

## Focus

### I. Regulatory changes in the financial sector and the prevention of housing bubbles

*Developments in the housing market and its related financial products have been at the heart of the current financial crisis, prompting a debate on ways to limit excessive credit growth and housing bubbles. Recent developments in lending for house purchases in the euro area evidence a variety of regional profiles — certain markets demonstrated much stronger growth than others in pre-crisis years, on the heels of brimming demand for housing. The single monetary policy appears ill-suited to address the adverse effects of excessive credit growth with a strong regional dimension. In contrast, regulatory and supervisory tools could prove more effective in limiting the occurrence and magnitude of housing price bubbles by keeping banks' leverage in check and by imposing higher standards on bank lending. They could also indirectly help curb the procyclicality of bank lending and mitigate the risks of cross-border spillovers. In this respect, the newly created European Systemic Risk Board (ESRB) will play a pivotal role for the identification of risks to the stability of the financial system as a whole.*

#### 1.1. Introduction

Housing market developments, including its financing, lie at the heart of the recent global financial crisis. House price dynamics associated with the development of new, complex financial products have facilitated the build-up of risks, eventually threatening the very foundation of the banking system. More generally, house price bubbles can be thought of as the excessive movements of prices that cannot be explained on the basis of fundamentals. They tend to occur in cycles covering a variety of asset prices accompanied by ample global liquidity and have potentially serious fallouts for the real economy. Besides factors influencing the supply of mortgage loans, demand for housing loans is determined by a number of factors both structural and market-oriented. <sup>(1)</sup>

Asset price bubbles are difficult to identify in their build-up period. Given their social and economic cost, however, there is an emerging consensus on the need to design policy frameworks that can reduce their occurrence and mitigate their effects. <sup>(2)</sup> There is scope for monetary policy to pay greater attention to financial risk and credit developments, i.e. “lean against the wind”. <sup>(3)</sup> However, monetary

instruments are relatively blunt and best geared to influencing economic activity and inflation rather than addressing particular vulnerabilities in the financial sector. <sup>(4)</sup> This means that additional policy instruments are required to tackle excessive credit and asset price bubbles. The issue is particularly crucial for the euro area, where monetary instruments are not targeted at the needs of individual Member States and in particular at possible regional asset price bubbles.

To that end, the EU is equipping itself with a range of instruments. Macroeconomic surveillance will be expanded beyond fiscal policy to include an Excessive Imbalance Procedure to addressing macroeconomic imbalances at an early stage. <sup>(5)</sup> Regarding the financial sector, the European Systemic Risk Board will be charged with macro-prudential oversight and issue warnings and policy recommendations to address systemic risks.

Against this background, the present focus section looks at the role that regulatory and supervisory tools may play in preventing excessive credit growth and housing bubbles. The overarching goal of prudential measures is to improve the resilience of the financial system by ensuring that banks' risk management practices are not a source of systemic risk. As shown in the recent past, house price bubbles can form a vicious circle

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<sup>(1)</sup> These determinants include long-term structural demographic developments, income, supply-side housing construction, consumer and investor preferences, the price of substitutes, fiscal regimes, developments in rental markets, as well as the availability of funding.

<sup>(2)</sup> See for instance IMF (2010), 'Rethinking macroeconomic policy', *IMF Staff Position Note* (February).

<sup>(3)</sup> See for instance ECB (2010), 'Asset price bubbles and monetary policy revisited', *Monthly Bulletin* (November).

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<sup>(4)</sup> IMF (2010), 'Central banking lessons from the crisis', *IMF Policy Paper* (May).

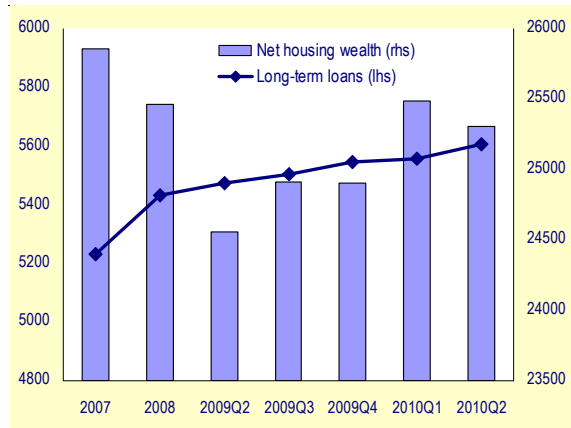
<sup>(5)</sup> European Commission (2010), 'Proposal for a regulation of the European Parliament and of the Council on the prevention and correction of macroeconomic imbalance', COM(2010) 527 Final, 29.09.2010.

