

FINANCIAL STABILITY REPORT

INFORME DE ESTABILIDAD FINANCIERA



May 2004



BANCO DE ESPAÑA

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INTRODUCTION

Spanish deposit institutions increased their profitability and maintained their solvency ratios in 2003, a year in which competition among financial institutions intensified, against a background of low interest rates, recovering stock markets and appreciation of the euro against the dollar. This positive performance was recorded by Spanish institutions in a year in which Spain's economic growth was substantially brisker than the euro area average.

Banking risks

As regards *credit risk*, lending accelerated in 2003, largely as a result of the high growth of credit for construction and property development, and the financing of house purchases by households. Credit for other productive activities grew at rates that were positive, but lower.

The relative weight of credit to property developers as a proportion of all credit has risen continuously in recent years. A substantial number of institutions, with a significant weight in the total, recorded very high rates of growth in credit to this business segment, although historically it has proved to be one of the more risky areas of activity.

Since mid-2003, doubtful assets have fallen in absolute terms, this being a change from the behaviour of the previous two years. This change is attributable to the sound performance of the Spanish economy, to the recovery of certain Latin American econo-

mies (accounting for a significant part of the financial assets abroad of Spanish banks) and to the decline in the weight of foreign business (which has a significantly higher doubtful assets ratio than business in Spain) as a consequence of the appreciation of the euro.

The behaviour of credit and doubtful assets led to further reductions in the doubtful assets ratio in all segments of business, except consumer credit. There was a significant shift in the population of deposit institutions towards lower levels of the doubtful assets ratio.

The strong growth of credit to the resident private sector has not been accompanied in recent years, by a similar increase in the funds raised by the institutions from resident depositors. Accordingly, there has been a progressive increase in the debit balance with the resident private sector, which accelerated in 2003. This debit balance, in the medium term, poses certain *liquidity*-management challenges for the institutions.

Among these challenges there is the need to gauge the long-run sustainability of lending growth that significantly outpaces bank deposit growth. The recourse to external financial markets increases the average cost of traditional bank liabilities and puts downward pressure on the net interest margin and, in short, on the profitability of Spanish deposit institutions. However, it should be stressed that Spain's membership of the euro area has facilitated the coverage

of the resident private sector's debit balance.

Market risk in equity portfolios continued to decline in 2003 and in early 2004, as the recovery in stock markets and the substantial reduction in volatility firmed. However, the terrorist attack of 11 March in Madrid has introduced uncertainty, although stock market volatility does not appear to have increased significantly.

Spanish institutions with a significant presence abroad have continued their strategy of hedging the *exchange rate risk* in their structural positions in Latin American currencies and the US dollar, in order to limit the impact of the appreciation of the euro on their results and own funds.

Profitability

The recovery in the results of Spanish deposit institutions, already well under way at the time of the last Financial Stability Report (FSR), was confirmed in the second half of 2003. This recovery is mainly attributable to the control of operating expenses and to the reduction in provisions and write-downs and in extraordinary losses, partly as a result of the decline in doubtful assets and the stock market recovery.

The decline in interest rates in 2003, the intense competition in banking and the appreciation of the euro vis-à-vis some of the main Latin American currencies put downward pressure on the institutions' net interest and gross margins, which fell, both in absolute terms and, especially, relative to average total assets.

The spread on the most significant loan products is widening, but at the same time liability spreads are narrowing. This shows, once again, the management challenge for the institutions in terms of the cost of funds raised. This challenge is particularly relevant in a low interest rate environment like that in 2003.

A comparison of Spanish and European banks based on the available market indicators does not show any sign of relative deterioration. Although some large European banks have recorded high rates of growth in their net income, a large part of this performance is attributable to the severe difficulties experienced in 2002, when doubtful assets increased substantially.

Solvency

The solvency ratios of Spanish deposit institutions were highly stable during 2003. Unlike in 2002, the institutions increased both their tier 1 and tier 2 capital significantly. This enabled them to manage substantial growth in their lending without any reduction in their solvency.

The increase in tier 1 capital is attributable to the increase in reserves, in line with the improvement in results, and it occurred in spite of the decrease in the stock of preference shares. Moreover, the considerable amortisation of goodwill and the smaller losses at consolidated companies arising from exchange differences, particularly as a consequence of the greater hedging of structural positions in Latin American currencies, helped to strengthen the tier 1 capital of Spanish institutions, in clear contrast to the reduction in 2002. The strengthening of their capital is also attributable to the considerable increase in subordinated debt, partly due to the effect induced by the increase in tier 1 capital.

As has become usual in recent years, there was also an increase in the statistical fund, which helps to bolster the solidity of Spanish deposit institutions.

In sum, despite the low interest rate environment and strong competition, Spanish deposit institutions increased their returns significantly in 2003, without any reduction in their solvency. The performance of the Spanish economy, the management of risk by the institutions and the ongoing drive to

contain costs would account for this performance. Although 2003 was a positive year, the institutions will need to continue to improve their risk management (with particular focus on the property sector and

on developments in the debit balance with the resident private sector) and increase their efficiency in order to be assured of success in increasingly integrated and competitive financial markets.

CHAPTER I

Banking risks

I.1. Introduction to Spanish deposit institutions' risk

The consolidated balance sheets of Spanish deposit institutions broadly confirm the trends already noted in the previous FSR. In this respect they show an acceleration in total assets, assisted by the greater buoyancy of credit to the private sector (1) in Spain, and by the smaller fall in foreign business activity. Unlike what was reported in previous FSRs, doubtful assets declined, while the doubtful assets ratio of the private sector stood at a low.

Consolidated balance sheets (2)

The total assets of deposit institutions grew by 9.8% in the year to December 2003, against 0.7% in the previous year (Table I.1). A recovery in activity seems to have been confirmed in 2003, following the slowdown that began in 2001.

The reasons for this recovery are two fold. First, business in Spain, which accounts for 84.8% of the total, grew by 13.3%, five percentage points (pp) more than in the previous year. Second, this recovery was also

due to the slowdown in the fall in foreign business (-6.3% against -23.5% in December 2002), which began in December 2001 (3).

As a result of the foregoing, the relative weight of foreign business declined further to stand at 15.2%, the lowest level since Spanish banks began their expansion abroad (Chart I.1). As noted in previous FSRs, this continuing reduction is due to the more prudent approach taken by institutions in their international expansion and to the effect of the euro's appreciation against some of the main Latin-American currencies, despite the improvement, albeit slight, in the region's economic situation and the more marked upturn in the world economy.

As regards *asset* structure, the relative weight of credit to the private sector rose by 2 pp to 58.9%, its highest level since 1998. In line with the previous FSR, it seems that the end of the slowing trend apparent from June 2001 to end-2002 has been confirmed, since growth was 7 pp higher than in December 2002.

The growth of credit to the private sector is largely explained by the buoyancy of lending in Spain, particularly secured lending (Chart I.2). At the same time, foreign business recorded a rate of change that, albeit close to zero, was positive for the first time since end-2001.

(1) For the purposes of the FSR, credit to the private sector includes financing to residents and non-residents other than credit institutions and public authorities. It includes both loans and fixed-income securities.

(2) The data in tables relating to dates prior to December 2003 may have changed slightly relative to those published in previous FSRs, owing both to rectifications of data by the institutions themselves and to changes in the composition of the consolidated groups. These minor changes in no way alter the conclusions drawn earlier.

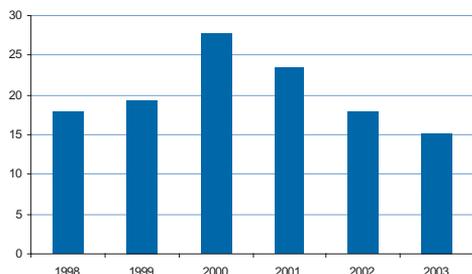
(3) Unless otherwise stated, amounts relate to December 2003 and comparisons are always between that month and December 2002.

Table I.1. Consolidated balance sheet. Deposit institutions

ASSETS	Dec-03	Relative	Chg.	Chg.	LIABILITIES	Dec-03	Relative	Chg.	Chg.
	(€ m)	weight	D-02/	D-03/		(€ m)	weight	D-02/	D-03/
	(%)	Dec-03	D-01	D-02		(%)	Dec-03	D-01	D-02
		(%)	(%)	(%)			(%)	(%)	(%)
Cash on hand and on deposit at Central Banks	32,493	2.0	-20.3	17.3	Central Banks	37,164	2.3	63.8	62.7
Due from credit institutions	178,777	11.2	1.3	-1.2	Due to credit institutions	280,837	17.6	-0.8	14.5
Credit to public authorities	46,165	2.9	-14.3	-5.7	Credit from public authorities	40,835	2.6	11.4	-11.3
Credit to private sector	877,541	54.9	6.9	13.4	Customer deposits	810,016	50.7	0.2	5.5
Fixed-income portfolio	265,723	16.6	-7.1	16.6	Marketable debt securities	156,687	9.8	2.9	42.0
Doubtful assets	11,683	0.7	13.2	-5.6	Other liabilities	40,997	2.6	-5.5	3.0
Equity portfolio	59,177	3.7	-4.5	11.1	Accrual accounts	19,307	1.2	-18.6	-4.5
Property and equipment	24,876	1.6	-9.7	-3.7	Provisions	53,407	3.3	-6.7	1.5
Goodwill in consolidation	15,663	1.0	-4.1	-15.7	Negative difference in consolidation	203	0.0	50.4	-1.1
Intangible assets	1,498	0.1	-17.1	-7.6	Subordinated debt	33,782	2.1	3.0	8.1
Own stakes and shareholders	227	0.0	-45.4	-22.3	Minority interest	20,603	1.3	-7.0	0.3
Other assets	48,950	3.1	-9.4	2.7	Capital stock	8,845	0.6	1.9	3.7
Accrual accounts	21,701	1.4	-17.4	-6.0	Reserves	62,083	3.9	4.2	5.1
Prior year's losses at the controlling entity	494	0.0	46.9	26.9	Reserves at consolidated companies	19,901	1.2	25.6	4.8
Losses at consolidated companies	12,978	0.8	77.1	3.4	Net Income	13,278	0.8	-8.2	14.1
					Group	11,473	0.7	-8.2	16.6
Total assets	1,598,063	100.0	0.7	9.8	Total liabilities	1,598,063	100.0	0.7	9.8
Memorandum item:									
Credit to private sector	940,901	58.9	6.8	13.8					
Exposure to public authorities	229,384	14.4	-11.6	6.8					

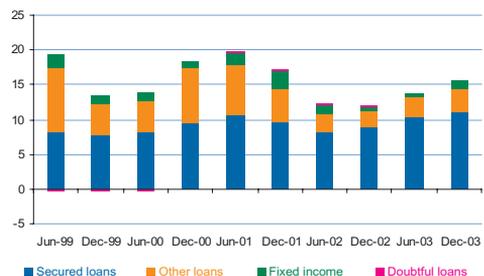
Unlike the situation observed in previous FSRs, total doubtful assets declined by 5.6%, while in December 2002 they were growing at a rate of 13.2%. This occurred both in business in Spain (down from 19.8% to -1.3%) and in foreign business (down from 4.7% to -11.7%).

As a result of the decrease in doubtful assets and of the growth of credit to the private sector, the doubtful assets ratio of the private sector dropped from 1.46% to 1.13%, marking a new low for the last five years. This decline was seen in both business in Spain and foreign business, although there is still a difference of nearly 3 pp in their doubtful assets ratios (0.83% against 3.60%, respectively).

Chart I.1. Foreign business as a percentage of total business (%). Deposit institutions

The relative weight of exposure to public authorities decreased by 0.4 pp to 14.4%. Although its progressive loss of relative weight continued, the rate of change of this exposure was positive for the first time since June 2002. This was due to its buoyancy in Spain and to the smaller fall abroad.

The relative weight of the equity portfolio increased very slightly, due to its growth of 11.1%, which pointed to a certain change of trend with respect to that in the last few years as a result of the performance of the stock market. The institutions continued to step up the accelerated amortisation of goodwill, the relative weight of which is

Chart I.2. Contribution to change in credit to the private sector (% and pp). Business in Spain. Deposit institutions

around 1%, similar to that seen at the beginning of 2000.

On the *liabilities* side, the trend deceleration in residents' deposits seen since mid-2001 was broken by a rise in their growth rate from 0.2% to 5.5%. Nonetheless, since they grew more slowly than total assets, their relative weight fell again, this time by around 2 pp.

To offset the lower relative weight of their most traditional form of financing, institutions are increasing other liability items. Thus the relative weight of interbank financing increased by 0.7 pp and that of marketable debt securities rose by somewhat more than 2 pp, after posting growth of 42%. Subordinated debt also showed higher growth, some 5 pp more than in December 2002, although somewhat lower than that of total assets, which meant that the relative weight of this item slipped from 2.2% to 2.1%.

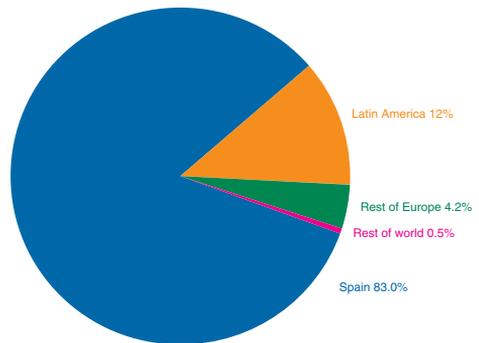
Preference shares continued to lose relative weight, dropping to the levels of December 1999 (1%). Group net income recovered significantly, while on-balance-sheet own funds grew at a rate of 9.6% after remaining practically flat in the year to December 2002.

