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**FINANCIAL STABILITY  
REPORT**

**11/2008**

BANCO DE **ESPAÑA**  
Eurosisistema









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## ABBREVIATIONS\*

€	Euro
AIAF	Asociación de Intermediarios de Activos Financieros (Association of Securities Dealers)
ABCP	Asset-backed commercial paper
ATA	Average total assets
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
bn	Billions
bp	Basis points
CBE	Banco de España Circular
CBSO	Banco de España Central Balance Sheet Data Office
CCR	Banco de España Central Credit Register
CDOs	Collateralised debt obligations
CDS	Credit Default Swap
CEIOPS	Committee of European Insurance and Occupational Pensions Supervisors
CIs	Credit institutions
CNMV	Comisión Nacional del Mercado de Valores (National Securities Market Commission)
CPSS	Basel Committee on Payment and Settlement Systems
DIs	Deposit institutions
ECB	European Central Bank
EMU	Economic and Monetary Union
EU	European Union
FASB	Financial Accounting Standards Board
FSA	Financial Services Authority
FSAP	Financial System Assessment Program
FSR	Financial Stability Report
FVCs	Financial vehicle corporations
GDI	Gross disposable income
GDP	Gross domestic product
GVA	Gross value added
GVAmP	Gross value added at market prices
IAS	International Accounting Standards
ICO	Instituto Oficial de Crédito (Official Credit Institute)
ID	Data obtained from individual financial statements
IFRSs	International Financial Reporting Standards
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
LBOs	Leveraged buy-out operations
LGD	Loss given default
LTV	Loan-to-value ratio (amount lent divided by the appraised value of the real estate used as collateral)
m	Millions
MEFF	Mercado Español de Futuros y Opciones (Spanish Financial Futures and Options Market)
MiFID	Markets in Financial Instruments Directive
MMFs	Money market funds
NPISHs	Non-profit institutions serving households
PD	Probability of default
PER	Price earnings ratio
pp	Percentage points
ROA	Return on assets
ROE	Return on equity
RWA	Risk-weighted assets
SCIs	Specialised credit institutions
SMEs	Small and medium-sized enterprises
SIVs	Structured investment vehicles
SPV	Special-purpose vehicle
TA	Total assets
VaR	Value at risk
WTO	World Trade Organisation

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\* The latest version of the explanatory notes and of the glossary can be found in the November 2006 edition of the *Financial Stability Report*.





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## Overview

Since the last Financial Stability Report (FSR) the international economic and financial environment has been particularly convulsed, while in the Spanish economy the adjustment initiated in 2007 has intensified. Spanish deposit institutions have thus pursued their activity under considerably more difficult conditions than those prevailing six months ago.

In the international arena the most complex crisis witnessed in recent decades is under way, which has led the governments of many developed economies to take exceptional and forceful measures to redress the situation. The US Federal Reserve helped arrange the acquisition by JP Morgan of the investment bank Bear Stearns in March, given the impossibility of the latter raising funds on the wholesale markets. And subsequently, the US Treasury had to place under administration the government-sponsored mortgage finance agencies (Freddie Mac and Fannie Mae). The difficulties did not end there, and there have been notable bankruptcies (with Lehman Brothers to the fore) and bank consolidation processes, affecting investment (Merrill Lynch) and commercial (Washington Mutual and Wachovia) banks alike. Tensions have spread to other sectors, making intervention by the authorities necessary in one of the biggest insurance companies in the world, American International Group (AIG). These episodes have also impacted other regions, including most notably – at the time of this FSR going to press – many European countries where certain major banks have been assailed by difficulties.

Although Spanish banks have not been directly affected by the US subprime market crisis, like other banking systems they must nevertheless face the difficulties associated with the bleaker economic situation and with the tightening of financing conditions on wholesale markets. In the face of a highly complex international setting, Spanish deposit institutions have reacted by beginning to restructure their balance sheets. On one hand, they are reducing their exposure to the sectors in which credit had grown most intensely in the past. On the liabilities side, fixed-term deposits are growing sharply. This restructuring of bank balance sheets, which naturally requires some time, is being accompanied by sound short-term results, by high starting levels for provisions for doubtful assets and by capital ratios far above the required minimum. Nonetheless, a crisis such as that beleaguering the international financial system coupled with the continuing lack of liquidity in the wholesale financing markets, set against the progressive use Spanish banks had made of these markets in recent years, all means that the Spanish banking sector faces additional factors of difficulty in the coming years.

In the light of the exceptional events that have unfolded, especially since late September and early October, the governments of many countries, including the United States, the United Kingdom and the euro area members, have coordinated their actions to adopt a series of measures aimed at reactivating markets and increasing confidence. Given the notable forcefulness of the measures, the situation of high instability on the financial markets is expected progressively to resume a normal footing. That said, if the implementation of the general framework agreed by the various governments were to take the form of the recapitalisation, through direct government aid, of institutions that apparently do not have solvency problems, that would introduce distortions insofar as the differences between those institutions that have made mistakes and those that have better managed the international financial crisis tend to disappear. Accordingly, these measures should be applied giving due regard to transparency and a level playing field.

In line with economic developments, bad debts have grown sharply since the last FSR. That said, behind this trend, which had been foreseen and which will persist in the coming months, are a series of diverse and simultaneous factors, including most notably the deterioration in the macroeconomic situation and higher interest rates. The greater prudence enshrined in Banco de España Accounting Circular 4/2004, which entails the earlier and fuller recognition of doubtful assets, and the incentives introduced by the new Bankruptcy Law also explain, and will continue to do so, the level and the rate of increase of doubtful assets ratios. The regulatory changes mean that, at the same pace the economy worsens, higher levels and a faster rate of increase in the doubtful assets ratio will be seen.

To withstand the increase in bad debts, Spanish banks have a general provision that provides for high coverage of doubtful assets. As bad debts carry on growing, as a result of further deterioration in the economy, the funds set aside will progressively be used. In any event, the doubtful assets coverage ratios need not cover all the risk, only the final loss that is to arise. In practice, this means that coverage ratios of around 50% are normal for coping with actual losses. In short, current coverage rates, at around 100%, may be expected to converge on these levels, which are consistent with those in other developed countries' banking systems. In any case, continuing revenues from the traditional retail business, and the availability of guarantees, provide additional factors of flexibility for managing credit risk.

During this last year, Spanish deposit institutions, like those of other banking systems, have had difficulty gaining access to the wholesale funding markets, against a background of notable liquidity tensions. However, Spanish banks were able to take advantage of the opportunities that intermittently opened up in the market, in particular in the second quarter of 2008. But at the time of this FSR going to press, these difficulties have worsened considerably as liquidity has dried up on numerous funding markets at the international level.

A defining characteristic of the funding Spanish banks have obtained over recent years, and which has enabled them to finance a portion of the growth of their credit, is that it is centred on lengthy maturities. Thus, the outstanding balance of medium and long-term issues is more than sixfold the outstanding balance of short debt, while under the former, 60% of maturities are after 2013. In any event, given the persistence of the tensions on international wholesale markets, Spanish deposit institutions have reacted by restructuring their liabilities, and in particular by notably stepping up the raising of fixed-term deposits. This reinforcement of their traditionally sound deposit base has largely been possible thanks to the type of retail business in which they engage, which is based on proximity to the customer and on building long-term relationships. It should likewise be recalled that Spanish deposit institutions participate very actively in the distribution of investment funds and life insurance, which enables them to tailor their range of savings products to market circumstances with greater flexibility. As indicated, the continuing lack of liquidity on international financial markets poses major management difficulties for Spanish banks. However, the approval of a common framework for action by the euro area countries should help alleviate such difficulties.

Liquidity obtained from the Eurosystem, which has increased since the start of the difficulties on international financial markets in 2007, accounts for a very small proportion of bank balance sheets (1.39%), while it is in line with the size of the Spanish economy in the euro area. This is so even considering the measure approved by the ECB on 15 October, whereunder all the liquidity requested by credit institutions will be granted at a fixed rate. What is more, bearing in mind the liquidity extended by the Eurosystem in different currencies, and not only in euro, the relative weight of that applied for by the Spanish banking system, in relation to its size, has fallen.

Despite the setting of greater international complexity described and the deceleration of the Spanish economy in the first half of 2008, Spanish banks' income statements have performed favourably. This is due above all to the fact that revenues from the traditional retail business characterising Spanish banks' income statements have held up. Also, solvency ratios are holding at levels well above the regulatory minimum required, and this bearing in mind the prudence with which the transition to the new solvency regulation arising from the entry into force of the Capital Requirements Directive is being implemented.

In sum, we are facing an unprecedented international financial crisis which is developing in a greatly weakened macroeconomic environment. In recent years the Spanish banking system has reinforced its control mechanisms and risk management, its profitability, its efficiency and its solvency. Although this places it in a sound starting position, the Spanish banking industry has to face significant challenges which will affect its earnings-generating ability in the coming quarters.



## 1 Macroeconomic risks and financial markets

*The external environment is in a particularly complex situation, with recurrent episodes of financial instability and a worsening macroeconomic outlook.*

Since the last Financial Stability Report (FSR) the international economic and financial environment in which Spanish banks operate has been exceptionally complex, with recurrent episodes of pronounced financial instability, both in the United States and in Europe. In the international financial arena, tensions have worsened on money and credit markets (see Charts 1.1.A and B), with stock market prices falling, marked increases in volatility, rises in risk premiums and higher demand by institutional investors for government debt. July marked an end to the decoupling of the emerging markets from the poor performance of the developed countries seen until then (see Charts 1.2.A and B). The international macroeconomic setting was characterised by a significant economic slowdown in Q2, markedly so in the developed economies, and a downward revision of growth forecasts that heighten the risk of exacerbating what are already sizeable difficulties in the financial sphere.

In the United States there has been a further deterioration in the housing market, where falling prices persist (the S&P Case-Shiller index for 20 major areas showed a year-on-year decline of 15.9% in September), and in the mortgage market, where the default rate has grown to 6.41% of all mortgages, while foreclosures have increased. These factors have meant further losses in subprime mortgage-backed assets, even for the high-grade tranches, affecting the results of banks and insurance companies most negatively, and obliging them to recapitalise in a very adverse financial setting.

*The US and European authorities had to intervene in key financial institutions, while there were bankruptcies, mergers and acquisitions among some banks and nationalisations of others.*

The financing conditions on wholesale markets have tightened notably, with bouts in which it has been most difficult – if not impossible – for certain key institutions in the United States and in some European countries to obtain funding. Indeed, the set of institutions affected has been progressively widening, giving rise to nationalisations, bankruptcies, interventions and to the adoption of exceptional measures on the functioning of markets, including most notably – as far as regulatory framework changes are concerned – the prohibition of short-selling of bank shares on stock markets.

The institutions affected in the United States encompass investment banks, whose business model has not survived the turmoil, other commercial banking institutions, the nation's leading insurance company and one of the biggest in the world (AIG), and the government-sponsored mortgage agencies (Freddie Mac and Fanny Mae). Also affected were certain money market mutual funds. Subsequently, large banks in some European countries (United Kingdom, Germany, France, Belgium, the Netherlands and Luxembourg, among others) have also become embroiled in these episodes of severe instability.

The seriousness of the situation has prompted the adoption of exceptional and unprecedented measures by governments. This has been so in the United States, where the Treasury proposed a far-reaching programme that was subsequently ratified by the Senate and Congress, and in Europe, where action by the British government and by the euro area countries has been proposed.<sup>1</sup>

Central banks, particularly since late September and early October, have intermediated with greater intensity than had habitually been the case in the provision of liquidity, to the extent that they have decided to grant liquidity with no ceiling on the amount requested provided, as is

1. Box 1.1 shows the sequence of events which, with increasing speed, have unfolded recently.



Since the onset of financial turbulence in summer 2007, bouts of heightened financial instability have intensified, to the extent that in recent months numerous financial institutions have been subject to nationalisations, bankruptcies and interventions. Also, a situation that had initially emerged abruptly in the United States has also spread to the banking systems of certain European countries, especially in Central Europe and in the United Kingdom.

In response to the virulence of the events, various governments, with differing degrees of intensity, have taken measures to try to restore confidence in their financial systems, while central banks have taken coordinated action to limit the malfunctioning of certain markets, in particular the interbank market.

This box sets out chronologically the main events that have occurred since the beginning of September.

7 September: as a result of the deterioration of the US mortgage market, the mortgage lenders Freddie Mac and Fannie Mae were brought under the control of the US Treasury.

15 September: the US investment banks Lehman Brothers and Merrill Lynch fail to withstand the impact of the subprime market crisis; the former files for bankruptcy and the latter is acquired by bank of America.

17 September: the Federal Reserve rescues American International Group (AIG), the country's leading insurance company and one of the largest in the world, which had announced two days earlier that it needed a large amount of capital. The intervention is justified by the impact that the bankruptcy of a company that has participated very actively in selling protection through credit default swaps (CDS) would have on the markets.

16-18 September: in the United States various money market funds are affected by the strains.

17 September: the difficulties suffered by the UK's largest mortgage lender (HBOS) eventually lead to its takeover by another British bank, Lloyds TSB.

19 September: given the seriousness of the almost constant stream of events, the US Treasury, in coordination with the Federal Reserve, proposes a rescue plan for the financial industry, involving withdrawal of the illiquid mortgage assets that are causing the losses to financial institutions. Following a long and complex passage through Congress, in which the plan at first failed to gain approval, on 2 October it is ratified by the Senate, which also approves an expansion of deposit insurance coverage.

21 September: the two US investment banks that have not filed for bankruptcy or been taken over by other institutions abandon the investment banking model and become commercial banks.

25 September: the largest US savings bank, Washington Mutual, files for bankruptcy and is taken over, with the agreement of the authorities, by JP Morgan.

28 September: as a result of the collapse in Fortis shares, the Belgian, Dutch and Luxembourg authorities agree to intervene, taking a stake in this institution.

29 September: in the United States the fifth largest commercial bank, Wachovia, goes bankrupt and falls into the hands of Citigroup. Subsequently it opens negotiations with Wells Fargo, leading Citigroup to take legal action. In the United Kingdom, following the nationalisation of Bradford & Bingley, the British authorities reach an agreement for it to be taken over by Banco Santander. In Germany, owing to its liquidity problems, Hypo Real Estate Bank receives a credit line from a consortium of German banks. In Iceland, the government acquires 75% of Glitnir Bank.

30 September: the Irish government guarantees all deposits for two years. The guarantee extends to covered bonds and senior and subordinated debt. Belgium, France and Luxembourg address the rescue of Dexia.

2 October: as indicated above, the US Senate ratifies the plan to rescue the financial system. In Europe, Greece guarantees all its deposits.

3 October: the Dutch government nationalises the Dutch part of Fortis.

4-5 October: the initial rescue plan for Hypo Real Estate Bank fails and the government is forced to redesign it.

6 October: the persistence of the problems at Fortis leads to an agreement for the French bank BNP Paribas to purchase Fortis in Belgium and Luxembourg, with the Belgian and Luxembourg governments maintaining blocking minority stakes. Belgium, and to a lesser extent Luxembourg, take stakes in the capital of BNP Paribas. The German and Dutch governments announce a 100% deposit guarantee.

7 October: Iceland nationalises its second largest bank (Landsbanki). The 27 EU finance ministers agree to increase the minimum amount covered by deposit guarantee funds to €50,000. The Spanish government announces an increase in the amount covered by the Spanish deposit guarantee fund to €100,000, along with the creation of a fund for the temporary acquisition of assets to boost the system's liquidity.