leading to inadequate risk management, distorting liquidity and funding management, and resulting in excessive credit growth, with potentially inflationary pressures. In this context, prudential measures could send clear signals to direct banks' behaviour and influence market incentives towards moderating balance sheet expansion, thereby ultimately containing imbalances and the potential cost of cyclical downturns. As prudential regulation is by definition pre-emptive, it could help avoid vulnerabilities at an early stage, and target regional or institution-specific risks. With banks playing a dominant role in the euro area, constraining banking credit via prudential tools could materially contribute to the moderation of regional asset price increases, thereby helping to limit the pro-cyclicality of the financial sector.

**I.2. Credit cycles and housing bubbles in the euro area**

Several episodes of asset price bubbles can be identified (ex post) in the euro area. On key consequence of bursting bubbles is a fall in households' net housing wealth, as occurred during the recent financial crisis (Graph I.1).

**Graph I.1: Housing loans and housing wealth, euro-area households (2007-2010Q2, end of period stocks, EUR bn)**



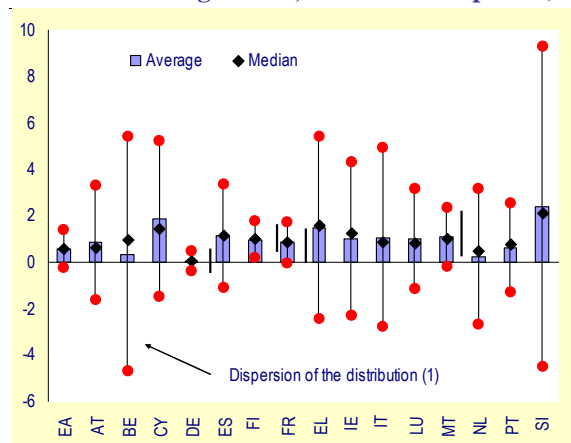
Source: ECB, Commission services.

Euro-area countries display divergent and segmented housing and mortgage markets, reflecting regional specificities in terms of market size, competition, developments in rental markets, legal, taxation and regulatory frameworks, as well as financing conditions. Data on loans to households for house purchases provide some evidence of episodes of excessive credit growth and asset price bubbles in pre-crisis years in some

parts of the euro area. (6) In some Member States, markets experienced buoyant developments — in Ireland, Greece, and Spain; to a lesser extent in Italy and Luxembourg (see Graph I.3 and I.4). In other Member States, credit growth was more modest — Germany, Austria, Finland and Portugal. Some of the Member states that have recently adopted the euro have shown very sharp fluctuations in credit in recent years.

Differences in national credit market developments suggest that regional bubbles with specific profiles can emerge and develop independently of the single monetary policy (Graph I.2).

**Graph I.2: Growth in mortgage loans, euro-area countries (average, median and dispersion of m-o-m changes in %, Jan 2002 to Sep 2010)**



(1) Average +/- 2 times the standard deviation.

Source: ECB, Commission services.

