

Preface

During the recession in years 2008-2009, the most severe for mature economies in the post-war period, housing markets have often been mentioned as having a special responsibility. During this period, housing was associated either with disruptions in the financial sector - which were triggered by crisis of the US subprime mortgage market -, or sharp shifts in the demand previously addressed to the construction sector, with effects on overall activity, or downward corrections in house prices, negatively affecting households' wealth.

From the European point of view, a central issue is to investigate whether these dynamics are country-specific or share common patterns across countries. For the conduct of the single monetary policy it is important to assess to what extent housing markets in the euro area have become more homogeneous. Another policy relevant question is to assess whether shocks in the housing sector may jeopardise financial stability.

The objective of this book is to shed light on the cyclical behaviour of the housing markets, its fundamental determinants in terms of supply and demand characteristics, and its relationship with the overall business cycle. The comovements of house prices across countries are also considered, as well as the channel of transmission of house price changes to the rest of the economy. Particular attention is paid to the effects on private consumption, through possible wealth effects.

The contributions focus on developments in the four largest countries in the euro area on the basis of a collection of research papers written by economists from Deutsche Bundesbank, Banque de France, Banca d'Italia and Banco de España. It also includes an introductory lecture by Matteo Iacoviello (Federal Reserve Board and Boston College, United States), who discussed the analytical merits and challenges of incorporating a housing sector in macroeconomic models, especially Dynamic Stochastic General Equilibrium models.

The conclusion of the book is that housing market cycles are still relatively heterogeneous across euro area countries, even though there is some evidence pointing towards convergence since the creation of the Economic and Monetary Union. On the other hand, housing markets may give rise to significant macroeconomic shocks, as the current crisis has shown, therefore calling for a regular monitoring of housing developments.

After reviewing the main reasons why the macroeconomics of housing markets represents a relevant research area, the papers collected in this volume will be briefly summarised. It should be noted that all the articles in the book express the opinions of the authors and do not necessarily reflect the positions of Deutsche Bundesbank, Banque de France, Banca d'Italia or Banco de España.

1 Housing markets in Europe as a relevant topic of economic research

The developments in housing markets influence business cycles, play a key role in the transmission of monetary impulses to the real economy and, under unfavourable circumstances, may even affect the stability of the financial system. This is due to a variety of reasons.

First, housing takes a relatively significant share in economic activity and, thus, shocks that originate in the housing sector can have a marked effect on the other macroeconomic variables. Residential investment and consumption of housing services (mostly effective and imputed rents) account for a share between 13 and 19 per cent of GDP in the four largest countries of the euro area, whereas real property assets represent more than 50 per cent of households' total gross wealth in these economies (see table 1). This is comparable to the figures found for the United States regarding the share of housing in households' total wealth (see Iacoviello, 2010, this volume).

Table 1 Size of housing markets

	Germany	France	Italy	Spain
Housing consumption and investment as a share of GDP (in%)	19	15	13	16
Housing wealth (including land) as a share of total household's gross wealth (in % of GDP)	52 (198)	63 (337)	51 (298)	89 (557)
Credit to households for housing / GDP (in%) (households' debt/GDPin%)	42 (61)	37 (51)	21 (40)	60 (84)

Source: National accounts for 2008, Monetary statistics from National Central banks

Second, purchasing a housing unit is the main motivation for entering into a debt contract by households and, accordingly, housing wealth backs a large share of banking loans. Credit for housing represents 21 percent of GDP in Italy and 60 percent in Spain, while France and Germany are in intermediate positions. To some extent, these differences reflect cross-country divergences in the share of owner-occupied housing, more developed in Spain and Italy than Germany and France.

Third, given the length of the housing construction process, mismatches between

supply and demand can be protracted, initiating swings in house prices which may feed on themselves and delay a change of direction. Thus, the housing market is prone to episodes of overvaluation which may have significant effects across the economy since it may transmit to the construction sector - as they affect firms' expected profitability - as well as to other industries, via changes in the ability to access credit markets, and to households, leading to wealth effects on consumption. One should therefore acknowledge, following Leamer (2007), that the macroeconomic contribution of residential construction to the business cycle may go beyond its long term share in GDP, since shocks affecting housing markets may be of large amplitude at particular points in time.¹ Leamer (2007) indeed shows that all recessions in the United States apart from the one in 2003 were preceded by a crisis in the residential construction market.

