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ABBREVIATIONS*

€	Euro
ABCP	Asset-backed commercial paper
AIAF	Asociación de Intermediarios de Activos Financieros (Association of Securities Dealers)
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 swaps
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
DGSyFP	Directorate General of Insurance and Pension Funds
DIs	Deposit institutions
ECB	European Central Bank
EMU	Economic and Monetary Union
EU	European Union
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
GI	Gross income
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
INE	National Statistics Institute
IOSCO	International Organization of Securities Commissions
LGD	Loss given default
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
NOI	Net operating income
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
SPV	Special-purpose vehicle
TA	Total assets
VaR	Value at risk
WTO	World Trade Organisation

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

CONTENTS

Overview

Since the publication of the last Financial Stability Report (FSR), and particularly since the summer this year, new factors of risk and uncertainty have arisen in the international financial sector. There has been considerable turbulence on financial markets, the source of which lies in the increase in defaults on US sub-prime mortgages. Although the size of this business segment is small (it accounts for 5.3% of banking assets in the United States, with defaults affecting less than 1% of such assets), the financing of this type of mortgage through complex structured products, which diversify risk among many agents but make the valuation thereof very complicated, has led the episode to spread to other financial markets and take on an international dimension, essentially affecting other, similarly developed countries. As a result, liquidity has contracted strongly on the markets, leading to the need for intervention by various central banks. And, at the same time, there has been a reappraisal of risk and less appetite to bear it on certain markets, a matter which might continue affecting confidence about the above-mentioned markets in the coming months.

Admittedly, this bout of turbulence may contribute to a normalisation of the low risk premia prevailing until recently. But it also entails greater uncertainty as regards world economic growth, especially if the US mortgage market crisis ultimately affects the US economy adversely or if the extension over time of financial turbulence alters the cost and availability of private sector financing. These risk factors compound those already mentioned in previous FSRs, and in particular those relating to global imbalances and to the rise in oil and commodities prices.

In any event, the current financial turbulence has come about at a time of strong world economic growth in which households, companies and financial institutions are generally displaying a sound financial position. There are essentially two channels through which the Spanish economy might be affected by this bout of instability: that relating to the external sector, insofar as our export markets may be affected; and that linked to financing conditions in the private sector. As regards the latter, it should be stressed that the financial position of Spanish deposit institutions is sound, and that should contribute to mitigating potentially adverse factors.

Over the course of recent years, the growth rate of financing granted to the private sector by Spanish deposit institutions has been strong. Recent trends, however, confirm what was reported in the previous FSR, namely that there has been a slowdown in credit to the resident private sector. The growth rate of credit to households has eased, as has, for the first time in recent years, credit to corporations. The slowdown in corporate credit is concentrated in the construction and property development sectors. Accordingly, although the growth rate of credit to the real estate sector remains high, changes are beginning to be perceptible at deposit institutions in the form of a greater diversification of their credit portfolios, with a significant increase in credit to industrial and services corporations not linked to the real estate sector.

In line with what was highlighted in the previous FSR, the normalisation of doubtful assets continues, moving towards the levels of doubtful assets ratios observed in other developed countries. However, this is largely in response to the strong growth of credit in recent years, given that there is a natural lag between credit expansion and the emergence of default problems. Further, the changes to accounting rules have also had a bearing on the higher growth

of doubtful assets, inasmuch as the latter have to be recognised much earlier and in a higher proportion. In any event, current doubtful assets ratios are very low, both when observed from a historical perspective and when compared with those in other developed countries. It should not be surprising, then, if further increases in doubtful assets ratios continue to be seen in the coming months.

In Spain there is no mortgage market segment comparable to the US sub-prime sector. What is more, Spanish institutions have virtually no direct exposure to the sub-prime market in the United States, and nor do they have any other type of investment tied to this business segment which, indirectly, might adversely affect them. The doubtful assets ratio for the US sub-prime segment currently stands at around 15%. Comparatively, at the height of the last recession in the Spanish economy 14 years back, characterised by a very high unemployment rate, a high budget deficit and a negative GDP growth rate (all of which circumstances are far removed not only from the current conditions in the Spanish economy but also from the worst conceivable scenario at present), defaults on individual mortgage loans did not exceed 4%; indeed, the attendant ratio in June 2007 stood at 0.5%.

The sharp growth in credit recorded in Spain in recent years has not been accompanied by a commensurate increase in deposits raised from customers, which is why Spanish institutions have resorted to the wholesale markets to raise financing. Asset securitisation has been one of the mechanisms used in this connection. Asset securitisation processes in Spain differ to a large extent from those pursued by entities in other countries, and there are several reasons for this. First, Spanish institutions have developed relatively simple securitisation structures; they have not seen securitisation as a business in itself but as an opportunity to obtain additional liquidity, and there are no incentives to grant credit on less exacting terms. Further, the quality of mortgage-backed assets is very high (low mortgage default, even in highly unfavourable economic circumstances, very low levels of actual losses in the event of default, substantial credit enhancements, etc.).

The policy of resorting to wholesale markets in search of financing, a matter identified in previous FSRs as a factor requiring proper management by Spanish institutions, may be on the wane insofar as credit is perceptibly slowing and the raising of deposits is more buoyant than in previous years. Institutions' liquidity position is thus trending favourably, while their short interbank position has diminished. Furthermore, the banking model in Spain, predominantly one of traditional retail banks with an extensive branch network, in which contact with customers is very close, may contribute to bringing about a replacement of financing from wholesale markets with customer deposits.

Despite a more uncertain international environment and the current circumstances on financial markets, Spanish deposit institutions are favourably placed to address the situation appropriately. This is thanks both to their business model, which depends less on obtaining revenue via the financial markets and which is unconnected to the risks arising from the US sub-prime mortgage market, and to their financial strength.

This financial strength can primarily be seen in the income statement, the first line of defence against potential difficulties. The favourable trend of the various operating margins and of efficiency is perceptible in a generalised improvement in returns, both on assets and on equity, to June 2007. Secondly, the solvency of Spanish deposit institutions stands comfortably above the regulatory minimum levels, in terms both of the total solvency ratio and the tier 1 ratio. Finally, Spanish regulations on coverage of doubtful assets with provisions for bad debts offer further, counter-cyclical factors of strength.

Insurance companies, which are less exposed to the current financial difficulties, are also demonstrating notable soundness, along with a favourable business performance. That does not mean that, as with other financial market participants such as pension and mutual funds, they are exempt from risks that will need to be properly managed. Such risks include longevity, without ruling out — especially for pension and mutual funds — risks related to the very course financial markets take. In this respect, private equity activities, which have expanded strongly in recent times, may be adversely affected owing to existing liquidity pressures and to a reappraisal of the level of risk incurred by investors in such activities.

Finally, and in the light of the recent bouts of financial turbulence, this FSR analyses the importance of central banks' collateral policy. It argues that an effectively and constantly extensive system offers advantages over a more restrictive one, these advantages being particularly telling in situations of tight liquidity on interbank markets.

1 Macroeconomic risks and financial markets

The bout of financial turbulence has been reflected in notable tension in international money markets…

Developments in the international financial markets in recent months have been shaped by a bout of turbulence triggered last summer by the increase in defaults on sub-prime mortgage loans in the US[1]. The exposure of the US financial system to these loans is limited (sub-prime lending represents from 10% to 15% of outstanding mortgages), so it only affects the solvency of a small number of institutions specialised in these markets. However, the process that has characterised the funding of these loans, in which the institutions originating them spread the risk via structured products, along with the complexity, size and popularity attained by these products in recent years, have caused the crisis to spill over into other markets and take on a worldwide dimension. Thus the deterioration in the quality of sub-prime loans was ultimately reflected in a widening of the risk premia on the products associated with them and in a contraction of liquidity in the secondary markets where they are traded. The lower demand for these instruments, partly due to the uncertainty about the size and distribution of the losses incurred on these complex, hard-to-value products, gave rise to problems in the refinancing of certain vehicles, obliging certain financial institutions to supply funds to these intermediaries. Such vehicles, counduits and SIVs invest long-term in diverse assets and are financed through short-term notes collateralised by securitisations (asset-backed commercial paper - ABCP). Unlike SIVs, conduits normally have liquidity lines from the banks that sponsor them. Spanish banks have not used this type of off-balance-sheet bank conduit or vehicle, unlike US banks and numerous European banks which have resorted to them, sometimes for highly significant amounts.

The greater need for liquidity generated tensions in money markets and led certain central banks to respond by supplying funds on an extraordinary basis. Despite this, the uncertainty as to institutions' exposure to the risks associated with US sub-prime mortgages led to a significant increase in depo-repo spreads[2] (Chart 1.1.A).

… and in other financial markets.

The turbulence has also affected other financial markets. Thus there has been a general widening of credit risk premia, most marked in lower quality debt (Chart 1.1.B). Stock market indices have fallen, most sharply in the financial and construction sectors, and prices have become more volatile (Chart 1.2 A and B). Against this background of heightened uncertainty, the preference of certain investors for lower-risk assets increased, and this was reflected in falling long-term government debt yields which, in the case of debt issued by the US government, dipped below 4.4% for 10-year maturities. In the currency markets, the higher volatility was behind the close-out of carry-trade positions[3] and a strong appreciation of the currencies on which the financing of these transactions is based (such as the Japanese yen), with the consequent depreciation of the currencies receiving the funds. However, following the cut of 50 bp in the US Federal Reserve's official rate on 18 September, there was some correction of these movements. Hence stock market indices recouped some of the lost ground, implied volatilities and risk premia fell, government debt yields rose and, in the currency markets, some of the incentive for carry-trading returned. Meanwhile, the US dollar, after an initial appreciation, followed a trend of significant depreciation, partly explained by the appearance of strong downside expectations in official interest rates.

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1. For more details of the origin and course of the crisis, see Box 1. **2.** Spread between the interest rate on unsecured interbank deposits and that on secured interbank deposits. **3.** Activity in which very low-cost financing is obtained in one currency and invested in assets yielding a higher return in another currency. The carry trader works on the expectation that the exchange rate will show low volatility or even contribute positively to the total return on the transaction.

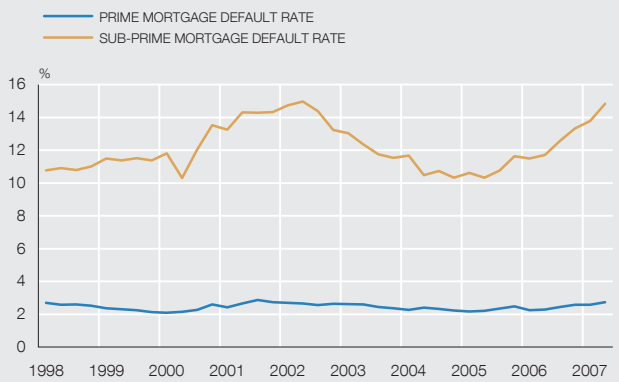
Although there is no exact definition of sub-prime mortgages in the United States, this type of loan is generally characterised by the fact that it is extended to households with a non-existent or incomplete credit record, and with a high risk profile. This market segment grew notably between 2003 and 2005 against a background marked by strong real estate price rises and by very benign borrowing conditions. A substantial portion of these loans were securitised, meaning the attendant risks were distributed to other national and international investors, thereby contributing to the expansion of this activity. From mid-2005, the default ratio for this type of mortgage began to move on a rising course, which worsened as from 2006 (see panel A). While the rise in defaults recently is similar to that witnessed between 2000 and 2002, there are differentiating factors between that period and the present one. The aforementioned securitisation of these loans has come about under a framework (originate-to-distribute model) which has, first, led the loan originator to tend to uncouple itself from the financial situation of the borrower. Further, the originate-to-distribute model has prompted a situation whereby risks are distributed among a broad set of domestic and international institutions in a relatively opaque fashion, partly due to the complexity of the process involving the use of sophisticated structured products. From the demand standpoint, it should not be forgotten that investors have pursued a search-for-yield process during these years, which has increased the attractiveness of these products. Finally, and largely as a result of the foregoing developments, the volume of the sub-prime segment has grown significantly in recent years.

Since early 2007, the deterioration in the quality of these assets has been reflected in an increase in the risk premiums on the lowest-rated tranches of the securitisations of these loans (see panel B). But, subsequently, negative sentiment spread to the other bonds linked to US sub-prime mortgages. This was especially the case when, in mid-June, Moody's downgraded the credit ratings of structured products that invest in these assets. In early July Standard & Poor's took similar action, which also spread to transactions with CDOs backed by these securities. In July and August, news emerged on the first intermediaries affected by the deterioration in this type of loan both in the United States and in other areas. The investment bank Bear Stearns duly informed its customers on 18 July of the sizeable losses incurred in two of the hedge funds managed by it. On 24 July Countrywide Financial Corp, one of the main private mortgage securitisation institutions in the United States, announced the difficulties it was facing owing to the decline in its profits, linked to the US real estate crisis. And on 30 July, the German investment bank IKB disclosed heavy losses linked to these products and announced that its main shareholder (the entity KfW) was assuming the obligations to supply liquidity to a securitisation vehicle exposed to the US sub-prime mortgage market. These developments ultimately affected the demand for asset-backed bonds, which appreciably reduced their liquidity. On 9 August, BNP Paribas temporarily froze redemptions in three investment funds owing to its difficulties in valuing its portfolio.

The refinancing problems facing certain investment vehicles with exposures to the sub-prime market, which were being funded by short-term financing, generated tensions on international money markets. That led the ECB to make an exceptional injection of funds into the financial system on 9 August, a measure that was also followed by other central banks. In the following days, there were further interventions aimed at normalising conditions on money markets. In the case of the US Federal Reserve, the injection was accompanied by a 50 bp cut in its discount rate. On 14 September the Bank of England extended emergency funding to Northern Rock in the light of the liquidity problems facing this entity. Although Northern Rock had no risks in the sub-prime segment, its difficulties stemmed, at a time of financial market turbulence, from its financing structure, in which a very high proportion of funds were from the wholesale markets. The following week (18 September) the US Federal Reserve cut its federal funds target rate and its discount rate by 50 bp.

In sum, the sub-prime mortgage crisis evidences idiosyncratic features that distinguish it from previous episodes. These include most notably the slowness with which it has come to light and the fact that its has been centred on the industrialised countries' markets.

A. DEFAULT RATES IN THE US MORTGAGE MARKET

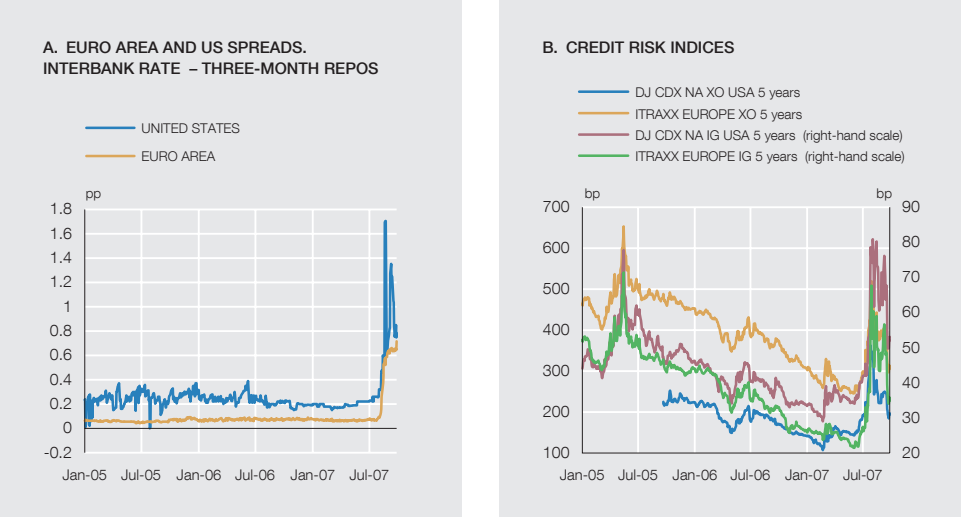


B. US RMBS SPREADS (ABX INDEX) (a)

SOURCES: Datastream and JP Morgan.

a. These correspond to the JP Morgan Chase ABX.HE 2007-1 RMBS index.

EURO AREA AND US INTEREST RATE SPREADS AND CREDIT RISK CHART 1.1



SOURCE: Datastream.