**I.3. Distortions created by asset price bubbles and excessive credit growth**

**Distortions in the assessment of risks**

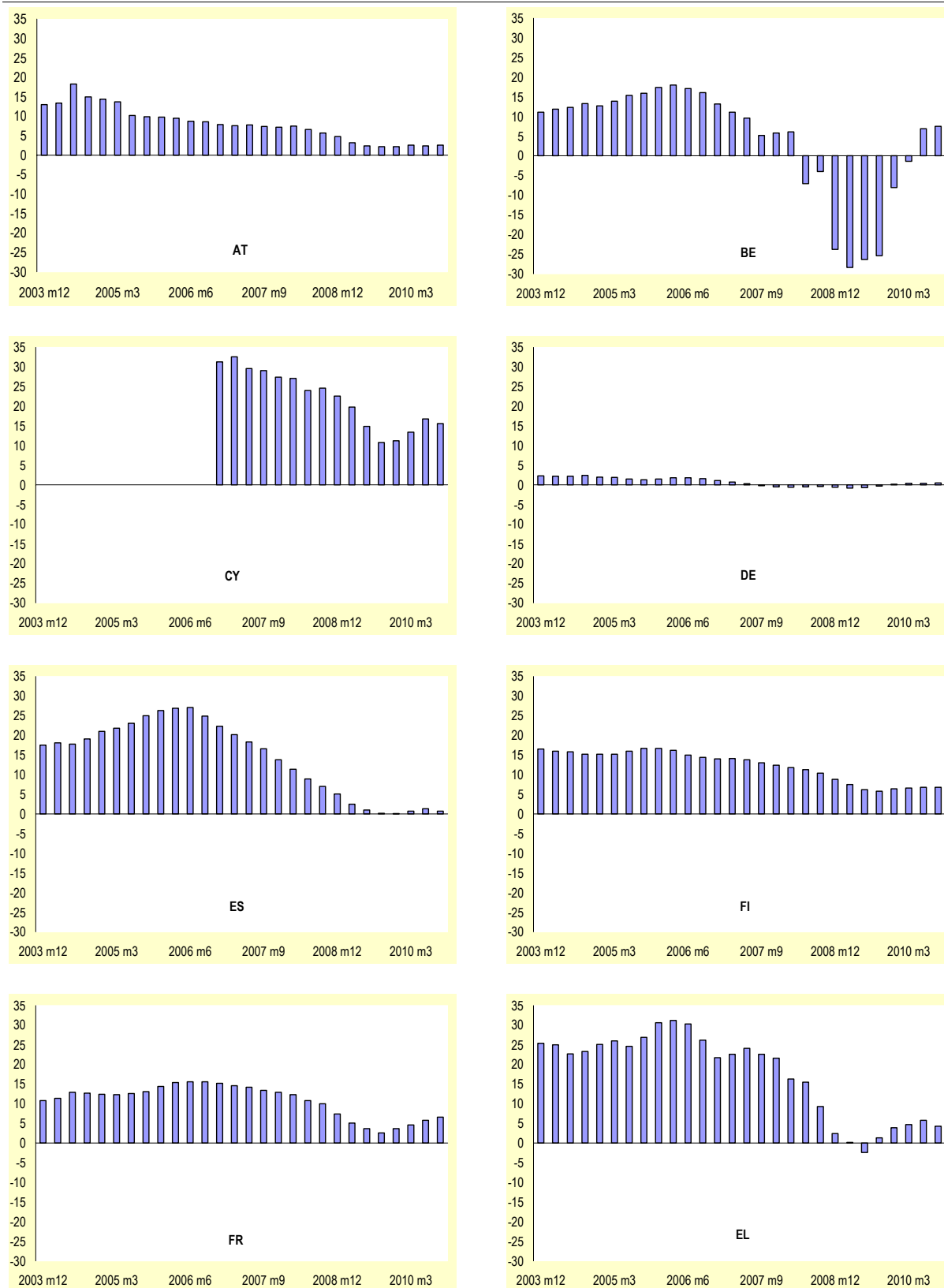
Loans for housing form a significant part of banks' balance sheets in some euro-area Member States (Graph I.5). The resulting dependency of banks' balance sheets on the quality of housing loans and on the level of house prices highlights several areas of potential vulnerability:

- House price bubbles can significantly contribute to distorting banks' perception of risks, as shown in euro-area surveys on changing lending standards (Graph I.6). The collateral — in the present case the claim on the dwelling — serves

(6) For an assessment of the size of house price misalignments in some euro-area Member States, see European Commission (2010), 'House price imbalances in the euro area', *Quarterly Report on the Euro Area*, Vol. 9, No 3.