8 October: the central banks of the main developed economies take coordinated action to reduce interest rates by 50 bp. The UK Treasury announces a rescue plan for its banks, involving the provision of liquidity and capital, through the purchase of preference shares. Banque Populaire and Caisse d'Épargne, the French mutual bank group, announce merger talks.

9 October: Belgium, France and Luxembourg announce a new plan to assist Dexia, with a year-long bank guarantee. Iceland takes control of its largest domestic bank, Kaupthing.

12-13 October: the euro area Heads of State and Government agree a joint strategy to restore market confidence and the proper function-

ing of the financial system. In Spain, an extraordinary meeting of the Council of Ministers approves a set of measures in line with this joint strategy.

14 October: in the United States it is announced that the Treasury will inject capital into banks and will set mechanisms in place to guarantee new bank debt issues.

15 October: proposal by the European Commission to amend the Directive regulating deposit guarantee schemes. The coverage level rises to €100,000 and the payout period is reduced to three days. The ECB announces that it will extend all the liquidity re-

quested by credit institutions at a fixed rate on an unlimited basis.

16 October: the Swiss government injects capital into UBS.

18-19 October: the Dutch government provides capital to ING.

21 October: the German bank Bayern LB requests assistance from the German government.

27 October: the Belgian government provides capital to KBC, one of the biggest Belgian banks.

*Central banks have provided liquidity and, in some cases, altered the operational framework to make access easier to new banks and to accept a wider range of collateral.*

natural, that the institution applying for the liquidity has the necessary collateral. Further, there have been significant changes to some central banks' operations. These chiefly include the Federal Reserve, which set in place new credit facilities to broaden the spectrum of banks having access and the collateral eligible for financing operations, and, to a lesser extent, the Bank of England. As to monetary policy, the Federal Reserve cut its official interest rates by 25 bp, placing the federal funds target rate at 2% on 30 April, while the Bank of England also cut rates by 25 bp to 5%. In this exceptional setting, the central banks of the main developed economies decided on 8 October to take concerted action to cut intervention rates by 50 bp. This unprecedented move, which did not initially succeed in unblocking the malfunctioning markets or in restoring confidence, should however have a positive outcome in the medium term, contributing to the better functioning of financial markets and to a progressive recovery in agents' confidence.

*Economic growth in the main economies has been weaker than expected, with the exception of the United States, where growth proved high.*

On the economic front, US Q2 growth figures were stronger than expected (posting an annualised quarterly rate of 2.8%) given the sound performance of exports and sustained private consumption, supported by tax breaks. However, a significant slowdown is expected in Q3, brought on by the reduction of the fiscal impulse, which might bear on consumption, and by a foreseeably lower contribution by the external sector. Japan posted a negative quarterly annualised rate in Q2 (-3%), and the related rate in the United Kingdom dipped by 0.3 pp to +0.8%. The emerging economies saw a slowdown in activity although, with few exceptions, this has been limited. However, there are increasingly greater doubts about the ability of these economies to remain insulated from the severe instability on international financial markets and, therefore, to maintain such high growth rates as they had been recording.

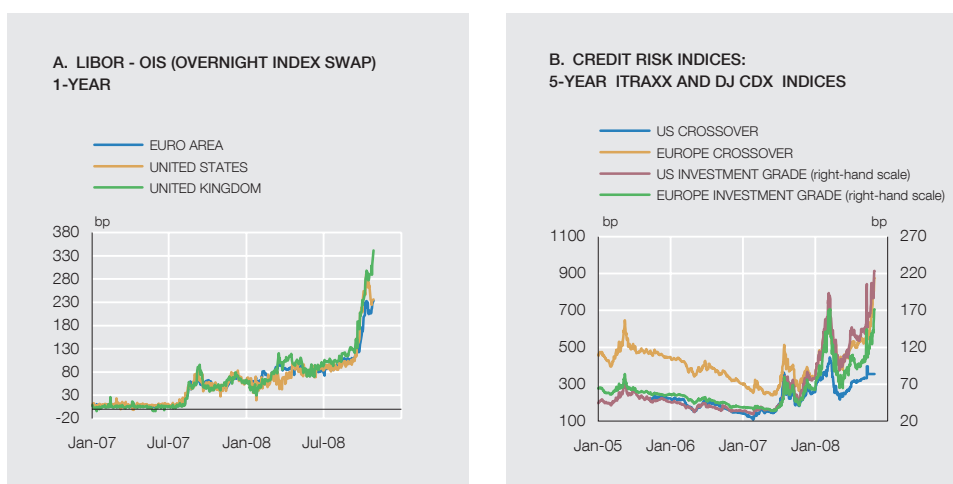
*Economic growth in the euro area has felt the impact and future growth projections have been revised downwards.*

There was a notable reduction in the pace of economic growth in the *euro area* in 2008 Q2. GDP shrank by 0.2% quarter-on-quarter in this period (see Chart 1.3.A). This decline stemmed not only from the correction of certain factors that had exceptionally boosted the increase in output between January and March (a 0.7% increase), but also from the weaker external environment, from the notable tightening of financial conditions and from developments in oil and commodities prices. Against this background, the ECB revised its projections downwards last September, placing GDP growth in the euro area at between 1.1% and 1.7% in 2008, and between 0.6% and 1.8% in 2009, with these figures subject to a sizeable degree of uncertainty and to downside risks that have become accentuated in recent months.

The risks the international financial environment faces remain very high, and further bouts of financial instability with potentially systemic repercussions cannot be ruled out. The financial

## STRESS IN CREDIT AND MONEY MARKETS

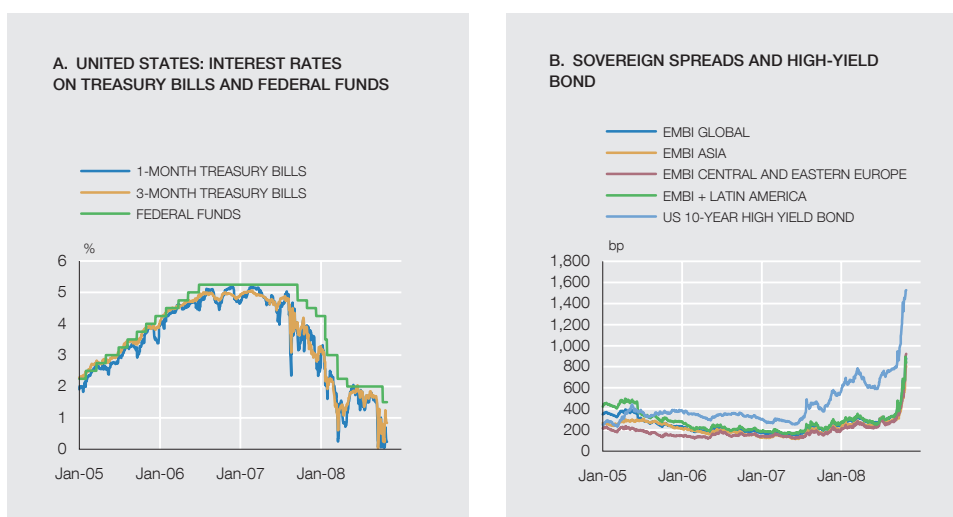
CHART 1.1



SOURCES: Bloomberg and Datastream.

## INTEREST RATES AND STRESS IN EMERGING MARKETS

CHART 1.2



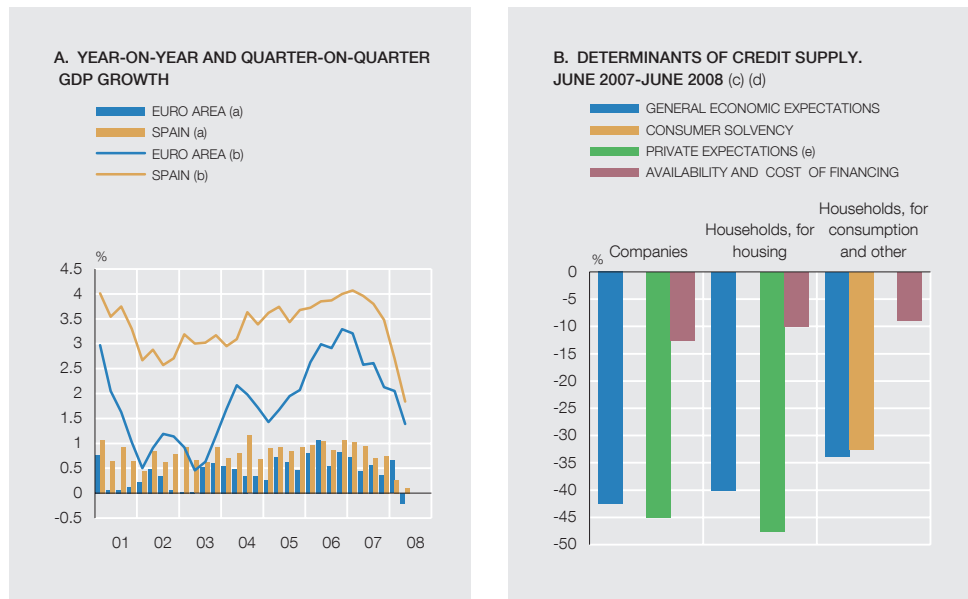
SOURCES: Bloomberg and Datastream.

*The possibility of feedback effects between financial and real factors has increased.*

deleveraging process, which entails a reduction in the size of bank balance sheets and an attempted shoring up of capital, is proving abrupt and, on occasions, disorderly. From a broader perspective, this process reflects a move towards a generalised reduction of financial intermediaries' debt and less availability of credit, which is beginning to affect households and firms. The linkages between financial and economic factors might exacerbate the already fragile international financial situation. The coordinated measures adopted by the different authorities do not avert deleveraging, but they should contribute to ensuring that the process comes about in a more progressive and orderly fashion, alleviating the effects on the real sector.

*The adjustment begun in the Spanish economy in 2007 intensified,*

In the *Spanish economy*, the adjustment begun in 2007 intensified. The quarter-on-quarter growth rate of GDP fell once again between April and June (0.1% against 0.8% recorded two quarters earlier; see Chart 1.3.A). In year-on-year terms, the rate of increase fell from 3.5% to 1.8% over the same period. This performance was the result of the marked weakening of domestic demand, mainly of consumption but also of gross capital formation, against the



SOURCES: INE, Eurostat and Banco de España.

a. Quarter-on-quarter rates.

b. Year-on-year rates.

c. Indicator = % of institutions reporting increases x 1 + % of institutions reporting some increase x 1/2 – % of institutions that indicate a certain decrease x 1/2 – % of institutions that indicate a considerable decline x 1.

d. The data represent the quarterly average change in those factors between June 2007 and June 2008, calculated as the average number of responses to the October 2007 and January, April and July 2008 surveys.

e. Expectations regarding the real estate market in the case of credit to households for house purchase.

background of high uncertainty associated with the continuing financial tensions and high fuel prices, which would have dented agents' confidence.

*prompting an increase in the unemployment rate.*

Weak economic growth and, in particular, the adjustment of the residential sector halted job creation in the first half of 2008. And combined with the increase in the labour force, this gave rise to a sharp employment adjustment, raising the unemployment rate to 10.4% in June 2008 (11.33% in September 2008), on EPA figures, against 8.6% at end-2007.

*Private-sector financing conditions continued to tighten ...*

Financing conditions for households and firms have continued to tighten. On one hand, banks have passed through the increase in money market interest rates to their lending transactions. And on the other, the Spanish bank lending survey (EPB by its Spanish abbreviation) suggests that financial institutions have applied stricter lending standards during the first half of the year.<sup>2</sup> These tighter standards would be linked above all to the perceived deterioration both in the general economic outlook and in specific industries, and also to the impossibility of gaining access to the international wholesale bank financing markets, which have collapsed of late (see Chart 1.3.B). The plan announced by the international authorities, and in particular by the euro area countries, of which the Spanish government's actions will be a part, should contribute to alleviating this factor of tension (see Box 1.2).

Against this backdrop of worsening confidence and the adjustment of financing conditions, credit to the non-financial private sector has continued to slow, meaning that its rate of expan-

2. For greater details, see Martínez Pagés, J. (2008): "Encuesta sobre préstamos bancarios en España: julio de 2008", *Boletín Económico*, September 2008.

The events that have occurred in the financial system since late September and early October confirm the existence of a financial crisis of a complexity and virulence unseen in recent decades.

The monetary authorities and governments of various countries had already taken decisions, of greater or lesser significance, to restore confidence in financial markets and contribute to a return to their normal functioning prior to the events of the week 6-10 October (see Box 1.1). However, these events, and the accompanying worldwide stock market crash that week, led to the adoption of an exceptional set of coordinated measures by the governments of the euro area countries at an emergency meeting held on Sunday 12 October.

These common measures were adopted by the euro area countries as part of the coordinated action by the governments of the main economic areas, including the United States and United Kingdom. The measures, to be implemented by each Member State in accordance with the particular features of its own banking system, are based on four general principles of action.

First, mechanisms have been designed to facilitate the funding of credit institutions, given the persistent distortions that currently exist. Thus, apart from the endorsement of the action of certain governments in relation to the purchase of high-quality assets, governments are authorised to guarantee medium-term bank debt issuance. The debt must be senior debt with a maturity of up to five years, and the price of the instruments will at least reflect their value under normal market conditions. The scheme, which shall be limited in amount and temporary (lasting until 31 December 2009), is aimed at institutions operating in euro area countries (including foreign subsidiaries) provided they at least meet the regulatory capital requirements.

Second, the States may strengthen the capital of credit institutions, in particular tier 1 capital, through the acquisition of preference shares or some other similar instrument. Governments commit themselves to provide capital when needed, while favouring the raising of private capital.

Third, an explicit commitment has been made to avoid the failure of relevant financial institutions. When taking action in this respect, States must be vigilant to ensure that the interests of taxpayers are protected and that assistance is accompanied by an appropriate restructuring plan for the institution in question.

Fourth, the competent authorities are urged to consider the need to ensure sufficient flexibility in the implementation of the accounting rules for valuation (in particular as regards the application of market value).

Finally, the mechanisms of vigilance and coordinated action between the various States and authorities of the European Union have been strengthened.

As a consequence of the framework for common action agreed by the euro area countries, the Spanish government, which had already taken the decision to extend the coverage of the deposit guarantee fund from €20,000 to €100,000<sup>1</sup> per depositor and institution and had established a scheme for the purchase of high-quality assets from institutions, for an overall amount of €30 billion, extendable to €50 billion,<sup>2</sup> has announced the following measures:

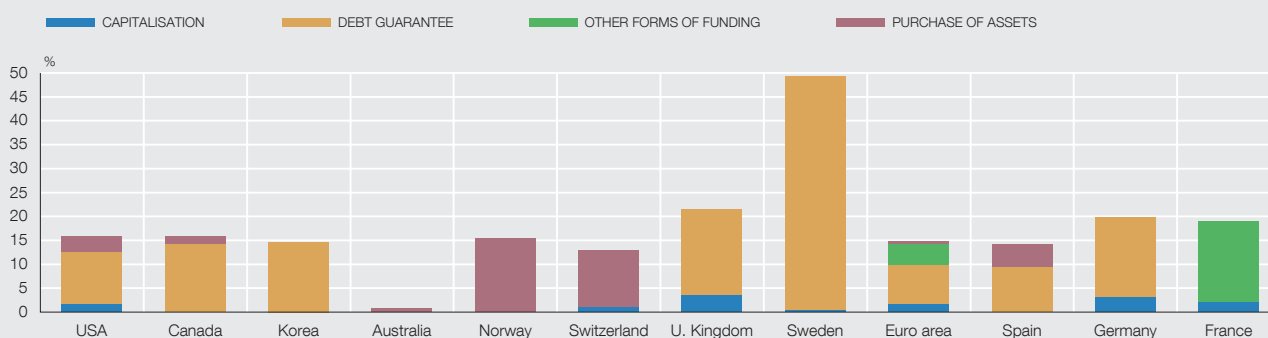
- Government guarantees may be given for new debt issued by credit institutions. The amount of the scheme approved in 2008 is €100 billion. The maximum maturity of the issues will be five years, but the guarantee may also cover interbank deposits.
- Where necessary, securities may be acquired to recapitalise institutions, through instruments such as preference shares.<sup>3</sup>

All these exceptional measures are commensurate with the current scale of the crisis. Such exceptionality is manifest in the very mechanisms designed by governments, in their coordinated adoption by a large number of countries and in their envisaged maximum amount, which can be approximated indirectly by their weight in terms of GDP (see accompanying chart) or by other relevant variables, for instance their weight relative to the financial system of the country in question.