Asset management

In addition to managing the assets and liabilities on their balance sheets, Spanish deposit institutions participate actively in managing other financial assets of their customers. They do this mainly through mutual fund and pension fund management companies. Asset management represents the development of new sources of revenue and of efficiency for institutions, although it poses management challenges in relation to the institutions' sources of financing and to the risks that may be associated with them.

The management of assets other than those of a strictly banking nature is closely linked

Chart I.3. *Geographical distribution of managed assets. Deposit institutions*



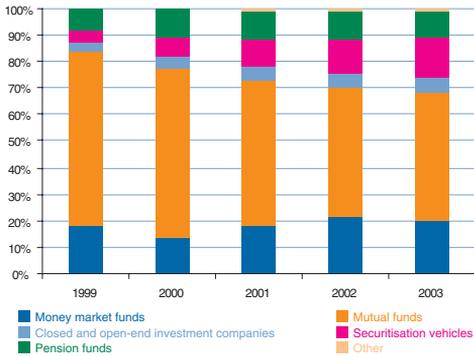
to the business of the institutions because it forms part of a cross-selling strategy that exploits the synergies arising in the provision of banking services. The result is that customers' search costs are lower and the institutions optimise their human and physical resources (branches) and enhance customer satisfaction through the provision of high-value-added services. Although these activities complement traditional deposit products, they also replace them since, up to a certain point, they compete with deposits and are therefore a management challenge for institutions.

In December 2003 the amount of assets administered by the management companies controlled by Spanish deposit institutions represented 31.3% of the competing deposit instruments (4). Although in the last four years assets under management have increased (by 41% in total business and by 30% in business in Spain), in 2003 in particular their weight relative to deposit instruments decreased slightly (33.6% in December 1999). Around 17% of managed assets are located abroad (Chart I.3).

Notable features of the assets managed in Spain are the weight of mutual funds (around 70% of the total) and the incipient development of securitisation SPVs (Chart I.4), whereas the assets managed in Latin America consist mainly of pension funds,

(4) Defined as customer deposits, debt securities and subordinated debt.

Chart I.4. *Distribution by product of assets managed in Spain. Deposit institutions*



which account also for around 70% of the total assets managed in those countries (Chart I.5).

The market share of the assets managed in Spain by groups of Spanish deposit institutions is generally highly significant. Particularly noteworthy are their strong presence in mutual funds, which is the product that accounts for the highest volume of assets, and their relative stability over time (Chart I.6).

Evolution of risks

Credit to the resident private sector continued to accelerate in 2003 (growth of 15.3% in December against 13% in the same period a year earlier), due mainly to the growth

Chart I.5. *Distribution by product of assets in Latin America. Deposit institutions*

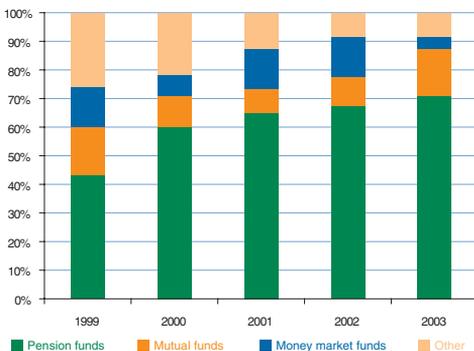
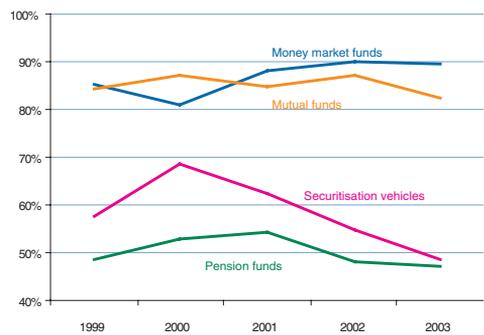


Chart I.6. *Market share of assets managed in Spain. Deposit institutions*

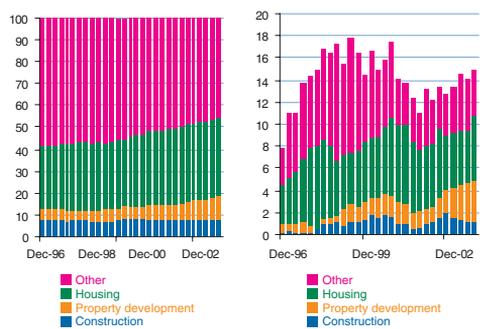


Sources: CNMV, DGS, INVERCO and BE calculation.

of credit linked to construction and real estate activities (property development by companies and house purchase by households), which represents somewhat more than half of the total credit and nearly three-quarters of its growth rate (Chart I.7).

Whereas lending for house purchase picked up at the end of 2003, the growth rate of credit to construction held steady and that of credit to *property developers* began to slow (Chart I.8). However, this latter rate is well above that of total credit and that of

Chart I.7. *Structure of and contribution to change in credit to the private sector (pp). Commercial and savings banks. Individual data (ID) (5)*



(5) Both here and in the rest of the FSR, individual data (ID) relate to business in Spain carried on by individual deposit institutions or total business (including branches abroad). At times the use of individual instead of consolidated data allows a more detailed analysis because more information is available. All data not stated to be ID are consolidated.

Chart I.8. Year-on-year rate of change in lending for house purchase and of credit to construction and property development (%). Commercial and savings banks. ID



credit to any other economic sector. The last FSR pointed out the close relationship that usually exists between very rapid credit growth and the appearance of doubtful assets, albeit with a considerable time lag.

The strong credit growth is helping to keep doubtful assets ratios at a very low level in the short term. Despite these record low levels, substantial differences are emerging between the doubtful assets ratios of the various sectors (Chart I.9). This evidences the higher risk of consumer credit and corporate lending compared with the lower credit risk entailed by lending to households for home purchase.

Although this feature of doubtful assets has been observed in Spain during the last two business cycles, the growing indebtedness of households, which now exceeds the euro area average, and the

Chart I.9. Doubtful assets ratios by loan purpose (%). Commercial and savings banks. ID

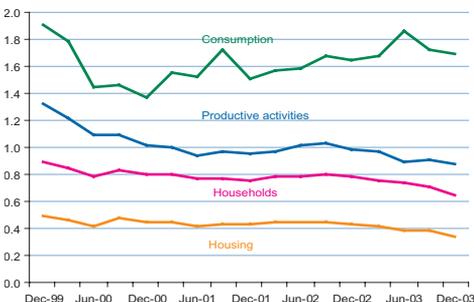
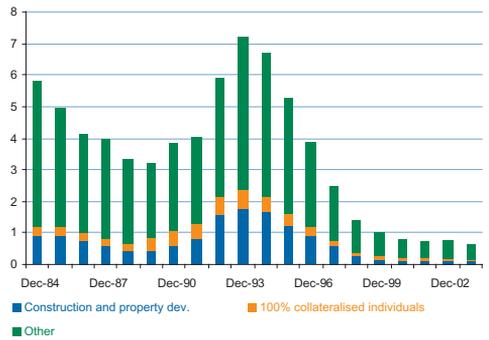


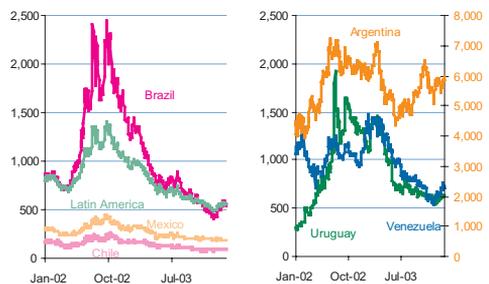
Chart I.10. Contribution to total doubtful assets ratio (%). Deposit institutions. ID



low interest rates could, in the event of a sharp rise in interest rates or an increase in unemployment, change this pattern of behaviour. A fall in house prices could exacerbate this situation and, at the same time, reduce the value of the collateral held by banks. However, historically the risk for banks has come more from lending to construction and property development firms than from lending to households for house purchase (Chart I.10).

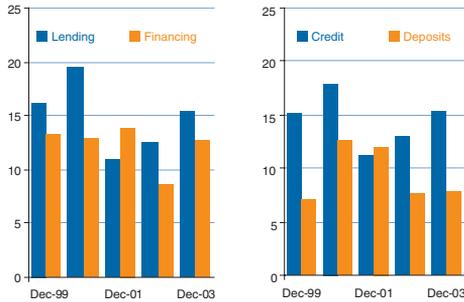
Although the doubtful assets ratio of Spanish deposit institutions' *foreign assets* is much higher than that of assets in Spain, the credit risk, approximated by the behaviour of sovereign spreads, fell considerably in 2003 (Chart I.11), particularly in those Latin-American countries that account for the bulk of the international exposure of Spanish banks in emerging countries.

Chart I.11. Sovereign spreads (basis points, bp)



Source: DataStream.

Chart I.12. *Year-on-year rate of change in lending and financing. Resident private sector (%). Commercial and savings banks. ID*



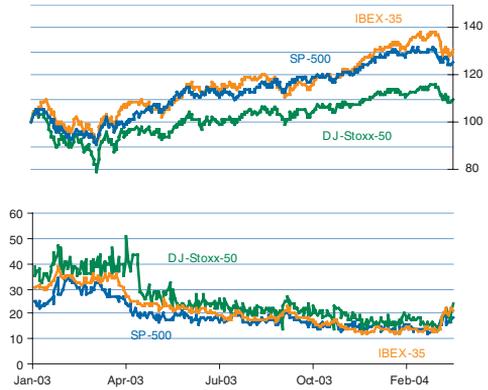
Note: In the chart on the left, lending also includes equity securities, while financing comprises deposits, debt securities and subordinated debt. The chart on the right includes only credit and deposits, the two most traditional items in operations with the resident private sector.

The strong growth of credit to the resident private sector and the much more moderate increase in financing from this sector, particularly in its more traditional components, i.e. sight and time deposits (Chart I.12), is giving rise to a significant and sustained increase in the *debit balance* of Spanish deposit institutions with the *resident private sector*.

The significant and sustained increase in the debit balance (or the decrease in the credit balance) with the resident private sector is a widespread development among Spanish deposit institutions. It results in an increase in their cost of financing and a growing dependence on the international financial markets for raising funds, both in the short term (interbank markets) and in the medium and long term (primary securities market), and may affect the medium-term sustainability of credit growth.

From 2003 Q2 the *stock markets* showed a sustained recovery accompanied by a reduction in volatility (Chart I.13). This contributed to a recovery in the unrealised capital gains on permanent holdings and to an increase in the value of institutions' trading books. However the terrorist attack of 11 March in Madrid made the future behaviour of the markets somewhat more uncertain.

Chart I.13. *Changes in stock market indices (1-1-2003=100) (top) and in their implicit volatilities (bottom)*



Sources: DataStream and Bloomberg.

Finally, the decrease in *interest rates* in 2003 continued to put downward pressure on the margins of deposit institutions in their business in Spain, while the appreciation of the euro had a negative effect on the contribution of foreign business, particularly that denominated in US dollars and Mexican pesos.

I.2. Credit risk

I.2.1. Impact of the macroeconomic background

I.2.1.1. Spain and the euro area

Following the period of economic stagnation in the euro area up to mid-2003, the latest available data point to a modest recovery in the growth rate (Chart I.14). Thus in the second half the GDP of the *euro area* showed a half-on-half growth rate of 0.5%, as against a slight decline in the first half of 2003. As a result, the increase in the year as a whole was 0.4%, down 0.5 pp on 2002.

The *Spanish economy* continued to expand at a faster pace than the euro area average, with a quarter-on-quarter GDP growth rate of 0.7% in Q4. This brought the rise in

2003 as a whole to 2.4%, up 0.4 pp on 2002.

The good relative performance of Spain's GDP in 2003 was accompanied by a reduction in the inflation differential with the euro area, which stood at 0.7 pp in December. By contrast, there were no significant changes in the other variables pointed out in the previous FSR as factors of vulnerability for economic buoyancy. Thus the indebtedness of the non-financial private sector continued to rise, more sharply in the case of households, and house prices continued to grow at high rates with no sign of a slowdown.

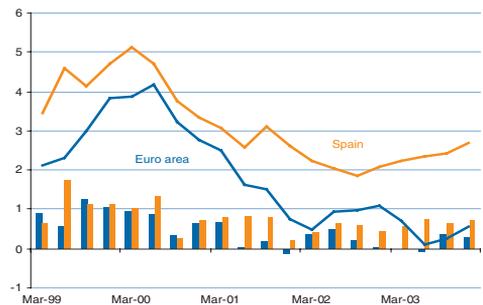
Non-financial corporations

In the first nine months of 2003, the *results* of the corporations reporting to the Banco de España Central Balance Sheet Data Office (CBSO) performed very well. Thus gross operating profit grew by 7.3% in relation to the same period of the previous year, up 5.1 pp on the rate for the first three quarters of 2002. The ordinary net profit, which includes financial revenue and financial costs, grew by 15.4%, the largest relative increase since 1998. This performance was the result of favourable behaviour both by revenue, which expanded at a rate of 10.6%, and by financial costs, which decreased thanks to the fall in the cost of debt.

Net profit, which includes extraordinary income and expenses, again turned positive following the negative levels seen in the same period of 2002 due to the significant provisions for losses that had to be recorded by certain corporations. The net profit in the first nine months of 2003 was 32.2% of gross value added, against -0.4% in 2002.

Accordingly, the *profitability* ratios calculated excluding extraordinary items remained at fairly high levels in 2003. The ordinary return on investment and on equity stood, respectively, at 7.7% and 11%, up

Chart I.14. Real GDP (%). Year-on-year (lines) and quarter-on-quarter (bars) rates



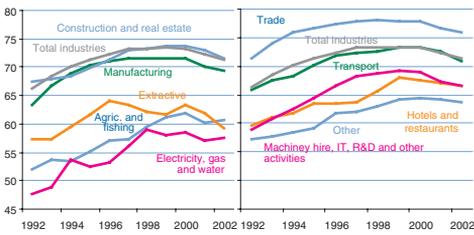
Sources: INE and Eurostat.