These features may explain why housing developments also have significant macrofinancial implications. Indeed historical experience shows that many financial crises in the past originated or were exacerbated by housing-related factors. In particular, in the last decade housing markets seem to have played a substantive role in building up global macroeconomic imbalances, the US subprime crisis being the most outstanding example.

Focusing on developments in the euro area, residential investment and house prices moved differently in the member states during the crisis. The degree of integration, although partly increasing since the start of Economic and Monetary Union in 1999, is still relatively modest among housing markets. This evidence, which is also one of the main conclusions drawn from the bulk of investigations collected in this volume, gives rise to a number of questions, which are both analytically challenging and relevant from a policy perspective. Among these questions are the following ones. Is the present diversity in national housing markets related to differences in institutional settings, the habits of consumers and investors and other characteristics? Which are the built-in forces of a monetary union which could balance out differences in housing markets and how can these be strengthened? How can the setting and conduct of economic policies as well as financial market regulation and supervision be designed to avoid, or at least counteract, the emergence of boom and bust cycles in real estate sectors? How can monitoring of housing market developments be improved? What lessons can be drawn from the recent crisis? These few and rather selective issues alone constitute a very ambitious research agenda.

Although only tentative conclusions can be drawn from the broad spectrum of results presented in the book, one conclusion is that the convergence of residential markets within the euro area has been hampered by a mixture of factors. First, national idiosyncrasies are still of prevalent importance in housing markets, given the relevance of factors such as taxation, social housing, legislation or land restrictions. Second, the fundamentals of housing demand - for example, demographics - have evolved quite distinctly across countries. Third, real interest rate differentials, while declining somewhat, were still characterised by a high degree of persistence,

¹ Leamer, E. E. (2007), Housing, housing finance, and monetary policy, Federal Reserve Bank of Kansas City, *Presentation to Symposium organized in Jackson Hole*, August 30 - September 1, 2007.

lengthening the asymmetric impact of real financing costs on housing demand and residential investment.

The experience of the previous cycle illustrates that the regular and close monitoring of housing market trends is essential for economic policy. This requires data of high quality and cross-country comparability. The statistical measurement of housing market activity is comprehensive given that national accounts provide harmonised quarterly data on residential investment and a number of monthly indicators (e.g. building permits) are available as supplementary information, although some pieces of information, such as the stock of unsold houses, is currently lacking. The financial side of residential activity is also well documented; for instance, in the harmonised MFI statistics of lending rates and loans as well as in financial accounts. However, the statistical basis is weaker regarding the measurement of housing wealth (including the land underlying dwellings). Despite some improvements, the monitoring of house price developments in the euro area still suffers from marked information gaps, in the residential and, even more so, commercial sector. Further progress might be envisaged in terms of representativeness, consistency and timeliness of indicators.

In the euro area, the mandate of monetary policy is to maintain price stability in a broad sense, suggesting that house price developments are addressed only insofar as they imply a risk to overall inflation or inflation expectations. Fiscal policy, however, might be more effective in counteracting unsustainable trends in national housing markets because a number of instruments are at the disposal of national or even regional authorities, such as real estate taxation, stamp duties or tax allowances for homebuyers. Other economic policy areas are also fundamental, such as the legislation concerning renting. The conduct of banking and financial market supervision might also be used to avoid excessive risk-taking by financial intermediaries, or even households, as the recent crisis in the subprime mortgage market has shown.

We now survey in detail the main findings of the various parts of the book:

- the measurement of housing cycles;
- the determinants of housing cycles;
- the impact of wealth effects;
- the conclusions for economic policy and financial stability.

2 Is housing a leading indicator of the business cycle?

In his introductory lecture, Matteo Iacoviello (Federal Reserve Board and Boston College) stresses the extent to which housing has often been underestimated in economic research, while, in the United States for example, it accounts for half of the total capital stock, outstanding housing debt is comparable to that of public debt and house price volatility is at least twice as high as that of inflation. According to Iacoviello, on the basis of evidence from Dynamic Stochastic General Equilibrium models (DSGE), the rise in house prices, due above all to weak technological

progress in construction, contributed significantly in the United States to private consumption growth in the first half of the years 2000s. It is therefore important to better analyse the formation of house prices, whose fluctuations show a relatively higher degree of inertia than on financial markets, by more efficiently incorporating expectations, the confidence of market participants and other financial factors (wealth effects, credit standards and banks' credit supply capacity).