The turbulence entails risks for world economic growth…

Although the reassessment of risk on credit markets accompanying this bout of turbulence calls into play certain positive factors for long-term financial stability, insofar as it involves the normalisation of excessively low risk premia and thus raises borrowing costs somewhat, it cannot be ruled out that some cost may have to be paid in terms of short- and medium-term world economic growth. In any event, it is still too soon to assess the impact of this turbulence, since there are not yet any significant data on how the international economy has performed after the turbulence. That said, the impact will depend primarily on the final extent of the real estate crisis in the US. The forecasts of international organisations are for US GDP to grow in 2008 at a moderately lower rate than that expected some months ago, although the downside risks seem to have risen. Naturally, if these risks were to materialise, the global macroeconomic scene would be seriously affected. Other factors that will shape the behaviour of world output are the depth and duration of the financial market turbulence, since these can affect the cost and availability of financing to the private sector.

… although some factors tend to mitigate that risk.

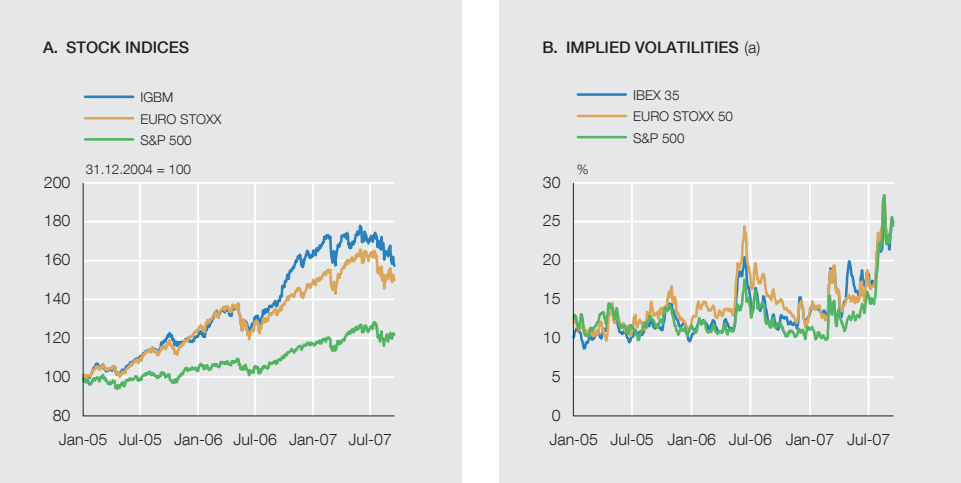
In any event, this episode has occurred at a time when the world economy is growing rapidly and, in addition, is characterised by the robustness of the financial position of households, firms and financial intermediaries in the major areas, which are factors that strengthen the resilience to these shocks. In particular, the high levels of capitalisation of the systemically important international financial institutions seem to be sufficient to absorb any losses stemming from market developments. Moreover, the buoyancy of the emerging markets, which have generally been little affected by this episode, would tend to mitigate the impact of the turbulence. The relatively sound behaviour of the main stock market indices and the high oil and commodities prices are consistent with this diagnosis.

In short, all these considerations suggest that in the upcoming quarters the pattern of world output should remain buoyant (albeit at a more moderate pace), although the uncertainty surrounding this behaviour has increased and, at the same time, the downside risks have risen.

These risks come on top of others such as those stemming from external imbalances and higher oil and raw material prices.

The risks stemming from market instability come on top of those already noted in the last FSR, such as the persistence of a high external deficit in the US the financing of which requires a considerable volume of funds. Although the lower economic buoyancy of the US will help to correct this imbalance, the rise in risk premiums will make it more costly to finance. Moreover, these factors could weigh on the performance of the US dollar.

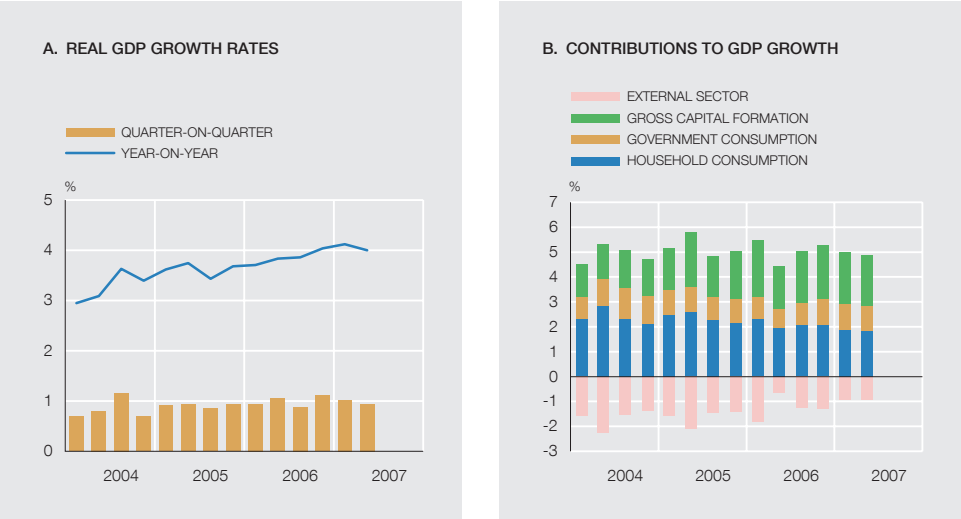
STOCK EXCHANGE INDICES AND IMPLIED VOLATILITIES CHART 1.2



SOURCES: Datastream and Bloomberg.

a. Five-day moving averages.

SPAIN. GDP GROWTH RATE AND CONTRIBUTIONS THERETO CHART 1.3



SOURCES: Instituto Nacional de Estadística and Banco de España.

The rise in oil and commodities prices also constitutes a risk factor for international economic and financial performance, insofar as it may feed through to heightened inflationary pressure, since, in this case, it will reduce the room for manoeuvre of monetary authorities to accommodate monetary policy to developments in risks to economic growth.

The Spanish financial system is in a sound financial position to face the bout of turbulence,

The Spanish financial system is in a sound financial position to face the turbulence in the international financial markets and is underpinned by high profitability, comfortable solvency levels clearly above the minimum regulatory requirements and ample coverage of doubtful loans by the provisions accumulated during recent years. Furthermore, the Spanish mortgage market lacks the sub-prime segment seen in the US. Hence the credit qual-

ity of Spanish assets is high, as evidenced by the low doubtful assets ratios and the moderate loan-to-value (LTV) ratios. In addition, the assets linked to US sub-prime mortgages have an extremely marginal weight in the balance sheets of these institutions and their exposure via possible lines of credit to other financial intermediaries that invest in such instruments is nil. Moreover, the scant financial liquidity on the money market has had a more moderate impact in Spain than in other countries because in recent years the institutions have been covering most of their funding needs through the issuance of medium- and long-term debt.

which, along with the buoyancy of the Spanish economy, provides leeway for absorbing the shocks,

These developments have come at a time when the Spanish economy continues to exhibit considerable buoyancy. Thus in the first half GDP grew at a rate of around or slightly above 4% (Chart 1.3.A), with a composition in which the lesser thrust of domestic spending is being offset by an improvement in net external demand (Chart 1.3.B). Against this background, one of the channels through which the recent turbulence could impact growth prospects is through its effect on Spain's export markets. Another way is through financing conditions for the private sector. In this respect, the strong financial position of institutions is a factor that will tend to mitigate the impact of the turbulence and so reduce the likelihood of it extending beyond a healthy normalisation of risk premia that were at very low levels. The resilience of the Spanish economy to this turbulence is also based on the financial soundness of households and firms, which is underpinned by high household wealth and the favourable performance of corporate profits.

although it is still very early to gauge the true extent of this episode.

In short, both the Spanish economy and the Spanish financial system are in a favourable position to cope with these shocks. However, it is still early to gauge the true intensity and duration of this market turbulence and it will be necessary to wait until fuller information is available to obtain a more accurate picture. Naturally, if the turbulence ends up substantially affecting the US economy, Spain's main export markets or the international capital markets, it is unlikely that the buoyancy of the Spanish economy will be unaffected.

2.1 Deposit institutions

2.1.1 BANKING RISKS

Chapter 1 noted the favourable performance of the world economy and, in particular, that of Spain, although the turbulence in international financial markets engendered new uncertainties while at the same time confirming some of the risks identified in the last FSR (excess liquidity and overly low risk premiums). Despite this, the data for the first half of 2007, which are the latest available at the time of this report going to press, confirm the strength of Spanish deposit institutions. This chapter analyses those points of strength and identifies certain risks that will have to be managed appropriately by institutions.

The pace of activity is high, although secured lending is slowing.

The *consolidated balance sheets* of Spanish deposit institutions (Table 2.1) show a brisk pace of activity in the first half of 2007, with total assets up by 18%. This buoyancy is apparent in both business in Spain (20%) and, albeit to a lesser extent, abroad (10.9%). However, it should be kept in mind that business abroad was affected by the depreciation against the euro of certain currencies of the countries in which Spanish banks have their highest exposures.

The buoyancy of bank balance sheets is largely explained by the behaviour of lending to the private sector, which grew somewhat faster than total assets (20.5%). However, credit to the private sector shows signs of slowing as rates fall from nearly 25% in June 2006 to slightly above 20% in the first half of 2007. This slowdown is concentrated in secured credit (down from 27% to 20%).

Doubtful assets continue to rise, but their effect on doubtful assets ratios is very moderate.

Against this background of growth in activity, the growth rate of doubtful assets has accelerated from 7.4% in June 2006 to 22.9% in the same period of 2007. This acceleration is shared by both business in Spain and that abroad. In any event, the pass-through to the doubtful assets ratio is very limited (increase of 3 bp with respect to the previous year) and, for total business, this ratio remained very low (0.65%). Moreover, provisions cover more than twice the current volume of doubtful assets and this coverage is even higher in individual balance sheets (business in Spain).

Deposits are growing more rapidly than in the previous year…

Private-sector deposits taken by Spanish institutions have grown (15%) more strongly than in the previous year. Nevertheless, their growth rate is slower than that of lending, so Spanish institutions have had to raise funds on the wholesale markets, although to a lesser extent than in the same period of the previous year. Also, own funds, which held at a relative weight of around 5% in bank balance sheets, were expansionary (17.7%), and this strengthened the solvency of institutions.

The pick-up in deposits, particularly time deposits, and the slowdown in lending to the private sector help to mitigate the loss of relative importance of traditional bank funding. Moreover, Spanish institutions, which are highly specialised in retail business and have an extensive branch network ensuring a close relationship with customers in both lending and deposit activity, depend on the securities market for funding to a similar extent to that observed in several other EU countries, such as the United Kingdom, Germany and Italy, and appreciably less so than in others like the Netherlands, Italy, Ireland and Denmark (Chart 2.1.A)[1].

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1. The data were drawn from the ECB publication *EU Banking Structures* (2005) and used to calculate the ratio of total deposits taken from customers other than credit institutions to loans granted to customers other than credit institutions. The information is only publicly available for 2005, but the trends observed for 2006 do not show significant changes. Individual data.

CONSOLIDATED BALANCE SHEET TABLE 2.1
Deposit Institutions

ASSETS	JUN-07	(% CHANGE) JUN-07/ JUN-06	RELATIVE WEIGHT JUN-06	RELATIVE WEIGHT JUN-07
	(€m)	(%)	(%)	(%)
Cash and balances with central banks	57,800	35.0	1.6	1.8
Loans and advances to credit institutions	280,365	20.5	8.7	8.9
General government	50,035	-1.1	1.9	1.6
Other private sectors	2,085,933	21.0	64.7	66.3
Debt securities	329,633	-1.7	12.6	10.5
Other equity instruments	113,490	35.2	3.1	3.6
Investments	31,651	-0.7	1.2	1.0
Derivatives	87,147	34.9	2.4	2.8
Tangible assets	34,782	-0.8	1.3	1.1
Other (a)	73,488	15.1	2.4	2.3
TOTAL ASSETS	3,144,324	18.0	100	100
Memorandum Items:				
Financing to private sector	2,186,524	20.5	68.1	69.5
Financing to general government	200,684	-6.7	8.1	6.4
Total doubtful assets	17,817	22.9	0.5	0.6
Total doubtful assets ratio	0.65			
Provisions for bad debts and country risk	38,855	18.5	1.2	1.2

LIABILITIES AND EQUITY	JUN-07	(% CHANGE) JUN-07/ JUN-06	RELATIVE WEIGHT JUN-06	RELATIVE WEIGHT JUN-07
	(€m)	(%)	(%)	(%)
Balances from central banks	40,596	-32.3	2.3	1.3
Deposits from credit institutions	466,906	8.5	16.1	14.8
General government	83,236	33.3	2.3	2.6
Other private sectors	1,385,401	15.0	45.2	44.1
Marketable debt securities	643,364	38.2	17.5	20.5
Derivatives	105,435	49.5	2.6	3.4
Subordinated debt	76,178	12.5	2.5	2.4
Provisions	34,858	-2.0	1.3	1.1
Other (a)	124,649	8.5	4.3	4.0
TOTAL LIABILITIES	2,960,623	17.9	94.3	94.2
Minority interests	5,864	-2.5	0.2	0.2
Valuation adjustments relating to total equity	22,390	48.4	0.6	0.7
Own funds	155,446	17.7	5.0	4.9
TOTAL EQUITY	183,700	20.0	5.7	5.8
TOTAL LIABILITIES AND EQUITY	3,144,324	18.0	100	100

SOURCE: Banco de España.

a. The remaining assets and liabilities entries not explicitly considered, including valuation adjustments, are included in "Other".

… while no significant risks associated with the assets abroad are discernible.

The slower growth of assets abroad as compared with the greater buoyancy of business in Spain means that the weight of the former in total business has decreased slightly, by 1.3 pp to 21.2%. In any event, as noted in previous FSRs, the foreign assets of Spanish deposit institutions present low levels of risk (Chart 2.1.B).

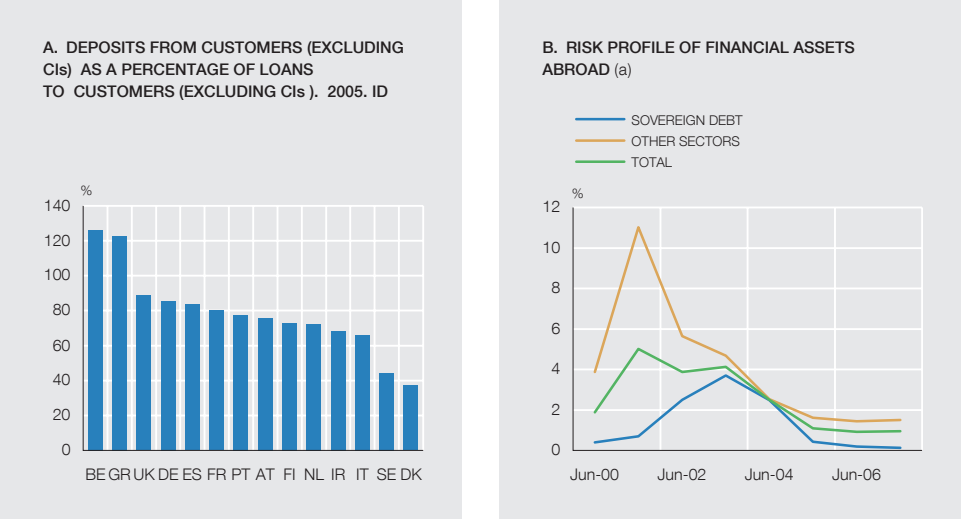
Lending growth has slowed…

Since the last FSR, *credit to the resident private sector in Spain* (Chart 2.2.A) has slowed (growth of 25.8% in December 2006, against 22.6% in June 2007) due to the trend in mortgage lending (to both households and firms), which had been growing less quickly since mid-2006 (27.7% in June 2006, 24.7% in December 2006 and 20.2% in June 2007). In terms of *net flows* (new loans granted less repayments on that already granted), the picture

DEPOSITS AS A PERCENTAGE OF LOANS AND RISK PROFILE OF FINANCIAL ASSETS ABROAD

CHART 2.1

Deposit institutions



SOURCES: European Central Bank and Banco de España.

a. Weighted average of default probabilities.

in the first half of 2007 is very similar to that in the same period of the previous year, with net lending at around €141,000 million and €145,000 million, respectively. In the second half of 2006, the lending flow decreased by €11,000 million, the fall being sharper in mortgage lending.