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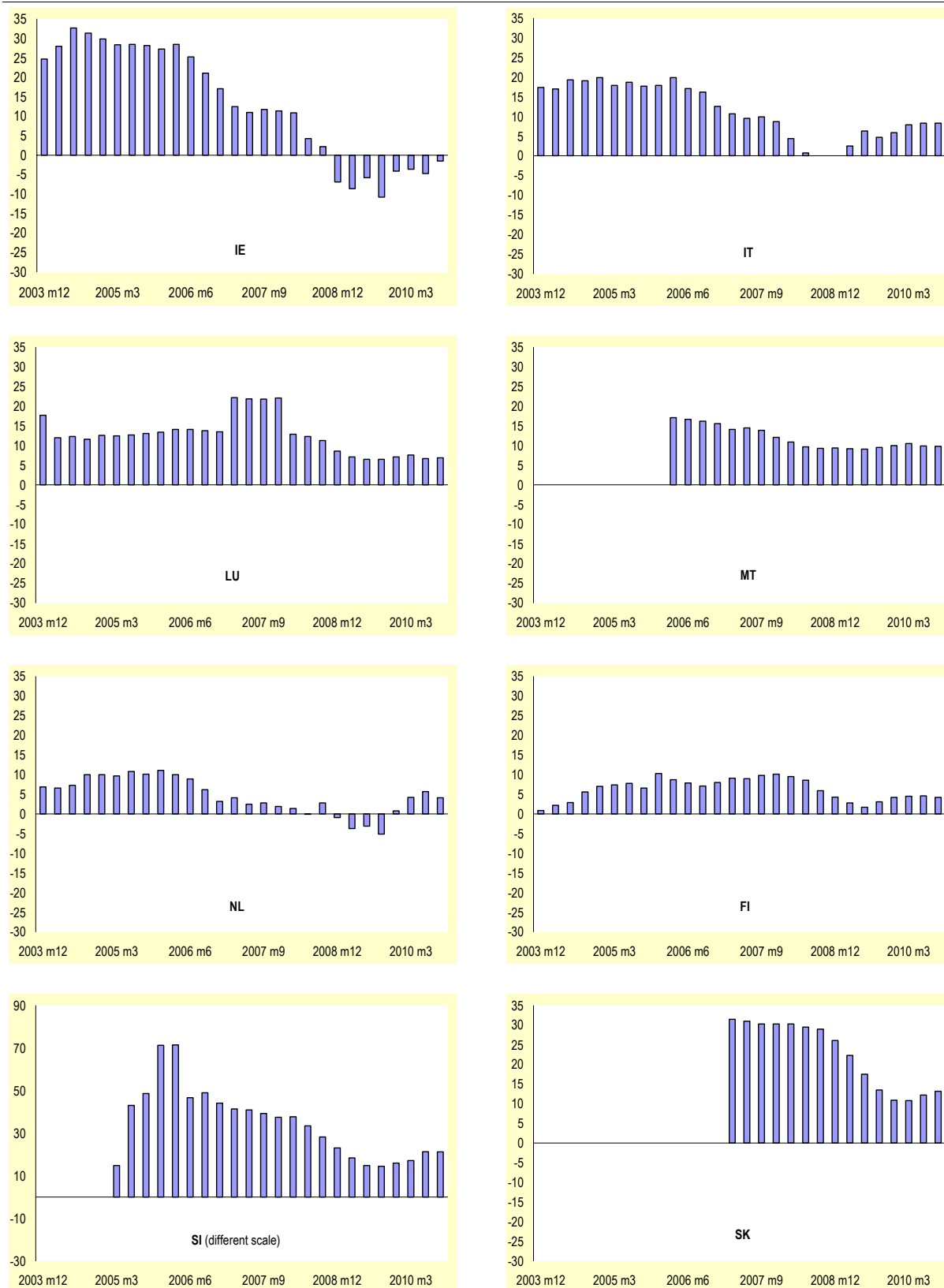
Graph I.3: Lending for house purchases, euro-area countries  
(y-o-y changes in %, index of notional stocks, Dec. 2003 to Sep. 2010) (1)



(1) Lending for house purchase in the balance sheets of MFIs (excluding the Eurosystem). Data for CY unavailable for part of the period. In Belgium the securitization of mortgage loans (not recorded in the balance sheets of credit institutions) explains much of the decrease in lending for house purposes in 2009.

Source: ECB, Commission services.