Although these measures are not having an immediate impact on returning markets to normality and restoring agents' confidence, as they are progressively applied they should conceivably alleviate the strains besetting the financial sector, while contributing to helping ensure that the adjustment, and therefore its impact on the real economy, is not as abrupt as it would otherwise be. Success will, however, also depend on the measures being implemented transparently and without distorting the level playing field for competition, and without hampering international financial market agents' discriminating capacity in respect of banks. Thus, for example, the recapitalisation of banks that apparently have no solvency problems might give rise to unwanted distortions in the degree of competition in the banking system and to the emergence of inappropriate incentives in bank management.

1. Royal Decree 1642/2008 of 10 October 2008. 2. Royal Decree Law 6/2008 of 10 October 2008. 3. Royal Decree Law 7/2008 of 13 October 2008.

MAXIMUM AMOUNT OF THE MEASURES ADOPTED, AS A PERCENTAGE OF GDP (a)



SOURCE: In-house based on market information.

a. The term "maximum amount" reflects the maximum value that the measures adopted might reach, but not necessarily their actual value, which will possibly be lower.

*... contributing to easing the pace of household and corporate debt, although the associated interest burden continued to increase.*

*As a result of all these factors an increase is expected in the proportion of agents under greater financial pressure. Looking ahead, it is foreseen that the adjustment of the Spanish economy will continue, while the prolongation of the turmoil will remain a further factor of risk.*

sion has drawn closer to that of nominal GDP, whereby debt ratios have tended to stabilise during the first half of the current year. However, the interest burden has once again increased as a result of the rise in average interest rates on outstanding loans, thus contributing to checking the growth of income. The rate of increase of household wealth has continued to ease as a consequence both of the unfavourable trend of financial asset prices and, to a greater extent, of house price dynamics.

In sum, the adjustment of the Spanish economy has intensified and quickened in the first half of 2008. Set against the international financial crisis, the current outlook points to the continuation of this process, the depth of which is conditional upon the behaviour of employment. Households and firms are adapting to this situation, although the increase in financing costs and the weakening in activity may be expected to raise the proportion of agents under greater financial pressure. Further, given the Spanish economy's high dependence on external saving, the prolongation of the financial turmoil is an additional factor of risk.



## 2 Deposit institutions and other financial market participants

### 2.1 Deposit institutions

#### 2.1.1 BANKING RISKS

*In a more complex economic and financial environment, Spanish deposit institutions are restructuring their balance sheets. Though this is a complex process given the international liquidity tensions,...*

*...it is supported by recurring income, and by the existence of a general provision in Spain.*

*A proper rationalisation of operating expenses and the sound capital adequacy position of Spanish banks should contribute to this process of adjustment.*

*Credit to the private sector continues to slow ...*

*... and will foreseeably do so in the coming quarters.*

As noted in Chapter 1, the serious international financial instability problems and economic weakening make for a much more complex operating environment for financial institutions. Against this background, Spanish deposit institutions have begun to restructure their balance sheets. This is reflected in a slowdown in lending, most marked in credit to the real estate sector, as a result of lower demand and greater caution in loan approval because of the significant increase in credit risk attributable to the downturn in economic activity. Set against the difficulties in gaining access to wholesale funding owing to the lack of liquidity on international financial markets, Spanish institutions have reacted by stepping up their efforts to attract deposits in their retail business. However, the lack of liquidity at the international level, which has become more marked since mid-September, hampers the process of restructuring bank balance sheets, making it much slower. The plan designed by the euro area countries, in coordination with other international authorities, and of which the Spanish government's proposals are a part, should contribute to improving this process (see Box 2.1).

The process of restructuring of banks' balance sheets is made easier by sound income statements, as these are based on a high percentage of recurring income from retail banking activities and little dependence on business in the international financial markets. The greatest threat to bank earnings in the coming quarters is the growth of bad debts, although, as explained in previous FSRs, Spanish institutions have a general provision which will help to counter the impact of the increase in doubtful assets.

One fundamental aspect in the process of adjustment should, however, be the control and rationalisation of operating costs by Spanish banks. At the same time, this process should be assisted by the sound capital adequacy position, unlike what may occur in other banking systems where institutions are much more highly leveraged and the losses relating to complex, non-transparent instruments are more significant.

Spanish deposit institutions have grown more moderately than in previous years. Consolidated balance sheets show a year-on-year increase in total assets of 8% in June 2008 (Table 2.1), basically due to the performance of business in Spain, as compared with the stagnation of business abroad. However, the growth of business in Spain (9.96%) slowed significantly with respect to June 2007 (20.1%).

The lower growth of total activity is explained by the continuing slowdown in financing to the private sector (credit and fixed income), which nevertheless grew at 9.5%, its weight slightly increasing in consolidated balance sheets. The trend towards lower lending growth, which has recently stepped up owing to the collapse of international financial markets and to the process of global deleveraging, will foreseeably persist in the coming quarters.

As noted in the last FSR, doubtful assets have grown sharply in total business. This surge is explained by the very low starting point of the doubtful assets ratios<sup>1</sup>, after a long, sustained period of economic growth. The increase in bad debts derives from a combination of various factors: the sharp growth of lending in the past, the recent behaviour of the real economy and of interest rates, and the changes introduced by Accounting Circular CBE 4/2004, which re-

<sup>1</sup> In the FSR, the terms bad debts and doubtful assets are used as synonyms, although technically doubtful debts include others in addition to impaired assets.



In the United States, securities market intermediaries (broker-dealers) are known as investment banks. Institutions such as Lehman Brothers, Goldman Sachs, Merrill Lynch, Morgan Stanley and Bear Stearns fell under this category. These investment banks would issue and buy securities on the securities markets and provide consultancy services to investors and advice on mergers and acquisitions. They were not deposit institutions but securities-dealer companies that financed themselves on the wholesale markets.

The distinction in the United States between investment banks and deposit institutions dates back to the 1929 crisis. The 1933 Glass-Steagall Act prohibited deposit institutions from operating as investment banks and vice versa. In 1999, the Gramm-Leach Bliley Act provided for the creation of financial holding companies that could engage in the activities of deposit institutions, broker-dealers and insurance companies.

There are major differences between US investment banks and Spanish broker-dealers which are imposed by the business engaged in. The attendant business in Spain focuses, in the main, on brokerage, with limited activity in dealing, while in the United States dealing was on an enormous scale, encompassing all types of strategies and taking advantage of solvency regulations that allowed very high levels of leverage.

Investment banks in the United States were authorised and regulated by the Securities and Exchange Commission (SEC), the Spanish counterpart of which is the CNMV (National Securities Market Commission). In 2004 the SEC introduced a consolidated supervision programme of which the major investment banks could voluntarily avail themselves. The banks were authorised to use internal models to estimate the market and credit risks with which they calculated capital requirements. In exchange, conglomerates had to agree to subject themselves to the consolidated supervision of the SEC, taking the form of so-called Consolidated Supervised Entities (CSEs). Merrill Lynch, Goldman Sachs, Morgan Stanley, Lehman Brothers and Bear Stearns availed themselves of this arrangement. No lender of last resort was assigned to the CSEs, which meant that in order to safeguard investment bank customers' interests, the SEC took on the task of monitoring liquidity risk management by these institutions. However, the SEC's supervisory approach, which was more focused on the proper functioning of the market and on investor safeguards, was not fully attuned to institutions whose business evolved progres-

sively towards raising borrowed funds in order to take proprietary positions.

The crisis of confidence that arose further to the subprime loan crisis affected investment banks acutely, to the extent that it brought about their disappearance under the model known to date.

Thus, in May 2007 the stock market value of Bear Stearns, the fifth-ranked investment bank in the United States, initiated a declining path which was the result of the doubts that emerged on the market over its viability, as it was the first institution to announce the liquidation of several hedge funds. According to information provided by the SEC, Bear Stearns at all times kept its regulatory solvency ratio at over 10%, and satisfactorily passed the liquidity tests required of it. However, the market's differing assessment of the risk relating to assets held by Bear Stearns meant that its sources of financing on the markets dried up. The situation ultimately led to the purchase of this bank by JP Morgan in March 2008.

In the wake of the problems assailing Bear Stearns, the Federal Reserve opened its discount window in March 2008 to investment banks through the Primary Dealer Credit Facility (PDCF). This facility enabled investment banks to obtain funds as it enhanced the liquidity of a broad range of collateral instruments in the event of market financing problems. In July 2008, the Federal Reserve and the SEC signed a Memorandum of Understanding to formalise the supervisory powers of the former over investment banks insofar as these have access to federal funds through the PDCF.

The crisis continued in September 2008, and Lehman Brothers filed for the biggest bankruptcy in US history, Merrill Lynch was taken over by Bank of America, and Goldman Sachs and Morgan Stanley applied to become commercial bank holding companies (BHCs), subject to the supervision of the Federal Reserve. Coordinated action was also undertaken by the Federal Reserve, the Treasury and the ECB to ensure the liquidity of the system at all times.

This crisis clearly illustrates how, against a backdrop of highly interrelated financial markets, a greater appreciation of risk can drastically worsen the liquidity position of institutions that depend on wholesale market funding. This high degree of interrelatedness compounds the uncertainty already in place in the financial system and has obliged central banks across the world to take measures on an unprecedented scale.

*Various factors explain the growth in bad debts, the impact of which has been softened, particularly in the initial stages, by the provisions in place.*

quire earlier and fuller recognition of doubtful assets than in the past. The default ratio in total business stands only at 1.3% (June 2008), but will continue growing in the coming quarters. However, the system of loan loss provisions in force in Spain, unlike those of other banking systems, ensures a high coverage of bad debts, which affords Spanish institutions greater room for manoeuvre, especially in the initial stages when doubtful assets are first starting to rise.

*The liquidity obtained from the Eurosystem by Spanish institutions is small.*

Turning to *liabilities*, the deposits of central banks grew sharply in June 2008. However, to assess the liquidity which Spanish deposit institutions receive from the Eurosystem, regard must be had to the net loan (difference between the funds received in liquidity providing operations and those delivered in liquidity absorption operations), whose weight in bank balance sheets is very low (1.39%). Indeed, since December 2007, when it amounted to 1.33% of the con-

**CONSOLIDATED BALANCE SHEET**

TABLE 2.1

Deposit institutions

ASSETS	JUN-08	CHANGE	RELATIVE	RELATIVE
	(€m)	JUN-08/ JUN-07	WEIGHT DEC-07	WEIGHT JUN-08
	(€m)	(%)	(%)	(%)
Cash and balances with central banks	54,668	-5.4	2.7	1.6
Loans and advances to credit institutions	285,037	1.7	7.5	8.4
General government	55,847	11.6	1.5	1.6
Other private sectors	2,276,661	9.1	66.7	67.0
Debt securities	349,911	6.2	10.7	10.3
Other equity instruments	92,118	-18.8	3.2	2.7
Investments	47,883	51.3	1.6	1.4
Derivatives	112,797	29.4	2.8	3.3
Tangible assets	36,648	5.4	1.1	1.1
Other (a)	85,577	16.5	2.2	2.5
<b>TOTAL ASSETS</b>	<b>3,397,147</b>	<b>8.0</b>	<b>100</b>	<b>100</b>
<b>MEMORANDUM ITEMS</b>				
Financing to private sector	2,394,642	9.5	70.1	70.5
Financing to general government	202,058	0.7	6.2	5.9
Total doubtful assets	38,511	116.1	0.7	1.1
Total doubtful assets ratio	1.30	65.0 (c)		
Provisions for bad debts and country risk	45,646	17.5	1.3	1.3
LIABILITIES AND EQUITY	JUN-08	CHANGE	RELATIVE	RELATIVE
	(€m)	JUN-08/ JUN-07	WEIGHT DEC-07	WEIGHT JUN-08
	(€m)	(%)	(%)	(%)
Balances from central banks	66,311	63.3	2.8	2.0
Deposits from credit institutions	505,077	8.2	14.1	14.9
General government	81,588	-2.0	2.7	2.4
Other private sectors	1,521,034	9.8	44.3	44.8
Marketable debt securities	666,488	3.6	19.9	19.6
Derivatives	129,969	23.3	3.2	3.8
Subordinated debt	83,384	9.3	2.4	2.5
Provisions	32,802	-5.9	1.0	1.0
Other (a)	109,800	-11.8	3.3	3.2
<b>TOTAL LIABILITIES</b>	<b>3,196,453</b>	<b>8.0</b>	<b>93.7</b>	<b>94.1</b>
<b>MEMORANDUM ITEMS</b>				
Eurosystem net lending (b)	47,077		1.33	1.39
Minority interests	10,292	75.5	0.3	0.3
Valuation adjustments relating to total equity	3,245	-85.5	0.5	0.1
Own funds	187,157	20.4	5.4	5.5
<b>TOTAL EQUITY</b>	<b>200,694</b>	<b>9.3</b>	<b>6.3</b>	<b>5.9</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>3,397,147</b>	<b>8.0</b>	<b>100</b>	<b>100</b>

SOURCE: Banco de España.

- a. The remaining assets and liabilities entries not explicitly considered, including valuation adjustments, are included in "Other".
- b. Difference between funds received in liquidity providing operations and funds delivered in absorbing operations.
- c. Difference calculated in bp.

solidated balance sheet, it has remained practically unchanged. Further, this percentage is in line with Spain's relative weight in the euro area as measured by the ratio between the reserve requirement for Spanish banks and that for the area as a whole. This has remained the case despite the fact that, on 15 October, the ECB announced that it will meet all demands for liquidity, at a fixed rate, without limits. Further, when considering the liquidity that the Eurosystem offers in different currencies, and not only in euro, that obtained by the Spanish banking system has even fallen in relation to its relative size.

*Securities issuance grew moderately because of the difficulties in international funding markets...*

As a result of an exceptionally convulsed international financial environment, in which numerous funding markets are still not operational, consolidated balance sheets reflect moderate growth of marketable securities issues. Spanish deposit institutions issued both senior debt and mortgage covered bonds, capitalising on the issuance opportunities which appeared, albeit discontinuously, on the international markets (for example, in 2008 Q2).