… both in households and in construction and property development…

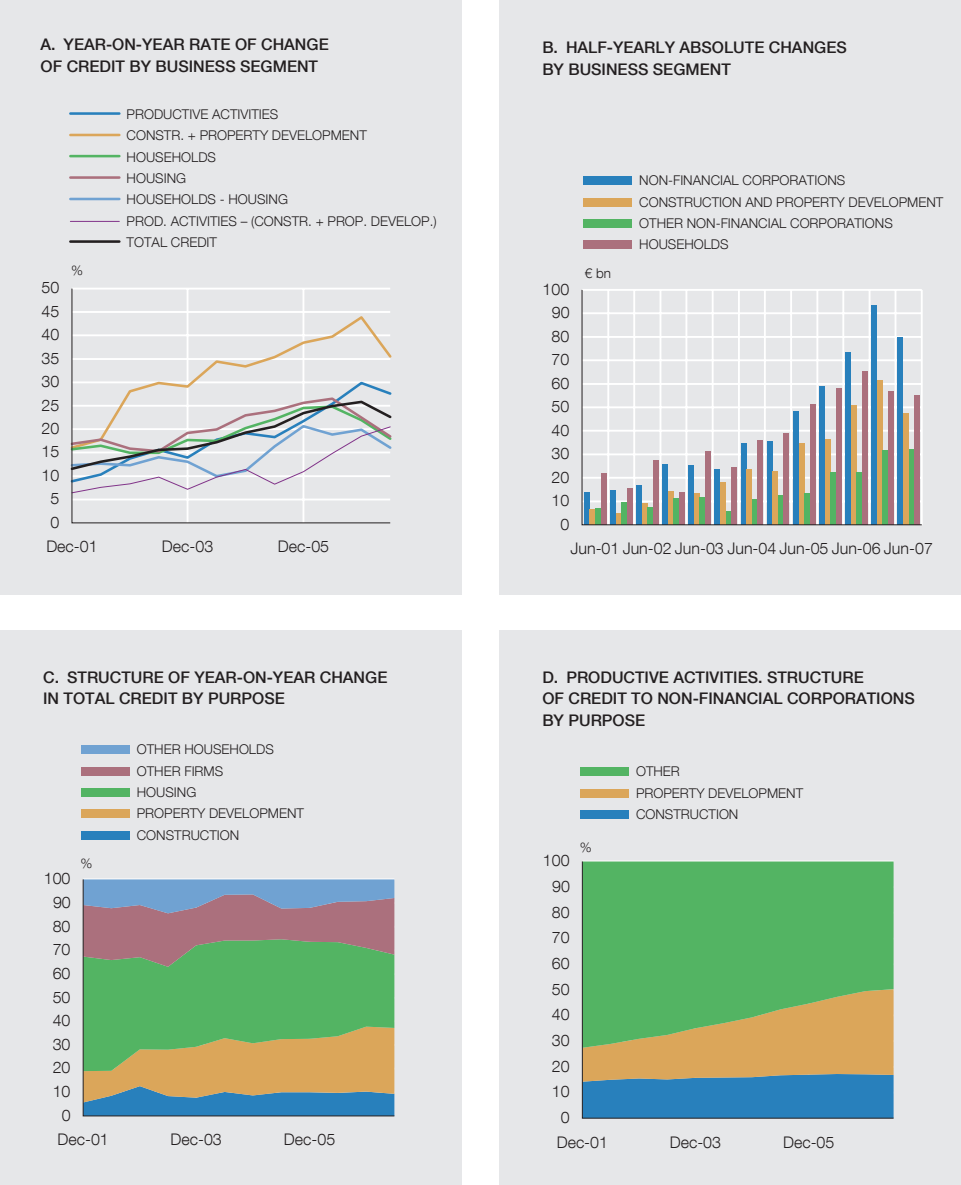
The slowdown in total lending was seen both in firms and in households (Chart 2.2.A). The growth of bank lending to households moderated both in the house purchase segment and in the others (basically lending for the purchase of current consumption goods and consumer durables). This moderation had already become apparent at the end of the past year. By contrast, the slowdown in bank credit to firms is new and attributable in its entirety to the significant decrease in the growth rate of credit to construction and property development (from 43.9% in December 2006 to 35.5% in June 2007). Lending to property developers has slowed more rapidly than that to construction companies, although both business segments still show brisk growth (42% and 24.4%, respectively), in line with the trend in real estate sector activity. Mention should also be made of the acceleration in credit to other firms, in a trend that has prevailed uninterruptedly since December 2005. While in terms of rates of change these are still well behind construction and property development companies, in terms of net flows the distance has narrowed considerably (Chart 2.2.B).

… and the relative weight of the real estate sector in bank balance sheets has begun to lessen.

Although as yet modestly, Spanish deposit institutions have begun to *diversify* their *loan portfolio* once again, increasing the relative weight of lending to the industrial and services sectors. This process drives and, in turn, is a result of, the shift taking place in the growth pattern of the Spanish economy, against a background in which firms are showing substantial financial strength (high returns and growing cash flows). Thus in June 2007 the relative weight of credit to other firms became significantly more telling in explaining the behaviour of total lending (Chart 2.2.C). Also, the increase in the still-high relative weight of credit to property developers in total credit to firms has almost completely halted (Chart 2.2.D), helping to reduce the concentration of institutions' loan portfolios.

CREDIT
Deposit Institutions. ID

CHART 2.2



SOURCE: Banco de España.

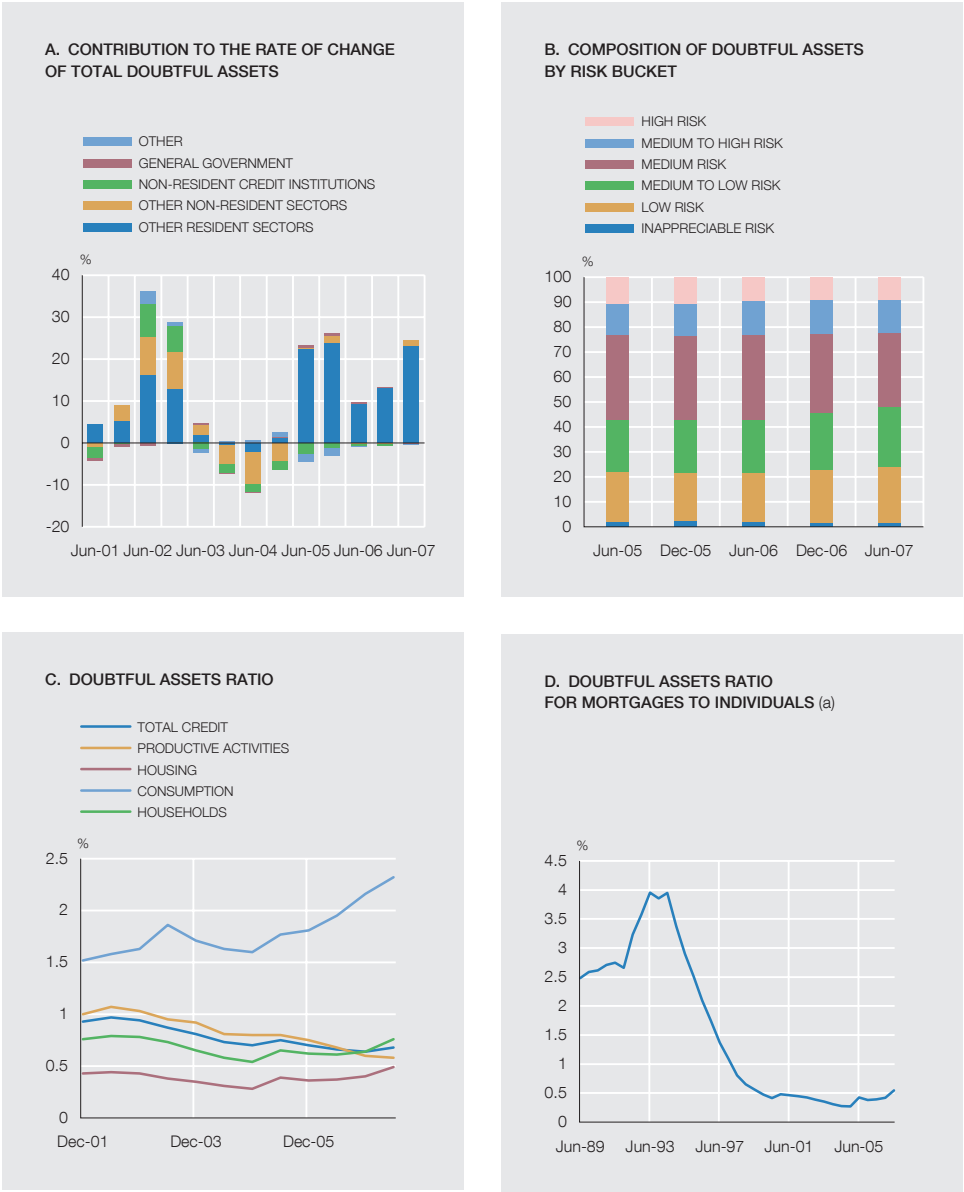
Following the high buoyancy of activity and the accounting changes, doubtful assets are growing more quickly,

As was to be expected, *doubtful assets* have continued to rise, their year-on-year growth rate accelerating to 24% (Chart 2.3.A). This initiated a process of normalisation taking Spanish banks towards the higher doubtful assets levels shown by the banks of other European countries. It should be kept in mind that the doubtful assets ratios of Spanish institutions are around one-third of the EU average. Also, as pointed out in the last FSR, this behaviour is due to the lag between the growth of loans and that of doubtful assets, and to the new accounting regulations which require the full amount of a loan to be classified as doubtful three months after the failure to pay only one instalment[2]. The increase in doubtful assets is closely related to past lending growth, so it is not surprising that credit to households for house purchases, which is a credit segment that has shown high rates of expansion in this decade until very recently, is that which now exhibits the highest increase in doubtful assets, followed by other credit to households. In addition to the accounting regulations and the strong credit growth in the past,

2. For more details, see Box 2.1 of the May 2007 FSR.

DOUBTFUL ASSETS
Deposit institutions. ID

CHART 2.3



SOURCE: Banco de España.

a. Mortgages are collateralised loans with a maturity longer than five years granted to individuals, including both households and individual entrepreneurs. (Information from the CCR).

the substantial rise in interest rates in the euro area from end-2005 (the rate on ECB main refinancing operations has doubled) also helps to explain the higher doubtful assets. Furthermore, although the doubtful assets on loans to non-financial corporations have accelerated since the last FSR, they are rising more moderately, which reflects the strength of the Spanish corporate sector. Once again, the business segments that grew most in the past (construction and property development) are those with the highest growth of doubtful assets, although their doubtful assets ratios are very low (0.49% and 0.32%, respectively).

These developments in doubtful assets translate into a slight rise in the relative weight of lower-risk assets (linked to mortgage credit), with the resulting relative decrease in doubtful assets linked to corporate credit (Chart 2.3.B).

… although doubtful assets ratios continue at very low levels, with slight rises in households….

Despite the growth in doubtful assets, the *doubtful assets ratios* remain, except in consumer credit, at very low levels (Chart 2.3.C). Thus that for house purchase credit to households is at 0.49%, with a slight increase in this half, while that for consumer credit has continued growing to 2.32%. This explains why the household doubtful assets ratio is 0.76%, against 0.64% in December 2006. By contrast, in the corporate segment the doubtful assets ratio continues to fall (0.58% in June 2007).

… and decreases in firms.

Accordingly, doubtful assets ratios are still very low, although in the coming months they can be expected to keep rising as a result of the aforementioned lag between lending and defaults, the accounting change and the impact of interest rates. An assessment of their long-term path has to take into account their past behaviour (Chart 2.3.D). Thus, for example, the current doubtful assets levels in house purchase loans to individuals are well below those around 1993 during the last economic recession in Spain. In this respect, three observations can be made. First, the state of the Spanish economy at that time (negative GDP growth exceeding 1 pp, high budget deficit and unemployment rates above 20%) differs considerably from today's worst-case scenario. Second, credit institutions have made significant progress in risk monitoring methods and control. Third, despite the foregoing, it cannot be ignored that in 1993 the doubtful assets ratio of house purchase loans to individuals, although high, did not rise above 4%, with an increase of 1.5 pp relative to the average level in the previous upturn. In addition, the effective loss for institutions was considerably less in that they managed to recover a large part of the amount owed to them by selling the property used as loan collateral.

The default rate curves are consistent with a slight general deterioration in doubtful assets ratios…

The detailed information in the CCR can be used to supplement the aforementioned information on the doubtful assets ratio. Since the origination date of a loan, and the date when it became past-due, if at all, are known, curves can be constructed of the *default rate* over time for the loans granted on a particular date[3]. A sharp increase in one of these curves indicates that the loans granted on that date were particularly risky (for example, because the institutions significantly relaxed their credit approval policies, as seen in US sub-prime mortgages in recent curves). By contrast, a general increase in all curves indicates a general worsening of doubtful assets ratios attributable to the macroeconomic setting (higher interest rates) and not to a specific deterioration in credit policy or to a phenomenon of one-off adverse selection.

Since 2003 the picture shown by default rate curves (Chart 2.4.A) has worsened slightly, although the 2005 curve practically coincides with that for 2002. More recently (loans granted in 2006), the slope of the curve is somewhat steeper, although the level reached continues to be very low. Indeed, the most significant feature of these curves is their low level: one year after loan origination, the default rate is around 0.20%. The data for the volume of doubtful assets are very similar. Comparison with the US sub-prime market curves (Chart 2.4.B) clearly shows the enormous differences in terms of default level and approval policy standards, particularly if recent dates are analysed. What is more, in the Spanish case, if the high recorded in the 2006 curve is compared with the lowest default rate attained after the same lapse of time from

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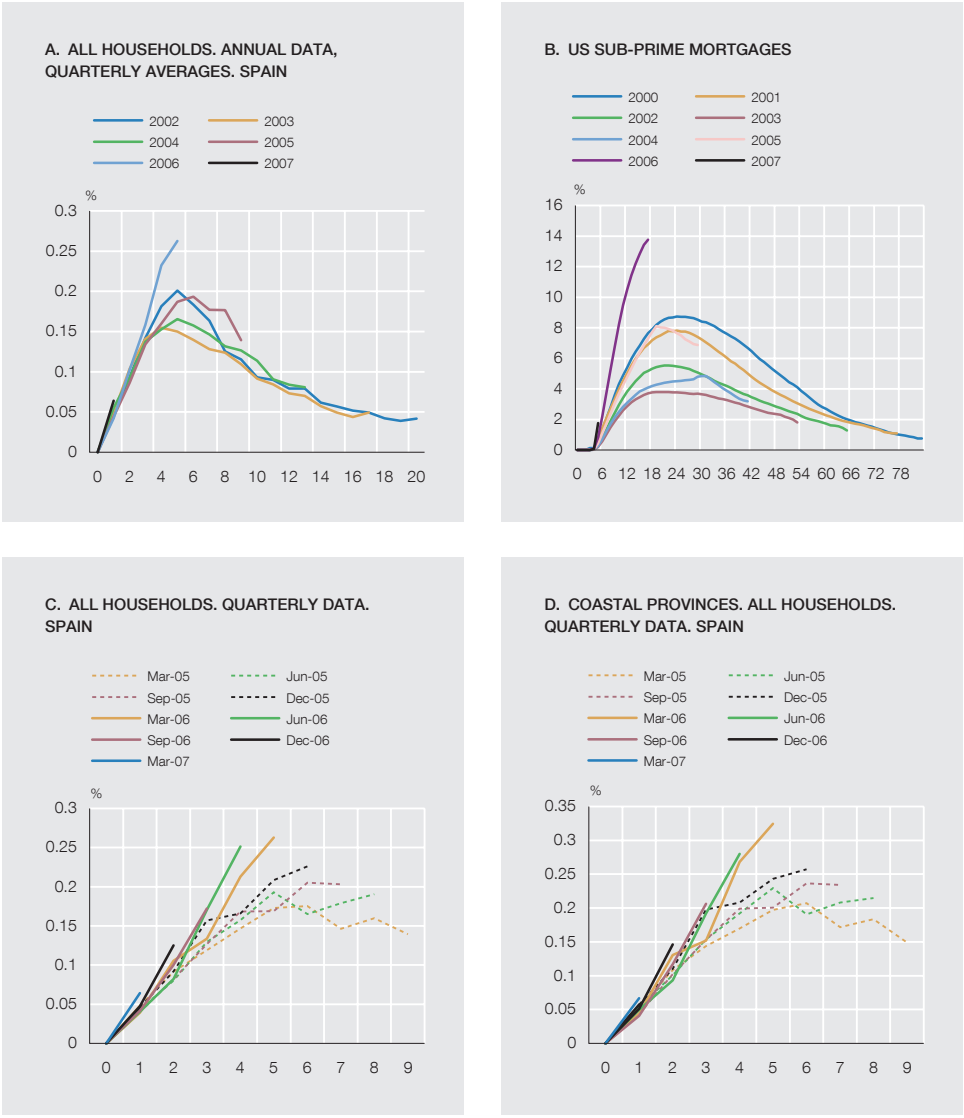
3. To construct default rate curves, for each quarter the loans originated in the previous three months are monitored. Specifically, for a portfolio of loans granted at time t, their default rate k quarters later is calculated as the number of doubtful loans at the future time t+k divided by the original number of loans. The x-axis indicates the quarter after loan origination, such that a value of 1 denotes the first quarter after the loan was originated. When the curves are annual, they represent the average default rate calculated for each portfolio of new loans originated in the first, second, third and fourth quarters of the year in question. Since the CCR does not contain express information on house purchase mortgages, the measurement used to proxy them was all financial credit granted to households for amounts exceeding €60,000, maturity exceeding five years, fully collateralised and arranged by fewer than four participants.