Graph I.4: Lending for house purchases, euro-area countries  
(index of notional stocks, end of period, m-o-m changes in %, Dec. 2003 to Sep. 2010) (cont) (1)



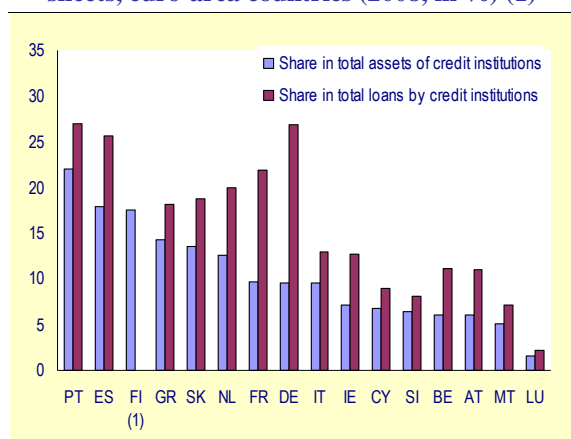
(1) Lending for house purchase in the balance sheets of MFIs (excluding the Eurosystem). Data for MT, SI, SK unavailable for part of the period.

Source: ECB, Commission services.

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to mitigate counterparty credit risk and to increase the amount the creditor is willing to offer. In the asset price build-up phase, the value of the collateral tends to grow faster than that of the loan portfolio, conveying the misperception that counterparty credit risk is on the decline. This myopic valuation of the collateral increases incentives for higher leverage and creates distortive balance sheet effects. The downturn phase elicits a net loss in bank assets, thereby exposing uncovered counterparty credit risk and possibly inadequate capital levels.<sup>(7)</sup>

Graph I.5: **Households' loans in banks' balance sheets, euro-area countries (2008, in %) (1)**



(1) Data are not available for FI.

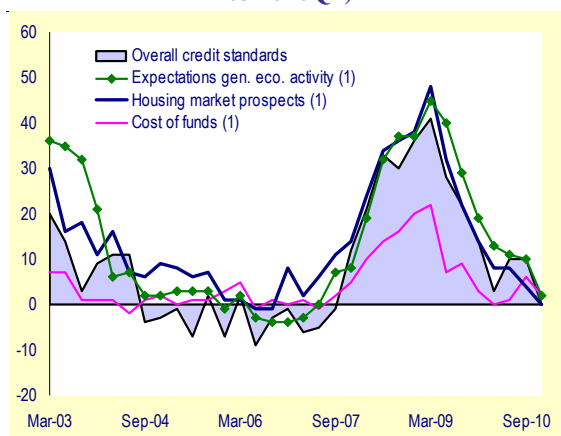
Source: Ecwin, Commission services.

- Rising asset prices induce retail borrowers to sell or refinance rather than default, since they are less threatened with financial loss. This makes banks consider mortgage finance less risky than financing productive investment and can sway their business model towards a higher exposure in mortgage loans. Moreover, reliance on bank borrowing triggers a wide-ranging leverage effect and increasing reliance on bank financing, as retail borrowers seek to maximise their borrowing relative to their income; banks will also aim to optimise their asset-liability management (possibly involving innovative financing methods) to match a larger loan portfolio to their available capital.
- Persistent house price increases can involve a mispricing of capital and perverse incentives for funding. Market participants, whether they recognise an asset bubble episode or attribute it to an independent improvement of fundamentals,

may also engage in speculative behaviours.<sup>(8)</sup> This feeds growing discrepancies between prices and fundamentals. It also entrenches the misconception that asset bubbles are beneficial to the sustainability of risk-taking balance sheet orientation. Furthermore, in the absence of adequate funding resources banks tend to rely more heavily on wholesale funding, which can exacerbate balance-sheet maturity mismatches if deposits prove inadequate.

- A house price bubble gives the false impression of a benign outlook for overall bank risks, as assets tend to grow more quickly than liabilities. As a result, the underestimation of risks leads banks to support a relaxing of credit standards, including low down-payments and some supervisory forbearance, and seek a more favourable tax and accounting treatment to shore up balance sheets.

Graph I.6: **Credit standards on loan to households for house purchases, euro area (net % of banks reporting a tightening, 2003Q1 to 2010Q4)**



(1) Factor affecting credit standards.

Source: ECB Bank Lending Survey.