*..., but the traditional retail business of Spanish institutions allows them to step up deposit taking at a pace which exceeds that of lending growth.*

Also, customer deposits, particularly those of the private sector, are growing more rapidly than the total balance sheet. What is more, partly due to the lower demand for credit and partly due to the greater efforts to attract customer funds, deposits are growing faster than loans. The growth of fixed-term deposits is particularly strong (around 30% in recent months), which makes for a more stable structure than one based on sight deposits. The Spanish banking system, based on a traditional retail banking model of long-term relationships with customers and with significant cross-selling of other savings products (investment funds, life insurance, etc.), has a greater capacity to attract deposits.

*The weight of accounting own funds in the balance sheet has increased.*

Finally, mention should be made of the positive performance of accounting *own funds*, which have grown at a rate of 20.4% and whose weight in the consolidated balance sheet has risen to 5.5%.

The weight of *business abroad* decreased slightly with respect to June 2007 to stand at 19.9% of total assets at consolidated level. The increasingly diversified international presence of Spanish institutions, which has increased significantly in Europe and in the United States, compared with that in the emerging countries, particularly in Latin America, helps to explain the low risk profile of overall assets abroad (Chart 2.1.A).

*The subprime crisis is having a notable direct impact on some international institutions...*

However, the financial turmoil is having a very significant impact on many *international financial institutions*. The difficulties facing these institutions are related to their high degree of leverage and to their notable exposure to non-transparent structured products which are difficult to value, linked to US subprime loans. Many of these exposures were held through structures which were off banks' balance sheets, so their progressive return to those balance sheets is generating additional pressure on banks' own funds. These international institutions are booking very sharp write-downs of their assets which have forced them to raise fresh capital (Chart 2.1.B). Among the most affected institutions are the large investment banks (Box 2.1), some of which have been absorbed by other banks with universal business models, while others are in the process of liquidation and yet others have been converted into commercial banks.<sup>2</sup>

*... although this is not the case with Spanish institutions which, due to their business model, have not suffered any direct impact,...*

It should be noted that the Spanish banking sector has not been affected by this *initial impact derived from the international crisis*. This is because of the banking model followed by Spanish institutions, focused on retail operations and having little in common with the originate-to-distribute model. They thus avoided complex structured products, off-balance-sheet positions via certain vehicles (conduits and SIVs<sup>3</sup>), exposures to monolines and incentives to generate a subprime mortgage segment, inexistent in Spain.

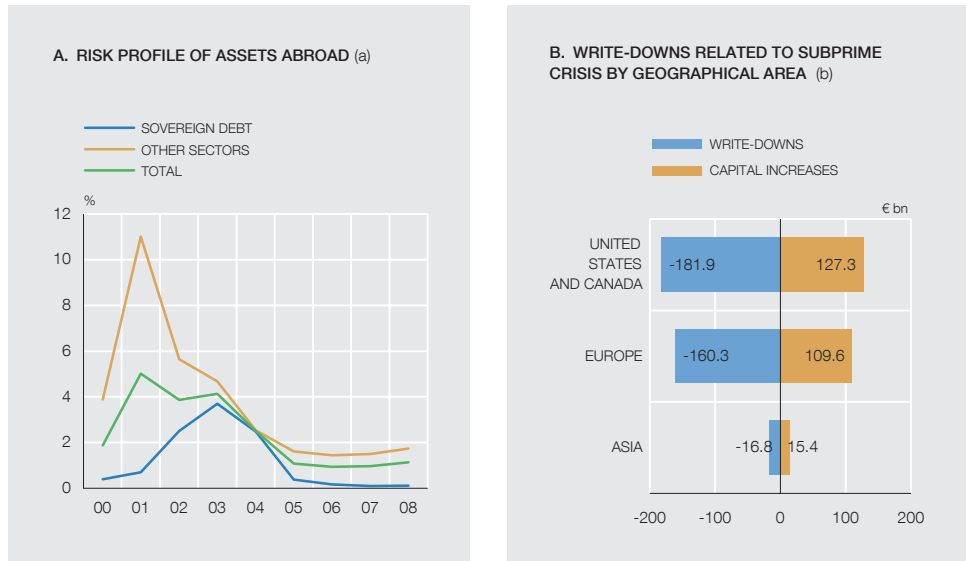
*... but, along with other banking systems, they are confronted with a much more complex economic situation, in view of the*

However, like numerous European and US banks, Spanish deposit institutions are faced with a *second-round impact derived from a significant weakening of economic activity*, which is more pronounced than expected in the major European countries, including Spain. This scenario of greater economic weakness is interacting with the blockage of a most significant part of banks' wholesale funding mechanisms in the face of the liquidity strains persisting on inter-

<sup>2</sup>. Box 2.2 of the April 2008 FSR described the major challenges awaiting these institutions in the future, contrasting them with the institutions following a traditional banking model of taking deposits from the public. <sup>3</sup>. Box 1.1 of the April 2008 FSR explains these and other terms relating to the current financial crisis.

**RISK PROFILE OF ASSETS ABROAD  
AND DIRECT EFFECTS OF THE SUBPRIME CRISIS**  
Deposit institutions

CHART 2.1



SOURCES: Bloomberg and Banco de España

- a. Weighted average of default probabilities. An explanation of the calculation of the risk profile of assets abroad can be found in *Estabilidad Financiera*, No 7, November 2004.
- b. Spain is not included because there have been no write-downs related to the US subprime crisis.

*persistent international liquidity strains.*

national funding markets. Hence Spanish institutions, despite not having been directly impacted by the subprime crisis, have to operate in a much more complex environment than in previous years.

*Credit to the private sector continues to slow...*

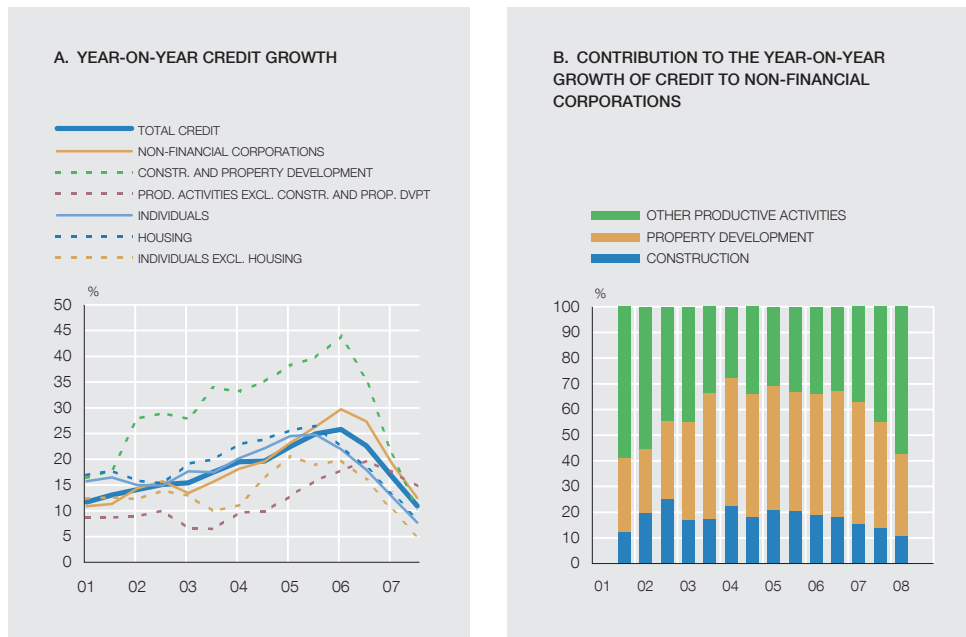
In keeping with the trends noted in previous FSRs, *credit to the resident private sector in Spain* continued to slow in the first half of 2008, with year-on-year growth of 11% (16.6% in December 2007). This trend had started at the end of 2006 (with growth still running at 25.8%), as lending adjusted to a situation which, particularly in the real estate sector, began to show signs of slower expansion. Banks' greater caution in assessing risks and the persistence of liquidity tensions on the international front add further elements of restraint on the credit supply side. In the coming quarters, lending can be expected to continue in this slower growth vein. The latest available data at the time of this FSR being drafted (September 2008) point more in this direction, with a further slowdown to a 8.3% in year-on-year terms.

*... more sharply in the sectors which had enjoyed the most rapid growth in recent years...*

By sector, the slowdown in lending in June 2008 is observed both in financing to households and in that to companies (Chart 2.2.A). For households, financing for house purchases and for other purposes (basically consumer credit) slowed to similar extents (from 18.5% in June 2007 to 8.4% in June 2008 and from 16.1% to 5.1%, respectively). The latest information available for September confirms the foregoing trends for companies overall and also for households.

For non-financial corporations, although growth is easing, this moderation is pronounced among construction and property development companies (from 35.5% in June 2007 to 10.3% in June 2008), given the difficulties this sector is experiencing, although the slowdown in financing to other firms (from 19.7% to 14.8%) is also significant, and is most likely to have continued in Q3. The differing sectoral behaviour of corporate credit is contributing to rebalancing the change in total credit to firms (Chart 2.2.B). This rebalancing is a sign of the incipi-

Deposit institutions. ID



SOURCE: Banco de España.

... and more moderately for non-financial corporations not related to the real estate sector. This re-balancing illustrates the process of restructuring of bank balance sheets which, however, is hampered by the liquidity strains on international markets.

The doubtful assets ratio has risen sharply...

... and will continue to rise in the coming quarters...

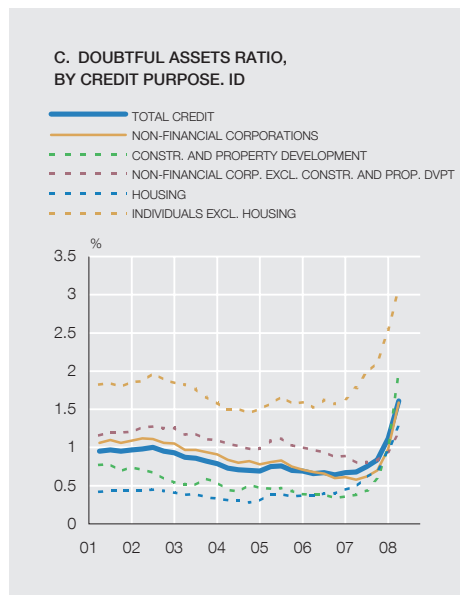
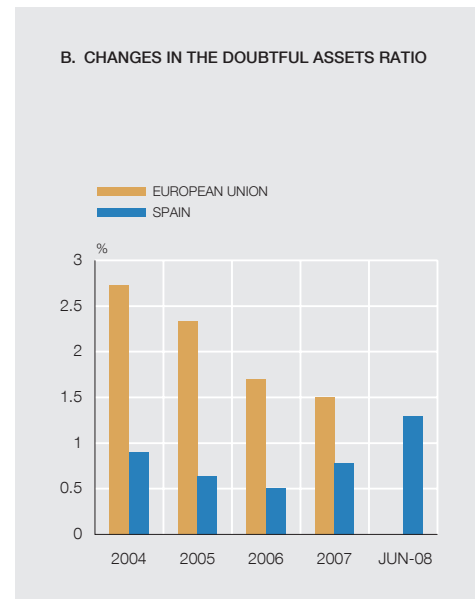
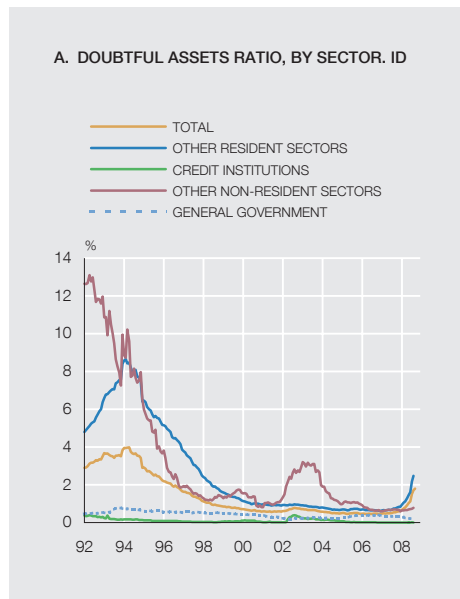
ent but slow process of bank balance sheet restructuring undertaken by Spanish deposit institutions. Thus the annual flows of credit (new credit granted) show that this restructuring process is leading to lower lending to the sectors which had enjoyed the strongest growth in the past (construction and property development and house purchases). In any event, and as indicated, this dynamic will be hampered insofar as the complex situation on the international wholesale funding markets persists.

The growth rate of the *doubtful assets* of the resident private sector in Spain has quickened with respect to that reported in the previous FSR. Given that the level of doubtful assets was very low after a prolonged period of economic expansion (the total doubtful assets ratio was 0.61% in December 2007), the rates of change include a scale effect which limits their analytical usefulness in the *present situation*.

The doubtful assets ratio of the total credit in Spain extended by deposit institutions amounted to 1.14% in June 2008, reaching 1.82% in September. Most of these bad debts arose from lending to the resident private sector (households and firms) and the doubtful assets ratio of this credit segment (77% of total credit) was the highest (2.54% in September 2008). Other lending (to financial institutions, general government and non-residents) showed very low and stable doubtful assets ratios throughout 2008 (Chart 2.3.A).

The rise in bad debts has been rapid and particularly sharp in recent months in credit to the resident private sector. Conceivably, in the next few quarters the doubtful assets ratio will continue on an upward trend, thereby converging with that of other EU banking systems which traditionally have had a significantly higher doubtful assets ratio (Chart 2.3.B).<sup>4</sup>

4. The EU data are the latest available at the time of this FSR being drafted. Generally, throughout the FSR, the most updated figures possible are provided. If more lagged data are given, this is because the latest figures are not publicly available, which is more frequent when international comparisons are made.



SOURCES: ECB and Banco de España.

*... partly because of the economic situation and partly because of the new accounting rules, which are more prudent in the recognition of doubtful assets.*

*Doubtful assets are growing more rapidly in the sectors which had enjoyed stronger credit growth in the past.*

The factors explaining the rise in bad debts are diverse and they are acting simultaneously. Thus the increases in bad debts seen in the past and which will continue in the coming months will be the combined effect of a weaker macroeconomic situation and of other factors unrelated to it. Therefore these increases are not all due to the greater weakness of the real economy, but are also caused by the extra prudence introduced by the new Accounting Circular CBE 4/2004, which requires doubtful assets to be recognised more fully and more promptly.

As noted in the previous FSR, the doubtful assets ratio is increasing more notably in the sectors which enjoyed the most rapid credit growth in the past, given the natural lag between this variable and the appearance of defaults. Thus it is the construction and property development sectors which, since December 2007, have suffered the largest rise in this ratio, up from 0.58% to 1.99% in June 2008 (Chart 2.3.C). This rise was also seen in credit for house purchases (from 0.69% to

1.28% in June 2008). Real estate development activities, by their very nature, incorporate a more marked cyclical profile. Past experience shows that, in this respect, their doubtful assets ratio usually stands, at times of greater economic weakness, at a level around twice the average ratio. However, much of the financing extended to developers is secured and has been earmarked for specific developments as these were in progress. In any event, managing exposure to the real estate sector is one of the most complex tasks facing Spanish credit institutions.