0.1 pp and 0.6 pp on those recorded between January and September 2002. This performance, along with the fall in the cost of debt, allowed the difference between the ordinary return on investment and the average cost of borrowed funds to rise by 0.5 pp compared with the same period in 2002, bringing it to 3.6%.

The total financing (loans from financial institutions and issuance of securities) received by non-financial corporations as a whole continued to grow at high rates in the second half of 2003, although it showed a slowing trend. Thus the year-on-year growth rate in December stood at 12%, down 1.8 pp on that seen in June. This performance further raised the sector's ratio of *debt* to gross operating profit plus financial revenue to nearly 400% at end-2003, against 389% at the middle of the year. However, CBSO information for Q3 indicates that this behaviour did not apply to all corporations and that, in particular, the larger ones slightly reduced their indebtedness.

The moderate increase in indebtedness was offset by the downward trend in the cost of debt, so that the debt burden arising from interest again fell slightly to stand below 19% of operating profit, according to National Accounts data. On CBSO data, the debt burden indicator which includes short-term debt, as well as interest, also declined slightly in 2003 Q3.

Chart I.15. Debt ratio by industry (%)



Sources: Mercantile Register and BE calculation.
 Note: Figures are the yearly median of the firms in each industry. The debt ratio is debt divided by total assets.

The improvement in the financial situation of corporations, particularly the larger ones, was reflected in their lower credit risk premia on credit derivatives markets.

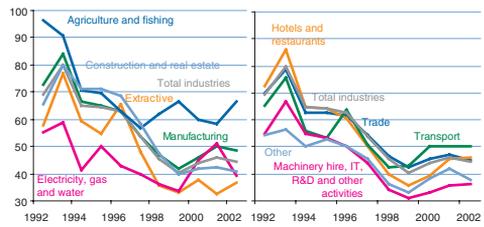
The previous FSR reported a higher debt ratio (debt as a percentage of assets) for SMEs than for large corporations, although this difference has been decreasing in recent years. Analysis of the debt ratio by economic sector (6) (Chart I.15) shows a high dispersion, which is partly due to differences in the average size of corporations from one sector to another.

Also, there has been a substantial decrease in the debt burden arising from interest in all sectors in the last 10 years (Chart I.16) (7). This is because of the highly significant reduction in interest rates associated with the structural change resulting from membership of the euro area. The lower sectoral dispersion of the debt burden arising

(6) The information is obtained from the Mercantile Register and, once appropriately filtered, enables researchers to work with a yearly average of 130,000 corporations (the minimum of about 35,000 was in 1992 and the maximum of 220,000 in 2000). The information contained in the Banco de España Central Balance Sheet Data Office is of higher quality than that in the Mercantile Register. However, the latter encompasses a much higher number of firms, particularly SMEs.

(7) The debt burden is defined as the inverse of the ratio of profit before interest and tax plus financial revenue to financial costs. This ratio is used primarily as a means of ordering corporations and neutralising the distortion that a negative denominator would cause in that ordering (a corporation with a higher loss will have a lower ratio without its financial situation being any better).

Chart I.16. Debt burden arising from interest on debt, by industry (%)



Sources: Mercantile Register and BE calculation.
 Note: Figures are the inverse of the median of the ratio of profit before tax plus financial revenue to financial costs of the corporations in each industry for the respective year.

ing from interest contrasts with the larger divergences in debt ratios.

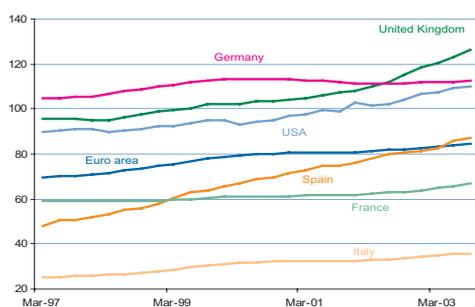
Box I.1 explores the connection between business risk and financial system stability.

Households

In the second half of 2003, the growth rate of financing extended to resident households picked up to 19% in December, up 3.9 pp on mid-2003.

This performance stemmed above all from the buoyancy of lending for house purchase, which in December 2003 showed year-on-year growth of 17% (20.9% when the effect of mortgage securitisation is included), somewhat more than 3 pp above the June figure. By contrast, the rate of expansion of credit for consumption and other purposes eased slightly, growing at a year-on-year rate of 13.4%, down 0.6 pp on mid-2003.

The acceleration of household liabilities in the second half of 2003, along with the moderate rise in household income, further pushed up the sector's debt ratio, which at end-2003 stood at nearly 90% of gross disposable income. This ratio is now above the euro area average (the result of highly uneven debt levels across countries), although lower than that of the US and the UK (Chart I.17).

Chart I.17. *International comparison of the household debt ratio (%)*

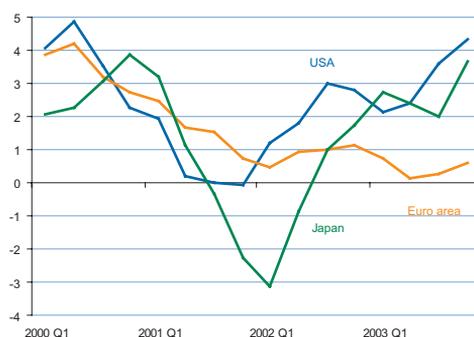
Sources: US Federal Reserve, Bank of England and BE calculation.

Despite the higher indebtedness of Spanish households, their *debt burden* did not vary significantly in the second half of 2003, and thus continues to stand at moderate levels. The favourable trend of the cost of debt, along with the lengthening of mortgage repayment periods, has meant that in the last two years the total debt burden, which includes interest payments and capital repayments, has remained relatively steady in relation to gross disposable income.

However, it should not be overlooked that households are now more sensitive than in the past to possible adverse shocks in income or interest rates. One reason is that, other things being equal, a higher volume of debt raises that sensitivity. Another is that the bulk of financing is for house purchase, an area of lending in which the predominance of variable rate loans has increased. Thus at end-2002, 97.7% of mortgage lending for house purchase was variable rate, up 12 pp on the 1997 figure.

Comparison of housing loan transactions in Spain and the euro area in 2003 shows that the interest rate renewal periods in Spain were lower than the euro area average (Box I.2). Interestingly, this comparison also shows that the average cost of debt was lower in Spain.

Finally, the *net wealth* of households continued to increase in the second half of

Chart I.18. *Real GDP (%). Year-on-year rate of change*

Source: DataStream.

2003, due to rises in house prices and this time also in financial asset prices, which offset the increase in the sector's liabilities.

I.2.1.2. Rest of the world

In the second half of 2003, the international economy recorded a more robust and diversified recovery than previously envisaged. Hence estimated world growth for 2003 stood at around 3.8%, with particularly positive figures in the United States (3.1%) and in the emerging Asian economies, particularly China (9.1%) and India (6.9%).

The pace of activity also showed signs of buoyancy in Japan, Eastern Europe and Russia. Moreover, this upturn in activity was accompanied by growth in international trade, although at a rate well below that seen prior to 2000. Consequently, the world growth forecasts for 2004 and 2005 were revised upwards. Inflationary pressures tended to remain moderate despite the sharp rise in raw materials prices.

In the *United States*, the recovery in the pace of activity (Chart I.18) was driven by the strength of domestic demand, which in turn was underpinned by expansionary monetary and fiscal policies and by the favourable performance of financial markets. The financing conditions of corporations improved significantly, with interest spreads

Box I.1**Accounting-based measures of business profitability, bank debt and financial fragility**

Business risk, which manifests itself in the variability of sales, of profit and of the return on real and financial investment, exposes firms to the possibility of finding themselves in situations in which they lack liquidity to meet payment obligations to third parties and, in extreme situations, may even push the firm into bankruptcy. The credit risk of deposit institutions is closely related to the risk borne by the non-financial corporations whose productive investments they help to finance. A knowledge of the business risk of the real sector of the economy and of the volume of debt to deposit institutions that is exposed to such risk is very valuable information for monitoring the stability of the financial system as a whole.

The business risk of a specific corporation can be assessed from the variability observed in its economic and financial profit (including stock market returns if the firm is listed) over time. For the economy as a whole and for the stability of the financial system, the most significant risk is that which manifests itself as the higher or lower proportion of corporations that at any given time may be having difficulty in meeting their debts and as the weight of their debt in proportion to the total debt of the financial system. A higher proportion of corporations in financial difficulty and a higher volume of debt per corporation mean that the financial fragility of the system as a whole is higher. Also, since the number of listed corporations is limited, the business risk for representative samples of non-financial corporations has to be assessed from information taken from accounting documents, i.e. the balance sheet and profit and loss account, that they make public regularly by communicating them to the relevant Mercantile Registry.

This box presents a method of analysis which enables the risk transmitted by the real sector to the financial system to be assessed using risk indicators based on information contained in the financial statements of corporations (1). The method is illustrated by applying it to non-financial corporations in Spain in the last ten years. The accounting information is taken from the Informa database, which receives data on approximately 130,000 corporations per year on average, and the information on bank debt is taken from the Banco de España Credit Register.

The indicator chosen to assess *financial fragility* resulting from business risk is *debt at risk*, expressed relative to the total debt of the system. This debt is equal to the probability that a corporation chosen at random is in an income situation previously defined as entailing difficulty for it in meeting its obligations to creditors (business risk) multiplied by the average debt per corporation in this situation relative to the debt per corporation in the total sample. The accounting variable used as a basis for constructing the random variable that serves to assess business risk is the return on the assets on the balance sheet at the end of the year (ROA, calculated as earnings before interest and tax, EBIT, divided by assets). Based on this, on the cost of capital, r , and on debt as a percentage of total assets, b , the following measures of business risk are defined (in increasing degree of difficulty in meeting financial commitments by corporations): probability that a corporation chosen at random has an ROA below its cost of capital, r , i.e. that it is in a situation of *economic loss*; probability that its ROA is lower than needed to offset the cost of debt financing, r_b , *accounting loss with indebtedness*; probability that its ROA is less than 0, *accounting loss without indebtedness*; and probability that its level of loss is higher than the corporation's own funds, i.e. that the corporation is technically *bankrupt*. For example, letting $Pr(ROA < r_b)$ be the probability that the corporation chosen at random has an accounting loss, the debt at risk for this situation will be equal to:

$$Pr(ROA < r_b) \times (\text{Debt per corporation that has a } ROA < r_b / \text{Debt per corporation for total sample})$$

Given the interest in estimating the fragility of the financial system caused by debt at risk, the application to Spanish corporations will focus on bank debt at risk.

The evidence obtained from applying the method described above to Spanish non-financial corporations is shown in Chart A. In preparing it, the measure used of the opportunity cost of equity and debt capital was the average cost of debt of each corporation. 1993 was the time of greatest fragility in the period analysed (1992-2002). In that year of business crisis, more than half of Spanish non-financial corporations had an ROA that was less than the average cost of their debt (r); 35.5% had an accounting loss after subtracting the financial cost of their debt bearing explicit interest; 17.1% showed an accounting loss even before subtracting the explicit cost of borrowing, and 2.7% of corporations may have been in a situation of bank-

(1) A detailed analysis is given in the unpublished study of S. Ruano and V. Salas: "Accounting based measures of risk in non-financial firms".

Box I.1 (cont'd)

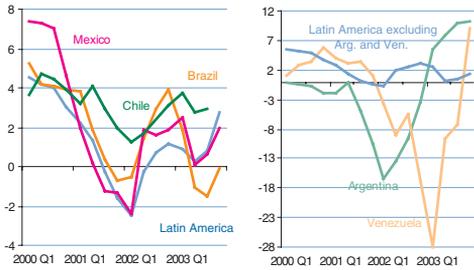
ruptcy given that their loss in the year exceeded the book value of their capital. These percentages are also the probabilities that a corporation taken at random from the total population is in the situation of financial difficulty corresponding to its risk class. Starting in 1994, business risk tended to decrease until 1998. In that year of favourable results, the proportion of corporations with an economic loss stood at nearly 30%, while 18.7% of corporations had an accounting loss, 11.2% had a negative ROA and around 2% were bankrupt. Then the trend again reversed, although with very moderate increases in the percentages of corporations in the respective risk categories. In 2002, the last year for which information is available, business risk was ostensibly lower than at the maximum point reached in the previous recession at the beginning of the 1990s.

According to the foregoing formula, if the average debt in the relevant risk category is equal to the average debt per corporation in the total population, the debt-at-risk indicator directly gives the probability that a randomly selected corporation will belong to that class of business risk. If it is higher (lower), the debt at risk is higher (lower) than the business risk. Comparison of business risk and debt at risk using the evidence of Chart A shows that the probability that a randomly selected corporation lies in one of the four regions defined using ROA thresholds generally understates the proportion of bank debt exposed to risk. This means that corporations at risk tend to have a per capita debt that is higher than the per capita debt of the total population of corporations. However, the degree by which it is understated is not constant over time, which indicates that the effect of factors of a variable nature, such as the business cycle, might differ in corporations with different levels of indebtedness. Finally, the rise in the degree of risk borne by corporations from the late 1990s is also reflected in increases in bank debt at risk, except in 2002 when it decreased significantly. In 2002, the bank debt concentrated in corporations with an economic loss stood at 31.9%, well below the 73.2% reached in 1993. Moreover, 22.2% of bank debt is concentrated in corporations with an accounting loss and 11.9% in corporations with a negative ROA. Finally, according to accounting information, the percentage of bank debt at corporations that are technically bankrupt is slightly above 1%.

In short, the proposed method links the situation of non-financial corporations to the credit exposure of banks and allows progress to be made in assessing the risks to financial stability posed by the potential difficulties of the real sector of the economy.