DEFAULT RATE CURVES CHART 2.4

Mortgages to households. Credit Institutions (a)



SOURCES: Banco de España, Merrill Lynch and Intex.

a. X-axis: number of quarters since loan origination date, except in the US chart, where the x-axis shows the number of months since origination.

origination in any other year (in this case, the 2003 curve), the increase found in the default rate is only 0.11 pp. However, if this analysis is performed on US sub-prime mortgages, the increase is 10 pp. Therefore, Spain does not have adverse selection or relaxation of risk control criteria in loan origination in recent years.

… which, however, are notable for their low level…

Analysis of the last few years (Chart 2.4.C) shows a progressive deterioration in default rate curves. This deterioration is general, so, rather than a problem in lending conditions in a given period, it reflects a general worsening in doubtful assets ratios (as mentioned above). The interest rate trend in the past year probably explains the steeper slope of the curves. In any event, the most noteworthy feature is again the fact that, despite the slight deterioration, the *level of default rates* in mortgage lending is very low, evidencing the high quality of these assets. This is in line with their traditional behaviour in Spain, since house purchase mortgage lending has always been the least risky business segment.

DEFAULT RATE CURVES CHART 2.5
Firms. Credit institutions (a)

SOURCE: Banco de España.

a. X-axis: number of quarters since loan origination date.

… even in the second-home segment…

The CCR data do not distinguish whether the mortgage is for a first or *second home,* or whether the borrower intends to use the house or sell it (investment motive). However, the results of the above-mentioned default analysis, when limited to mortgage loans to households in the coastal Mediterranean and island provinces, where the percentage of second homes (Chart 2.4.D) is higher, do not show a noticeably different profile from that of total mortgages, the default level being only slightly higher (5 bp). Nor are significant differences found when analysis focuses only on the provinces that are most active in property development[4].

The only segment of the mortgage business identifiable as having higher default rates is that of *mortgage lending to foreign residents,* be they from other EU countries or from the rest of the world. However, this behaviour is not recent but of a structural nature. Thus the default rate curve for 2003, the lowest year, is more than double for foreign residents than for households as a whole. In any event, the relative weight of this business segment in household mortgages, although growing in recent years, is only 7.2% of the total.

… and in firms, including construction companies and property developers.

Default rate curves for corporate loans can also be constructed. These curves for the construction and property development sector (Chart 2.5.A) show some deterioration dating from 2003 but, once again, the rates are very low. Very similar, albeit somewhat lower, levels (Chart 2.5.B) are found for other firms.

In Spain there is no sub-prime mortgage market.

The exposure to the *US sub-prime market* is the cause of the turbulence affecting the international financial markets in recent months. Transparency regarding such exposure is one of the factors that should help the markets to recoup a greater level of normality and, in addition, enable greater discrimination between institutions via price. The doubtful assets ratios

4. Note that, in any event, this is an approximation not exempt from limitations because in the coastal provinces it does not distinguish between first and second homes, nor does it include mortgages taken out in other Spanish provinces to acquire second homes on the Mediterranean coast. However, it seems a reasonable first approximation.

and default rate curves, even in the highest-risk segments, are clearly lower than those in the US sub-prime market (Chart 2.4), showing that these two credit markets are not related in any way, whether in terms of definition, of the credit policy practised by institutions or of the level of risk assumed. Even in a scenario with a very low probability such as that of 1993 (recession, high budget deficit and very high unemployment rates), the doubtful assets ratios in mortgage lending to households in Spain are much better than those of the sub-prime segment.

As part of the Banco de España's customary monitoring of the risks incurred by Spanish deposit institutions, a study was made of those to which they may be exposed in the US sub-prime market. This study focused on obtaining information on the following direct and indirect risks: i) risks due to granting of sub-prime mortgages directly or through subsidiaries; ii) lines of credit granted and any other commitment to institutions involved in transactions with sub-prime exposures; and iii) risks arising from other types of investments related to sub-prime mortgages in the US, such as the first-loss tranche of asset-backed bonds known as collateralised debt obligations (CDOs)[5], the underlying assets of which are related to these mortgages. The study found that the risks to which the analysed Spanish institutions were exposed in this connection in June 2007 represent 0.03% of their assets and 0.68% of their tier 1 capital. Therefore, the exposure of Spanish banks to the US sub-prime market is completely marginal in terms of its potential impact on both profitability and solvency.

Asset securitisation in Spain involves less complex processes than in other countries,…

Asset securitisation has developed strongly at international level in recent years, enabling institutions to raise funds and re-allocate risk more efficiently. Spanish institutions have participated actively in this process, as might be expected in view of their management capabilities, level of development and recent expansion. However, it should be noted that securitisation transactions are not as complex in Spain as in other banking systems.

… differs from the originate-to-distribute model,…

As explained in Chapter 1, part of the turbulence assailing the international financial system is due to uncertainty about the level of risk associated with certain complex products (CDOs, CLOs, etc.) through which some underlying assets could be linked to the US sub-prime segment. Moreover, numerous banks involved in this process have engaged in the practice of originating sub-prime mortgages, granting the loan and immediately distributing (i.e. securitising) it to rid themselves of the risk and obtain additional liquidity with which to originate fresh loans. This securitisation business model differs substantially from that followed by the more traditional banks (like those in Spain). Under this traditional model, the risk, or a good part of it, remains on the balance sheet, meaning the bank has an adequate incentive to keep pursuing a rigorous loan approval policy. The Spanish securitisation model does not separate origination from risk management and the incentives of the loan originator are well aligned with those of the investors that acquire the securitised loan. In short, risk transmission is limited and the incentive to select borrowers adequately has not been weakened as in the originate-to distribute model applied by numerous US institutions.

… and is characterised by high-quality underlying assets.

Detailed study of the securitisation transactions of the last two years has demonstrated the high quality of the underlying assets. Underlying asset quality is a key factor in determining the risk of this product for investors and, therefore, the cost of the funding obtained by the bank. The information in the CCR shows that the securitised assets of households (the vast bulk of which are mortgage loans) have a lower doubtful assets ratio than those not securitised (40 bp

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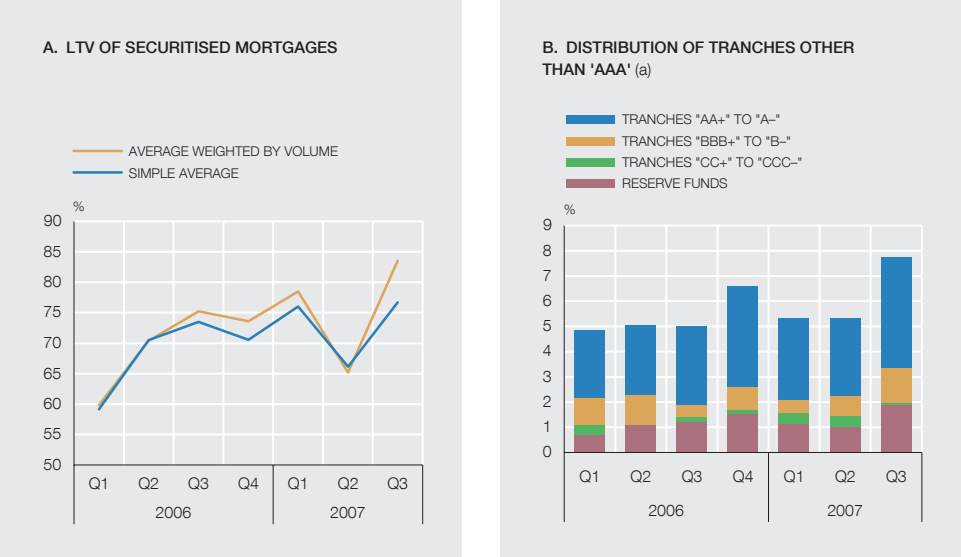
5. A CDO (collateralised debt obligation) is a securitisation structure in which the securitised asset portfolio is considerably more heterogeneous than in traditional securitisation. These structures may include different types of bonds and loans (collateralised loan obligation or CLO), including those from other securitisations.

MORTGAGE SECURITISATION. ISSUES SINCE 2006 CHART 2.6
Deposit institutions



SOURCES: Comisión Nacional del Mercado de Valores and Banco de España.

a. The remaining proportion up to 100% corresponds to the relative weight of the AAA tranche.

less in June 2007), evidencing the higher quality of securitised loans[6]. Securitised mortgages have an average LTV (loan amount divided by the appraised value of the property used as collateral for the transaction) of around 70%, with a slight tendency to move upwards in recent times (Chart 2.6.A). Note that this LTV is that calculated at the origination date and that, with the passage of time, the mere process of repaying the loan continuously reduces the LTV[7]. The geographical concentration indices of the securitised mortgage loan portfolio are low (Herfindahl index of around 0.3, which coincides with that of the credit portfolio). Also contributing to the geographical diversification is the practice by which various institutions pool their portfolios for joint securitisation.

Finally, around 94% of asset-backed bonds are triple A, i.e. they have the *maximum credit quality rating* awarded by rating agencies (Chart 2.6.B). Hence the lower-rated tranches, including the reserve fund set aside to be used first to absorb losses, represent around 6% of securitisations, based on assets (mortgage loans for house purchase) whose doubtful assets ratio is currently around 0.5% and, as stated above, failed to reach 4% at the height of the last Spanish recession (Chart 2.3.D). Moreover, the realisation of assets subsequently enabled a good part of the outstanding loan amount to be recovered in many cases, that is to say, the loss in cases of default on these assets has historically been very low. Hence it is difficult to conceive a scenario in which the losses would extend to the higher-rated tranches. This would only be possible if the default rates were very high (for example, 12%) and if the loss given default reflected very low foreclosure values (for example, 50% of the residual value of the loan). These situations are highly unlikely taken separately and much more so taken together.

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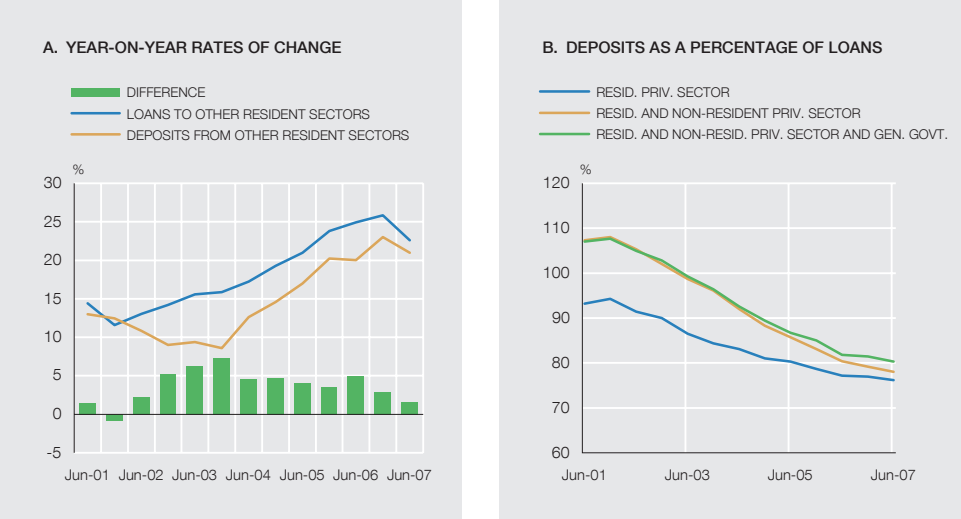
6. In June 2007 the securitised assets of firms (largely loans to SMEs) represented around 20% of total securitised credit, and their doubtful assets ratio was also lower than that of on-balance-sheet loans to firms. **7.** Naturally, the increase in house market value further reduces this LTV. For example, not counting repayments, a LTV of 80% (100%) in 2003 becomes 53.7% (67.2%) in 2007.

COMPARISON OF LOANS AND DEPOSITS CHART 2.7
Deposit Institutions. ID



SOURCE: Banco de España.

The observed increase in the cost of Spanish asset-backed bonds and of covered bonds is due more to market conditions than to the quality of the securities issued.

Recently, coinciding with the turbulence in international financial markets, the spreads in the *secondary market* in which Spanish asset-backed bonds and covered bonds are traded have widened. This widening of spreads, also seen in other market segments, largely reflects the process of reassessment of risk levels and the consequent adjustment of risk premiums in progress since last summer. However, given the high quality of Spanish underlying assets, it seems that the widening of spreads may also reflect certain tensions in the investors holding these products which, in turn, are a reflection of the liquidity difficulties besetting them because they cannot roll over the commercial paper used to finance these assets. It is estimated that around two-thirds of the total amount securitised in Spain could be in the hands of widely diverse foreign investors. These include, on the one hand, investors such as insurance companies and investment and pension funds and, on the other, investors with a more variable time horizon, high gearing and a greater dependence on short-term financing, whether from banks or from others. The marking-to-market of these assets, together with secondary-market movements, may give rise to significant losses in some of these investors dependent on short-term funding, because of a significant increase in the liquidity premium[8]. However, as the financial turbulence subsides and market liquidity returns, these spreads will gradually narrow, given the high quality of the underlying assets and the credit enhancements included in securitisations in Spain (Chart 2.6.B).

The recent slowdown in lending and pick-up in deposit growth suggest that the need for borrowing in wholesale markets will decrease…

The slowdown in credit to the private sector in business in Spain and the good progress of deposits taken from Spanish households and firms, against a background of sustained economic expansion and sound performance of employment and of business activity have meant that in the past year, and particularly in the last half, the difference between the two growth rates has decreased (Chart 2.7.A). The continuation of this trend in the near future, as the lending growth rate adjusts to a normalising real estate market and financial institutions increase the amount of new saving captured, competing with other financial intermediaries, will reduce the pressure to resort to the wholesale market to finance lending activity.

8. Box 2.1 comments on the different types of valuation of financial assets and, in particular, on the conditions necessary for applying them.

Heightening uncertainty as a result of the increased volatility of interest and exchange rates and of commodities prices in the late 70s prompted the use of financial derivatives as a means both of mitigating risks and of operating with them as a new source of business. In turn, there was a significant qualitative leap in academic research from 1973 with the papers by Fischer Black, Myron Scholes and Robert C. Merton on rational option valuation.