### Impact on the conduct of monetary policy and on risks to financial stability

Asset price bubbles hamper the proper transmission of monetary policy and render the outcome of monetary policy more difficult to predict. Against this background, recent research at the ECB indicates that economic conditions may sometimes necessitate taking steps to limit the effects of asset price bubbles so as to restore

<sup>(7)</sup> The EU Commission has launched the Responsible Mortgage Lending and Borrowing initiative to mandate an adequate prior assessment of the borrowers' creditworthiness. The legislation should be adopted during spring 2011.

<sup>(8)</sup> See in particular Abreu, D. and M.K. Brunnermeier (2003), 'Bubbles and crashes', *Econometrica*, Vol. 71, No 1, pp. 173-204.

the integrity of monetary policy instruments.<sup>(9)</sup> However, the conditions under which central bank measures can be effective in curbing the effect of asset price misalignments remain unclear. Furthermore, a common monetary policy cannot adequately address regional housing bubbles in the euro area.

Asset price bubbles and excessive credit growth increase systemic risk. Boom phases in house prices feed excessive investment and promote credit expansion. At the level of the individual banks, this does not necessarily create systemic risk since bank managers are expected to maintain adequate capital to match risks. However, the interplay of financial innovation, increased leverage, and banks' interconnectedness predispose bank balance sheets to amplify systemic risk. The possible presence of macroeconomic imbalances directly or indirectly related to asset prices (e.g. external deficits or public deficits) further increases such a risk, with a potential for contagion through market and balance sheet linkages between banks and the rest of the economy.

#### ***1.4. Regulatory and supervisory tools to limit financial instability risks***

Given the distortions created by housing bubbles and the associated risks to financial stability, there is a need to design policy frameworks that can reduce the occurrence of bubbles and mitigate their effects. For that purpose, policy makers have a range of possible policy instruments at their disposal (see Table I.1). In the euro area, attempts to contain harmful regional house price bubbles need to be tailored to regional market conditions. National tax instruments can make a potentially valuable contribution to this aim. Furthermore, micro-prudential tools have an important role to play in preventing and mitigating the impact of asset price bubbles. While the prevention of asset and credit bubbles is not the main pursuit of micro-prudential oversight, measures targeted at the reduction of systemic risk and pro-cyclicality have the potential to curb excessive credit growth and the generation of asset price inflation.

The global financial turmoil prompted a wide range of regulatory reforms, including a complete overhaul of supervisory structures in the European Union. The main aim of these reforms is to

<sup>(9)</sup> The ECB has recently argued that 'both the experience of the recent financial crisis and the results of economic research have strengthened the case for central banks "leaning against the wind" of asset price bubbles'. See ECB, *ibid*.

reinforce the surveillance and monitoring of the financial system, shore up the solvency of the banking sector, and strengthen the overall financial stability of the system. The litmus test for these measures is their ability to dampen the pro-cyclicality of banking activity and reduce the sources of regulatory arbitrage while reinforcing international convergence and preserving the level playing field.

Although the regulatory reforms are applicable to the entire European Union, they are all the more necessary in the euro area due to the limitations of the single monetary policy to counteract potential financial imbalances on a country-by-country or regional basis. This sub-section reviews a range of regulatory and supervisory tools that have the potential to keep banks' leverage in check and thereby limit the risk of house price bubbles.

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**Table I.1: Selected policy instruments to help limit housing bubbles**

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#### **Monetary Policy**

##### **Tax policy**

Reduction of mortgage interest relief  
Taxation of imputed rents (owner-occupied houses)  
Property holding and transaction taxation

##### **Regulatory policy**

Capital adequacy requirements  
Counter-cyclical capital buffers  
Loan-loss provisioning rules  
Accounting standards (e.g. asset valuation)  
Maximum exposure limits  
Maximum leverage ratios  
Loan-to-value (LTV) limits  
Loan-to-income (LTI) limits

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*Source: Commission services.*

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While the discretion granted to supervisors under Pillar 2 of the Basel framework provides the flexibility needed to apply many of these tools with a certain amount of judgment, it also creates the risk of inconsistent implementation across countries. The newly created European Systemic Risk Board (ESRB) will therefore play a pivotal role in identifying potential imbalances as well as risks to the stability of the financial system as a whole. Moreover, the new procedure proposed by the Commission on 29 September on the surveillance of macro-economic imbalances provides for an additional, complementary instrument to identify macro-financial risks early

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on and to devise appropriate policy responses. One of the strengths of this new surveillance procedure, which will be operated in close relationship with the ESRB, is that it should provide effective instruments to monitor and ensure the proper implementation of measures that are deemed necessary to correct imbalances, possibly including financial sanctions.