*They are also growing due to the worse economic situation and the higher interest rates...*

*... although no problems of adverse selection when loans were being granted have been detected.*

*The Spanish mortgage market bears no relationship to that of the US,...*

*... and the more vulnerable credit segments, the bad debts of which are rising more rapidly due to the adjustment of the economy,*

*... are not comparable even with US Alt-A quality loans.*

*The characteristics of house purchase lending in Spain explain its historically low doubtful assets ratios,...*

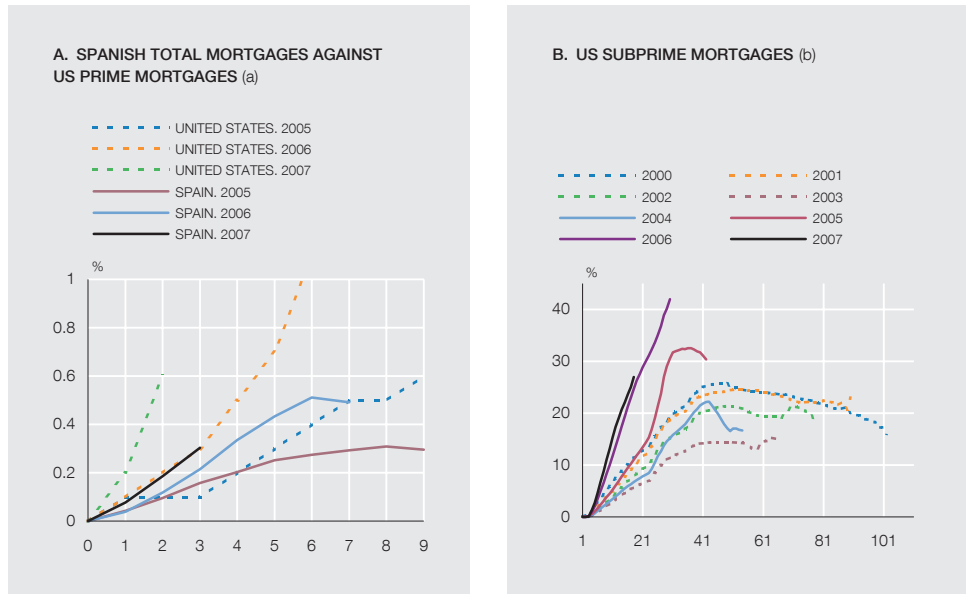
The impact of the worse economic situation and of the higher interest rates is apparent not only in the doubtful assets ratio, but also in an analysis of the default rate curves. These curves have risen generally, and the rise bears no relation to when the loans were granted. This indicates that there have been no significant adverse selection problems at the time of origination during the last three years in the Spanish credit market. In other words, given that the rise is similar regardless of the origination date, it can be interpreted that the rate of impairment seen is uniform for all of them, suggesting the existence of common factors (the cycle), rather than a relaxation of credit standards at some time in less stringent conditions (as in the case of US subprime mortgages). Moreover, this general rise is consistent with that observed in the doubtful assets ratio.

Comparison of the Spanish mortgage market with that of the US enables it to be concluded that these are markets with very different structural characteristics. As is natural when the economy worsens, the doubtful assets ratios grow (Chart 2.4.A). Beyond this, there are no other similarities, among other reasons because Spain does not have a subprime segment nurtured by weaknesses in the so-called originate-to-distribute model. Hence developments in the US subprime segment (Chart 2.4.B), which has default ratios of 25% in the loans extended since 2005, is not comparable with any segment of the Spanish mortgage market, with a default ratio for all mortgages taken together of around 1%.

Nonetheless, it is possible that the Spanish mortgage market may contain segments where higher levels of risk are taken on because the institutions face a higher uncertainty as to the future behaviour of borrowers that may find themselves in difficulty. An example of this is the segment of mortgage lending to foreign residents.<sup>5</sup> Although its weight in Spanish deposit institutions' mortgage portfolios is low (6.9% in June 2008), it might experience more delinquency as a result of the aforementioned uncertainty when it comes to granting loans (largely because this is a business segment that has been less explored in the past). Thus, analysis of the default curves shows that the rate of new defaults is higher for resident foreigners than for the overall portfolio, as is also the level of these curves (a high of around 3%). Having said that, once again the rise in doubtful assets is a general phenomenon not associated with particular loan origination dates, which is consistent with the impact of a poorer economic situation. Comparison of Spanish mortgage loans to foreign residents with US intermediate quality loans (Alt-A) shows notable differences, with the latter having much higher doubtful asset levels (the highs of the curves are around 10%). Therefore, the Spanish mortgage market does not have business segments comparable to either subprime or Alt-A quality loans. In short, although these loans have default characteristics different from traditional ones, the default levels are far below US subprime and their small weight in total credit reduces the significance of these differences even further.

House purchase lending, which accounts for a large share of total credit to the resident private sector (36%), has historically shown the lowest bad debts of all bank credit. Various factors explain this, reflecting the borrower's incentive to comply with his credit obligations. Thus many households are purchasing what for them is an extremely important asset, both because

<sup>5</sup> This category includes both resident immigrants and other borrowers such as, for example, retired foreigners who have taken up residence in Spain.



SOURCES: Merrill Lynch, Intex and Banco de España.

a. X-axis: the number of quarters since the loan was granted.  
b. X-axis: the number of months since the loan was granted.

of its value and because of its purpose (principal residence). It should also be kept in mind that, unlike in other countries, the percentage of house ownership in Spain is very high. Furthermore, under the Spanish legal system, unlike that of, for example, the US, the non-payment of mortgage debt is not satisfied by the delivery of the mortgaged asset (if the value of the house is less than the debt), but rather the borrower is liable with the rest of his assets until the debt has been repaid in full. In addition, the buy-to-let business, in which the risk of house price falls is ultimately assumed by the institution, is practically non-existent,<sup>6</sup> nor is it common in Spain to use the mortgage collateral to finance consumer credit, based on the house price appreciation in recent years, as is customary in other countries.

... and the low losses in the event of customer default.

These features mean that the probability of default and the loss given default for house mortgage loans are usually very low, even in cases of sharp deterioration of the economy (as in 1993, with unemployment rates above 20% and the budget deficit at 6.7% of GDP, well above the current levels). In contrast, owing to its characteristics, consumer credit usually has higher default rates, and its doubtful assets ratio in June 2008 was 3% (Chart 2.3.B).

As indicated above, apart from the credit-related developments in the past and the particular characteristics of the financing granted, the factors explaining the rise in bad debts also include changes in the accounting rules applied by credit institutions and in the regulations on the declaration of corporate insolvency. Thus the new accounting rules in effect in Spain since the beginning of 2005 affect the level and the growth rate of the doubtful assets ratio. Specifically, new Accounting Circular (CBE 4/2004) takes a more prudent approach and requires

<sup>6</sup> Spanish institutions have valued these transactions on the basis of the expected cash flows rather than at the collateral value of the property involved in the transaction. Other markets prefer to take the appraised value of the collateral (and its expected price appreciation), a practice which makes this product very risky. The institutions which originate transactions of this type do so with the intention of renewing the mortgage loan after a certain agreed period, on the expectation that the house price will have risen. However, if the price moves in the opposite direction, the risk returns to the institution.



*Bad debts are also rising because the new accounting regulations, which are more prudent, recognise doubtful assets earlier and more fully, and because of the incentives introduced by the new insolvency law.*

an earlier and fuller recognition of doubtful assets than its predecessor (CBE 4/1991). Moreover, this increased level of stringency is not linear over time, but rather is designed so that, as the doubtful assets ratio increases, its effect becomes greater (Box 2.1 of the May 2007 FSR). Thus, and faced with the same economic circumstances, the new Accounting Circular has, compared with its forerunner, two effects. First, and on a permanent basis, it raises the level of the doubtful assets ratio. Second, the speed at which this ratio rises increases. Accordingly, and in step with the pace of deterioration in the real economy, the new Accounting Circular will involve greater levels for the doubtful assets ratio, and swifter rates of increase. In this respect, it is estimated that since December 2007 the increase in the doubtful assets ratio for this reason has been around 10%, and its relative importance will grow in the coming quarters.

Meanwhile, the current insolvency law provides incentives to company managers to call for a creditors' meeting at an earlier stage, thereby bringing forward the impact of bad debts on institutions, although this effect is very difficult to quantify.

*Hence, given the same behaviour of the real economy, bad debts will now reach higher levels more rapidly because the regulations induce greater transparency and mean earnings will be set aside for bad debts.*

This simultaneous action of diverse factors will continue in the coming quarters, so a part of the increase in bad debts will reflect a less favourable economic situation, but another part will be caused by the aforementioned regulatory changes. The increases in the doubtful assets ratio derived from the more prudent regulatory approach are conducive to enhanced transparency in disclosures by institutions and mean that earnings will be set aside for bad debts.

To assess the rise in bad debts, not only must the simultaneous impact of the causal factors be considered, but it must be set in a historical context so as to analyse, first, the loan loss provisions set aside by the institutions to cope with it and, second, the recurring income which enables the higher write-downs to be absorbed.

*Although each cycle has its own particular features, bad debts are far from being as high or widespread as in 1993, and the same goes for the starting macroeconomic conditions.*

A broad historical perspective (the last 20 years) allows for a better assessment of the rise in doubtful assets ratios in the last year (Chart 2.5.A). The differences between the current starting situation and that in the early 1990s, before the last Spanish recession, are very significant. To begin with, the Spanish economy has benefited from joining a more stable region like the euro area here. Thus, previously, nominal interest rates were higher and the public finances and employment were in a significantly worse situation. In addition, credit institutions have improved their control and credit risk management models. However, this historical comparison must be made with caution, not only because not all economic cycles are the same, but because of the uncertainty surrounding the global economic situation.

These considerations affect not only the level of the doubtful assets ratio, which is currently lower than at the beginning of the 1990s, but also its degree of dispersion among institutions (Chart 2.5.B). This dispersion is growing as a result of the differing impact of the economic situation on the various credit policies pursued by institutions in the past.

*Also, the loan loss provisions in place give room for manoeuvre,...*

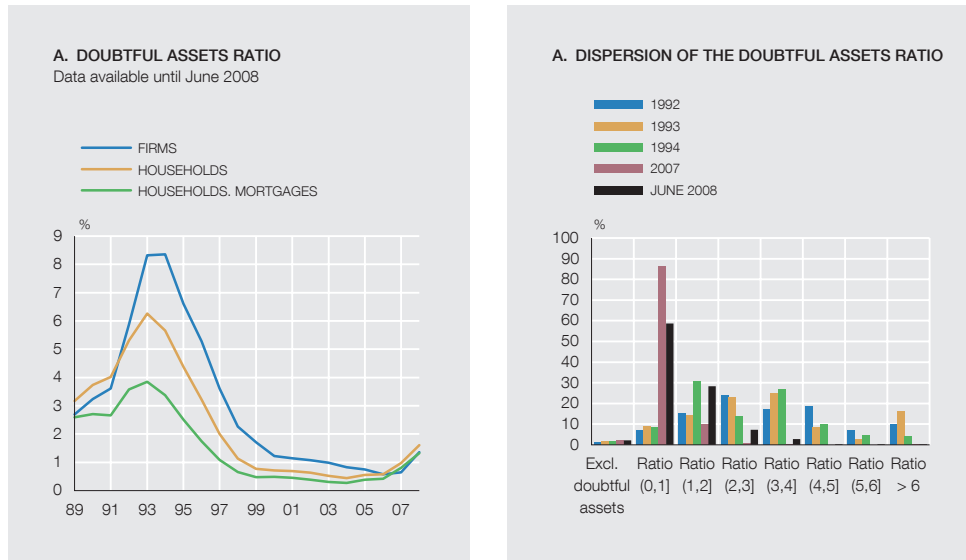
The existence of an ample loan loss provision accumulated through stringent general provisioning in the previous expansionary phase of the cycle means that the increase in bad debts has had an early and progressive impact on the results of Spanish deposit institutions. Hence institutions can withstand a significant deterioration in bad debts without their income statements being so adversely affected, as would occur in the absence of such a system of provisions.

*... since, by definition, the general provision is designed to be used when bad debts increase.*

By definition, the funds set aside through a general provision such as that in Spain are designed to be used when bad debts rise, as at present. This is being seen in the current year, in which the coverage ratios have decreased significantly (to 114% in June 2008) and will foreseeably continue converging towards the average levels prevailing in EU banking systems (around

**DOUBTFUL ASSETS RATIOS OVER TIME:  
LEVELS AND DEGREE OF DISPERSION**  
Deposit institutions. ID

CHART 2.5



SOURCE: Banco de España.

50%). Provisions for loan losses can be seen to decline in all countries when defaults rise significantly.<sup>7</sup> The general loan loss provisions were set up in the past to be used in circumstances like those at present, and not to increase permanently the funds available to institutions.

*A good part of the financing which grew most strongly in the past is secured, which allows greater flexibility in managing the credit risk.*

To determine the effective level of coverage of credit risk losses, it must be taken into account that the loss given default (LGD) is generally lower than the total amount of the doubtful assets. The lending in Spain, particularly that which has grown most strongly in recent years, is secured. From the standpoint of credit risk management, this allows institutions greater flexibility and more room for manoeuvre. In this respect, the LGD of a loan to a property development company is appreciably lower than that which would be recorded in another type of loan (for example, one secured by a specific asset of the company, which rapidly deteriorates and becomes obsolete, or one which is completely unsecured, the recovery of which depends solely on the willingness/ability to pay of the borrower, without any room for manoeuvre for the institution).

*The provisions in place enable coverage of the losses associated with doubtful asset ratios higher than the current ones, and more so if the recurring nature of bank income is taken into account.*

Assuming a level of bad debt coverage similar to the European average (around 50%, which takes the LGD into account), and taking into account the current level of the loan loss provision, this provision would enable banks to cover the losses associated with a doubtful assets ratio of around 4%. If to this is added the margin offered by the income statement, this coverage ratio boosted by one year's profits would enable doubtful assets ratios of around 7% to be covered. Alternatively, if three-quarters of the profits of two consecutive years are added, the loss coverage would reach doubtful assets ratios of 9%. Naturally, this is a scenario of considerable stress for income statements.

*The liquidity tensions persist on international financial markets.*

Credit risk is not the only risk which institutions have to manage. As a result of the international financial crisis, the *access to funding on the wholesale markets* has become more complex for financial institutions. The recent events involving US investment banks, one of the world's major insurance companies (AIG) and US money market mutual funds, coupled with

7. The average figure for the EU might fall in the coming quarters.

the movements in stock market prices and their high volatility and the difficulties of certain large European banks, evidence episodes of severe instability on international financial markets that are now affecting the ability of non-financial corporations to access funds.

*The wholesale funding received by Spanish deposit institutions...*

In recent years Spanish institutions have turned to the medium- and long-term wholesale financial markets to finance some of their growth. This equipped them with a more flexible financial structure in the benign conditions prevailing on international financial markets.

*... avoided the products which are now giving trouble...*

The funding from the wholesale markets was raised through a wide range of financial instruments, and avoided the complex structured products that have proved problematic due to their lack of transparency and the difficulties in valuing them.

*... and has a maturity structure substantially slanted towards the long term.*

Also, the diversification of issuance terms and, in particular, the prevalence of medium- and long-term maturities (the outstanding medium- and long-term balance is more than six times the short-term funding received), although more costly than short-term funding on the money markets, has enabled Spanish institutions to achieve greater stability in their wholesale funding. Thus, even within medium- and long-term funding (excluding notes), the long maturities clearly predominate: 3.8% of the outstanding balance in July 2008 falls due at the end of this year, 36% matures between 2009 and 2012, with maturities spread evenly over those years, and the remaining 60% matures after 2013 (Chart 2.6.A).