Given that the cost of most derivatives is zero, these were initially recorded as off-balance sheet transactions due to the difficulties of valuing them at cost. The existence of more or less liquid markets together with the development of accepted valuation methodologies used by financial market participants to set their price diminished the credibility of information based on historical cost. Accordingly, the principal accounting regulators (IASB and FASB) called for the disclosure of information on fair value in the notes to financial statements. Subsequently, consensus was reached in the late 90s over the fact that fair value was the only relevant measure for investors in respect of financial instruments, and most particularly of derivatives.

Fair value is a rational price which is either obtained directly from real transactions in an active market or from a valuation model that seeks to reproduce the price which, under normal business conditions, the entity would receive if it were to sell the asset or the amount it would need to deliver to acquire its liabilities. Accounting standards set a series of criteria to be met by any model: i) it should be commonly used by market participants and incorporate all the factors that a participant would consider on setting the price; ii) it should be consistent with the principles of financial theory; iii) it should use the time value of money, volatility, risk premiums, liquidity, and other relevant variables; and iv) it should be regularly calibrated against real transactions.

As regards *credit risk,* fair value estimation models face the difficulties proper to the modelling of this risk: the estimation of probability of default, recovery rates and correlations between defaults. Most credit instruments, as is the case with securitisations, do not have an active market, and the model is therefore not derived from a statistical analysis of prices based on their historical experience, and nor is there information on defaults of each instrument. As an example of a structured product, CDOs have as their underlying portfolio loans transferred to a vehicle which issues bonds with different ratings (senior, mezzanine, equity) that reflect seniority in regard of the absorption of losses. The rating agencies play an important role as they are responsible for assigning a rating to the different tranches of the vehicles.

Entities should disclose information of help for evaluating the uncertainty of the estimates. They should inform as to whether the fair value is obtained from an observable price or from a valuation model. They should further offer information on the model used and the most relevant hypotheses employed, and on the effect on fair value of the range of potential alternative assumptions, if a change in any of the latter should result in a significantly different valuation (stress testing). The information on fair value should be complemented with sensitivity measures (such as VaR), consistency analysis (such as back testing) and test methods (excess frequency testing). As regards credit risk, an analysis of the entity's exposure thereto should be included, using external or internal ratings, along with information on historical default rates.

The paradigm change from historical cost to fair value involves the provision of information that is useful for investors, but not exempt from new risks. Mark-to-model valuation (i.e. using a model) gives rise to *model risk,* since fair value in the case of instruments without an active market is an estimate about the future on the basis of past and present information, and the model is based on past relationships that have to hold in the future for the estimate to be correct. The estimation models are rather market agreements, and not so much scientific laws. Accordingly, their reliability is based on the consensus of market agents as they use them for price formation.

… in a banking system in which traditional retail banking predominates…

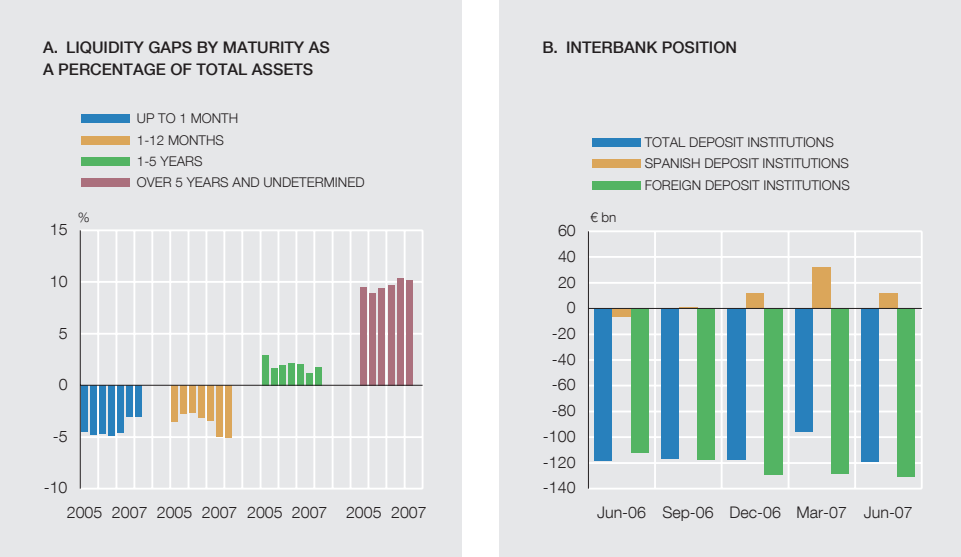
… which makes it easier to replace wholesale funding, if necessary, with customer deposits.

For this reason, the relative weight of *deposits from the resident private sector with respect to credit to this sector* will foreseeably increase. This ratio has decreased significantly over the past decade (Chart 2.7.B) and in June 2007 was 76.2% (131.3% if the ratio is credit to deposits)[9]. This business structure clearly reflects the predominance of the traditional retail banking model in Spain[10], although without spurning the possibilities offered by markets and new financial instruments (securitisation), particularly if they involve simple operating procedures and high-quality underlying assets. It should be noted that the extensive branch network, the considerable relative weight that deposit institutions have in the distribution of other products designed to channel saving (investment and pension funds, insurance policies, etc.) and the close contact maintained with bank customers may enable Spanish institutions, in the event

9. If both residents and non-residents are counted, the ratio of deposits to credit increases to nearly four-fifths (78% in June 2007). If, furthermore, credit to and deposits from general government are included, this ratio rises, in June 2007, to 80.3%. **10.** In Spain there is a close relationship between banks and their assets-side customers and, as a result, the average number of banking relationships is very low, as shown in the study by G. Jiménez, J. Saurina and R. Townsend entitled "Análisis del número de relaciones bancarias en España", *Estabilidad Financiera,* forthcoming November 2007. This close relationship of firms and households with their banks in the credit market extends to the deposit market, supported by an extensive branch network which enables banking to be finely attuned to customers and their needs, with benefits on both sides.

LIQUIDITY AND INTERBANK POSITIONS (a)
Deposit institutions. ID

CHART 2.8



SOURCE: Banco de España.

a. A negative (positive) value indicates net borrowing (lending).

that the international financial market turbulence persists, to replace some of the funds raised on wholesale markets with different types of bank deposits from their retail customers, provided that attractive yields are offered.

The liquidity position has performed favourably…

As regards the *term structure of the liquidity position*[11] reflected in bank balance sheets, the latest available information up to June 2007 shows a favourable performance, with a significant decrease in the short position up to one month (from 8% of assets in June 2006 to 5% in June 2007) and a lengthening between 1 and 12 months (Chart 2.8.A). Of the institutions operating in Spain, it is the subsidiaries and branches of foreign banks which, at aggregate level, have the most marked short position (around 15% of assets) in maturities up to one month. In any event, the liquidity position of Spanish deposit institutions reflects the traditional transformation of maturities and the customary operating practices used in banking.

… and the interbank short position has been reduced.

The recent changes in the term structure of Spanish deposit institutions partly reflects the decrease in the *interbank short position,* down from a high of 7% of total assets in December 2005 to a low of 4.5% in June 2007. This short interbank position basically reflects the relationship of foreign subsidiaries and branches that operate in Spain with their own financial group (Chart 2.8.B), while Spanish banks have a much more balanced and slightly long position (net lenders).

During the period of turbulence, Spanish institutions exhibited a comfortable liquidity position, largely because many of them had brought forward their programmes to obtain liquidity for the whole of the year and completed them before the summer to take advantage of the

11. Assets up to one month include, in addition to items maturing in this period, total cash and balances with central banks, debt securities, equity instruments included in financial assets held for trading, other financial assets at fair value through profit or loss, and quoted available-for-sale financial assets. Liabilities up to one month include total deposits from central banks and, as an assumption, 25% of sight deposits. The other 75% is classified as undefined maturity, due to the stability of these deposits.

favourable financial market conditions in the first half of the year (abundant liquidity and very low risk premiums). Although some wholesale markets were still not showing clear signs of recovery at the end of September 2007, others were functioning without excessive friction. Thus Spanish institutions are not finding it difficult to issue in the international short-term note market.

2.1.2 PROFITABILITY

Deposit institutions reported higher profitability…

In line with the trends noted in previous FSRs, the income statement of Spanish deposit institutions disclosed a sound position in the first half of the current year. This soundness was evidenced in the notable increase in group net income, which grew by 25.6% (Table 2.2). As a result, the return on assets *(ROA)* before (after) tax stood at 1.46% (1.11%), rising in both cases by 9 bp with respect to the same period of 2006. The return on equity *(ROE),* also improved on the previous year, moving up from 19.8% to 21.4% in June 2007, well above the return on Spanish long-term debt. This favourable performance of ROE was widespread (Chart 2.9.A). The improved ROE performance of Spanish deposit institutions was based, above all, on their greater operating efficiency (Chart 2.9.B)[12].

… based on the strong performance of all their operating margins…

The strength of the income statement was evident in the behaviour of the three main operating margins, which showed a positive dynamic not only in their rates of change, but also in terms of average total assets (Chart 2.10.A). Thus *net interest income* posted an increase of 20.2%, rising by 7 bp relative to average total assets from June 2006 (to 1.83%). The favourable performance of net interest income is driven by the strong behaviour of financial revenue and, in particular, against a background of lending growth, of that from customer lending. The rise in financial revenue offset the increase in financial costs, which was sharpest in trading securities and also in customer deposits, the latter as a result of the effort made by institutions to step up their funding from this type of product. In a setting of growing interest rates, the spread between marginal lending and deposit rates remained practically unchanged, so the additional pressure on the funding side was able to be offset by similar increases on the lending side (Chart 2.10.B).

The buoyancy of net interest income passed through to *gross income,* which grew by 19% (to 3.16% of ATA, up 9 bp on June 2006). The most buoyant component of gross income was gains and losses on financial assets and liabilities, the growth of which is explained by the improved behaviour of gains on trading book securities and by the sale of holdings by certain institutions. The growth of net gains on financial assets and liabilities offset the less vigorous behaviour by the share of profit or loss of investees and by commissions, the latter growing by 13.4%, nearly 3 pp less than in the previous year. In fact, compared with the growth of activity, that of commissions was down by 1 bp. The lesser buoyancy of commissions was attributable to those for collection and payment services, which posted growth of 6.5%. This moderation in the growth of such commissions, which was more marked in business in Spain, is related to the more intense competition between institutions. Meanwhile, commissions from the provision of securities services and from the marketing of non-bank financial products were somewhat more buoyant, growing by 14% against a background of favourable financial market performance, at least in the first half of the year.

… and on efficiency gains…

Operating expenses held on the moderating growth trend observed in previous FSRs. This moderation in their growth (7.6%, nearly 2 pp less than in June 2006) accounts for the drop in terms of average total assets. By component, staff costs increased somewhat less than overheads (7.4% against 8%). In any event, the effort to keep operating expenses at moderate

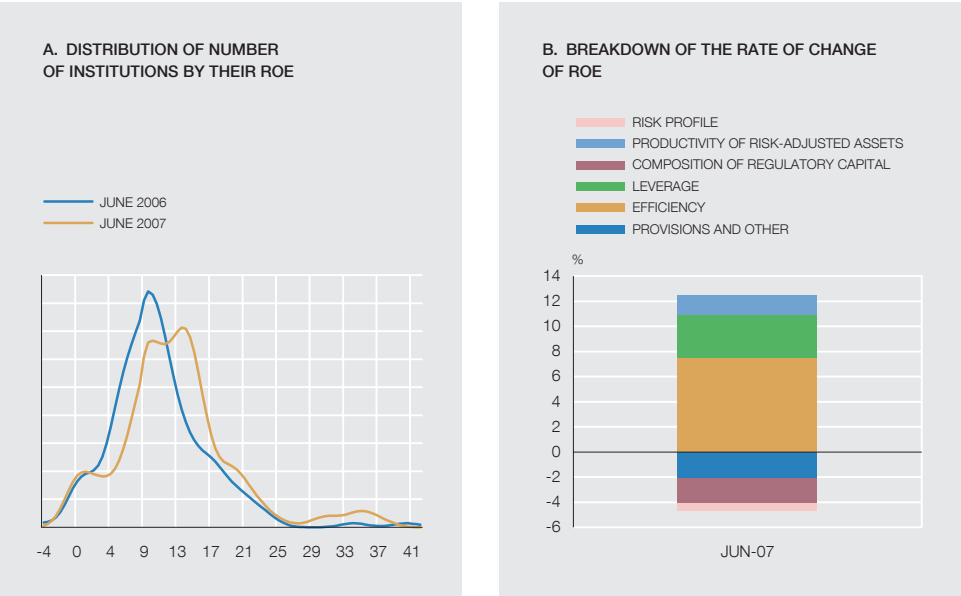
12. See Box II.1 of the May 2004 FSR for a detailed explanation of the breakdown of ROE.

INCOME STATEMENT TABLE 2.2
Deposit Institutions

	JUN-07		JUN-06	JUN-07
	€m	(% CHANGE) JUN. 07-JUN. 06	% ATA	% ATA
Financial revenue	67,639	35.4	4.13	4.82
Financial costs	42,015	46.7	2.37	3.00
Net interest income	25,624	20.2	1.76	1.83
Share of profit or loss of entities accounted for using the equity method	2,132	3.4	0.17	0.15
Net commissions	11,034	13.4	0.80	0.79
Gains and losses on financial assets and liabilities	5,542	33.5	0.34	0.40
Gross income	44,332	19.0	3.07	3.16
Operating expenses	19,793	7.6	1.52	1.41
Other operating income	682	-14.3	0.07	0.05
Net operating income	25,221	28.3	1.62	1.80
Asset impairment losses	5,198	34.9	0.32	0.37
Provisioning expense (net)	1,046	26.8	0.07	0.07
Other income (net)	1,454	-4.3	0.13	0.11
Profit before tax	20,431	23.8	1.36	1.46
Net income	16,184	23.3	1.09	1.15
Memorandum item:				
Group net income	15,529	25.6	1.02	1.11

SOURCE: Banco de España.

DISTRIBUTION BY ROE AND FACTORS INVOLVED IN ITS RATE OF CHANGE CHART 2.9
Deposit institutions

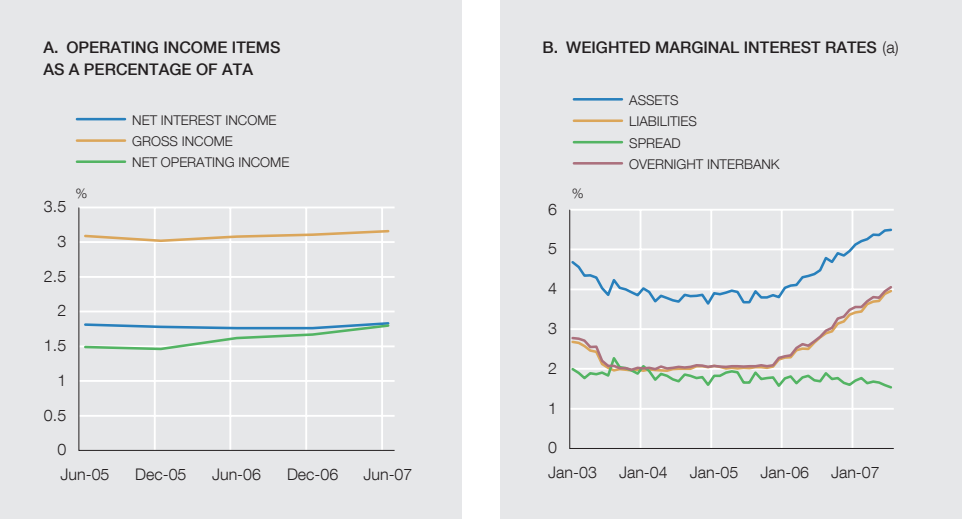


SOURCE: Banco de España.

levels of growth, along with the favourable performance of gross income, enabled the *efficiency ratio* to improve further from 49.4% in June 2006 to 44.7% in 2007. This improvement was across-the-board in all institutions (Chart 2.11.A). As noted in previous FSRs, a part of the efficiency gains derives from the expansionary behaviour of activity, so a slowdown in activity

OPERATING INCOME ITEMS AS A PERCENTAGE OF ATA AND MARGINAL INTEREST RATES
Deposit Institutions

CHART 2.10



SOURCE: 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.

could adversely affect this indicator. Institutions should be prepared for this eventuality and take into account that they may have to tighten their cost control.