Effective prevention of imbalances will require identifying housing bubbles on a timely basis and developing a good understanding of their ramifications in terms destabilising the financial system. This will clearly not be an easy task. For the supervisory bodies concerned, it will mean good access to timely micro data, the development of strong analytical tools and drawing on outstanding expertise in the economic sectors concerned. Recent economic research appears relatively encouraging in this context, pointing to a range of instruments and indicators that can be useful in detecting asset price misalignments and signalling financial distress early on.<sup>(10)</sup> But much further work is needed in that area.

### Improving the valuation of assets

The rules for the valuation of financial assets (fair value and other valuation criteria) can have a strong influence on investment decisions made by banks. These rules determine whether the fluctuations of financial asset prices are translated into profits or losses in the banks' accounts.

Asset classes that are valued at market price at all times (marked-to-market) exert considerable volatility on banks' balance sheets, thereby potentially amplifying pro-cyclicality and bubbles.<sup>(11)</sup>

Until recently, mortgage loan assets were mainly held by retail banks with a low risk profile. They were not marked-to-market but valued using more conservative valuation standards. However, in the run-up to the crisis, the high yields offered by

complex financial instruments based on mortgage loans generated large capital inflows which were used for residential property lending. In most cases these instruments were held for speculative purposes and were marked-to-market.

Following the famous 'originate-to-distribute' model, mortgage loans were extended massively, on the back of an ever-increasing mortgage-backed securities market. As a result, residential mortgages became accessible to a wider spectrum of borrowers and a spiral was set in motion of increased demand for real estate, rapid growth of mortgage loans and further asset price increases, which turned out to be one of the roots of the financial crisis.

In reaction to these root causes and other accelerating factors of the crisis, the International Accounting Standards Board (IASB) have undertaken a full revision of the accounting standards which determine the valuation of financial instruments.<sup>(12)</sup>

### Impact of the rules on loan-loss provisioning

Appropriate rules for loan-loss provisioning can reduce pro-cyclicality and provide a cushion in the event of unforeseen loan losses. Essentially, loan-loss provisioning seeks to compensate for expected future losses that occur if a borrower does not repay according to the loan contract. The rules for provisioning have a strong impact on the accounting value and the yield of loans, credits and other receivables since provisions lower the value of the loans and reduce the profits of the entity which holds these instruments.

Currently, International Financial Reporting Standards (IFRS) follow an incurred loss approach, where specific provisions can only be registered when an event has an impact on the estimated future cash-flow of the loan. Empirical evidence suggests that this accounting methodology may generate a dangerous time lag before the underlying losses in a loan portfolio are registered. By way of example, in the period that preceded the crisis, the amount of loans in arrears and provisions sunk to very low levels. However, when the crisis began, loans in arrears started swelling, increasing abruptly the amount of provisions. This approach has proved extremely pro-cyclical, further choking access to financing

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<sup>(10)</sup> See, for instance, ECB (*ibid.*) and Bank for International Settlements (2010), 'Macroprudential policy and addressing procyclicality', BIS 80<sup>th</sup> annual Report (June).

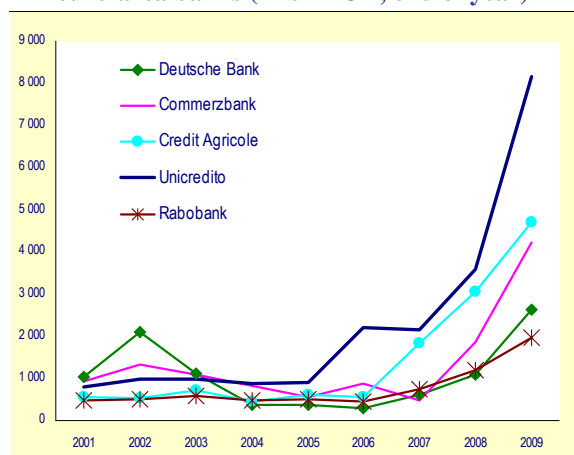
<sup>(11)</sup> For example, the accounting standards generally applied in the euro area — the International Financial Reporting Standards (IFRS) — prescribe that derivative contracts not serving to hedge positions must be valued at all times using fair value where fair value is marked-to-market or a valuation following market price fluctuations. According to the IASB, the definition of fair value is 'the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date'.