*Market placements by Spanish institutions took advantage of the particular opportunities available on the market...*

In the current year Spanish deposit institutions were, despite the difficulties, able to issue on the market some €36 billion of unsecured financial debt (€22 billion) and mortgage covered bonds (€14 billion). In the circumstances currently prevailing on the international financial markets, not only the volumes, which were concentrated mainly in Q2, but also the large number of institutions gaining access to the wholesale markets, were significant.

*... but difficulties persist at present,*

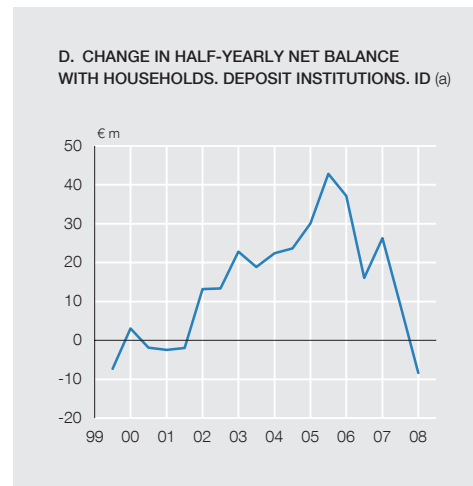
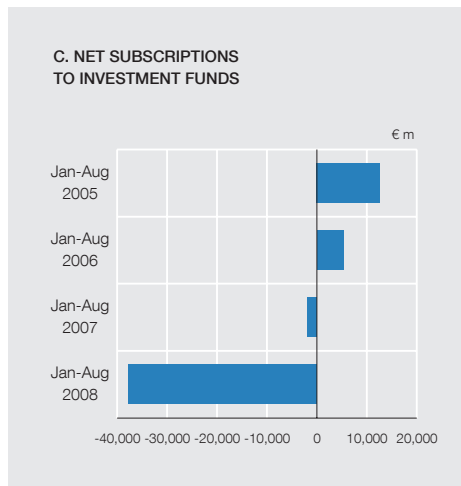
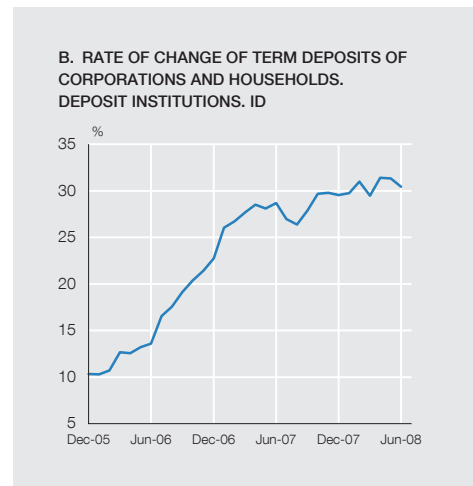
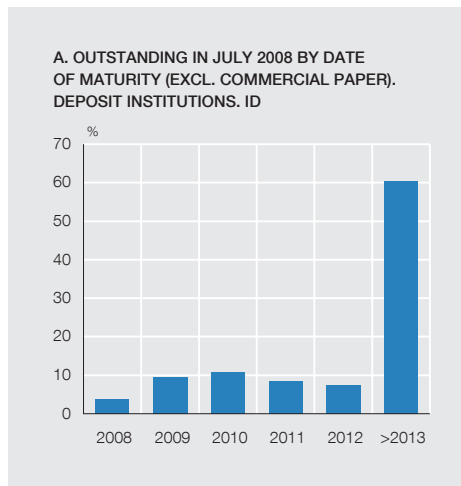
However, the access to these markets, both for Spanish institutions and for those of other EU countries, has not been continuous or smooth, but has rather taken place when opportunities have arisen to place instruments with investors highly reluctant to take risks and preoccupied with their own efforts to restructure portfolios and financing sources. This illustrates the severity of the current difficulties, with these markets – which were deep and liquid until mid-2007 – having almost completely ground to a halt. The Spanish government's action plan, which is part of that decided on by the euro area countries, should – insofar as it provides State backing to institutions' issues – contribute to re-opening funding possibilities for Spanish institutions.

*difficulties that should be alleviated by the State backing to institutions' issues.*

*The mortgage portfolios securitised by Spanish institutions are characterised by their granularity and by the simplicity of the structures used.*

Two factors explain the quality of the portfolios securitised by Spanish institutions. First, the portfolios are highly granular (i.e. composed of many small diversified loans) and generally have moderate LTVs (ratio of the value of the mortgage loan to that of the house being financed, which stands at an average of around 70%). Second, the securitisation structures used are very simple and implemented through asset-backed securities which, given their lack of complexity and high transparency, are far removed from those of other banking systems. Contributing to this is the concept that Spanish institutions have of securitisation, since, rather than considering it as a business in itself, they regard it as an additional source of funding, so most of the risks have remained on bank balance sheets. Thus, apart from avoiding the serious problems of incentives in origination and subsequent loan monitoring encountered in the US, the bonds resulting from securitisation processes in Spain have a notable credit quality (on average 93% are triple A).

Given the current levels of mortgage bad debts in Spain (1.28% in June 2008), it is unlikely that credit portfolio defaults will affect the higher-quality bonds. Considering, as mentioned above, that the higher credit quality tranche includes 93% of the bonds issued, these would only suffer



SOURCES: Market information, INVERCO and Banco de España.

a. Net balance defined as credit less deposits.

*Hence it is hard to conceive that the higher-rated bonds, which includes practically all of them, will be affected by the increase in bad debts, even in highly adverse scenarios.*

losses when the probability of default on the mortgage loans, assuming a LGD of 50% (very high for Spain since in the previous recession this loss was practically zero), rose to 14% (28% if the LGD were 25%), a level which is well removed from even that recorded in 1993 (mortgage doubtful assets ratio of 4%), the year of the last Spanish economic crisis. For a loan with a LTV below 80% and a LGD of 50%, house prices would have to fall by more than 60% for there to be losses. This is a very severe stress scenario with a very low probability of occurrence. It should also be taken into account that this type of stress testing, valid for Spain, cannot be conducted in those banking systems in which successive securitisations have been carried out, since the underlying assets are not granular and the probability distributions are not homogeneous.

*The traditional Spanish retail banking model is making it possible to restructure liabilities by increasing deposits taken from the public,...*

Against this background, Spanish institutions have reacted rapidly to strengthen their traditionally sound customer deposit base. This was made possible largely because of their characteristic business model. Spanish banks engage in typically retail business, and so have close ties with their customers. These bonds, which are strengthened by banks' proximity to customers through their extensive office network, enable long-term relationships to be established. Also, Spanish banks have a proven ability to adjust the mix of savings products offered to their customers (deposits, investment funds, life insurance, etc.).

*... particularly fixed-term deposits which, although more costly, are more stable.*

The structural characteristics of the Spanish banking system are helping institutions to restructure their balance sheets. In the past year, banks have attracted a significant volume of fixed-term deposits, with growth rates of around 30% (Chart 2.6.B). The increase in fixed-term deposits meant that their relative weight rose with respect to sight deposits. This, albeit at a higher cost, lends greater stability to their liability structure. Also, it can be considered that funds have also been received from investment funds (Chart 2.6.C). Even so, and as mentioned throughout this FSR, the difficulties in obtaining funding on international markets make for considerable additional difficulties for Spanish institutions. The plan announced by the Spanish government, which is part of the euro area countries' action plan, should contribute to alleviating these difficulties (Box 1.2).

This restructuring of liabilities, along with the slower lending growth, means that the difference between new funds loaned and those raised (new loans less new deposits) has progressively narrowed, with the deposits taken from households exceeding the lending to this sector in the first half of 2008 (Chart 2.6.D).

#### 2.1.2 PROFITABILITY

*The income statement continues to consist largely of recurring items,...*

Despite the complex developments on financial markets and the significant economic slowdown in Spain, the income statement of Spanish deposit institutions continues to be characterised by recurring items, particularly if it is compared with that of other EU banking systems. The recurring nature of their business is underscored by the scant dependence of their income on financial market performance.

*... and despite the slight fall in profit...*

Group net income was somewhat higher at €15,100 million for the period up to June 2008, slightly (2.5%) less than for the same period of 2007 (Table 2.2). The slight fall in profit is partly explained by the more complex environment in which institutions operated and by the strong performance in the first half of 2007 when, moreover, various large institutions made one-off sales of some of their investments. Further, it should be kept in mind that business abroad is negatively affected when it comes to converting its results to euro, due to exchange rate trends.

*... profitability remains high.*

In line with the slight fall in profit, the return on equity (ROE) decreased uniformly across institutions (Chart 2.7.A), from 21.5% in June 2007 to 17.7% in June 2008. Despite the decline, the current levels of ROE are very high and clearly exceed the yield on public debt (Chart 2.7.B).

*The recurring nature of income can be seen in the three main margins...*

The recurring nature of income statement items can be seen in the sound performance of its three main margins (Chart 2.7.C) and, in particular, in that of the net interest margin (traditional retail business) and of operating expenses, which mitigate the stagnation of fees and commissions and the notable growth of loan loss provisions (Chart 2.7.D).

*... and particularly in net interest income, which reflects the persistence of income and the ability to adjust interest rates to the general market risk premium.*

Net interest income grew by 13.5% (5 bp in terms of ATA, to 1.88%), and this despite the slowdown in activity and higher funding costs. Unlike those of other countries, Spanish banks have a large percentage of loans extended at variable rates (Chart 2.8.A), which enables them to adjust interest rates more rapidly to the general market risk premium, keeping a stable spread between marginal lending and deposit rates (Chart 2.8.B). The persistence of tensions on international financial markets will mean that funding costs will continue to exert downward pressure on net interest income.

Operating expenses are still growing at a high rate (8.3%), albeit one lower than that of gross income (9.7%), which prompted a slight change in the efficiency ratio from 44.6% in June 2007 to 44.1% in June 2008. This development was general in deposit institutions, particu-

## INCOME STATEMENT

Deposit institutions

TABLE 2.2

	JUN-08		JUN-07	JUN-08
	€m	% CHANGE JUN-08/ JUN-07	% ATA	% ATA
Financial revenue	83,686	23.7	4.82	5.41
Financial costs	54,610	30.0	3.00	3.53
Net interest income	29,076	13.5	1.83	1.88
Share of profit or loss of entities accounted for using the equity method	2,541	18.9	0.15	0.16
Net commissions	11,025	-0.1	0.79	0.71
Gains and losses on financial assets and liabilities	5,983	8.0	0.40	0.39
Gross income	48,625	9.7	3.16	3.15
Operating expenses	21,429	8.3	1.41	1.39
Other operating income	677	-0.9	0.05	0.04
Net operating income	27,873	10.5	1.80	1.80
Asset impairment losses	8,479	63.0	0.37	0.55
Provisioning expense (net)	1,195	14.0	0.07	0.08
Other income (net)	1,463	0.6	0.11	0.10
Profit before tax	19,662	-3.8	1.46	1.27
Net income	15,996	-1.2	1.15	1.03
MEMORANDUM ITEM				
Group net income	15,149	-2.5	1.11	0.98

SOURCE: Banco de España.

larily the larger ones (Chart 2.9.A). Operating expenses decelerated slightly in business in Spain (from 9.1% in June 2007 to 8% in June 2008), particularly administrative expenses, while the contribution of staff costs and depreciation to the total rate of change was similar to that in the previous year. The June 2008 data (Chart 2.9.B) showed that banks have begun to act on those expenses where they have most room for improvement in the short term (advertising and publicity), but that office openings (3.8% in June 2008) and new employee hires (4.2% in June 2008) continue to grow.

*Institutions should step up their efforts to rationalise operating costs.*

These data show that there is room to act on operating expenses. What is more, given the current circumstances of banking business, institutions should strive more to reduce their operating expenses. Such efforts would range from rationalising their operations and the level of their cost structure, to harnessing the economies of scale that might arise from any future banking consolidation processes. In any event, and whatever the strategy chosen by each institution, the outcome should lead to greater cost efficiency. The rigorous control of costs should contribute to softening the impact which, in the coming years, the write-down of doubtful assets and the lower rate of expansion of banking activity will exert on earnings.

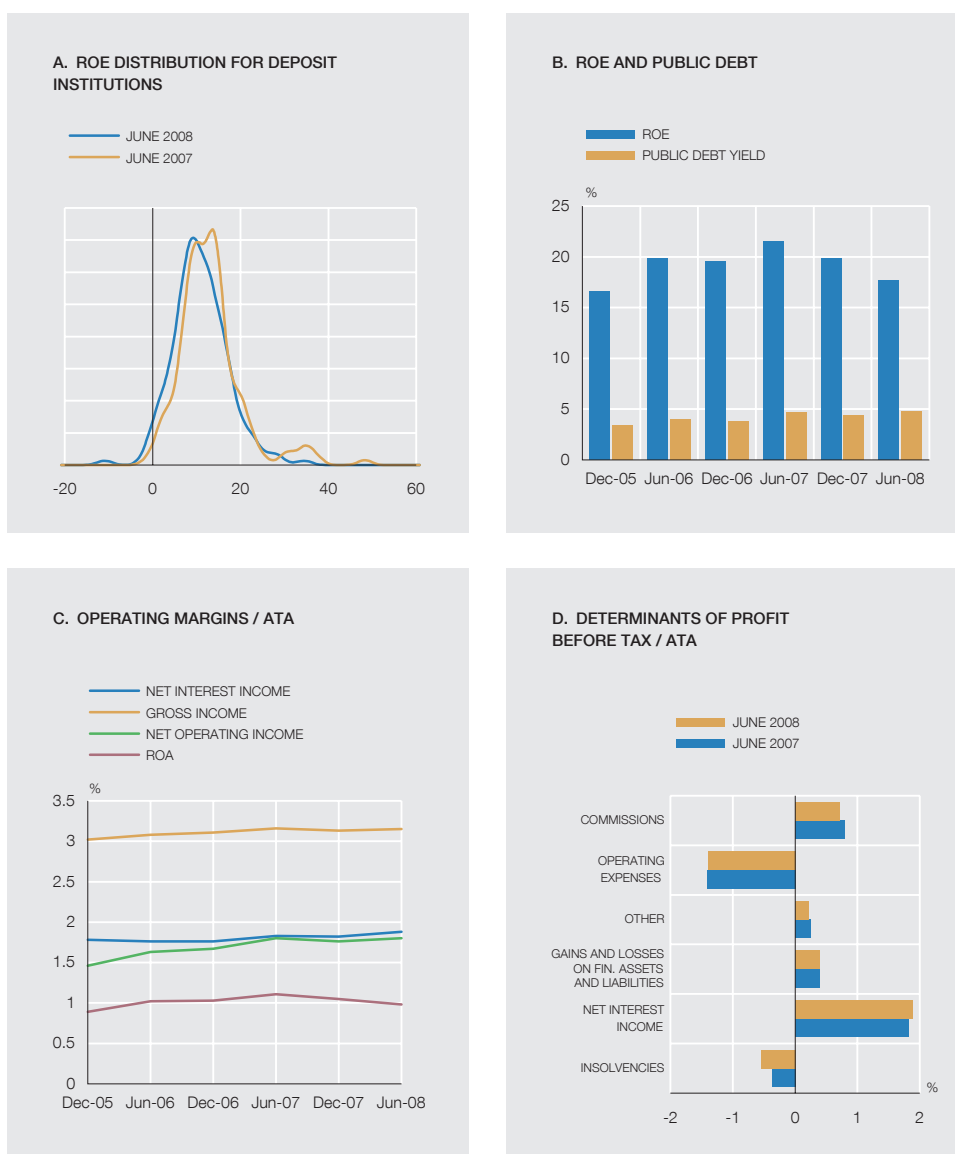
*Fees and commissions have not grown,...*

The sluggishness of fees and commissions, a trend which foreseeably will not reverse in the short term, is explained basically by the smaller volume of securities services and non-banking product sales, as well as by the lower growth of collection and payment service fees, probably due to the policy of reduction followed by numerous banks and to the lower volume of business.