Chart A. Percentages of corporations and percentages of debt to credit institutions by risk category. Economic loss (top left); accounting loss with indebtedness (top right); accounting loss without indebtedness (bottom left) and bankruptcy (bottom right)



Chart I.19. *Real GDP (%). Year-on-year rate of change*

Sources: Central banks and BE calculation.

relative to sovereign debt that were moderate at around 140 bp for bonds with a Baa credit rating. The economic recovery occurred simultaneously with a high current account deficit despite the appreciation of the dollar (this deficit stood at 4.9% of GDP in 2003) and with a sharp deterioration in the budget deficit (4.8% of GDP).

The main risks to the continued recovery of the US economy lie, firstly, in the size of the external and government imbalances, which will foreseeably not be reduced in the short term, and, secondly, in the sustainability of domestic demand. In addition, the relative sluggishness of the unemployment figures and the high level of household indebtedness cast a shadow over a markedly favourable economic performance, at least in the short term.

In *Japan*, GDP growth in Q4 accelerated to an annual rate of 2.7%, a figure which contrasts significantly with the negative rate (-0.4%) in the previous year. The growth was based on the favourable behaviour of exports, mainly to Asian countries, and on a rise in investment. Furthermore, industrial production picked up notably as business expectations improved. The risk of a significant appreciation of the yen can be considered to be the main factor of vulnerability for the Japanese economy, since the growth pattern continues to be strongly focused on the external sector.

In *Latin America*, following a sluggish Q3, activity picked up towards the end of the

year with a year-on-year rate of 2.8% in 2003 Q4 (Chart I.19). However, the marked weakness of the first three quarters dragged down annual growth, which stood at 1.2% in 2003 as a whole, the third consecutive year without any improvement in per capita income. Although the pick-up in activity was general, it was much more vigorous in the countries that had been beset by economic crisis in 2002 (Argentina, Uruguay and Venezuela), which grew at year-on-year rates of nearly 10% in 2003. One of the exceptions to this upturn was Brazil, which ended the year with practically zero growth in Q4.

External demand drove growth in Latin America in 2003, thanks to the rise in raw materials prices and to greater global buoyancy in the second half, all in an environment of stable Latin-American exchange rates against a dollar that was weak with respect to the other major currencies. However, difficulties persisted in the recovery of domestic demand, which was held back by the adjustment of salary income and its impact on consumption, and by the lack of buoyancy in investment. These factors are heightened by the uncertainty as to the resilience of activity in the region.

The monetary policy stance remained accommodative in view of the downturn in the inflation rate, which ended the year at 7.3% year-on-year (down from a high of 14.2% in February). However, this process stalled at the beginning of 2004 in certain countries and even reversed in others (Mexico), as prices started to rise. In contrast, fiscal policies continued to be restrictive (with the sole exception of Chile), given the high levels of debt and the persistent vulnerability of public finances, despite the greater availability and lower cost of external financing.

The *credit* extended by the banking system continued to show negative growth in real terms for the region as a whole, but in relative terms it improved in 2003 Q4 (Chart I.20). In Argentina, credit to the private sector continued to fall rapidly within a proc-

Box I.2**A comparison of housing credit interest rates in Spain and in the euro area**

A new statistic is being published in the Eurosystem on the interest rates applied by monetary financial institutions to their customers. This new statistic represents a significant advance on the previously existing information because it standardises the items in the euro area countries and thus makes it easier to compare them. However, the limited data available (the series begins in January 2003) and the existence of a certain residual heterogeneity despite the harmonisation efforts made, mean that some caution must be exercised initially in assessing the results.

Under the new statistic, housing loans are classified according to the initial rate *fixation*, establishing the following intervals: up to 1 year, 1 to 5 years, 5 to 10 years, and longer periods. Table A shows that new housing credit in Spain in 2003 was concentrated in the up-to-1-year segment, which accounted for nearly 80% of the total volume of transactions that year. This concentration is related to the large relative weight of floating rate contracts in Spain and to the fact that the reference rates used are short term. The other segments account for the remaining 20%, with practically residual percentages for terms of over five years. The structure of housing credit transactions in the euro area is somewhat more homogeneous across intervals although, as in Spain, the tranche with the shortest term had the highest percentage (43%). As financial costs adjust more rapidly to market conditions, the sensitivity of the debt burden of Spanish households to interest-rate changes will, on average, tend to be higher than that of the euro area.

Comparison of the *effective interest rates* applied by institutions to housing credit shows that in the most representative tranches in Spain (up to a five-year renewal term), new house purchase financing was obtained in Spain on more advantageous terms for households than in the rest of the euro area. Thus, in the up-to-1-year initial rate fixation tranche, the interest rate spread between the euro area and Spain stood at 28 bp.

This new statistic also includes, for housing credit, interest rate information in terms of the equivalent annual rate (EAR), which includes the effect of commissions. By comparing the effective rates with the EARs, the cost attributable to commissions can be approximated. In Spain this stood at around 13 bp in yearly terms, while in the euro area it was somewhat higher (21 bp). Hence comparison of the euro area and Spain in EAR terms amplifies the differences observed in terms of effective rates.

The low interest rates on housing credit in Spain compared with the rest of the euro area is probably related to the significant competition between Spanish institutions in this segment, which has been characterised by considerable buoyancy in recent years. Thus the year-on-year rate of change of housing loans in Spain at end-2003 was above 20%, while euro area average growth was 7%. The greater buoyancy of the Spanish market is also manifest in the proportion of euro area transactions that took place in Spain in 2003, which at 20% is twice the relative weight of Spain's economy in the euro area in GDP terms.

Table A. *Interest rates and volume of new housing credit transactions. (%) Average of 2003 monthly data*

	Spain	Euro area
Effective rates (not including commissions)		
Initial rate fixation up to 1 year	3.59	3.87
Initial rate fixation over 1 year and up to 5 years	3.60	4.23
Initial rate fixation over 5 years and up to 10 years	5.95	4.94
Initial rate fixation over 10 years	4.27	4.90
EAR-effective interest rate		
Average of effective rates	3.61	4.35
Average EARs	3.75	4.55
EAR-effective interest rate spread	0.14	0.20
Volume and percentage structure		
Amount of new transactions (€m)	8,599.1	46,304.3
Initial rate fixation up to 1 year	79.0	43.1
Initial rate fixation over 1 year and up to 5 years	18.6	17.8
Initial rate fixation over 5 years and up to 10 years	0.8	20.6
Initial rate fixation over 10 years	1.5	18.5

Sources: ECB and BE calculation.

Chart I.20. *Year-on-year rate of change in real credit to the private sector (%)*

Sources: IFS service of the IMF and BE calculation.
 Note: Year-on-year rates deflated by GDP.

ess that started in 1999 and has taken its levels in real terms back to those existing at the beginning of the 1990s. In Brazil the stock of credit has remained practically stagnant in real terms since the crisis in early 1999 and it even fell in 2003 at a rate of 3% year-on-year, although this fall subsequently eased. In Mexico the pick-up in credit that commenced in mid-2002 scarcely lasted a year, given that since 2003 it has again slowed and even shown moderately negative rates.

In Q2 the improved market sentiment towards the region held steady and even intensified, as shown by the performance of sovereign spreads, which ended the year between 40% and 65% lower than at end-2002 (Chart I.11). The only exception was Argentina, the spread of which again widened in the second half of the year, in a market conditioned by the difficulties in restructuring the defaulted debt.

Two noteworthy developments in the sovereign debt markets during the year, particularly in the second half, were the general narrowing of spreads, which affected investment-grade and speculative-grade issues almost equally, and the relative increase in spread correlations during a good part of the second half.

One possible interpretation of this phenomenon turns on the fundamental role that has been played by external influences in the

current narrowing of credit spreads, particularly the ample global liquidity and the lower risk aversion, which obviously help to improve the region's fundamentals. This causality calls for some caution because it is potentially reversible. In fact, at the beginning of 2004 there was a small upward correction in sovereign spreads which affected the more vulnerable countries to a greater extent.

I.2.2. Impact of institutions' credit policy

Credit growth

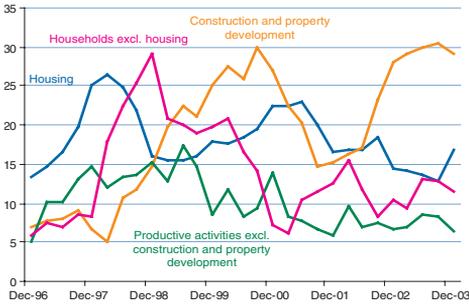
In 2003 credit to construction and property development became increasingly disassociated from credit to other productive activities. This was also seen in financing to households for house purchase and for consumption (Chart I.21). In turn, credit is becoming increasingly dependent on the performance of the property sector and this is also seen in an analysis of financing by instrument (Chart I.22).

These developments must be assessed not only in terms of credit risk, approval, extension and, where applicable, the effective amount (and time) of recovery of any doubtful assets that may arise, but also in terms of risk concentration, both at individual borrower level and at sectoral level.

Credit to property developers merits special attention because of its high growth rates in the last year (Chart I.8), its high historical default rate and because it now represents 10.4% of credit to the resident private sector (Chart I.7).

The high growth rate of credit to property developers is not limited to just a few institutions, but is widespread among many medium-sized and even large lenders (Chart I.23). Last year 26 institutions, accounting for more than 10% of total credit to the resident private sector, more than doubled their portfolio of loans to property developers.

Chart I.21. Year-on-year rate of change of financing to households and productive activities (%). Commercial and savings banks. ID



And 60 institutions, accounting for more than one-quarter of total credit, stepped up financing to developers by more than 50%. The risk entailed by this behaviour naturally depends, among other things, on the level of financing extended to developers, on their debt-servicing capacity and on the knowledge of and relationship with the developer.

In this setting, it becomes more important to assess the effect of adverse selection, which inevitably accompanies expansion into new markets or business segments (opening of branches and lending to developers) and which may impair profitability in new business areas in the short and medium term.

Asset securitisation

Spanish deposit institutions are increasingly resorting to the securitisation of their credit

Chart I.22. Year-on-year rate of change in credit by instrument (%). Deposit institutions. ID

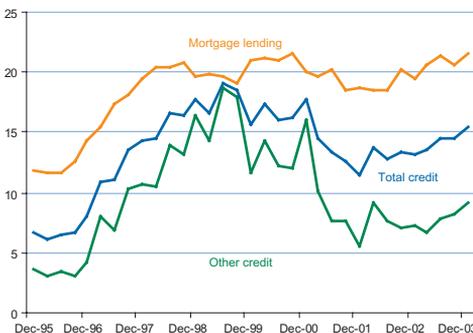
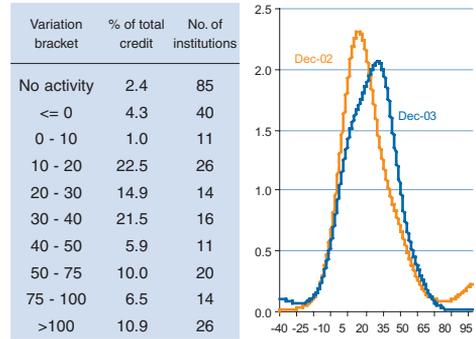


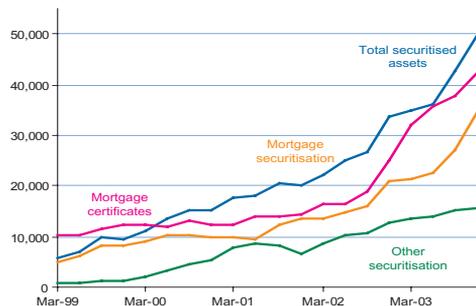
Chart I.23. Distribution of rate of change of credit to construction and property development by bracket (left) and density function (8) (right) of credit to the resident private sector. Deposit institutions. ID



portfolios (Chart I.24) or the issuance of mortgage certificates (securities linked to the mortgage loan portfolio) to enable them, inter alia, to obtain the liquidity they need to continue financing their expanding credit to the resident sector, given the lower rate of fund-raising from that sector. The amount securitised and that issued in mortgage certificates form a growing part of institutions' credit portfolios, amounting to 6% (somewhat more than 4% for mortgages and somewhat less than 2% for the rest) and 5%, respectively, in December 2003.

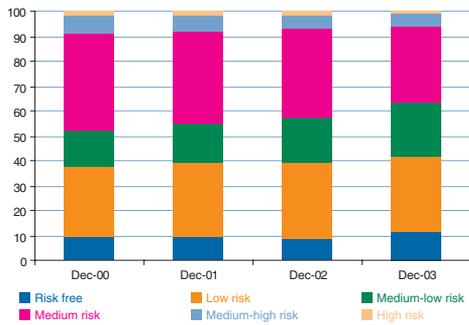
Asset securitisation, apart from serving as a source of liquidity, is a mechanism for optimising own funds and, in certain circum-

Chart I.24. Securitised assets and mortgage certificates. (€m). Deposit institutions. ID



(8) In this case, as in the rest of the FSR, the density function is approximated by means of a kernel estimator.

Chart I.25. *Composition of credit portfolio by risk tranche (%). Deposit institutions. ID*



stances, an instrument that helps to manage credit risk and transfer it to a third party. The securitised assets are removed from the balance sheet, although the new IASB (International Accounting Standards Board) standards scheduled to come into force for institutions with listed securities at the beginning of 2005 only allow them to be removed if there is a substantial transfer of risk and control is not retained. Box I.3 sets forth the results of a study on credit risk transfer in Spanish institutions.