The papers presented in Part II of the book then examine the links between housing cycles and general economic activity in certain countries. In line with US evidence, Laurent Ferrara and Olivier Vigna (Banque de France) and Luis J. Álvarez and Alberto Cabrero (Banco de España) find that housing market cycles in France and Spain tend to be a leading indicator of the business cycle, in contrast with the evidence by Guido Bulligan (Banca d'Italia) for Italy. Furthermore, in France, there tends to be downward price rigidity, which explains why house prices fell less sharply than in other countries and, in Spain, there are interesting asymmetries in cyclical fluctuations: contractions in GDP and housing tend to be briefer than expansions.

However, it is essential to analyse housing market developments at the international level. In the four major euro area countries, GDP cycles show a high degree of comovement, most likely due to trade linkages. In contrast, housing market cycles - in which country-specific or local variables, such as land availability or regulation play a major role - show substantially weaker comovements across countries, according to a study conducted jointly by Luis J. Álvarez (Banco de España), Guido Bulligan (Banca d'Italia), Alberto Cabrero (Banco de España), Laurent Ferrara (Banque de France) and Harald Stahl (Deutsche Bundesbank).

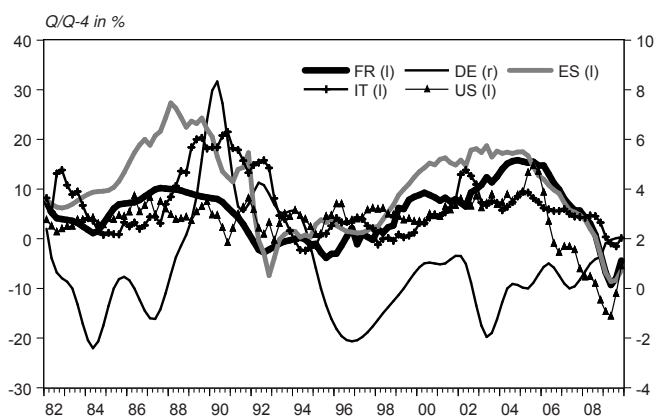


Fig. 1 Nominal house prices in the four largest euro area countries and United States

These findings have been corroborated by Laurent Ferrara (Banque de France) and Siem Jan Koopman (VU University Amsterdam), who show that, for Spain, the dependence between the housing market and economic activity is stronger than elsewhere. Housing cycles appear to be correlated in France and Spain, while the German market exhibit a different cycle. Extending the analysis to OECD countries, Olivier de Bandt (Banque de France), Karim Barhoumi (Banque de France) and Catherine Bruneau (University of Paris-Ouest and Banque de France) highlight the existence of various channels of transmission of house price shocks, either direct (between housing markets, with a particular role for those originating in the United States), or indirect via other macroeconomic variables (see Fig. 1).

3 What drives housing cycles?

Part III focuses more closely on the structural determinants of the housing market and their impact on the economy. Rémy Lecat and Pamfili Antipa (Banque de France) present a model showing that, in both France and Spain, residential property prices in 2007 were clearly above the level explained by their fundamentals (households' disposable income, housing stock, interest rates, etc.). Nevertheless, this overvaluation is greatly reduced when taking into account other indicators measuring changes in financial and demographic factors. The paper by Thomas Knetsch (Deutsche Bundesbank) shows that housing market developments in Germany have been influenced by the economic consequences of German reunification for the last two decades. For a number of reasons, this event seems to have triggered a pronounced cycle in dwellings construction, exceeding previous fluctuations in duration and magnitude. In addition, there is evidence that, on the German housing market, the forces to equilibrium correction have been weakened since 1991, as the speed of adjustment in housing supply via residential investment slowed down significantly and house prices became virtually irresponsive. In a complementary study, Tobias Duemmler and Stephan Kienle (Deutsche Bundesbank) focus on the financial conditions for residential investment. Their paper shows that, in Germany, the demand for housing is significantly affected by the real user cost. Moreover, net financial wealth seems to have an impact, too, stressing the role of collaterals for bank lending in the context of imperfect information.