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<sup>(12)</sup> The International Accounting Standards Board is the accounting standard setter responsible for publication of the International Financial Reporting Standards applied most commonly in the euro area.

and aggravating the impact of the crisis (Graph I.7).

**Graph I.7: Loan-loss provisioning in selected euro-area banks (in bn EUR, end of year)**



Source: Bloomberg, Orbis, Commission services.

Already in 2000, Spanish regulators decided to supplement the current incurred-loss approach with a dynamic provisioning mechanism. With dynamic provisioning, the level of provisions increases during the economic upturn, thereby tempering the pro-cyclicality of the incurred-loss approach and providing a capital reserve in case unforeseen losses materialise.

Drawing on the experience of the crisis, the IASB is currently revising the applicable rules for loan-loss provisioning in order to adopt a more forward-looking provisioning approach that is able to cushion against potential future losses. This measure is set to modify the yield and the valuation of the loan portfolio, partly correcting the incentives to invest in residential property.

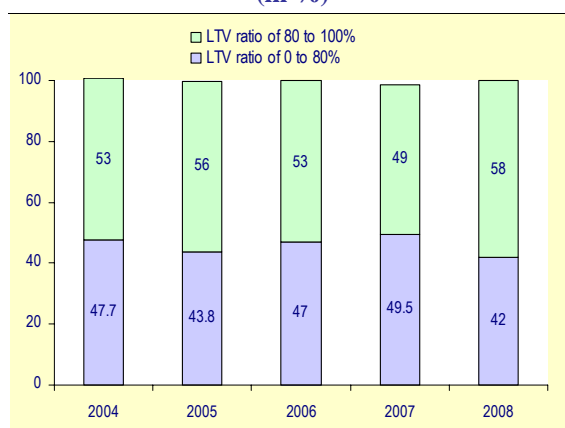
**Measures influencing the volume of credit**

A number of measures can be employed to influence credit growth. The volume of credit supplied to the economy can be constrained by imposing limits either on banks or on borrowers. On the one hand, the total amount of lending can be limited by imposing additional capital requirements, binding leverage ratios or rules on large exposures on banks. On the other hand, the capacity of entities or individuals to borrow can be constrained by rules stipulating specific Loan-To-Value (LTV) or Loan-To-Income (LTI) ratios for determining the access to credit. These rules limit the amount of money that can be borrowed by an individual or a company based on the value of the collateral (LTV) or on the level of income

(LTI), which could eventually contain excessive credit growth.

However, empirical evidence shows that the effectiveness of these measures depends on a number of factors. In the build-up to the US subprime crisis, for instance, financial institutes granted mortgage loans against the value of the collateral. The creditworthiness of the borrower played only a negligible role. As it turned out, the LTV approach was part of the problem in the sense that it fuelled a speculative spiral and contributed to the inflation of residential and commercial property rather than anchoring credit to its fundamentals.

**Graph I.8: Distribution of mortgages by Loan-To-Value ratios, Dublin area, Ireland (in %)**



Source: Department of the Environment, Heritage and Local Government in Ireland and Commission services.

This experience teaches important lessons. First, LTV rules must be sufficiently stringent to ensure that the value of the collateral will cover bank losses even in the event of overpricing of the assets that are pledged against the loan. Secondly, the assessment of the value of the collateral should go hand-in-hand with a proper assessment of the creditworthiness of the borrower. In other words, effective rules for mortgage loans should combine both LTV and appropriate LTI ratios. Assessing credit risk on the basis of the value of collateral alone creates the wrong incentives.

The setting of binding thresholds based on both LTV and LTI ratios could have helped to avoid excessive credit growth in Ireland and Spain, too. As Graph I.8 shows, in Ireland the share of risky exposures with LTV ratios beyond prudent levels were significant and the ratio of total liabilities to disposable income had reached very high levels in the run-up to the crisis (Graph I.9).