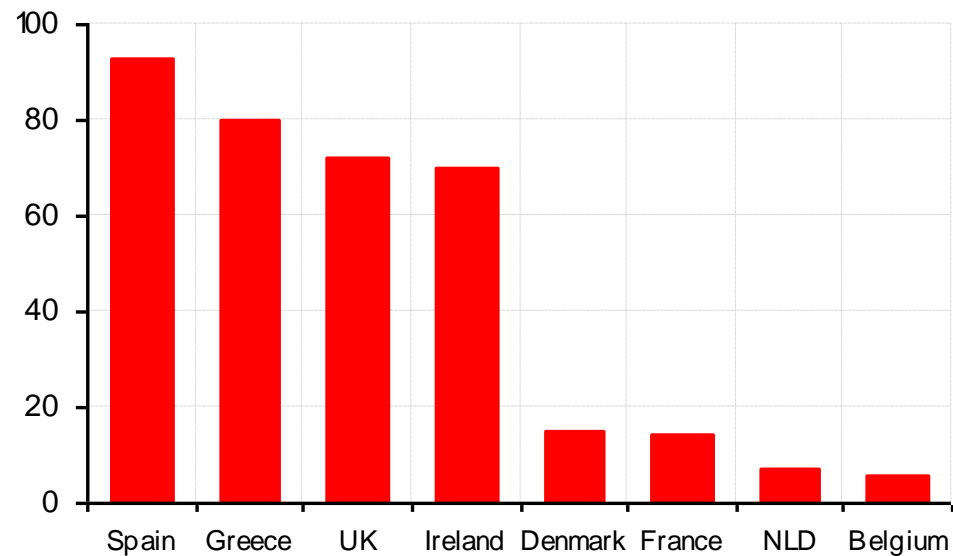
# Inherent risks in the mortgage value chain

Mortgage  
funding

## *Interest rate risk*

- In Spain – interest rate risk lays on clients
- The need to develop fixed-rates mortgages

### Variable rate mortgages (as a % of total)



Source: ECB and AHE, may 2009

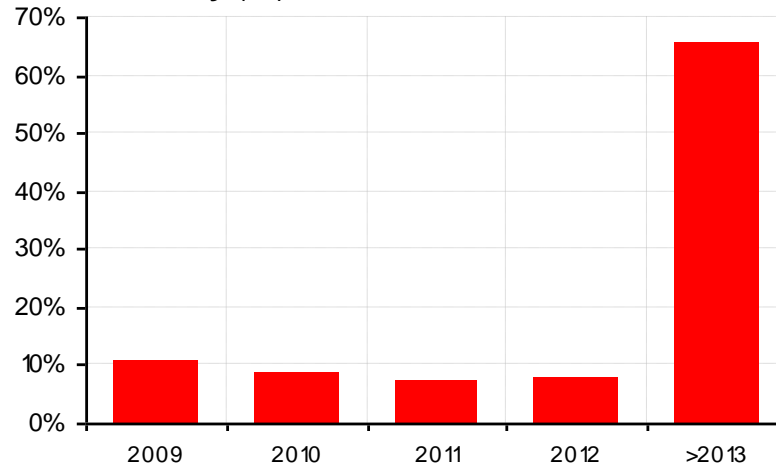
# Inherent risks in the mortgage value chain

Mortgage  
funding

*Liquidity  
risk*

- Diversified funding base
  - Spanish Banks intermediate savings (Deposits vs. Investment Funds)
- Diversified terms structure
- Liquidity regulation? No, liquidity supervision

**Deposit institutions mid and long term debt maturity (%)**



Source: Bank of Spain, Financial Stability Report 05/2008

Portfolio management

*Systemic risk*

- Globalization
- Interconnections
- Counter-part risk

Investor purchase

*Market risk*

- Plain vanilla securitizations and covered bonds
- Transparency
- Low market discrimination

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## 6. Conclusiones

- In Spain, the housing bubble happened in the middle of an structural change.
- However, it will take some years to deal with the current oversupply stock.
- An impulse to a new economic model and a bet on rental market could help
- The current crisis vindicate old known risks. As well as some new ones.