… the ability to generate recurring income being closely linked to retail banking activity.

Accordingly, the strong performance of gross income, along with the moderate increase in operating expenses, gave rise to growth in *net operating income* of 28.3%, an improvement of 18 bp in terms of average total assets. The contribution to the growth of net operating income (Chart 2.11.B) is basically thanks to the favourable performance of net interest income and to the containment of the growth of operating expenses, the relative weight of which has been declining over time. The former evidences the continuing significant role of traditional retail banking in the business of Spanish deposit institutions, as a result of which their ability to generate recurring income is not so closely linked to financial market operations more typical of investment banking.

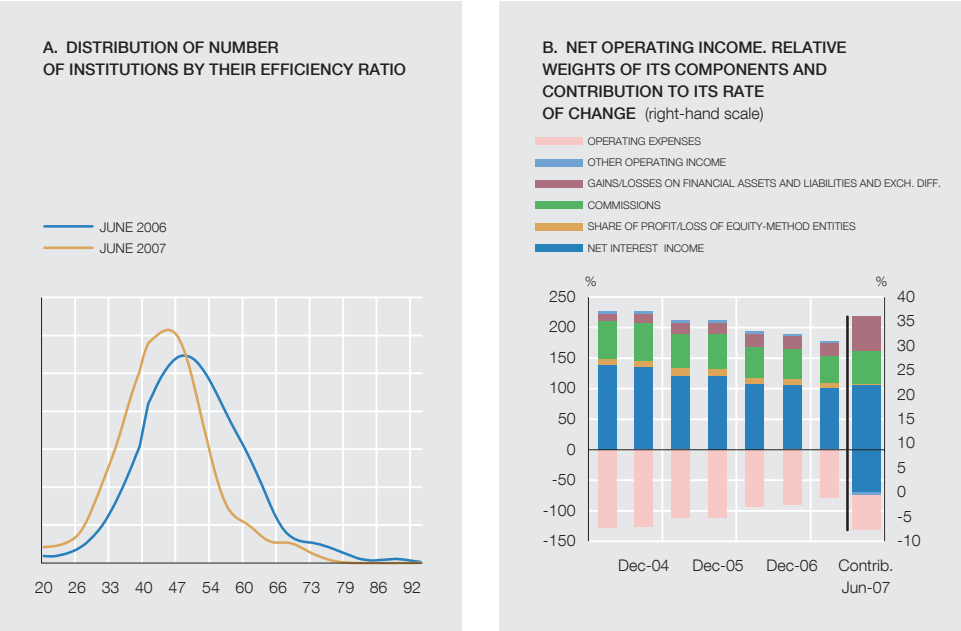
Asset impairment losses, substantially all of which can be attributed to lending, grew by 35% with respect to the previous year, partly due to increased doubtful assets and, to a greater extent, due to the still-high buoyancy of lending, which led to increases in general provisions because the system of recognising asset impairment losses in Spain is counter-cyclical. This, together with an increase in provisioning expenses, which grew by 26.8%, resulted in net operating income being reduced by 24.8%, which was a similar proportion to that in June 2006. Finally, despite other profit figures falling slightly, the *profit before tax* showed notable growth, both in absolute terms (23.8%) and in relative terms (9 bp, to 1.46% of average total assets).

The resilience of the income statement to persistent financial market turbulence is high.

If financial market turbulence were prolonged in time and wholesale markets were only willing to purchase bank instruments (particularly asset-backed bonds and covered bonds) with a significantly higher spread, or if institutions decided to compete more intensely to attract tradi-

DISTRIBUTION BY EFFICIENCY RATIO AND ANALYSIS OF NET OPERATING INCOME
Deposit institutions

CHART 2.11



SOURCE: Banco de España.

tional bank deposits (demand and time deposits), the average cost of bank deposits would increase. If, in addition, we assume that institutions cannot pass this increase through to lending, which is an extreme assumption as shown by the high correlation between the cost of funds raised and the return on lending (Chart 2.10.B), it is possible to assess the impact on the income statement. A simple exercise shows that, at consolidated level, an increase of 25 bp in the total cost of financing, which under the foregoing assumptions signifies that the spread between the return on assets and the cost of liabilities narrows by the same amount, would give rise to a deceleration in net interest (operating) income of 5.9% (12.8%), with an increase in profit before tax of 5.4%. If the size of the shock is raised to 50 bp, net interest (operating) income decreases by 8.3% (2.7%), with a fall in profit before tax of 21.6%[13]. In short, a *very direct stress test* (with a very low probability of occurrence) on the income statement of Spanish deposit institutions shows their high resilience to an unfavourable environment in the international financial markets involving a resultant increase in the cost of financing and a very rapid and marked narrowing of their spread.

The soundness of the income statement is also apparent when it is compared with that of other European countries.

The soundness of Spanish deposit institutions is apparent from a *comparison with EU banks* (Chart 2.12). Thus, the available data, which relate to 2006, show that the net interest income of Spanish institutions is 27% higher than that of EU countries[14], which points, once again, to the greater relative importance of the traditional retail model pursued by Spanish banks. The fact that these favourable differences to Spain flow through to gross income, albeit somewhat diminished, partly reflects the similar level of commission income. However, in terms of net

13. A narrowing of the spread by 25 bp is more than twice that experienced by Spanish deposit institutions in the last two years. A fall of 50 bp in this spread has taken four years to occur. It follows from this that the assumptions on the narrowing of the spread are extreme. **14.** The comparative analysis of Spanish banks with those of the European Union as a whole is based on ECB information in which the countries that, for this purpose, follow International Financial Reporting Standards (IFRSs) are distinguished from those that do not. This FSR preserves that distinction, Spain being in the first set of countries.

COMPARISON OF SPANISH INSTITUTIONS WITH THEIR EUROPEAN COUNTERPARTS (a)**. December 2006**

CHART 2.12

SOURCES: European Central Bank and Banco de España.

a. According to the information provided by the ECB, EU-IFRSs (NON-IFRSs EU) are those countries that do (not) present their accounts in accordance with International Financial Reporting Standards.
b. EFFIC.: inverse of efficiency ratio, such that values over 100 reflect a better relative position of Spanish institutions.

operating income, the positive difference enjoyed by Spain with respect to EU countries as a whole widens. The reason is that the better performance of gross income must be added to the efforts by Spanish institutions to moderate their operating expenses, which is reflected in higher levels of efficiency. Finally, the ROE and ROA summarise the more comfortable position of the income statement of Spanish banks compared with that of EU banks.

The quotations of Spanish institutions, like those of European ones, have been affected by the recent turbulence, which has been significantly more intense for investment banks.

After a long period of sustained growth of Spanish banks' *stock market quotation*s (Chart 2.13. A) in line with the performance of other European banks, from 2007 Q2 and, more markedly, from August, there has been some correction of stock market capitalisations, also seen in other European and US banks. The correction has been sharper in investment banks and in those universal banks with a large component of this type of business. The institutions which, very markedly, have most felt the turbulence in the international financial markets are those with an extreme specialisation in the mortgage market and with a pronounced dependence on the wholesale market for funding their business (such as, for example, certain US and UK institutions which obtained around 80% of their total funds from the wholesale market).

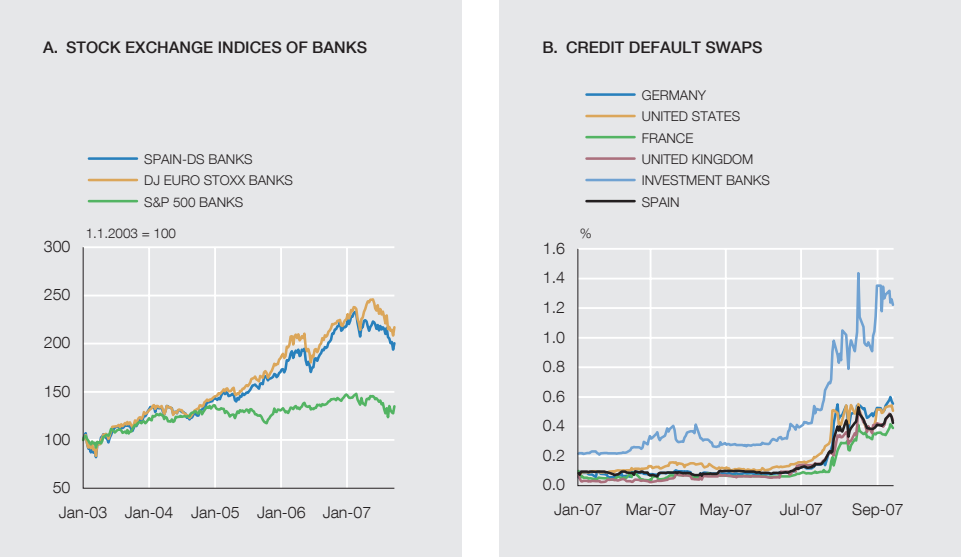
This turbulence has also prompted an upward re-adjustment in the perception of risk, particularly in investment banking…

… although in the Spanish case the indicators stand at low levels below those in 2002.

The turbulence in the financial markets has not only affected stock market capitalisations. In general, as already seen in Chapter 1, there has been a significant *upward adjustment in the perception of risk,* correcting the previous anomalous situation of scant differentiation of risk levels largely stemming from an abundance of liquidity. The information contained in *CDSs* (Credit Default Swaps[15]) (Chart 2.13.B) indicates that the perception of the risk of institutions specialised in investment banking is substantially higher than that of other banks. At a notable distance behind them are the German and US institutions. Finally, UK, Spanish and French banks show the smallest spreads. The spreads of Spanish banks are smaller than they were at the end of 2002. The information on CDSs enables the obtainment of *implied probabilities of default* assigned by the market to banks. These probabilities were around 0.1% in the first

15. A credit default swap is a type of credit derivative in which one of the parties acquires protection against the occurrence of a certain credit event in exchange for the payment of a premium.

STOCK EXCHANGE INDICES OF BANKS AND CREDIT DEFAULT SWAPS CHART 2.13



SOURCES: Datastream and Banco de España.

half of 2007 for the large European and US banks and, when the uncertainty and lack of market confidence were precipitated at the beginning of August, they rose significantly (to around 0.4%), and even more so in investment banks (to somewhat above 1%).

As regards the other market indicators for the large Spanish banks, the *implied volatilities* have increased, although the levels reached are well below the highs of 2002. The *beta,* a measure of non-diversifiable risk, is around 1.3, i.e. an intermediate level, whereas the ratio of market value to book value *(Tobin's q ratio)* continues to be among the highest (in June 2007 it was 2.5).

2.1.3 SOLVENCY

Solvency levels remain comfortably above the regulatory minimum requirements.

During the first half of 2007 Spanish deposit institutions maintained a high level of own funds that enabled them comfortably to exceed the regulatory requirements under both Spanish and Basel rules. *The solvency ratio,* calculated on the basis of Spanish requirements, is very sound, standing for the third year running at 10.6% (Chart 2.14.A). The decline in the tier 1 ratio has been checked, having fallen by only 2 bp, whereby it accounts for 6.9% of risk-weighted assets. The solvency ratio calculated under the Basel rules has declined by 21 bp to 11.8%, i.e. almost 50% above the minimum required level.

In line with the increase in activity, requirements are growing although the risk profile of institutions has lessened.

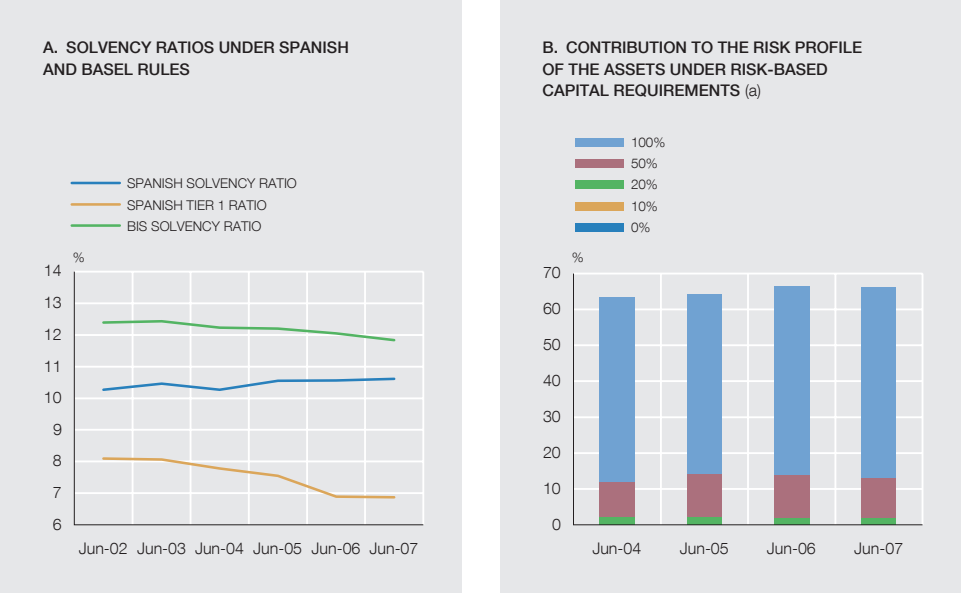
The favourable course of the economy during the first half of 2007, at both the domestic and international levels, explains the 17.2% growth in *risk-weighted assets.* Compared with the dynamism shown by this figure, the comparison with the previous year shows a slowdown of 3 pp. In particular, credit has continued to be the driving force behind the banking business, although the slowdown in house mortgage loans and the growth of exposure to sectors with a lower weighting have prompted a 42 bp reduction in the risk profile of deposit institutions (the ratio of risk-weighted assets to total assets) to 66.1%, following several years of continuous increases (Chart 2.14.B).

Own funds, principally driven by tier 1 capital, are growing in line with requirements...

Total capital has run parallel to requirements. Thus, although they continue to grow at a sound pace (17.7%), they have slowed by 2.6 pp. The strong acceleration in tier 1 capital, which has posted an increase of 16.8%, and a considerable slowdown in tier 2 capital (61 pp) account

AGGREGATE SOLVENCY RATIOS AND RISK PROFILE
Deposit institutions

CHART 2.14



SOURCE: Banco de España.

a. The risk profile is the ratio of risk-weighted assets to total assets.

for this behaviour. Lower deductions have also contributed positively to the change in own funds.

The acceleration in tier 1 capital by over 7 pp was prompted by the growth in reserves (21.3%). The sound banking performance during the first half of the year, along with the growth of preference shares (22.2%), which account for 14% of reserves, lie behind this (Chart 2.15.A). Goodwill increased by 16.5%, while losses in consolidated firms rose, although their weight continues to be very low.

Tier 2 capital grew by only 9.8%, following its strong increase in 2006. Its main component, subordinated debt, slowed by somewhat more than 11 pp, posting growth of 5.7%. Gains on investments in shares meant that asset revaluation reserves grew by 8.5%. The increase in general provisions as a result of the growth in credit and of low default rates has provided for a bigger increase in own funds (Chart 2.15.B).

Finally, and in line with the last FSR, *deductions from own funds* fell by 26.9%, driven by divestments of insurance companies.