Risk profile of the credit portfolio

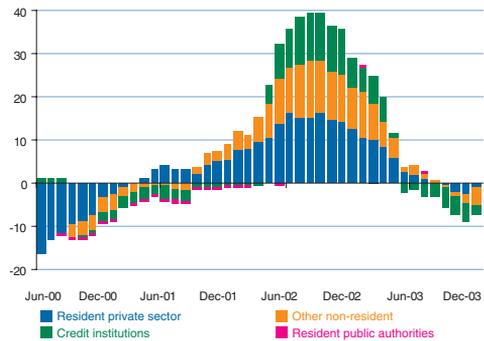
The risk profile of Spanish deposit institutions continued downward in 2003, although more markedly in commercial banks than in savings banks (9). This basically reflects the rise in lending in the medium-low risk tranche and the decrease in the medium risk tranche (Chart I.25), linked to the faster growth of lending to the property sector in the broad sense.

Doubtful assets

At the individual level, the absolute value of total doubtful assets decreased in the second half of 2003. This came about because there was practically no change in those of the resident private sector and a

(9) Risk profile obtained by using weightings from the standard method for calculating the statistical provision.

Chart I.26. *Year-on-year rate of change of total doubtful assets and contribution of its components (% and pp). Deposit institutions. ID*



fall in those of the non-resident sector, including foreign credit institutions (Chart I.26). These developments are explained by the relatively favourable performance of the Spanish economy and the relative improvement in the situation of some Latin-American countries. The fall in doubtful assets was concentrated in commercial banks, whereas savings banks, and especially credit co-operatives, saw a certain rise in theirs.

The behaviour of doubtful assets and the strong growth of lending continued to put downward pressure on doubtful assets ratios – both the total one and that for the resident private sector – (Chart I.27) in all institution groupings and in nearly all business segments (Chart I.9).

As noted in previous FSRs, the decrease in doubtful assets ratios was spread across all deposit institutions (Chart I.28). Notably the institutions with the highest relative weight had the lowest ratios and only a few very small institutions had doubtful assets ratios exceeding 2.5%.

I.3. Liquidity risk

Markets

The liquidity conditions in the spot segments of the European *debt markets* worsened slightly in 2003. Although in general terms

Box I.3

Credit risk transfers in Spanish institutions

The European System of Central Banks has, through its Banking Supervision Committee, conducted a study on credit risk transfers (CRTs) by financial institutions in Europe, from the standpoints of their contribution to more efficient risk management and of their possible impact on financial stability due to the accumulation of risk in certain institutions/sectors, for example, insurance and reinsurance companies. For this purpose interviews were conducted with certain credit institutions in each country of the European Union. In Spain interviews were held with four large institutions (three commercial banks and one savings bank) which, in principle, might be thought to be active in this rapidly growing market. As a result of the inquiries made to these institutions, their participation in the CRT market was clearly differentiated on the basis of its ultimate objectives: securitisation; and other instruments, basically credit default swaps (CDSs) (1).

The reasons for *securitisation*, which accounts for the bulk of CRT activity by Spanish institutions, are basically the arbitrage of capital, although not of provisions, and, for some institutions, the raising of liquidity. For some institutions, on certain occasions, securitisation means no more than transforming illiquid assets (mortgage loans) into others that are more liquid (mortgage-backed bonds), which remain on the balance sheet. Thus there is no capital arbitrage or immediate receipt of funds, but a cushion of assets easily convertible into liquidity is created (for example, by offering them as collateral at the ECB, with a transaction cost of some 3 bp) or else a residual pool of securities that can be used for efficient management of an ongoing securitisation policy (optimisation of the legal gap – time from when the issuer requests and obtains authorisation until placement on the market – in new transactions). By means of this activity, institutions can graduate their credit expansion in terms of both liquidity and allocation of own funds. Some institutions indicated that the main objective of these transactions was the saving of own funds, given their high cost when it comes to obtaining liquidity (30 bp above Euribor). As an alternative, the issuance of mortgage certificates (not strictly securitisation) involves lower costs (10 pb).

A basic issue in all the *securitisation transactions* carried out in Spain so far is that of their true nature. Given that institutions tend to cover the losses arising, up to around 1.5% of the securitised assets, for assets (generally mortgage loans) with a low probability of default (less than 0.5%), the transfer of risk is limited. Capital arbitrage and the search for liquidity thus seem to be the only reasons for these transactions. The future application of international accounting standards (IAS) will very likely require these transactions to be returned to the balance sheet. It should be remembered that current Spanish regulations on loan loss provisions take into account whether or not risk is transferred, so that substance prevails over form.

As regards *other CRT activities*, Spanish institutions are beginning to move into this business gradually, their risk control departments apparently exercising great caution (strict and conservative limits, daily control of positions, etc.). Also, they are net purchasers of protection, although they also sell it to diversify risk (taking on risk from firms outside their geographical area or outside their traditional business environment). Some institutions do not participate in this market because they are wary of the legal certainty of contracts, although most of them consider that the growing contract standardisation provided by the ISDA (International Swaps and Derivatives Association) defines a clear framework which is increasingly transparent and entails little uncertainty. The institutions interviewed consider that the market is highly concentrated (among large US, German and French banks) but do not think that this affects price or liquidity. Also, they consider that this concentration will gradually decrease and that, in reality, it also occurs in other derivatives markets (interest and exchange rate). However, market transparency is not total.

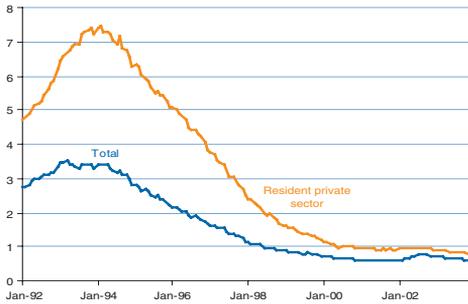
Credit derivatives can be used to provide early warning of credit risk in the institution underlying the contract. Specifically, changes in the risk premia implicit in CDSs provide evidence of how the risk profile of a given firm is behaving. Credit risk management and control tools (in-house credit risk models) will play a basic role in the correct assessment of the risk transferred (or that can be taken on to diversify the portfolio) and, therefore, for accurately establishing its price.

CRTs are considered to be an important instrument in managing the balance sheet and risk of an institution. They enable active management of risk exposure to customers without affecting commercial relations (no need to sell a bond or close a line of credit) or profitability. The purchase of protection enables the risk of concentration to be mitigated without affecting the institution's relationship with important firms. These products will enable efficient integral management of credit risk at the banking group level. Diversification via the assumption of risk is valued positively, up to a certain level. In general, institutions tend to value these instruments positively because they enable them to cover positions with customers at a given moment and thus reduce the concentration risk.

Finally, as regards the regulatory framework, the interviewees consider that Basel II may lead to an increase in the capital requirements for securitisation and, to the extent that capital is more finely tuned to the level of risk incurred, to a lower incentive for these transactions as the opportunity for arbitrage will decrease. Thus the desire for liquidity would become the main driving force for these transactions although, as mentioned above, it may not be sufficient to maintain the current pace of growth in this business segment.

(1) For a detailed analysis of all these products, see J. Pérez Ramírez: "Los derivados de crédito" (Credit Derivatives) in *Estabilidad Financiera*, 2002, no. 3, pp. 59-85.

Chart I.27. Ratio of total doubtful assets to those of the resident private sector (%). Deposit institutions. ID



the quality of the quotations did not change appreciably, the volume of wholesale transactions decreased. On data from the Public Debt Market Annual Report, trading in Spain between market members fell by around 10%. If trading with customers is also included, the decrease is around 2.5%. Table I.2 shows a similar pattern in Europe, according to available information on a number of electronic public debt markets.

Although it is difficult to identify the reasons for this liquidity behaviour, two observations can be made. First, the ultimate determinants do not seem to be of a systemic nature, but rather to have a circumstantial component, possibly related to the strength of expectations of upward adjustments to debt yields. In Spain a major role may also have been played by an event that in itself is beneficial for the Treasury, i.e. the sig-

Chart I.28. Distribution of the doubtful assets ratio of the resident private sector by bracket (left) and by credit density function (right). Deposit institutions. ID

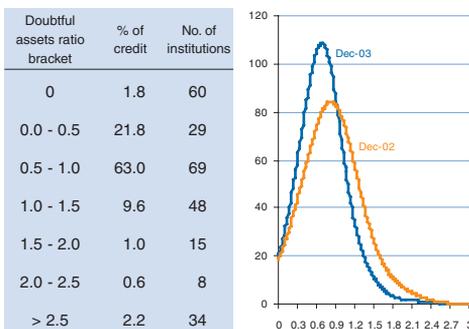


Table I.2. Wholesale trading of public debt outside Spain (€m and %)

Market	2002	2003	Change
EuroMTS	1,041,148	861,516	-17.3
MTS Italy	2,208,511	2,161,153	-2.2
MTS Germany	157,987	221,852	40.4
MTS France	258,462	257,137	-0.6
MTS Netherlands	138,767	122,320	-11.9
MTS Belgium	259,855	215,975	-16.9
MTS Portugal	111,162	133,055	19.7

Source: MTS.
Note: In 2003 MTS Germany commenced lines of activity not present in 2002, so the comparison is not homogeneous.

nificant contraction in the yield spread on central government debt over that of the other main European countries. Specifically, the available synthetic spread indicators indicate that the Treasury financing conditions in 2003 did not differ from those of France or Germany or were even temporarily somewhat better.

The second observation is that the overall market performance, at least in Spain, was less negative than that of the electronic platforms considered separately. This seems to confirm that the trading technology is not neutral in relation to the behaviour of liquidity.

In contrast to this slightly negative trend in liquidity in the debt market, trading on the *stock market* climbed back to the levels of previous years, as confirmed by the turnover of IBEX 35 shares (Chart I.29). However, the relatively steady price ranges quoted for the main shares on the Spanish stock market indicate that liquidity quality has not changed.

Box I.4 analyses the role played by the Banco de España in payment systems, a key element in the workings of any financial system.

Institutions

The introduction to this chapter and previous FSRs have mentioned the growing

Box I.4

The role of the Banco de España in payment systems

Payment systems are a fundamental part of the infrastructure of any financial system and, by extension, of any economy. The fluid and timely fulfilment of financial obligations arising from economic activity (both commercial and purely financial) is an essential requirement for ensuring the confidence of agents and the smooth working of the economy. Furthermore, Spanish payment systems have to meet the needs of a highly international economy that is fully integrated in the euro area. For this purpose, the basic functions of the Banco de España include ensuring the proper working of payment systems. Spanish legislation, specifically Law 13/1994 on the Autonomy of the Banco de España, assigns (in Article 7) the performance of this function to the Banco de España and empowers it (in Article 16) “to regulate interbank and foreign exchange markets, managing, if relevant, the corresponding clearing and settlement systems”. Law 41/1999 on payment systems and security settlement (Settlement Finality Law) makes the legal recognition of a payment system subject to approval of its rules by the Banco de España, and grants the latter supervisory powers over these systems. The integration of the Banco de España in the European System of Central Banks (ESCB) strengthens this commitment to “promote the smooth workings of payment systems”, as set forth in the Treaty establishing the European Community (Art. 105) and in the Statute of the ESCB (Art.3).

The role of the Banco de España in payment systems turns on two basic approaches: the operation of payment systems and the supervision thereof. In addition, the Banco de España plays an active role in protecting the rights of consumers as end-users of payment systems.

Regarding the first option, the degree of *operational involvement* of the Banco de España is different in each of the Spanish payment systems. Thus the Banco de España owns and manages the Spanish real-time large-value gross settlement payment system (the Banco de España Settlement Service, SLBE, integrated in TARGET) and is therefore responsible for all matters relating to it, such as design, development, operating rules and daily operations. In the area of retail payments, the Banco de España limits its activity to administration of the National Electronic Clearing System and to management of daily settlement in SLBE accounts, once (decentralised) bilateral exchange of information between participants has been completed. Finally, as regards the Spanish Interbank Payment System (large-value netting system), which is owned and managed by the participating institutions themselves, the Banco de España limits its role to daily settlement of the system.

Regarding its second line of action, the Banco de España *oversees* Spanish payment systems for the prime purpose of ensuring their proper working. The Banco de España does this by focusing its efforts on achieving safe, reliable, efficient and modern payment systems. Its supervisory activity, which includes every stage in the life of the system, is intended to mitigate the risks inherent in payment systems, whether they be legal, operating or financial (liquidation risk, credit risk or systemic risk), while overseeing the efficiency of the system for the economy as a whole.

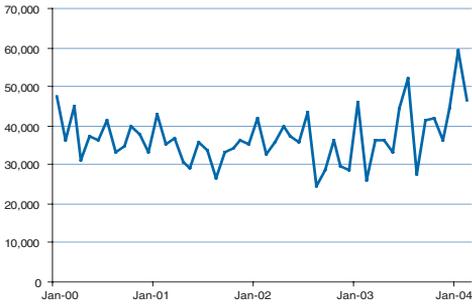
To achieve its goal, the Banco de España has various *instruments* at its disposal. First, it has to approve the operating rules of the aforementioned Spanish payment systems. This power, along with the use of *international standards* for assessing payment systems, enables the Banco de España to ensure that the system design incorporates generally accepted standards of efficiency and security. The international standard used to assess payment systems is known as “Core Principles for Systemically Important Payment Systems”, developed by the Bank for International Payments (1). The payment systems that comply with the ten principles set forth in this standard are awarded accreditation of sound design, which is an assurance that they are secure and efficient. Another basic resource of the Banco de España is its ability to *monitor* payment systems from the standpoints of their daily operations and of their performance and implementation of regulatory or functional changes. The compilation and processing of data relating to the workings of each system enables supervisors to analyse and diagnose possible deficiencies.