*... but loan loss provisions have surged.*

Finally, to explain the decrease in group net income, given the growth of 10.5% in net operating income (unchanged as a percentage of ATA), account must be taken of the notable

Deposit institutions



SOURCE: Banco de España.

growth (63%) of asset impairment losses, practically all of which were due to loan losses. This reflects the increase in specific provisions as a result of the rising bad debts, and, although the general provision has countered some of this effect, it has not done so to a greater extent because numerous banks have pursued a policy of prudence and have kept recording provisions.

As mentioned throughout this FSR, although Spanish banks face a much more complex period, they must harness the room for manoeuvre available to them to alleviate difficulties. From the standpoint of the income statement, this is so because of the strong starting position.

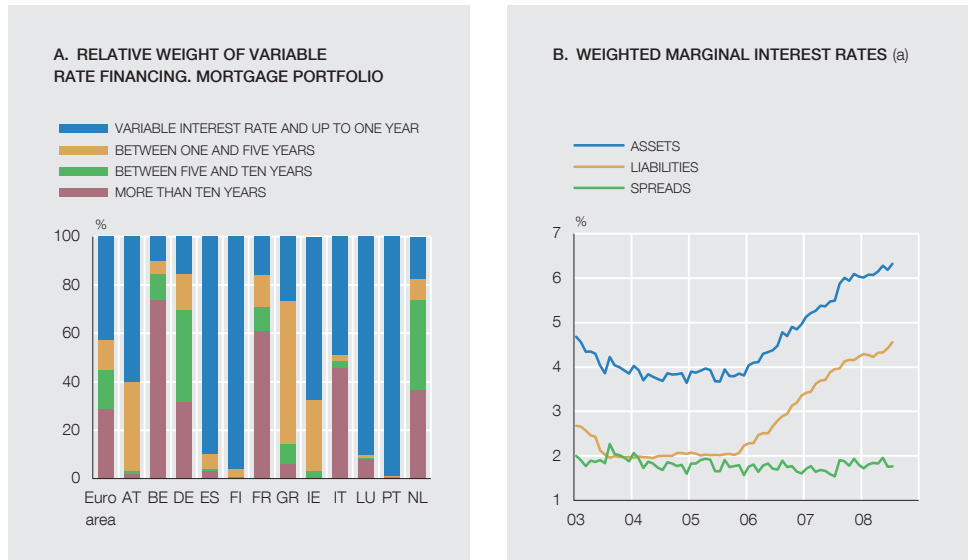
*Compared with the EU, the starting position is good.*

This starting position is discernible on comparing the results of the Spanish banking system with the EU average (the latest available data are as at December 2007). It can be seen that Spanish banks are more profitable and efficient (Chart 2.10.A). Contributing to this are the recurring nature of their traditional retail business and their cost management ability.

## VARIABLE RATE FINANCING AND MARGINAL INTEREST RATES

CHART 2.8

Deposit institutions. ID



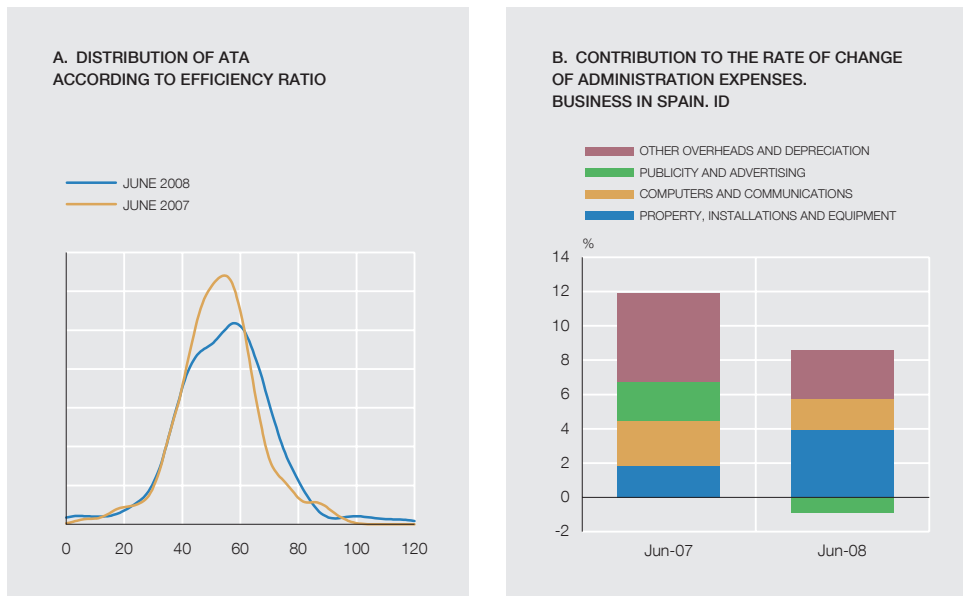
SOURCES: ECB and Banco de España.

a. These rates are those established in transactions initiated or renewed during the month prior to that of reference, such transactions being weighted by their volume. The asset-weighted marginal rates include, inter alia, those applied to house and consumer finance and credit to non-financial corporations, while the liabilities ones include, inter alia, fixed-term deposits and repos.

## OPERATING EXPENSES AND EFFICIENCY

CHART 2.9

Deposit institutions



SOURCE: Banco de España.

*This is reflected in the better stock market performance, although the perception of credit risk is similar to that of other financial systems.*

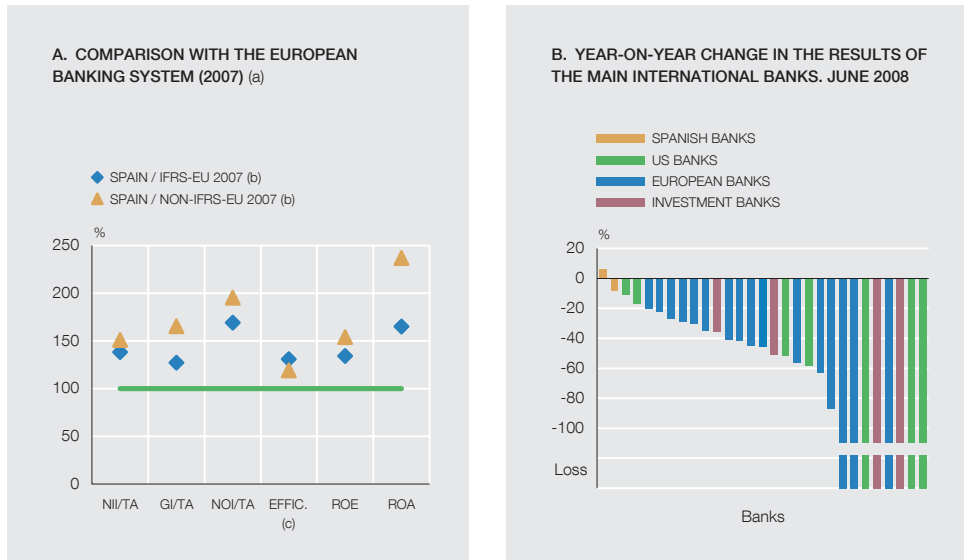
Second, as mentioned above, avoiding the direct impact of the subprime crisis means that there is now extra room for manoeuvre. Comparison of the major banks' earnings performance in the first half of 2008 shows that the Spanish institutions performed better (Chart 2.10.B). These differences are reflected in their share prices, which fell less sharply than those of the large members of other banking systems (Chart 2.11.A), although the perception as to



## INTERNATIONAL COMPARISON.

Deposit institutions and main banks

CHART 2.10



SOURCES: ECB and Banco de España.

- Spanish data relative to average EU data. Above the value 100 (green line) the situation in Spain is more favourable, while below it would be less favourable.
- For the purposes of the information gathered by the ECB, IFRS-EU (NON-IFRS-EU) countries are those that (do not) present their consolidated financial statements in accordance with International Financial Reporting Standards.
- EFFICIENCY: inverse of the efficiency ratio, which means that values above 100 (green line) reflect a better relative position for Spanish institutions.

their credit risk, which is rising, is similar to that of other international banks, and appreciably lower than for US banks (Chart 2.11.B).<sup>8</sup>

The implementation of the measures agreed by the EU countries on the shoring up of credit institutions' capital would, if they were applied to institutions not undergoing solvency problems, have an unwanted negative effect. This is because they would hamper the discriminating capacity of financial market agents among institutions, which might hinder the return of the former to a normal footing.

Despite a positive performance both at absolute level and comparatively with other banking systems, there are downside risks to the earnings performance of banks, particularly because of the expected increase in loan loss provisions. In any event, banking is a cyclical business, so the high returns of the recent past cannot be expected now that the economic and financial environment has turned much more unfavourable.

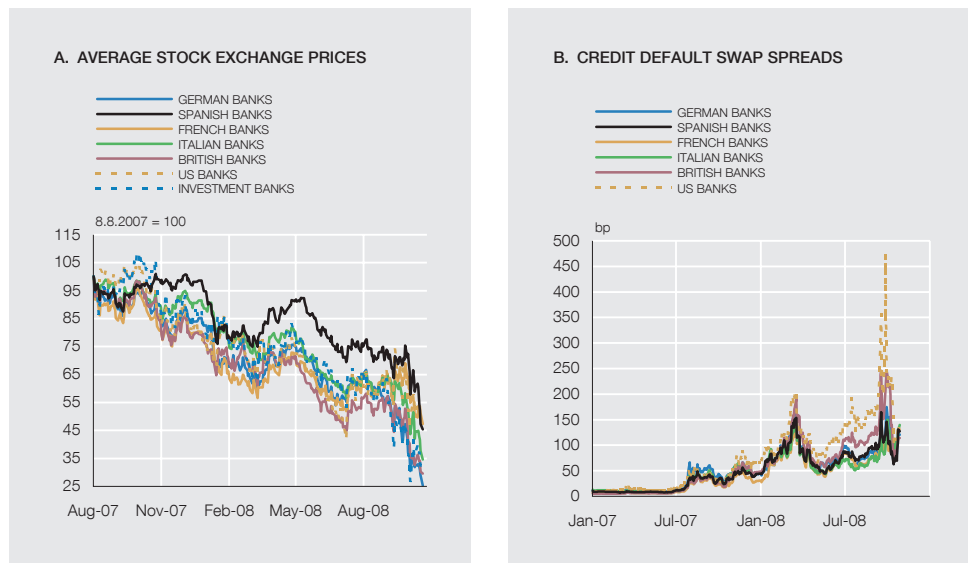
### 2.1.3 SOLVENCY

*Spanish institutions reported June 2008 solvency data in accordance with the new solvency Circular.*

The recent transposition of the EU Capital Requirements Directive to Spanish law meant that deposit institutions obliged to report their solvency situation to the Banco de España did so for the first time in June 2008 in accordance with the New Capital Accord (Basel II) criteria.

In June 2008, the overall solvency ratio for deposit institutions stood at 11.3%, while the tier 1 ratio was at 7.7%. In both cases, Spanish deposit institutions are comfortably above the regulatory minimum requirements.

<sup>8</sup> The risk premiums derived from the CDSs of other smaller Spanish institutions should be regarded with much caution because the liquidity of this market is usually very low, and the same can be said of its transparency.



SOURCE: Datastream.

*Both the total ratio at the tier 1 ratio of comfortably above regulatory minimum requirements.*

*There was an improvement on June 2007, despite the prudent criteria with which the transition to Basel II is being implemented.*

*Attesting to the soundness of Spanish banks' solvency is their core capital ratio,...*

*... and international comparisons.*

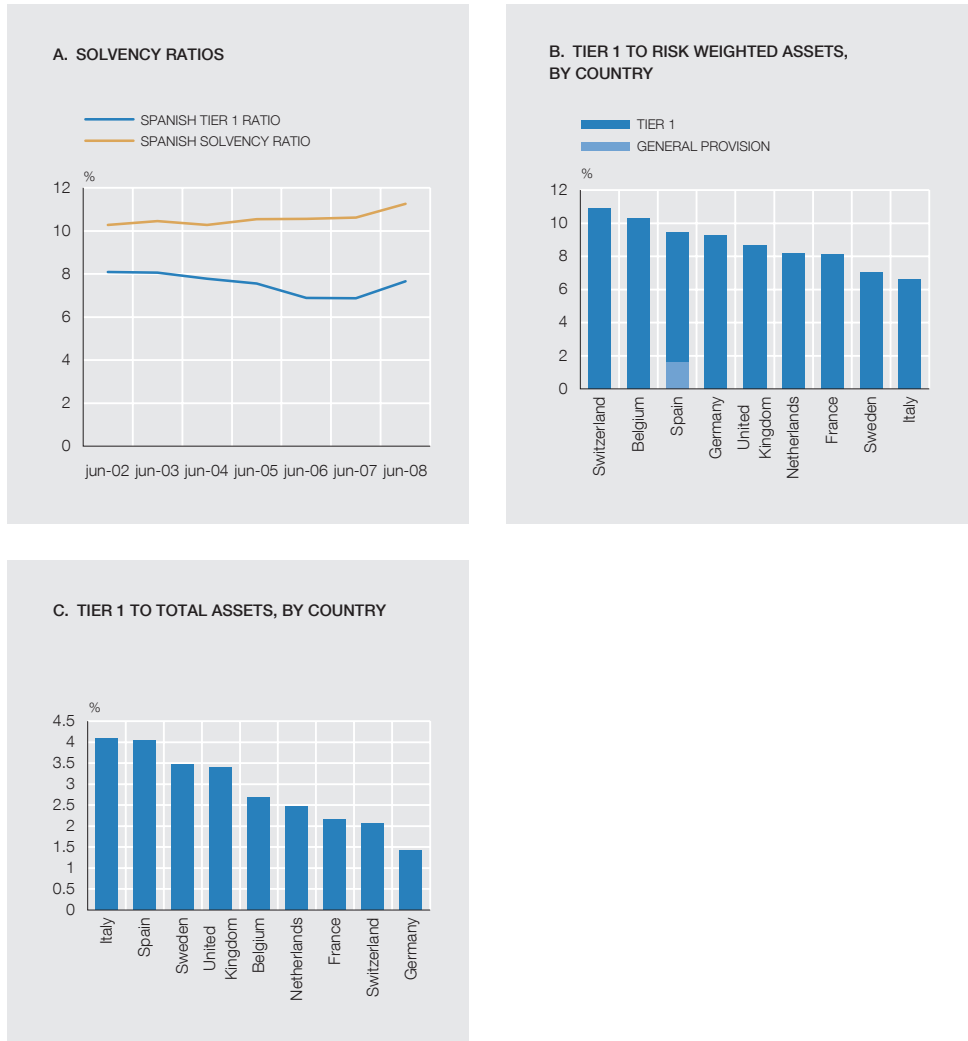
*Some international banks with high solvency ratios have had to be bailed out, in one form or another, which evidences the limitations of solvency ratios for certain assets included in the held-for-trading portfolio and the existence of off-balance sheet structures*

Compared with June 2007, both the total solvency ratio (from 10.6% to the above-mentioned figure of 11.3%) and the tier 1 ratio (from 6.9% to 7.7%) trended favourably (Chart 2.12.A). This favourable solvency performance, and in particular of the ratio that reflects the highest-quality capital, has come about notwithstanding the fact that Spanish banks are not expected to significantly improve their capital ratios as a result of this regulatory change. This is because of the prudent criteria with which this process of transition is being implemented.