For Italy, Filippo Scoccianti (Banca d'Italia) investigates the joint effects of low real interest rates and the reduction in downpayment requirements: his research concludes that the easing of financing conditions is beneficial to households managing to access home-ownership in that it enables them to absorb the negative impact, for their property affordability, of the rise in house prices. In contrast, middle-aged home owners, who also hold financial assets, gain on their financial wealth but lose from lower interest rates paid on their financial savings.

4 Wealth effects from housing

In order to assess the links between housing, access to credit and household consumption, and the evidence gathered in the book on possible "wealth effects" on consumption (i. e. to what extent consumption responds to variations in households' wealth), it is useful to refer to the work of John Muellbauer (2009). In his view, house price increases trigger a decrease in the demand for housing, because past price rises end up pricing out an increasing number of first-time potential buyers, and constrained spending on current dwellings (rental or ownership) is higher than before. This drives down private consumption and ultimately aggregate growth.² However, for a given country, the final impact of an increase in house prices depends, on the one hand, on the owner-tenant ratio and, on the other hand, on the structure of the financial system, in particular the supply of credit. In a country with a strong rate of growth of bank credit, whose amount depends on the value of property financed or mortgaged as collateral, an increase in house prices may increase the present value of collateral, hence partially counteracting, and even sometimes reverting, the initial negative effect on consumption.

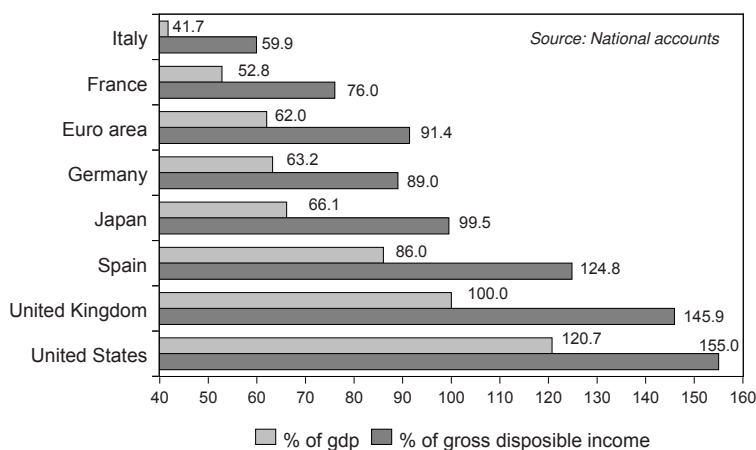


Fig. 2 Households' debt ratios, fourth quarter of 2009

In the book, the measurement of wealth effects was more particularly investigated for three countries: in France (Valérie Chauvin and Olivier Damette, Banque de France), in Italy (Antonio Bassanetti and Francesco Zollino, Banca d'Italia) and in

² Muellbauer, J. (2009), Housing, Credit and Consumer Spending, *Presentation to the Conference organized in Paris on "The Macroeconomics of Housing Markets"*, Dec. 3-4 2009.

Spain (Teresa Sastre and José Luis Fernández, Banco de España). Levels of household debt vary considerably across countries (see Fig. 2).

These three studies reach a number of common conclusions based on an equilibrium relationship which appears to exist at the macroeconomic level between housing wealth, financial wealth, the purchasing power of income and private consumption. According to these estimates (see Table 2), a one euro increase in financial wealth implies an increase in consumption around 4.5 cts in France and Italy, and 9.7 cts in Spain. The equivalent figures for an increase in housing wealth is less than 2 cts in Italy and Spain and in the range of 2.7-4.3 cts in France. Comparative evidence for Germany for total wealth, as found in Hamburg (2008), indicates that the impact seems to be slightly higher than in France and Italy.³ Apart from these differences, the estimates of wealth effects available for the major continental European countries share the feature that, in general, they are below the estimates usually found in the United States and the United Kingdom,⁴ although one should acknowledge the existence of measurement issues, as stressed in the economic literature. It remains that wealth effects, in particular from real property, are small but non negligible in the euro area.

A certain number of caveats should, however, be kept in mind. First, wealth effects only materialise as soon as households perceive the rise in housing wealth to be permanent. Second, one needs to identify the source of shocks : over the last few years, consumption behaviour has mainly reflected expectations of financial asset prices, for the United States, and income expectations, in the cases of France, Italy and Spain.