On occasions the risks associated with payment systems are not generated in the system itself, but rather the system transmits risk from outside. To forestall such risk, the Banco de España has to be in contact with other agents and institutions in the appropriate forums to ensure that timely and accurate information is received on events that may affect payment systems. In this respect, the Banco de España makes use of so-called *Memorandums of Understanding* with other supervisory authorities. Specifically there are two memorandums of understanding currently in force with credit institution supervisors in EU countries. One of them is for exchanging information on circumstances in a credit institution that may affect the systems in which it participates and, conversely, the other is to establish co-ordination mechanisms between these authorities in the event of crisis.

In any event, the exercise of *supervisory activity* is not limited to payment systems, but rather extends to payment systems (payment cards, cheques, direct debit, electronic money, payment by mobile phone, etc.) and other payment mechanisms (interbank agreements) that are equally fundamental for the proper provision of payment services.

(1) “Core Principles for Systemically Important Payment Systems”, Committee on Payment and Settlement Systems, Publication no. 43, January 2001, BIS.

Chart I.29. Turnover of IBEX-35 shares (€m)

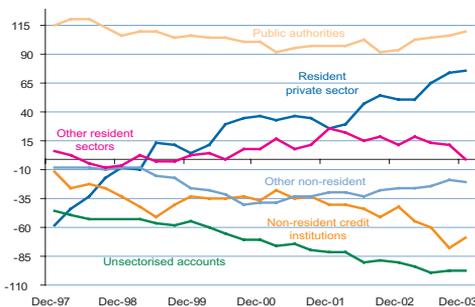


Source: Sociedad de Bolsas.

debit balance of Spanish deposit institutions with the resident private sector as a result of the faster growth in lending to this sector than in financing raised from it (10). In 2003 this trend became more marked as the debit balance rose by more than €25 billion. This balance was largely financed by recourse to the European inter-bank market, to the Eurosystem and, to a lesser extent, via own funds included in unsectorised accounts (Chart I.30).

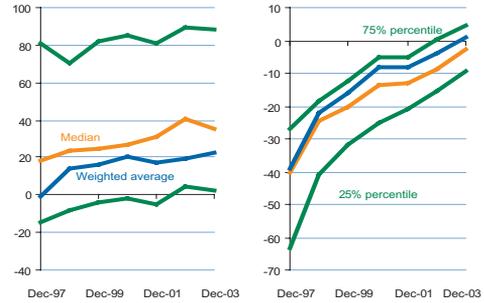
There are significant differences between the groups of institutions. However, commercial banks, which account for the bulk of the debit balance with the resident private sector, and savings banks, although they still have a credit balance (i.e. they receive more financing from the resident pri-

Chart I.30. Sectoral balances. Business in Spain (€bn). Commercial and savings banks. ID



(10) Lending also includes equity securities, whereas financing comprises deposits, debt securities and subordinated debt.

Chart I.31. Balance with the resident private sector as a percentage of lending to that sector. Business in Spain. Commercial (left) and savings (right) banks



Note: The bank chart excludes the institutions in the two extreme deciles. These institutions are generally small and highly specialised. For similar reasons, the savings bank chart excludes the CECA.

vate sector than they supply to it), show a very similar trend.

The increase in the debit balance or decrease in the credit balance with the resident private sector is not limited to just a few institutions, but rather is a widespread trend among commercial and savings banks, although it is more notable in the larger institutions of both types (Chart I.31).

There were 70 commercial and savings banks with credit balances in December 2001, representing 44% of the credit portfolio, while in December 2003 this number had fallen to 54 institutions, with a relative weight of 21%. Nearly three out of every four institutions have increased their debit balance or decreased their credit balance in the last two years, with a relative weight of 87% of the total.

The foregoing developments pose certain challenges for the institutions. The first is to assess the medium-term sustainability of a lending growth rate that is much faster than that of financing from residents. The growing dependence on the European inter-bank market and, more generally, on the international financial markets is, on the one hand, a logical consequence of Spain joining the euro area and of the growing

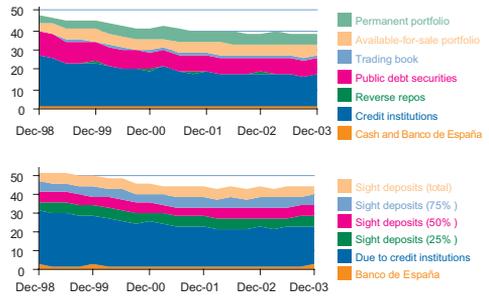
internationalisation of Spanish banks but, on the other hand, it may constitute a factor of vulnerability in the event of turmoil or instability in international financial markets.

The second challenge arises because recourse to financing from non-residents, from the interbank market or from institutional investors entails higher costs than those of traditional bank deposits (particularly sight deposits). Also, about a third of non-resident financing is denominated in foreign currency (mainly US dollars and sterling), meaning that exchange rate risk must be taken into account. Moreover, financing from the resident private sector increasingly involves debt securities and subordinated debt, which further raises the cost of funds and puts pressure on bank margins.

The liquidity of individual institutions is not easy to analyse because of a lack of detailed information on the effective maturity periods of transactions (particularly sight deposits) and because it is difficult to assess their ability to resort to the market to obtain funds in situations of market stress. Therefore, the various *liquidity ratios* that can be constructed have to be regarded with utmost caution. However, their behaviour over time gives a certain idea of institutions' ability to generate liquidity and of their possible short-term requirements.

The main limitation encountered in constructing liquidity ratios arises from the assumptions about which items are to be included on the assets side (11) and which on the liabilities side (12). This report therefore includes a detailed breakdown which, on the assets side, includes the largest possible volume of assets convertible into liquidity at low cost in the short term and

Chart I.32. *Liquid assets (top) and liabilities (bottom) as a proportion of total assets (%). Commercial and savings banks. ID*



which, on the liabilities side, incorporates diverse assumptions as to the possibility of withdrawal of sight deposits (Chart I.32). At times of great tension, the broadest asset ratio acts as an upper level and the broadest liability ratio serves as a lower level. Over time there has been a reduction in liquid assets which has been offset by a fall in liquid liabilities. The ratio of one to the other has been very stable for deposit institutions as a whole, although it is decreasing slightly.

Internationalisation and openness of European banking systems

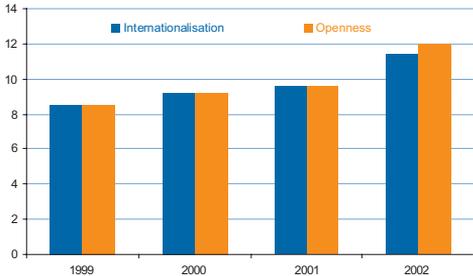
The recourse to the European interbank market is a sign of the growing internationalisation of the Spanish banking system, in line with the trend seen in numerous European countries. Thus the introduction of the euro in 1999 was a major boost to economic integration and to the creation of a single market in Europe. The integration of European banking systems is a twofold process. First, the expansion (internationalisation) of national banks to the other European countries. Second, the opening of Spanish banking systems to institutions from other European countries.

The ratio of the assets held by the banks of one country in other European countries to the total banking assets of the country in question is an indicator of the internationalisation of the institutions of that country. The ratio of the assets that the banks in

(11) In decreasing order of liquidity: cash and central banks, interbank loans, reverse repurchase agreements and, with certain restrictions, the fixed-income and equity portfolio items considered to be assets convertible into liquidity at low cost.

(12) Interbank and Eurosystem financing plus sight deposits.

Chart I.33. External bank assets sent to and received from the euro area as a percentage of the bank assets of each country. Weighted average of countries



Sources: Bank for International Settlements, European Central Bank and BE calculation.

other European countries hold in the country in question to the total banking assets in that country is an indicator of the degree of openness of that country’s banking system to other European institutions.

Chart I.33 shows that, in general, both the level of internationalisation and the level of openness in Europe are low. However, in the short time since the creation of the euro area, the level of both measures has grown, particularly in 2002.

The differing degree of internationalisation and openness of European banking systems is due to country size, the level of development of the banking system, its degree of concentration and certain characteristics of each country’s institutional framework. Also, although due caution must be exercised when interpreting on the basis of a small number of observations, the euro seems to have made a significant positive contribution to European banking integration, such that the euro area countries are more closely integrated than the rest of the European Union or than the developed countries as a whole. Chapter III analyses in greater detail the possible implications of these findings for banking regulators (13).

(13) A more detailed analysis can be found in the unpublished study “Banking Integration in Europe” by D. Pérez, V. Salas and J. Saurina.

Chart I.34. Exchange rate of the dollar against the euro and of the yen against the dollar



Source: DataStream.

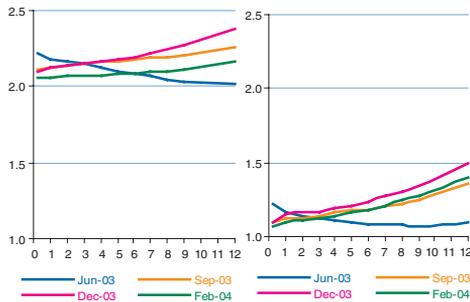
I.4. Market risk

The international financial developments in the second half of 2003 and the first few months of 2004 generally represented a continuation of the trends in the first half of 2003: persistence of the dollar’s weakness against the euro and the yen (partially reversed in February and March), low interest rates in the money and public debt markets, and significant rises in equity prices.

In the *foreign exchange markets*, the depreciation of the dollar was marked (Chart I.34) and brought with it considerable intervention to purchase dollars, mainly by Asian countries. The depreciation of the dollar, although it could be considered a movement in the right direction tending to correct the external imbalance of the US economy, posed a risk in the form of a possible unbalanced distribution of the adjustment between the main currencies. In particular, at the beginning of 2004 the euro reached levels of nearly \$1.30 per euro, which represents an appreciation of more than 15% against last September’s exchange rate.

Against this background, a G7 communiqué in February 2004 included a reference to the risks deriving from excessive volatility or disorderly movements in exchange rates. Simultaneously, the declara-

Chart I.35. Yield curves of different maturities (months) for the euro (left) and the dollar (right) (%)



Source: DataStream.

tions of euro area authorities seem to have helped to restrain the appreciation of the euro.

Market expectations as to *official interest rates*, while initially favouring a rise, now seem to have opted for postponing it, despite the economic recovery under way (Chart I.35). In the United States, a rise in official interest rates is not expected until the second half of 2004, given the prospects of steady rates described by the Federal Reserve in its latest statements, the current absence of inflationary pressure and the weakness of employment figures.

Meanwhile, *long-term interest rates* in the US have held on a moderately declining trend towards levels below 4%, which contrasts with the vigorous economic growth and the fiscal deterioration (Chart I.36). The main underlying determinants of these developments seem to be the acquisition of US government debt by Asian central banks, the accommodative stance of monetary policy, the risk hedging transactions by the agencies *Fannie Mae* and *Freddie Mac* and the absence of inflationary pressures. Also notable was the high level of synchrony in interest rate movements and levels in the US and in the euro area.

In the *Spanish debt markets* the medium- and long-term government debt yields from June to end-2003 showed an upward trend which, however, has reversed in 2004. Thus

Chart I.36. Long-term interest rates in the euro area and the USA (%)



Source: DataStream.

the March 10-year yields stood 15 bp above the levels at mid-2003. The same developments were also seen in the other euro area markets, so the ten-year spread between Spanish and German debt held steady at a level of practically zero.

The *equity markets* stepped up the positive performance initiated in March 2003, encouraged by higher corporate earnings, by the economic recovery under way and by abundant liquidity, in a setting of very low interest rates on debt. Thus the Dow Jones index rose by 14% between September 2003 and February 2004, while the Nasdaq index was up 9%.

European stock market prices rose by somewhat more than US prices. Thus at the beginning of March 2004 the broad DJ Euro Stoxx index was up by 22.7% on the mid-2003 figure. The European firms which showed the largest gains were those belonging to the construction sector (29.7%) and to financial services (25.3%).

Like those in other developed areas, the *Spanish equity market* has performed very favourably in the second half of 2003 and in 2004 to date. Hence stock market prices followed an upward course while their volatilities continued falling to stand at relatively low levels (Chart I.13). This performance was underpinned by an improvement in global macroeconomic prospects and by the earnings rally of listed firms. In this re-

Chart I.37. Stock market indices.
1-1-2003=100



Source: Bloomberg.

Note: The Latin American series plots a regional index compiled by Morgan Stanley Capital International.

spect, the IBEX 35 rose by 21.6%. By sector, the largest rises in Spain were in intermediate and investment goods and in telecommunications, with cumulative gains of 42.9% and 30.9%, respectively.

The upward course of stock market prices in the main equity markets was reflected in a rise in PERs (14) to values above their historical average.

In short, although the likelihood does not seem high, the main risks to international financial developments are a disorderly depreciation of the dollar, particularly against the currencies that have already appreciated significantly, or a rise in long-term interest rates, or a combination of the two.

Latin America

The consolidation of the prospects for recovery of the world economy, in a setting of low interest rates, allowed the *Latin American stock markets* to record very significant rises which were particularly sharp in the second half of 2003 (Chart I.37). These rises mostly came several months in advance of the signs of resumed growth in the region. Taking as a reference a regional index, the stock market rise in the whole of the second half of 2003 was 67%.

The sharpest stock market rise was that of Argentina (over 100% in local currency for the year as a whole), followed by Brazil (more than 80%), Chile and Mexico (more than 40%). Except in the latter country, the stock market rise measured in dollars was even higher, standing between 10% and 20% higher than in national currency due to the widespread appreciation of these currencies.

In the *foreign exchange markets* the performance of the main Latin-American currencies in the second half of 2003 was marked by stability, following the strong appreciation against the dollar by many of them in the first half. That said, not all currencies behaved similarly.