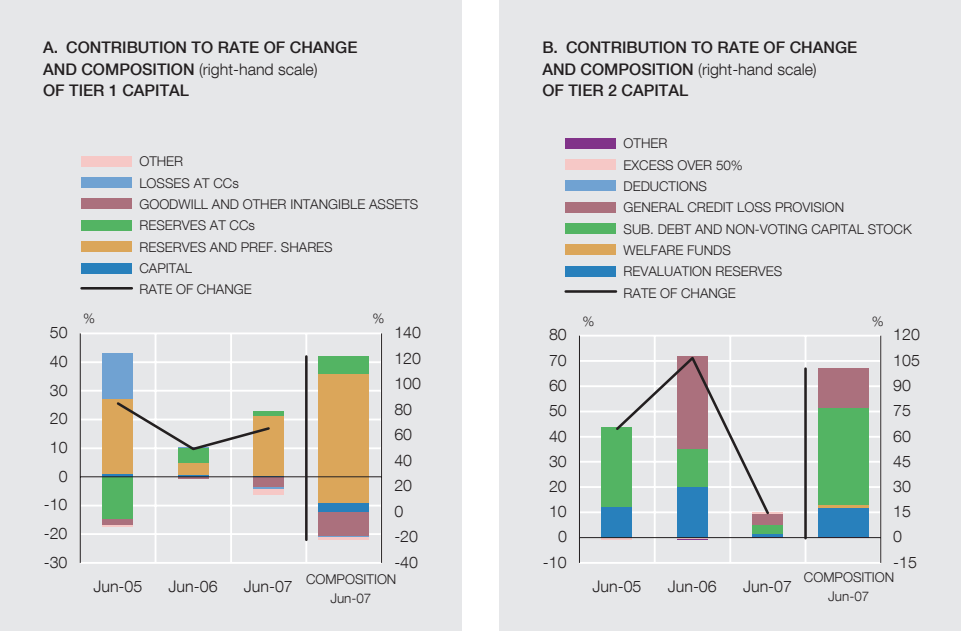
Solvency ratios stand at the average EU level, while doubtful assets ratios in Spain are significantly lower…

The solvency levels of Spanish deposit institutions are similar to those of the *EU*[16] countries as a whole. This is the case both for the total solvency ratio and the tier 1 ratio (Chart 2.16.A). Although the data revealed that solvency levels tend to be slightly below the EU average, it should be borne in mind that in Spain, in recent years, activity has been most buoyant and has pushed capital requirements up. Further, the solvency levels of Spanish institutions are com-

16. As earlier indicated in the section analysing the profitability of Spanish deposit institutions, the data used for international comparison are from the ECB, and a distinction is drawn between countries that follow IFRSs and those that do not. It should be recalled that the latest data available refer to 2006.

CAPITAL
Deposit institutions

CHART 2.15



SOURCE: Banco de España.

fortably above the regulatory requirements. Finally, the doubtful assets ratio for the Spanish banking system is very low, clearly below the EU average.

… and the provisioning for doubtful assets is very high.

In Spain, prudential regulations place particular emphasis on the need for institutions to make proper provision for credit risk, both that incurred and individually identified in specific transactions (specific provisions) and that incurred but not yet identified (general provisions). The confluence of credit risk over the course of the cycle with this prudential approach make for ample coverage of doubtful assets through existing loan loss provisions. Drawing on data from institutions' individual financial statements, such provisioning is somewhat more than 2.5 times the amount of doubtful assets in June 2007 or, expressed otherwise, even if defaults were to double, institutions have, at the aggregate level, provisions set aside to cover this increase, without any additional impact on earnings for the year (Chart 2.16.B). What is more, specific provisions as at June 2007 alone covered almost half of the total of doubtful assets. At the consolidated level, provisioning is also high (212% in June 2007), with a very similar breakdown between specific and general provisions[17]. Finally, the Spanish experience has highlighted the fact that loss given default (LGD) in the segment of credit to households for house purchases is very low. Institutions, through the execution and subsequent sale of the guarantee (the house being financed) generally recoup a very high portion of the amount owed. Accordingly, a specific provision for, say, half of the doubtful amount affords a very high degree of protection to institutions. That is to say, current provisioning levels could absorb at least fivefold growth in the present default levels.

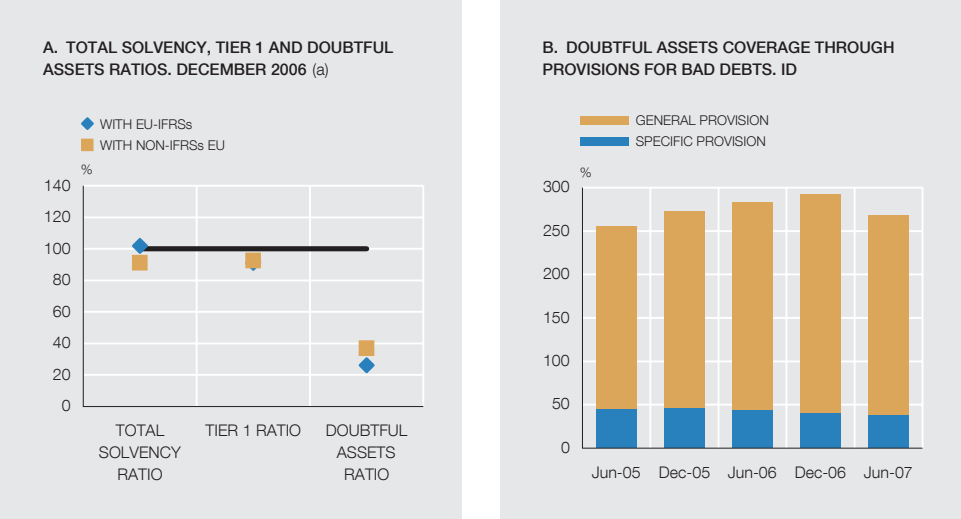
Stress tests show the considerable capacity of Spanish institutions to withstand adverse scenarios through their provisions and their own funds…

Drawing on CCR figures, a model has been constructed to estimate the *distribution of Spanish deposit institutions' credit risk losses* on the basis of historical data on loans granted by these institutions in the past two decades. By means of this model, an analysis has been made of

17. Logically, insofar as general provisions are progressively used, these will cease to qualify as tier 2 capital. In any event, there is currently a surplus of general provisions not eligible as tier 2 capital of 29%. The sum of this non-eligible surplus and cumulative specific provisions cover 94% of doubtful assets as at June 2007.

COMPARISON WITH INTERNATIONAL BANKS AND COMPOSITION OF COVER RATIO
Deposit institutions

CHART 2.16



SOURCES: European Central Bank and Banco de España.

a. According to the information provided by the ECB, EU-IFRSs (NON-IFRSs EU) are those countries that do (not) present their accounts in accordance with International Financial Reporting Standards.

the effect of macroeconomic variables such as GDP and interest rates on the proportion of defaults, the changes in the total number of loans granted and the loss that these defaults may entail for institutions. As a result, it has been possible to calculate the impact that different macroeconomic scenarios would have on the distribution of cumulative losses over a time horizon of three years[18].

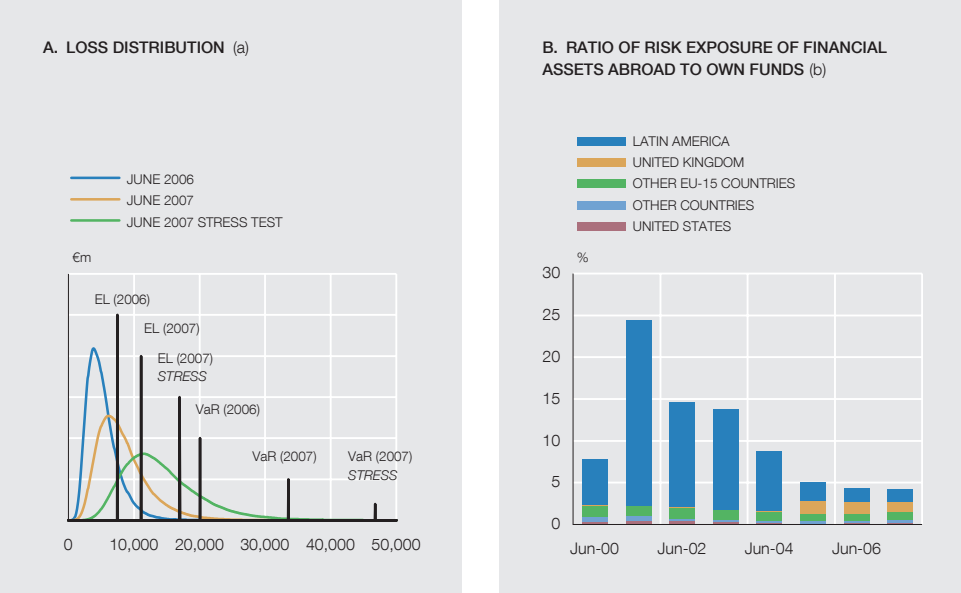
This distribution of losses shows a shift rightwards and flattening (Chart 2.17.A) from June 2006 to June 2007, which is indicative of greater expected and unexpected losses. The increase in the volume of credit granted between both dates explains the shift. However, the own funds available at present comfortably cover these losses. Specifically, the expected loss amounts to only 37% of the sum of the general and specific provisions of all deposit institutions, while the unexpected loss, calculated at a confidence level of 99.9%, accounts for only 12% of the system's aggregated own funds[19].

In addition, a *stress test on the distribution of losses* obtained in 2007 has been conducted. It analyses the impact that four consecutive quarters of GDP declines on a similar scale to those that occurred in the 1993 recession would have. It is further assumed that, as from the fourth quarter of the shock, it would take two years to regain the previous growth levels. As can be seen (Chart 2.17.A), the fundamental effect on the distribution of accumulated losses over the next three years would be a considerable increase in credit risk. Specifically, the expected loss would increase by 53%, while the unexpected loss, also evaluated at 99.9%, might undergo a 33% increase on its current value. Despite the harshness of the simulated scenario, this shock would not jeopardise the strength of

19. The unexpected loss for a given confidence level is defined as the difference between the value at risk (VaR) at that same confidence level and the expected loss. **18.** A more detailed analysis can be found in the paper by G. Jiménez and J. Mencía: *"Modelling the distribution of credit losses with observable and latent factors"*, Documento de Trabajo 0709, Banco de España.

RESILIENCE OF BANKING INSTITUTIONS
Deposit institutions

CHART 2.17



SOURCE: Banco de España.

a. EL: expected loss; VaR: value at risk.
b. Risk exposure: maximum expected loss when recoveries are not considered.

Spanish institutions, since the own funds they have accumulated would be capable of comfortably absorbing the increase in credit risk losses in the business in Spain. In particular, the expected loss in this stress test scenario would only amount to 57% of the sum of the general and specific provisions, while the unexpected loss would only be 16% of own funds.

… while expected losses on foreign financial assets are at minimum levels.

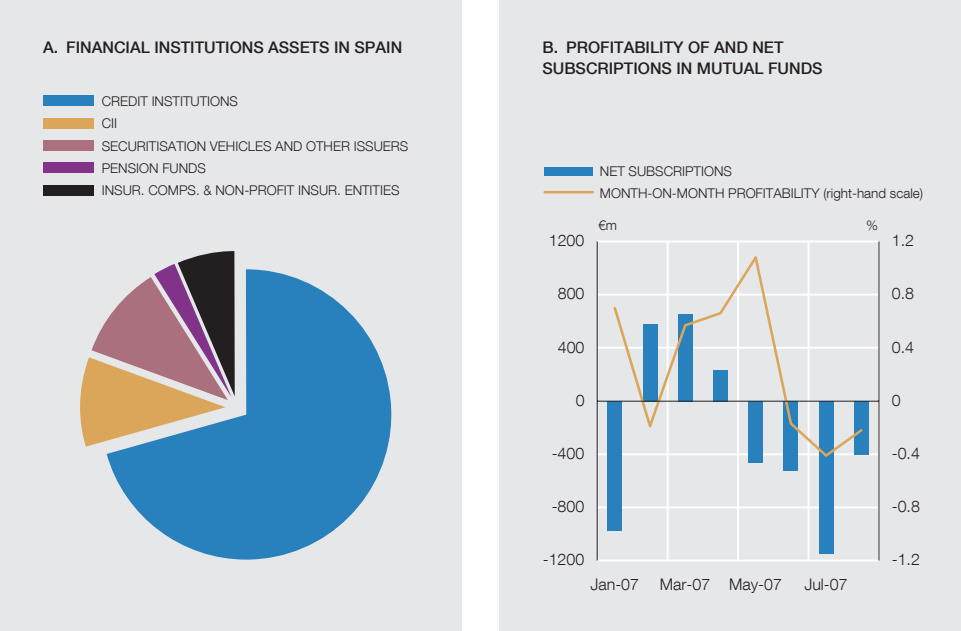
The combination of exposure to the external sector, in terms of financial assets located outside Spain (chiefly loans and fixed-income securities, both to the private and public sectors), with the attendant default probability allows a ceiling to be obtained for *expected losses in business abroad.* These foreign assets of Spanish deposit institutions have scarcely changed in the past year. The favourable performance of the world economy and, in particular, of those regions in which Spanish banks operate (Latin America, Western Europe, Eastern Europe and the United States) means that it has been possible to maintain very low default probabilities for foreign assets (close to zero for public debt and below 2% in financing to the private sector). As a result of this, *risk exposure* (maximum expected loss on foreign assets, without including possible recoveries) stood in June 2007 at 4.23% of own funds, the lowest level this decade (Chart 2.17.B).

2.2 Other financial market participants

2.2.1 INSURANCE COMPANIES

Despite the high relative weight of credit institutions in the Spanish financial system (Chart 2.18.A), the monitoring of other financial intermediaries is needed to complete the analysis of financial stability. The total assets of Spanish *insurance companies* grew by 7.2% in 2006 to €206 billion. As mentioned in the previous FSR, the balance-sheet structure of Spanish insurance companies shows a high proportion (slightly over 50%) of their assets to be in fixed-income investments, while equities account for a relatively very low weight (around 5%). Unit-linked policies, in which the policyholder assumes the risk of the investment, grew by 17.5%, representing somewhat more than 5% of the sector's total assets.

FINANCIAL INSTITUTIONS' STRUCTURE AND MUTUAL FUNDS CHART 2.18



SOURCES: Inverco, Comisión Nacional del Mercado de Valores, Dirección General de Seguros y Fondos de Pensiones and Banco de España.

Interest rate movements…

The exposure of insurance companies to *fixed income* means that interest rate dynamics become a key factor of how their business fares. Indeed, at the European level[20], interest-rate risk has been identified as being of prime concern for the industry, in a setting in which rates have held at very low levels. Although a very pronounced increase in interest rates might have very adverse effects for the sector, a moderate rise is seen as a favourable factor. Nonetheless, it should be borne in mind that in Spain the time horizons of investments have progressively lengthened over recent years, while a high proportion of insurance policies are managed by means of duration immunisation. For these reasons, the exposure of the Spanish insurance industry to interest-rate risk appears to be low, as evident in the surveyed opinions taken from companies in the sector, which do not identify it as one of the biggest concerns.

… and securities market fluctuations are not identified as particular risks for Spanish insurance companies.

European insurance companies, insofar as their equities investments are significant, have also expressed concern at developments on financial markets. Although many companies develop provisioning and diversification strategies for these investments, the factors of uncertainty arising from the recent turbulence have intensified this element of risk. Once again, Spanish companies have not identified this risk as one of their main concerns, largely because of their limited investment in equities.

Risks associated with natural catastrophes are considered at the European level to be a factor to be taken into consideration, while Spanish companies have not expressed any excessive concern in this connection. As indicated in the previous FSR, it should be borne in mind that, in Spain, risks relating to catastrophes and terrorism, among others, are covered by the Consorcio de Compensación de Seguros (Insurance Compensation Consortium).

20. Part of the appraisal of the risks affecting the European insurance industry has been obtained from the Spring 2007 Report on Financial Conditions and Financial Stability in the European Insurance and Occupational Pension Fund Sector (CEIOPS-July 2007).

Challenges arising from the risk of longevity and of underwriting have however been identified…

… as have those relating to tax and regulatory changes.

Common ground on the challenges and concerns facing the Spanish and European insurance industries has been found mainly in four areas. First, the *risk of longevity,* inasmuch as this may be increasing at a greater-than-expected pace, and *underwriting risk,* insofar as premiums are not properly valued to cover all necessary contingencies. Further, the challenges entailed by *changes in the tax and regulatory framework* are highlighted. Thus, from the tax standpoint, some Spanish companies have stated that these changes might act in favour of deposit institutions, thereby stepping up the competition to capture savings. Finally, the regulatory changes to which institutions are already adapting (IFRSs and Solvency II) also represent significant challenges.

Nonetheless, Spanish companies have been evidencing robustness …

Spanish insurance companies have been evidencing robustness in their financial position and their business in recent years. As regards the coverage of the *solvency margin,* the estimates available for 2006 in the previous FSR appear to have been confirmed, standing at 189% for life assurance and at 370% for the non-life branch.

… and the forecasts for the industry this year are favourable.