The strength in terms of solvency of Spanish banks can also be seen when other measures of capital are analysed, measures which, though not subject to regulatory requirements, are taken into account by the market when analysing bank positions, since they consider the highest-quality capital elements. Thus, the core capital ratio, i.e. the ratio of capital plus reserves to risk-weighted assets, was 9.12% in June 2008. If intangible assets (essentially goodwill in the case of Spanish banks) are stripped out the ratio, it still stands at a comfortable level (7.14% in June 2008).

The solvency position of Spanish banks compared with that of other European banking systems stands around the mean, and all the more so when funds set aside as general provisions are considered (Chart 2.12.B). However, as recent events have highlighted, very high ratios, including those of the most basic capital measure, have not prevented deposit institutions from various European countries from undergoing notable difficulties, necessitating, in one way or another, intervention by the public authorities. Indeed, several institutions that have needed such help were amongst the highest-ranked, before the international financial crisis unfolded, in terms of their capital ratios. This probably reflects the insufficiency of capital requirements for certain types of assets, in particular those included in the held-for-trading portfolio which, as has been indicated, incorporates a high credit risk. It also reflects the existence of off-balance sheet vehicles, which have tightened capital requirements above what the previous figures showed.

In this respect, the current situation has shown that deposit institutions' level of leverage is, notwithstanding other considerations, also very important. For overall Spanish deposit institu-



SOURCES: Banco de España and company reports.

*This is why leverage ratios are important.*

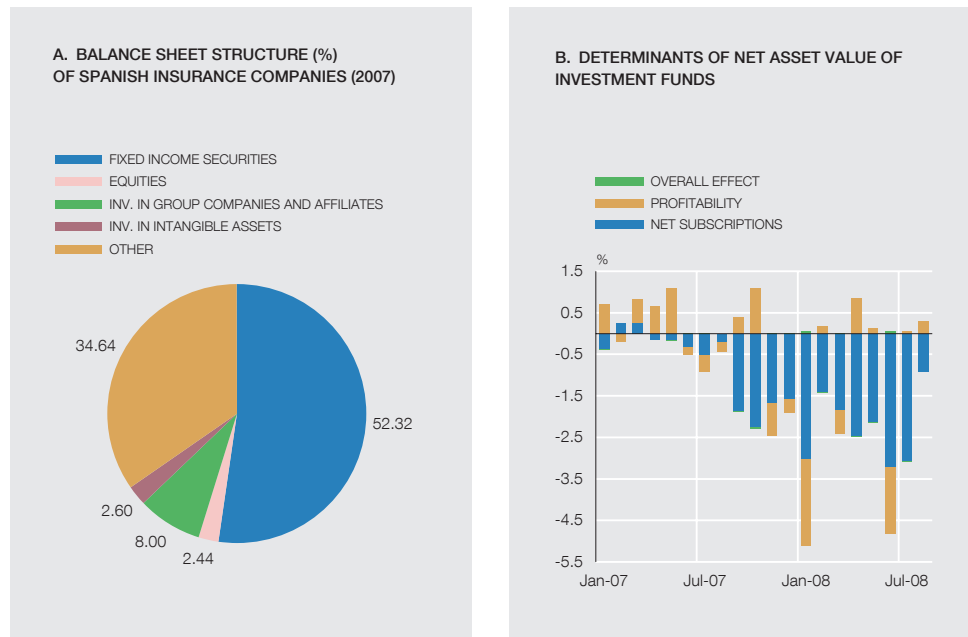
*Spanish banks are in a leading position internationally.*

*The recapitalisation by some governments of banks that apparently have no solvency problems may distort the level playing field. At the same time, there are doubts as to whether the*

tions, this level of leverage stands at around 4.8% when tier 1 capital is set in relation to total assets. When capital plus reserves is considered, this ratio stands at 5.7% and rises to 6.7% when general provisions are taken into account.

The soundness of Spanish banks in terms of their leverage is evident when compared with the situation of the biggest European banks (Chart 2.12.C). In terms of core capital, the information available is more limited, but the relative strength of Spanish institutions is corroborated. However, set against the current uncertainty over both developments in the world economy and in the main financial markets, the shoring up of capital is a factor that banks should analyse thoroughly.

This analysis has been prepared without considering the measures that various European governments are implementing to provide more capital to a good number of their biggest banks (e.g. in the United Kingdom, the Netherlands and France). If these measures are not carefully designed and explained to the market, so that banks that have not shown any solvency problems are also favoured, the level playing field of competition could be perverted, while distortions would be introduced that would make financial markets agents' task of discriminating among banks more complex. Counterproductive effects would thus be generated,



SOURCES: Inverco, Dirección General de Seguros y Fondos de Pensiones and Banco de España.

*instruments being used in such recapitalisation processes can be considered best-quality (tier 1 or core) capital.*

## 2.2 Insurance companies and mutual funds

*The international insurance sector faces a more complicated environment, although Spanish companies have a very limited exposure to the problematic products.*

*The starting position is good, although they have to face a more difficult economic situation,...*

hampering the return of financial markets to a more normal footing. Moreover, there are doubts over how the features of the instruments used to recapitalise banks square – according to the agreements by EU heads of state and the applicable Community directives – with the features that should characterise both tier 1 and core capital. Specifically, cumulative preference shares clearly belong to the tier 2 capital category.

From an international perspective, the difficulties besetting the insurance sector are plain in the case of one of the world's largest insurers (AIG), and the need for public intervention evidences their deep impact on the financial system. Also, in the international arena, the concern about the monolines noted in the previous FSR has not dissipated.

For Spanish insurance companies, the exposures both to complex products lacking in transparency which have proven to be problematic and to monolines are estimated to be insignificant. Hence their balance sheet structure, in which the weight of equities instruments is slight (Chart 2.13.A), helps to mitigate the adverse effects derived from international market developments.

Nonetheless, Spanish companies, despite their high profitability (ROE of 26.4% and ROA of 2.6% in 2007) and high solvency margin (195% in life insurance and 343% in non-life in 2007), have to face the difficulties derived from a more unfavourable economic conjuncture in a much more complex financial environment.

Thus the automobile insurance sector, which has benefited from the decrease in claims, has been negatively affected by the drop in car sales and by the effect of inflation on the cost of vehicle repairs. Meanwhile, the fall in house sales has had a negative effect on the new multi-risk home insurance, on life insurance linked to house purchase mortgages and on payment protection insurance in case of unemployment.

*... and heightened competitive pressure to attract household savings,...*

Furthermore, the life insurance business has been faced with strong competition from deposit institutions to attract household savings.

*...which also affects investment funds.*

This increased competitive pressure from deposit institutions also affects investment funds (sharp decrease in net subscriptions), which, together with the difficulties on international financial markets (lower returns), helps to explain the decline in investment funds' net assets (Chart 2.13.B).

### 3 Infrastructures

#### **New Eurosystem risk control measures**

*In February 2009, the Eurosystem will change its collateral admission arrangements which, although they have proved sound,...*

*... are reviewed every two years and will on this occasion include lessons learned as a result of the turmoil.*

*The essence of collateral policy is retained, with the changes being of a technical nature.*

On 4 September, the Eurosystem announced changes in the risk control measures applied to the eligible collateral for its credit operations with counterparties. These measures will come into force in February 2009. The collateral framework set in place by the Eurosystem has consistently proven sound and efficient. As previously highlighted in the November 2007 FSR, the admission of a wide range of eligible assets has been a differential feature that has contributed favourably to the resilience of financial markets in the current circumstances.

Nonetheless, in a collateralisation framework in which asset eligibility is essentially determined by relatively general principles, it is important to check periodically that the features and parameters of the risk control framework are in line with actual market circumstances. The changes announced by the Eurosystem are part of the regular review made every two years. These reviews enable relevant information drawn from the financial markets to be updated in order to bring risk control policy into line. Consequently, further to the international financial turmoil, these changes also include the lessons learned during the current market situation.

The changes are considered to be technical adjustments, with the essence of the Eurosystem's collateral policy being retained. The changes can, concisely, be grouped under the following headings. First, the valuation haircuts applied to the various instruments accepted as collateral will be increased.<sup>1</sup> Second, transparency requirements in the rating of asset-backed securities are to be stepped up. Third, the definition of "close links" is extended to include situations in which a counterparty submits an asset-backed security as collateral when it (or any third party that has close links to it) provides support, in specific circumstances, to that asset-backed security.<sup>2</sup> Finally, the Eurosystem may, if required, and notwithstanding compliance with formal requirements, limit or exclude the use of certain assets as collateral for its credit operations, doing so also at the level of individual counterparties.

The increase in valuation haircuts for specific instruments entails updating the level of haircuts it is deemed appropriate to maintain for marketable assets that were included in the less liquid categories. In the specific case of asset-backed securities, the observation that the prices of these assets had declined significantly in various markets, including over short periods of time, appeared to warrant an increase in their haircuts. The uniformity of the new level of haircuts, irrespective of the maturity or coupon structure of the bond, responds to the fact that risk in this type of product is more closely linked to the underlying assets, whose maturities are generally in the long term, than to the asset-backed securities themselves. The increase in the haircuts on non-collateralised bank paper is due to the greater risk concentration that this asset introduces. The introduction of a 5% reduction to the theoretical value of asset-backed securities that lack a market price is in response to the loss of liquidity of this instrument, which means that its theoretical valuation is subject to greater uncertainty, given the lesser availability of market prices that can be used as a reference for its intrinsic value.

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1. These measures may be summarised as: (i) increase in haircuts applied to asset-backed securities for all maturities and coupon structures, up to 12%; (ii) additional 5% markdown to that previously existing for fixed-income instruments issued by credit institutions (other than collateralised bank bonds); (iii) asset-backed securities to which a theoretical value is assigned (because there is no market price) will be subject to a valuation markdown of 5% of this theoretical value. 2. Either by establishing a currency hedge with the issuer or guarantor, or by providing liquidity support for more than 20% of the nominal value of the asset-backed security.

**TARGET2 - SECURITIES (T2S)**

One of the characteristics of the post-trading<sup>1</sup> of securities in Europe is its fragmentation into numerous infrastructures. This bears adversely on the efficiency of the industry in respect of financial market integration. One particular manifestation of this inefficiency is in cross-border business, where much higher settlement costs than at the national operational level combine with operational difficulties. The Eurosystem has a particular interest in this industry owing both to its commitment to financial integration in Europe and to financial stability considerations. Heightening this interest is its status as a user of the post-trading platforms and the very close links between securities settlement and cash settlement in central bank cash accounts.

Accordingly, the Eurosystem has been closely monitoring the solutions proposed in the post-trading industry in recent years and, against this background, it has taken the initiative to develop the TARGET2-Securities (T2S) platform. In July 2008, following ground-work involving continuous consultation with all the parties involved, and bearing in mind the support received from both political and market quarters, the Governing Council of the European Central Bank took the decision to set the T2S project in train. It further decided that the Eurosystem shall be the owner and operator of this platform, which will be developed and operated by the central banks of Germany, Spain, France and Italy. The specifications of the platform, which will determine the functional and technical design of the system, should meet users' needs. The specifications phase, which should conclude in late 2009, will be followed by a fully fledged development phase, with T2S expected to come on stream by 2013.

T2S is a very ambitious project whose main aim is the integration of securities settlement and the associated cash settlement on a single common platform. The platform, on which cash and securities accounts will remain respectively assigned to the central banks and central securities depositories, will centralise the settlement of all securities operations in euro (and in other European currencies) in central bank money. It is a technical infrastructure shared by all the central securities depositories that decide to join the project, which will operate under harmonised rules and which will ensure equal treatment and access to all participants. In any event, the central depositories that join will retain their contractual and business relationship with their customers.

From a financial stability standpoint, T2S represents substantial progress in risk containment. The overall reduction in post-trading

risk that T2S will undoubtedly involve is largely due to its expected containment of the scale of legal, settlement and custodial risk, especially as far as cross-border securities traffic is concerned. Further, to mitigate the additional risk that concentrating all settlement in a single platform might involve, a series of particularly demanding operational risk control measures are to be adopted.

T2S will thus provide for a reduction in principal risks and those risks arising from the use of numerous players (custodial chains) involved in the settlement of operations, as it enormously simplifies delivery versus payment in central bank money.

Settlement risk can also be reduced, since T2S will offer a real-time gross settlement service that will be assisted by optimisation mechanisms both on the securities side and the cash side (autocollateralisation in stocks and flows). These mechanisms allow the advantages of net models to be had, as they reduce the liquidity needs proper to gross systems without incorporating the risks inherent in these net models.

From an operational security standpoint, as T2S is constructed on the TARGET2 infrastructure, it will enjoy very high reliability and operational security levels, along with contingency mechanisms and back-up systems that will ensure activity re-start and the completion of the settlement process in emergency situations. It should be pointed out that TARGET2 meets the most demanding international security standards.

With regard to efficiency, the concentration of all securities and cash accounts in the same platform will allow for better management of participants' collateral and liquidity. This efficiency will in turn be enhanced by the harmonisation of communication protocols and of operational procedures. Also, the T2S platform will generate economies of scale and network economies, features proper to this type of infrastructure, which will result in lower costs, especially in the cross-border sphere.

In sum, T2S is expected to contribute decisively to the creation of a single and more secure securities market, helping reduce collateral and liquidity requirements substantially and allowing cross-border operating in Europe to reach the same levels of efficiency and security it enjoys at the national level. Further, T2S will contribute favourably to containing the systemic risk inherent in securities settlement activity, since it incorporates procedures that will enable a substantial portion of the risks proper to this type of activity to be mitigated.

1. Securities clearing and settlement.

The requirement of greater transparency in the rating of asset-backed securities and the extension of the definition of "close links" are a response to certain practices observed in some issues of asset-backed securities. Strong dependence of the risk profile of an asset-backed security on the counterparty may invalidate its effectiveness as collateral in operations between the counterparty and the Eurosystem. The explanations given by rating agencies about the reasons behind the credit ratings granted to asset-backed securities have subsided substantially in recent times.

*The effect of the measures will be limited in the Eurosystem ...*

The overall effect of these measures, which will conceivably reduce the value of the eligible collateral available, is limited. This is because the volume of collateral deposited by counterparties with the Eurosystem is notably greater than their funding needs.

*... and even more negligible for Spanish banks, which have a high volume of collateral.*

In the case of counterparties resident in Spain, the situation is even more comfortable. Possibly, the reduction in the value in eligible collateral will be somewhat higher in percentage terms than that estimated for the Eurosystem, since the proportion of asset-backed securities in the composition of eligible collateral deposited at the Banco de España is somewhat higher than that of the Eurosystem. However, the volume of eligible collateral deposited exceeds the amount used in credit operations with the Banco de España by an even steeper proportion than that for the Eurosystem: of a volume of collateral of €170 billion, approximately €15 billion would have to be deducted, which would still leave €155 billion to guarantee monetary policy operations which, at most, have amounted to around €50 billion for the set of counterparties resident in Spain. Finally, the extension of the definition of close links in asset-backed securities would not affect the counterparties resident in Spain, since such securities deposited by these counterparties possess none of the features that would make them ineligible as from 1 February 2009.





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