Both the Brazilian real and the Argentine peso depreciated slightly (between 2% and 5% against the dollar). This could have been associated with central bank intervention to counteract the previous appreciation of these two currencies. The Mexican peso again moved one way and then the other, depreciating by more than 8% in the second half to a low of 11.4 pesos/dollar, and later recovering in January to 10.8 pesos/dollar. The lag with which the Mexican economy joined in the US recovery, the competition with China in third markets and the difficulties in pushing through structural reforms seem to be the main reasons for this performance.

The Chilean peso appreciated perceptibly (by more than 15%) in the second half of the year, in a movement that can be associated with the sharp rise in the price of copper, the upward revision of growth prospects for 2004 (to 5%) and the expectations stemming from the signature of the free trade agreements with the US. Finally, Venezuela again devalued the bolivar from 1,600 to 1,920 bolivars/dollar in mid-February, in a movement which was expected, but did not suffice to bring the official rates into line with the market rate.

Given the performance of the euro against the dollar since January 2003, the main Latin-American currencies moved unevenly

(14) Ratio of price to average earnings per share.

against the euro. Whereas the Brazilian real and the Chilean peso appreciated slightly against the euro, the euro appreciated against the Argentine and Mexican pesos and, in particular, against the Venezuelan bolivar (Chart I.38).

Meanwhile, the strong compression of spreads enabled *sovereign issuers*, except Argentina, to gain access to markets on the most favourable terms for the last five years. 2003 saw gross issues of \$41 billion spaced relatively evenly throughout the year, practically twice the 2002 figure. In the second half the main issuer was Brazil, followed by Mexico, and, most notable of all, Venezuela was able to issue significant volumes on very favourable terms. 2004 saw the launch of securities issues with renewed vigour, especially sovereign issues. Thus countries like Chile and Mexico have in principle covered their issuance programme for the whole year, while Brazil has issued more than half its programmed volume.

The improved financing conditions were accompanied by a notable recovery in *net capital flows* towards Latin America to an estimated level of nearly \$40 billion in 2003. However, if these flows are analysed

Chart I.38. Exchange rate of the euro against Latin American currencies. 1-1-2003=100



Source: DataStream.

by component, the picture is less favourable.

A third of the net inflows are official funds largely relating to support by multilateral bodies to economic programmes set up to cope with the episodes of instability in the last few years. Bank loans continue to show negative net flows, although less so than in previous years. More worrying is the decline for the fourth consecutive year in net inflows of direct investment, since their previous high levels lent stability to the capital flows towards the region. Finally, net portfolio investment posted a positive flow for the first time in recent years.

CHAPTER II

Profitability

II.1. General situation

The results of Spanish deposit institutions picked up strongly in 2003, despite the continued adverse impact of the appreciation of the euro on the year-on-year results in foreign business and the ongoing pressure on margins from low interest rates. The institutions countered the latter by means of increased business volumes and cost-cutting drives. The results of the institutions were also boosted by the decline in provisions and write-downs and by the recovery in share prices, associated with an improvement in agents' expectations about the economic outlook.

The group net income of deposit institutions grew by 14.6% (1) (Table II.1) (2), with a rise of 7 bp in terms of ATA, to reach the same level as in 2001, following the decline, in absolute and relative terms, in 2002 (Chart II.1).

The growth in group *net income*, which was much higher than that of the average own funds of the group (3.3%), led to a

(1) In this and the following chapter of the FSR, foreign bank branches based in other European Union countries are not included, as this sub-group is not subject to capital requirements in Spain. The number of institutions analysed in both chapters therefore holds constant. In any event, the relative weight of the institutions excluded is very small.

(2) The profit and loss account for analytical purposes included in this chapter differs to some extent, in certain groupings of headings, from the public profit and loss account.

Table II.1. Consolidated profit and loss account. Deposit institutions

	Dec-02		Dec-03		
	% ATA	% chg D.02- D.01	€ m	% ATA	% chg D.03- D.02
Financial revenue	5.47	-12.9	63,766	4.46	-15.2
Financial costs	2.86	-21.1	29,330	2.05	-25.4
Net interest income	2.61	-1.7	34,435	2.41	-4.1
Net commissions	0.97	-3.7	13,317	0.93	-0.3
Result on financial transactions	0.11	-16.4	2,352	0.16	61.8
Gross income	3.69	-2.7	50,104	3.50	-1.2
Operating expenses	2.21	-4.6	29,052	2.03	-4.3
Net operating income	1.48	0.3	21,052	1.47	3.3
Provisions and write-downs (net)	0.53	-24.1	6,236	0.44	-13.8
Profits from group transactions	0.02	-83.6	277	0.02	1.8
Extraordinary income (net)	0.04	-84.9	1,846	0.13	275.6
Profit before tax	1.01	-11.4	16,940	1.18	21.9
Net income	0.85	-7.5	13,129	0.92	12.4
Memorandum item					
Group net income	0.72	-7.3	11,324	0.79	14.6
ATA	100	2.2	1,430,049	100	4.0

1.3 pp increase in the ROE (3) of deposit institutions as a whole, taking this variable to a similar level to 2001 (13.3%). When the change in the *ROE* is analysed (Box II.1), it can be seen that this increase in profitability is largely attributable to a reduction in provisions and extraordinary losses, to an improvement in the efficiency ratio and, to a lesser extent, to the moderate increase in the risk profile of assets and to a slight reduction in the quality of own funds. This has been partly offset by the lower ordinary return on risk-weighted assets and by lower gearing.

(3) The ratio of group net income to average own funds (equity) of the group, calculated as the sum of paid-up capital, reserves of the controlling entity and, in consolidated entities, group net income and the fund for general banking risks, less own shares, the losses of the controlling entity from prior years and the losses at consolidated companies.

Box II.1

Determinants of changes in the ROE of Spanish deposit institutions

The return on equity of a deposit institution summarises the final balance of the effects of a set of variables related to productive efficiency, competitiveness, risk exposure and the financial structure. An increase in the ROE of deposit institutions will be differently interpreted, in terms of productive efficiency and wealth creation, depending on whether it results from an improvement in competitiveness or from increased exposure to risk, owing to an increase in financial leverage. In the latter case, the increase in financial risk entails a higher cost of own funds, to offset the shareholders' greater exposure to risk, so that a higher ROE only implies greater wealth creation if the parallel increase in the cost of capital is more than offset by higher returns. This box presents an *algebraic breakdown of the ROE* of deposit institutions designed to show how profitability is affected by changes in factors of different natures. This breakdown enables those factors whose association with increases in profitability is most clearly related to efficiency and wealth creation to be identified (1).

The ROE, which is group net income divided by the group's average own funds, can be expressed as the product of six terms as follows:

$$\text{ROE} \equiv \frac{\text{group net income}}{\text{groupequity}} = \frac{\text{group net income}}{\text{NOI}} \times \frac{\text{NOI}}{\text{GI}} \times \frac{\text{GI}}{\text{RWA}} \times \frac{\text{RWA}}{\text{A}} \times \frac{\text{A}}{\text{tier1+tier2}} \times \frac{\text{tier1+tier2}}{\text{groupequity}}$$

The first term is *group net income divided by net operating income (NOI)*. An increase in this ratio indicates a smaller deduction from income to cover the different risks or for extraordinary losses. Accordingly, an increase in ROE attributable to this factor may be interpreted as a sign of the institution's greater economic and financial strength. However, an increase in this ratio may also stem from a one-off increase in extraordinary profits, in which case the increase in ROE will be temporary in nature and will not be associated with better management of the ordinary activities of the institution.

The second term is net operating income divided by gross income (GI). This ratio can also be expressed as $1 - \frac{\text{Operating expenses}}{\text{GI}} = 1 - \text{ER}$; i.e. as 1 minus the *efficiency ratio*. Consequently, an increase in the ROE driven by an improvement in the relationship between net operating income and gross income indicates progress in the positive direction of more efficiency in the management of primary funds.

The third term is gross income divided by risk-weighted assets (RWA). This ratio is an indicator of the *productivity of the assets adjusted for risk*. Consequently, an increase in the ROE attributable to this factor can be interpreted as evidence that the deposit institution is generating more value added for each euro of assets adjusted for the risk assumed.

The fourth term is risk-weighted assets divided by total assets (A). An increase in the ROE stemming from an increase in this ratio should be interpreted as the result of an investment strategy that changes the *risk profile of the assets* towards a balance-sheet structure with a greater presence of risky assets, so that the positive contribution to the increase in profitability also entails an increase in the risk assumed. This interpretation is obviously subject to the criticisms deriving from the scant correlation in the current regulation of own funds between RWA and effective risk, something that Basel II will help to mitigate.

The fifth term, total assets divided by the sum of core capital (tier 1) and supplementary capital (tier 2), is an indicator of the level of debt or *gearing* of the institutions. In consequence, increases in ROE stemming from increases in this ratio cannot be interpreted as increases in the wealth created using the capital resources invested because the consequent increase in the weighted cost of capital neutralises the positive effect of the higher profitability. Moreover, for a given economic risk, higher gearing entails a greater risk of insolvency, prejudicing the institution's stability.

Finally, the sixth term, regulatory capital (tier 1+ tier 2) divided by the group's equity (mainly capital and reserves), is an inverse indicator of the *quality of equity*, since the numerator includes subordinated financing and preference shares that are not in the denominator. A rise in the ratio tells us that the deposit institution is increasing its gearing within regulatory capital which, in turn, increases the cost of the risk capital provided by the shareholders until the effect on wealth creation of the higher profitability is neutralised. Thus, an increase in the ROE associated with a higher value for this ratio will indicate that the institution's (and its shareholders') risk exposure is higher (greater financial fragility).

The algebraic expression which breaks down the ROE into a combination of six factors related to efficiency, competitiveness and risk, is applied to Spanish deposit institutions. The annual change in the ROE in the latest

(1) A similar, albeit less detailed, breakdown was proposed in the Financial Stability Review of the Bank of England in December 2003, p. 74.

Box II.1 (cont'd)

financial year is expressed as the sum of changes (log differences) in each of the six factors considered. It can be seen (in Chart A) that the increase in the ROE in 2003 stemmed from an increase in group net income as a proportion of net operating income (lower provisions and extraordinary losses) and in the efficiency ratio of Spanish deposit institutions. These positive effects on the final change in the ROE were countered by an appreciable fall in the productivity of risk-weighted assets (GI/RWA). The increase in the return on equity also stemmed from a moderate increase in the risk profile of assets and from a slight decline in the quality of equity ((tier 1+tier 2)/group equity), while the lower gearing (A/(tier 1+tier 2)) contributed to slower growth in the profitability ratio (while at the same time reducing financial risk). In any case, the ROE of Spanish deposit institutions is at relatively high levels, particularly if we take into account the level of interest rates (Chart B).

The last three terms of the breakdown of the ROE (the risk profile of the assets, gearing and quality of equity) are closely linked to the stability of the institutions. An increase in the ROE as a consequence of a higher risk profile, higher gearing or a deterioration in the quality of equity has a much less favourable prudential interpretation than if the increase is the result of greater efficiency or higher productivity of the assets. In recent years, the contribution of the three terms mentioned has been relatively moderate in comparison with the rest of the terms and not always in the same direction (Chart C), with increases in gearing alternating with reductions in the risk profile of assets and vice versa.

Chart A. Breakdown of the year-on-year change in the ROE in 2003 (pp). Deposit institutions

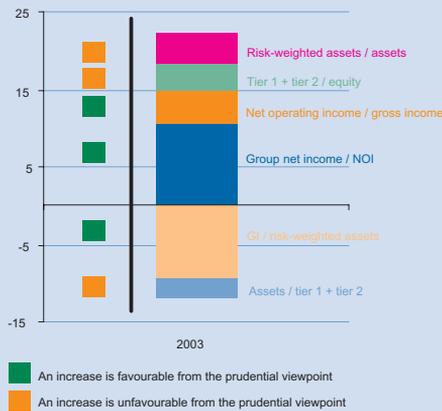


Chart B. ROE (%). Deposit institutions

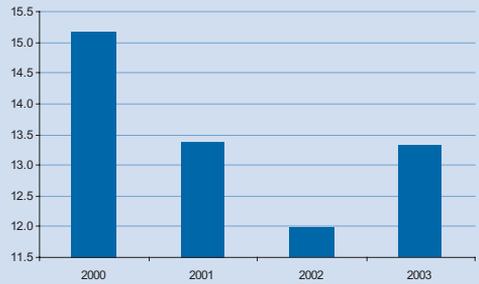
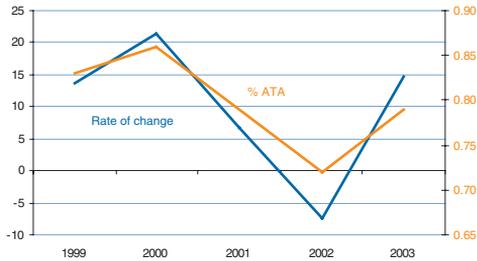


Chart C. Breakdown of the year-on-year change in the ROE (% and pp). Deposit institutions



Chart II.1. Group net income. Year-on-year rate of change and as a proportion of ATA (%). Deposit institutions



The recovery in the results of deposit institutions is not apparent at the level of *net interest income*. The downward trend in this variable, which commenced in 2001, following the strong growth recorded in previous years, became more acute in 2003, with a fall of 4.1% (–1.7% in 2002). This fall also entailed a decline in net interest income as a percentage of ATA.

Nonetheless, the unfavourable performance of net interest income is basically attributable to the appreciation of the euro against some of the main Latin American currencies, in year-on-year terms. In the case of business in Spain, net interest income grew by 6.7%, in contrast to the fall in 2002, since deposit institutions were able to offset the narrowing of the total spread (14 bp) with increased business volumes. However, the low growth of this margin relative to activity led to a further decline in net interest income as a percentage of ATA.