Forecasts for the industry as regards *business* in 2007 indicate that this will be a good year. This is suggested by the data available on premiums at the time of this FSR going to press. In the first half of 2007, premiums in the life branch were estimated to have grown by 18.9% year-on-year, while the related rate in the non-life branch was 5.8%. In the non-life segment, the growth rates of premiums remained high in health and multi-risk insurance (9.3% and 9.1%, respectively). However, the multi-risk branch might feel the effects of its links to new mortgage loans. Car insurance, where premiums in the first half of the year accounted for 40% of the non-life branch, grew at a rate of 3.6% owing to the heightened competition in the sector. Nonetheless, one factor which might be bearing favourably on this business is the reduction in claims.

2.2.2 OTHER FINANCIAL MARKET PARTICIPANTS

Mutual fund assets have increased slightly in the year to date, with net subscriptions declining…

Since January 2007, the total assets of *collective investment institutions* (CIIs) have increased by €5,898 million (1.75%) to €342,909 million. Within CIIs, the assets of mutual funds, which account for 74.7% of the total, have increased by 0.69%. In the first eight months of the year, the return on funds stood at 2.02%, with equity and balanced equity funds to the fore. As to net share subscriptions, the result for the year to date is negative, especially in the last four months, during which net redemptions of over €2,500 million have been recorded (Chart 2.18 B). While it is probably still too early to assess the impact of the recent turbulence on international financial markets, returns on mutual funds in July and August were negative, with net redemptions of around €1,600 million.

Pension funds grew by 2.94% in the first six months of the year (13.7% year-on-year), exceeding €83 billion. Association pension plans posted the highest growth (4.54%). Returns over the past 12 months stand at over 8%.

… set against current market conditions and competition in the banking sector to capture customers.

Admittedly, net subscriptions to mutual funds in recent months have not been particularly significant when viewed over a broad timespan; but they do highlight the challenges this type of institution must face, in a setting in which deposit institutions will foreseeably step up competition to capture household and corporate saving. Such competition is more readily provided for by the personal income tax reform undertaken[21], which has brought the taxes on these types of products into line. This competition may be broadened if uncertainty persists on financial markets and if current and potential shareholders prefer saving strategies less tied to market fluctuations. Moreover, it should be recalled that around 80% of the assets of mutual

21. The following Chapter explains this reform in greater detail.

funds in Spain and 50% of those of pension funds are managed by institutions linked to banking groups.

Private equity activity has been adversely affected by liquidity tightness and by the diminished appetite for risk.

As regards *private equity* activities and, in particular, leveraged buy-outs (LBOs), one of the financial market segments that had been most influenced by the abundance of liquidity[22], market sentiment has changed drastically compared with that noted in the previous FSR. The turbulence unleashed during the summer has meant that much of the activity in this market has diminished. Firstly, the availability of funds to finance this type of operation has declined owing to liquidity tightness. Secondly, the major international banks involved in these operations focus, above all, on reducing the exposure in their balance sheets, in the face of the difficulties of syndicating or placing financing tranches to which they had committed (pipeline risk), having counted on easy subsequent distribution against a background of abundant liquidity and a high appetite for risk. In this respect, it should be stressed that In this respect, for the Spanish institutions that have participated in this type of activity, the level of risk retained in relation to these operations is relatively small compared with the total volume. Finally, in line with the reappraisal of risk on international markets, banks are being more cautious in these operations which, until recently, entail very high leverage and few guarantees for the lender banks. In sum, the volume of activity in this segment is expected to moderate significantly, particularly for very large-scale operations.

22. Private equity is understood to encompass those activities in which a group of investors acquires a company with the aim of restructuring it, making it more profitable and selling it on subsequently so as to gain a return on their investment. Many private equity activities are conducted by substantially increasing the indebtedness of the acquired company (leveraged buy-outs).

The recent turbulence on international financial markets, the impact on the interbank market and the response of central banks have highlighted the significance of certain structural aspects relating to the collateral policy of central banks. At national level, the potential tightening of deposit institutions' financing conditions may lead these entities to compete more fiercely with other financial intermediaries to capture household and corporate saving. Changes in taxation on financial products may play a considerable role in such competition. These two matters are analysed in this Chapter, which is devoted to the analysis of structural elements of the financial system with a potential impact on financial stability.

3.1 Institutions' collateral policy

An appropriate collateral policy contributes to the efficient performance of a central bank's tasks…

Central banks should perform the functions entrusted to them efficiently. It is well known that efficiency in the implementation of monetary policy and in the management of payment systems requires an appropriate collateral (guarantees) policy. The dislocations in financial markets in the second half of 2007 have, moreover, highlighted how crucial this policy is in a situation of turbulence.

… with its extensiveness being a defining characteristic of such policy.

Against this background of financial market tensions, one of the defining characteristics of an appropriate collateral policy has been seen to be its extensiveness. In other words, the set of eligible assets should be sufficiently extensive as to allow the central bank to provide the necessary liquidity, without undermining the solvency of its balance sheet in the process.

The validity of the foregoing statement becomes clear when bearing in mind how the collateral framework at different central banks (the Eurosystem, the US Federal Reserve and the Bank of England) has contributed to managing the turbulence in question. In the Eurosystem, the collateral policy may be said to have been neutral, insofar as it has not influenced liquidity provision procedures in any way. But this has not been the outcome in every case. To analyse the causes, a comparative study of the collateral policy of these three central banks should be made.

The Eurosystem's collateral framework maintains greater effective extensiveness…

The collateralisation framework of regular operations in the Eurosystem responds to a criterion that is to some extent opposed to that followed by the US Federal Reserve and by the Bank of England. While the assets backing ordinary liquidity injection operations are only government and federal agency[1] debt in the case of the Federal Reserve, or only government debt in the case of Bank of England, in the Eurosystem the regular refinancing operations may be guaranteed by a broad range of debt instruments, as will be described below.

The greater effective extensiveness of the Eurosystem's collateral framework is also patent when regard is had to the collateralisation used in the case of the marginal lending facility. In this connection, it should be recalled that, although its use is penalised, the lending facility is also an ordinary refinancing mechanism. In the Bank of England, resort to the lending facility is collateralised as a regular operation, although, as stated, eligible assets are confined to government debt.

Further qualifications are needed when drawing comparisons with the US lending facility. While the so-called "primary credit discount window" is a similar facility to the Eurosystem marginal

1. The term "federal agency debt" requires some clarification. It does not only include debt issued directly by federal agencies, but also the debt of specific private bodies operating under licence and with public objectives. These include mortgage associations such as Fannie Mae and Freddie Mac.

lending facility, the "secondary credit discount window" is for emergency assistance. Coverage of the credit risk resulting from both facilities is, as in the Eurosystem, through a broad spectrum of eligible assets. However, the persistence of a degree of stigma associated with resort to "primary credit", as though it were an emergency recourse, still marks a considerable difference with the Eurosystem framework.

The greater effective extensiveness of the Eurosystem's collateral framework in normal conditions, along with the lack of stigma associated with resort to ordinary financing mechanisms (with penalty or not), have been decisive in allowing for comfortable management of market tensions, for three reasons.

First, the scale of the (hypothetical) liquidity problems that would require resort to emergency procedures should, all other things being equal, be greater in the Eurosystem. In other words, a broad set of eligible assets in normal conditions enables the prevalence of the conditions of normality to be prolonged.

Second, a wide-ranging criterion of eligibility in normal conditions presupposes that the collateral management apparatus needed is available at all times. In this respect, it should be noted that the counterpart to the formal flexibility that the collateralisation framework for the Federal Reserve's primary credit and emergency operations guarantees is the fact that certain possible types of collateralisation have not been implemented for a long time.

Finally, mention should be made of the operational efficiency that ensues when an extensive collateral policy allows for the simultaneous coverage both of the central bank's credit exposure attributable purely to financing operations and the exposure stemming from the operation of the payment systems under its charge.

The extensiveness of the Eurosystem's collateral framework is highlighted by the fact that the volume of assets deposited in the Eurosystem during 2006 was, on average, around 10% of eligible assets. Reinforcing this argument of formal sufficiency, close to 40% of what was deposited in 2006 was not actually used. At end-August 2007, unused collateral in Spain accounted for almost 70% of the collateral deposited[2].

… which while not unlimited…

Without detracting from the foregoing, it should be observed that the extensiveness of the collateral framework cannot be unlimited. The need for specificity in discharging functions precludes an extensive collateral framework from being synonymous with one governed by the principle of universality. Specifically, the need to avoid disguised tax distortions and alterations in price formation on markets, and to conform to the prevailing legal framework mean, inter alia, that assets eligible as collateral should comprise a limited category.

The document entitled "The implementation of monetary policy in the euro area" outlines the harmonised collateral framework in the Eurosystem since early 2007[3]. This is not the place to discuss it in detail. However, attention should be drawn to some of its main features. Specifically, assets accepted as collateral should be creditworthy unsubordinated debt instruments in accordance with the provisions laid down in the Eurosystem credit assessment framework

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2. This figure should be qualified as it is an aggregate and time-specific measure. However, there have been no collateral restrictions to date either at the level of specific institutions or at any point in time. **3.** The harmonised framework will come fully into force in 2012. Until then there will be an adaptation period in which the various national central banks shall adjust their previous practices. The collateral framework in force in Spain is regulated by Technical Application No. 1/2006 of the SLBE (Banco de España Settlement Service).

(ECAF). The extensiveness of the Eurosystem's collateral policy is determined by the acceptability both of marketable and non-marketable assets, and of assets that meet certain minimum credit standards, irrespective of whether such standards are set by rating agencies, central bank internal validation systems, internal models of the counterparties themselves or automated rating solutions.

Naturally, there are specific rules covering different operational, contractual and legal aspects that outline in greater detail which assets are eligible or not, along with their actual capacity to mobilise funds[4]. Thus, for instance, the Eurosystem does not accept individual liabilities, even if they are mortgage-backed. This does not mean that the counterparties' investments in this category of assets cannot be discounted in the Eurosystem. The acceptability of covered bonds and similar instruments, and that of asset-backed bonds, is a means for the rediscounting of mortgage-backed securities. Nor does the Eurosystem accept collateral provided by counterparties with close links to the issuer of the debt in question. This measure is a safeguard against potential situations of double default, whose (conditional) probability is obviously greater in situations involving close links.

Conversely, the collateral policy pursued by the Federal Reserve in its primary and secondary discount window programs does not envisage exceptions such as those outlined above. However, the immediate capacity to mobilise collateral proves more limited than that contained in the regulations. An example of this occurred in late August when the New York Federal reserve, among other measures to tackle the sub-prime crisis, clarified the conditions for the eligibility of ABCP provided by counterparties that were providers of the liquidity facility of the vehicle in question.

… allows for comfortable management of situations of tension, precluding the moral hazard stemming from taking decisions on the extension of the collateral list, and preventing the generation of spurious signals about the position of institutions which, for whatever reason, have to resort to the lending facilities.

Beyond possible differences of opinion between the Eurosystem and the Federal Reserve as to what constitutes close links, the foregoing example highlights the advantages of a system that is effectively extensive at all times. A wide-ranging collateral framework avoids two serious, practical difficulties of managing turbulent situations. First, it allows a situation of moral hazard resulting from having to take decisions to extend the list of eligible assets in situations of tension to be avoided. Further, it prevents the generation of spurious signals about the position of institutions which, for whatever reason, find themselves having to resort to lending facilities. In sum, a sufficiently extensive and appropriately calibrated collateral framework is the best alternative both for normal and turbulent times.

3.2 Changes in the taxation of financial products

The new personal income tax legislation has enacted notable changes in the taxation of, and withholdings system for, financial instruments…

The entry into force of the new personal income tax legislation[5] in January 2007 has entailed far-reaching changes in the taxation of, and withholdings system for, financial instruments. Among the main reforms enacted, mention should first be made of the replacement of the concept of "special income"[6] with that of "savings income", a different and broader term which, as can be seen in the accompanying table, covers all financial returns whatever the period over which they have been generated. Further, the different forms of taxation on income from movable capital and on all existing capital gains and losses on the basis of issuers have been brought into line. In particular, the 40% reduction for income from movable capital generated at over two years, and the 40% and 75% reductions for returns at over two and five years on deferred capital insurance contracts if collection of the income is in the form of a single pay-

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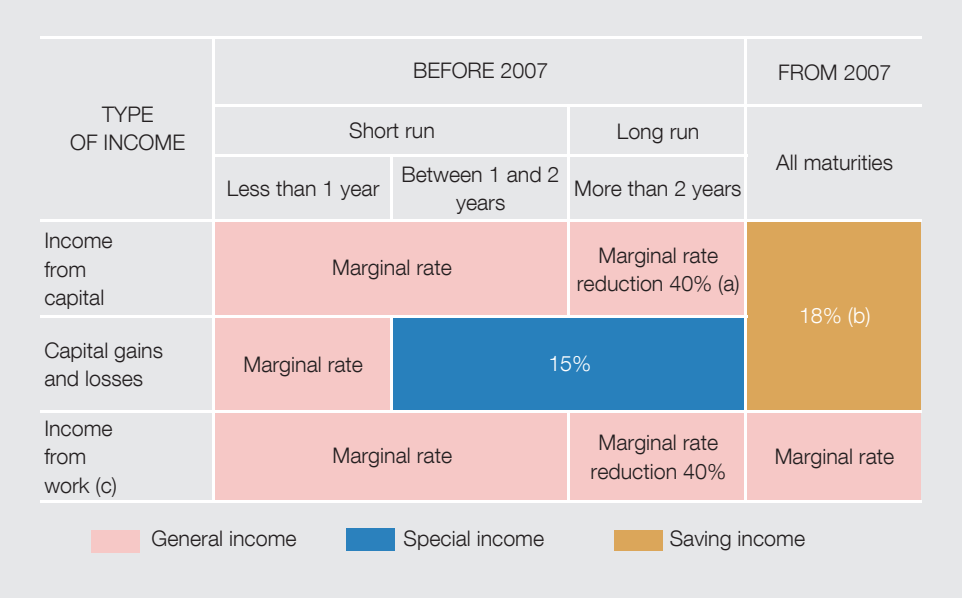
4. The capacity to obtain refinancing charged to collateral is restricted by the size of the haircuts applied to the face value of the collateralised asset. The size of this discount is determined by a combination of criteria which consider exposure to risk in the event of enforcement of guarantees and the aim of neutrality in price formation on debt markets. **5.** Law 35/2006 of 28 November 2006 on Personal Income Tax and the partial amendment of the legislation on Corporate and Non-Resident Income Tax and Wealth Tax (Official State Gazette of 29 November 2006). **6.** The concept was introduced into Law 40/1998 on personal income tax and other tax regulations.

SAVINGS TAX REFORM

TABLE 3.1



SOURCE: Banco de España.

a. In the case of insurance contracts, reductions may rise to 75 % if the investment period exceeds five years. There are reduced allocation percentages for temporary income and annuities.
b. In the case of temporary income and annuities, there are lower allocation percentages than in 2006.
c. Pensions plans and similar. Contributions are tax-deductible while benefits are taxed as income from work in the tax base.

ment, have been eliminated. The flat rate of 15% applied to special income is raised to 18%, and this rate is used for savings income irrespective of the taxpayer's income level. The Royal Decree on payments on account[7] has established a withholding of 18%, a 3 pp increase[8].

… making the taxation of saving more neutral in respect of instruments, terms and income levels.

As a result of all these changes, the dual tax system initiated in 1996 has been consolidated while the taxation of saving has become much more neutral in respect of instruments, terms and income levels. Accordingly, the current taxation of saving tends to foment greater competition among the issuers and managers of different financial instruments, strengthening the role of the terms of risk and return, while minimising tax considerations.

Recent developments in financial flows suggest that these changes may have influenced household portfolio decisions. Thus, since 2006 Q2 investment in this bank deposit sector — in which the lack of neutrality significantly affected the assets in question — has gained fresh momentum[9].

7. Royal Decree 1576/2006 of 22 December 2006 amending personal income tax regulations and other rules relating to payments on account. **8.** For more details on this legislation and its effects, see the article (in Spanish only) by García-Vaquero and Maza (2007): "El tratamiento de los instrumentos financieros en el nuevo IRPF", Boletín Económico, January. **9.** Although the new law did not come into force until 2007, investment in time deposits taken out during 2006 and maturing in 2007 avails itself of the new tax arrangements.

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