Table 2 Increase in Total Consumption (cents), after a one euro increase in households' wealth

	Germany	France	Italy	Spain
Total wealth	4-5	0.4-1.7	2.6	-
Financial wealth	-	4.4-4.5	4-6	9.7
Housing wealth	-	2.7-4.3	1.5-2	1.1

Sources: Basanetti and Zollino (2010, this volume) for Italy; Damette and Chauvin (2010, this volume) for France (non durable consumption); Sastre and Fernandez (2010, this volume) for Spain; Hamburg et al. (2008) for Germany

Supplementing this macroeconomic analysis with a microeconomic study, Luc Arrondel and Frédérique Savignac (Banque de France) analyse households' trade-off between housing wealth and financial wealth. Indeed, households not wishing to take excessive risk favour at times housing assets and at times equities. Preferences may vary across countries. In particular, the fact that the share of financial assets in

³ Hambourg, B., M. Hofmann, M. and J. Keller (2008), Consumption, Wealth and Business Cycles, *Empirical Economics*, 34,3, 451-476.

⁴ For the USA, see the paper by S. Dubecq and I. Ghattassi (2009), Banque de France, Working Paper, No. 264.

French households' aggregate assets is lower than in other countries, is explained by the greater preference of French households for housing assets.

5 Implications for economic policy and financial stability

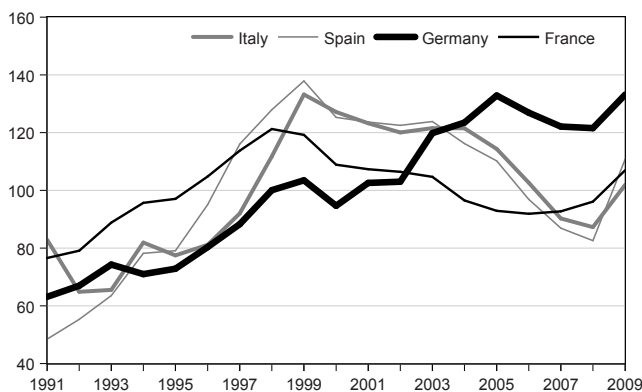
Given that the interrelations between general economic activity, household consumption and changes in housing or financial wealth vary across countries, there is a debate among policymakers about the most suitable economic policy to be implemented in the presence of housing cycles. We distinguish here between fiscal policy and the monitoring of financial stability.

There is a host of evidence that the housing cycle may be affected by fiscal policy. The existence of such a link between government housing subsidies and housing market dynamics is borne out for France by Pamfili Antipa and Christophe Schalck (Banque de France): according to this research, residential investment and the housing cycle in France appear to be sensitive to tax allowances (including tax deductibility).

As regards the risks that housing markets pose for financial stability, Vladimir Borgy, Laurent Clerc and Jean-Paul Renne (Banque de France) put forward a method to identify asset-price or house price bubbles *ex ante*, by isolating in particular the episodes where the bursting of a bubble leads to a marked slowdown in activity. They conclude that this type of situation is found more frequently in cases where bubbles develop in housing markets than in stock markets. Moreover, it is important to analyse the level of real interest rates, credit and investment growth when house price bubbles start to form.

Another indicator used to assess risks to the sustainability of house price developments is the affordability index. Affordability measures the maximum size of housing unit a household can acquire, depending on house prices, but also financial conditions (interest rates and average maturity of loans, which is affected by financial innovation), as well as households' disposable income.

In France, Italy and Spain, after a decrease in affordability until 2007 due to the steady growth of house prices, the index has been improving. In Germany, however, the affordability constraint turns out to have become looser in the last two decades owing to comparatively stable house prices, increasing disposable income and declining interest rates (see Fig. 3).



Source : Authors's own computations.

Fig. 3 Affordability index (average 1991-2009 = 100)

To conclude, the book sheds some light on the various determinants of house prices and the contribution of residential construction to macroeconomic developments. After the run-up in the early part of the years 2000s, house prices in France, Italy and Spain are now slowly converging to a more sustainable path, while the situation in Germany has been characterized by stable prices after the upswing associated with reunification. The key role that the housing sector has played recently, and which has been deeply explored in the book, invites to pay more attention in the future to its performance and to make further progress on different research areas related to that sector.

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Housing Markets in Europe

A Macroeconomic Perspective

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(Eds.)

2010, XIX, 406 p., Hardcover

ISBN: 978-3-642-15339-6