The last FSR noted a widening asset spread and a narrowing liability spread that was

Chart II.2. Lending spreads (pp). Deposit institutions. ID

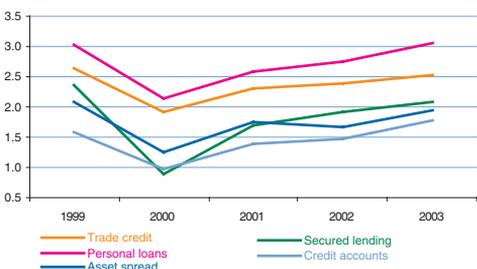
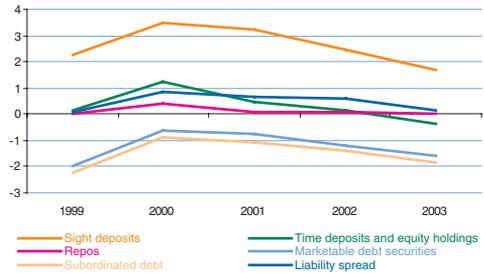


Chart II.3. Liability spreads (pp). Deposit institutions. ID



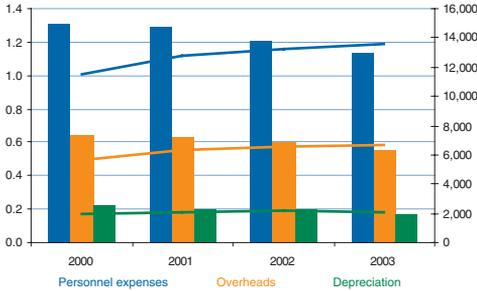
close to zero (4). Apart from the path of money-market interest rates in the euro area, the breakdown by instrument of these two spreads also shows the different level of credit risk in lending transactions and the significant differences in cost associated with the various products for raising funds, partly linked to the differing maturity of the transactions and also to the existence of costs of search and of switching institution (Chart II.2 and Chart II.3).

Commission income declined slightly, basically reflecting the stagnation of commissions for collection and payment services, since the falls in the commissions on securities services (–4.6%) and on the exchange of foreign currency and banknotes (–18.8%) were offset by an acceleration in those associated with contingent liabilities and by the recovery in commissions on the sale of non-bank financial products (6.6%). The latter item is related, in turn, to the recovery of the net asset value of the mutual funds managed by the institutions in 2003 against the background of a more favourable stock market performance than in previous years.

Results on financial transactions grew significantly, in relative terms, driven by the high profits on the trading book and the available-for-sale fixed-income portfolio.

(4) The total spread can be written as the sum of the asset spread (average return on interest-bearing financial assets less average 3-month Euribor) and the liability spread (average 3-month Euribor less the average cost of interest-bearing financial liabilities).

Chart II.4. *Components of operating expenses. €m (lines; right-hand scale) and % ATA (bars; left-hand scale). Business in Spain. Deposit institutions*



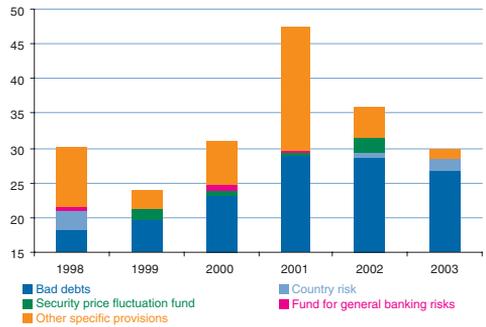
These were boosted, in the first case, by the stock market recovery and, in the second, by the interest rate reductions. By contrast, the income from exchange differences declined and losses were recorded on other futures transactions.

Gross income continued to fall in absolute terms, albeit at a lower rate (-1.2% as against -2.7%), and in relative terms too. However, in the profit and loss account for business in Spain this item grew at a rate of 6.8% , double the 2002 rate.

Net operating income grew by 3.3% , following its stagnation in 2002, but still declined slightly in terms of ATA. The improved behaviour of this item was made possible by the lower *operating expenses*, which absorbed around 58% of gross income, 1.8 pp less than in 2002, so there was an improvement in the *efficiency ratio*.

At the total business level, the decline in operating expenses reflects, to some extent, the effect of euro appreciation which, in this case, has a positive impact on the profit and loss account. However, it also shows the sustained drive by deposit institutions to contain costs. Thus, at the level of business in Spain, the growth of operating expenses continued to slow, to 2.2% , falling by 14 bp in terms of ATA, owing to the absolute decline in depreciation and the slowdown in personnel expenses and overheads (Chart II.4).

Chart II.5. *Provisions and write-downs as % of net operating income. Deposit institutions*



Together, *provisions and write-downs* reduced net operating income by 30% . This was less than the 36% reduction in 2002 and the 47% one in 2001, so they made a positive contribution to the growth of income in 2003 (Chart II.5). Specifically, bad-debt provisioning diminished (-2.6%), owing to the lower provision required for the specific fund, as a result of the fall in doubtful assets, and despite the increase in the statistical fund and the larger volume of general provisions, attributable to the acceleration in lending. The recovery in stock markets allowed a significant reduction in the provisions to the security price fluctuation fund, while the net provisions to other specific funds continued to fall significantly in 2003.

Net income on *group transactions* was similar to the previous year, although there were significant changes in its composition. Provisions for the amortisation of goodwill increased significantly, largely owing to its

Chart II.6. *Extraordinary income and losses as a percentage of ATA (%). Deposit institutions*

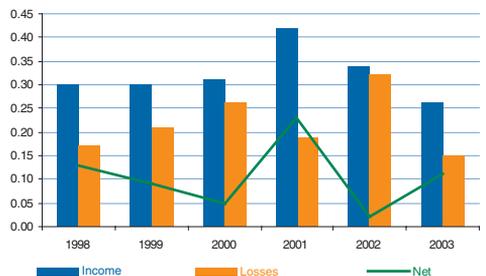
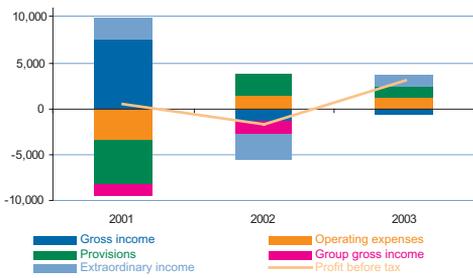


Chart II.7. Breakdown of the absolute changes in profit before tax (€m). Deposit institutions



accelerated amortisation by certain large institutions. Also, the profits from the disposal of holdings in companies valued by the equity method declined. Both effects were offset by the higher profits obtained from the sale of holdings in fully or proportionally consolidated entities and by the higher income from holdings in companies valued by the equity method, which shows that the profits of non-financial investee companies recovered.

Extraordinary income was a significant factor in the recovery of the profits of deposit institutions in 2003. This income rose by 9 bp to 0.11%, owing to lower extraordinary losses (Chart II.6).

In short, the results of Spanish deposit institutions recovered notably in 2003. Lower operating expenses, lower provisions and write-downs and the increase in extraordinary income (Chart II.7) were responsible for this outcome. These factors offset the effects of the low-interest-rate environment and euro appreciation.

Chart II.8. Distribution of ATA (left) and of the number of institutions (right) according to ROE. Deposit institutions

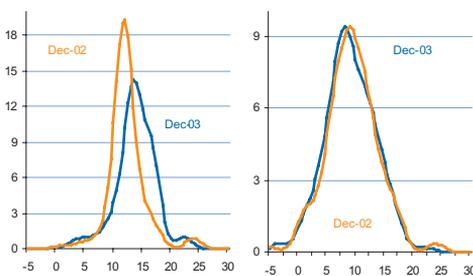


Table II.2. Distribution of profitability by bracket. December 2003. Deposit institutions

ROE brackets	% of ATA	No. of institutions
<0	0.3	8
0-5	2.9	24
5-10	6.4	71
10-15	57.2	55
15-20	29.8	13
>20	3.4	1

II.2. Analysis based on individual institutions

The distribution of the number of institutions according to their return on equity remained little changed from 2002. However, the ATA distribution shifted significantly to the right. This indicates that the rise in the *ROE* of deposit institutions mostly affected relatively large institutions (Chart II.8 and Table II.2).

The improvement in the *efficiency ratio* is attributable to its decline in certain large institutions, since there were no significant changes in the distribution of institutions and the ATA distribution shifted towards lower efficiency ratio brackets (Chart II.9 and Table II.3).

Box II.2 contains a historical analysis of the activity and results of the branches of foreign banks in Spain, a group of institutions with specialised business.

Comparison with European banks

The year 2003 was more favourable for European banks than 2002. First, stock mar-

Chart II.9. Distribution of ATA (left) and of the number of institutions (right) according to the efficiency ratio. Deposit institutions

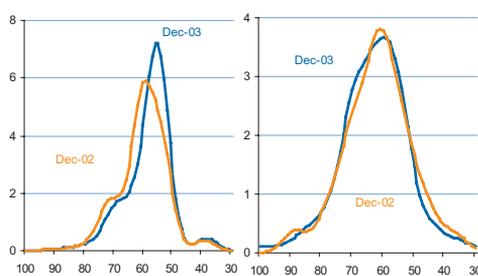
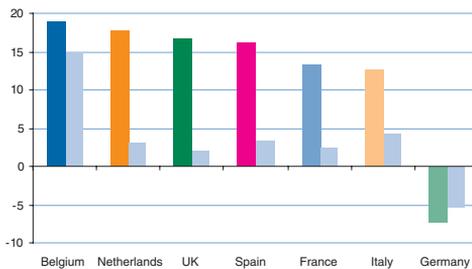


Table II.3. *Distribution of the efficiency ratio by bracket. December 2003. Deposit institutions*

Efficiency ratio brackets	% of ATA	No. of institutions
>100	0.4	10
90-100	0.2	2
80-90	1.9	8
70-80	10.7	29
60-70	17.7	56
50-60	64.7	52
40-50	1.0	9
<40	3.5	6

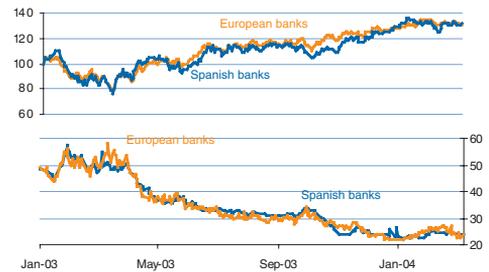
kets picked up, with the consequent positive impact on business. Second, in those countries most affected by the slowdown in activity, the outlook for economic recovery improved. In particular, with the help of lower interest rates, the deterioration in the financial situation of firms was halted. Also, banks embarked on restructuring in order to sell non-strategic assets and, especially, to reduce costs. Most of the large European banks recorded significant growth in their *results* and in their *ROE* (Chart II.10). Generally, the greater the re-

Chart II.10. *ROE (l-h bars) and year-on-year change (r-h bars) (% and pp). December 2003. Major European banks grouped by country*



Sources: Annual reports of the institutions, Bloomberg and BE calculations.
 Note: Information is included for the 20 leading EU banks by volume of assets. For each country, what is shown is the average weighted by total assets.

Chart II.11. *Share prices (top) and implied volatilities (bottom). Large European banks*



Sources: DataStream and Bloomberg.

duction in profits in 2002, the larger the increase in both variables.

Last year, the *stock market performance* of large Spanish banks was very similar to that of other large quoted European banks (Chart II.11). Their *implied volatility* also followed a similar path.

The information available from the spreads in the market for *credit default swaps* (CDSs) also confirms the downward path of the risk of large Spanish institutions, closely in line with other European banks, save for exceptions in the odd country with large loss-making banks. This behaviour of Spanish institutions, in line with the rest of the European banks, is observed both in the CDSs on senior debt and in those on subordinated debt.

Finally, with respect to the previous FSR, there were no significant changes in betas (5), either in terms of the relative position or the level, although the latter fell slightly to stand somewhat below 1.2 for the large Spanish banks.

(5) Obtained from the CAPM (Capital Asset Pricing Model).

Box II.2

Branches of foreign banks in Spain

Foreign banks have been permitted to operate in Spain since 1978, either through a subsidiary (with Spanish legal status) or through branches (without independent legal status), although initially their operations were subject to certain restrictions. As regards foreign banks with branches in Spain, their number grew continuously until 1995 (4 banks in 1978, 36 in 1985 and 57 in 1995), stabilising thereafter, with a significant increase in banks from EU countries (34 in 1995 and 49 in 2003) and a reduction in other banks (23 and 8, respectively). The market share of branches of foreign banks in the private resident sector is very small, especially in terms of the funds raised from this sector, although it has risen slightly in the last two years (Chart A).

The *structure of the assets* of these institutions has changed in recent years (Chart B) as the relative weight of business involving greater credit risk has increased. The fall in the percentage of assets invested in financial intermediaries (50% in the mid-1990s) was offset, until 2000, by the rise in lending to the resident private sector, whose weight in the balance sheet increased in five years by almost 13 pp, to 37%. However, in the last three years the weight of this lending has fallen to 24% (the percentage for all deposit institutions being more than double), owing to strong growth in the interbank market and in private fixed-income, which represents 25% of the total balance sheet (five times more than for all deposit institutions). Most of these securities were issued by credit and savings institutions (13% of total assets) and the non-resident private sector (7% of total assets), although the weight of fixed-income securities issued by the resident private sector is also important (4.9%).

Activity is focused on wholesale and corporate banking, in very specific sectors of the market. Most of the lending to the resident private sector is to non-financial firms. That to households is much less important, with a weight of around 10% of the total, and it has even fallen in recent years. This structure differs significantly from that of other deposit institutions, in which the weights of these two sectors have been approaching each other in recent years. The energy and electricity and mining and industrial sectors, made up mainly of large firms, absorb more than a quarter of all the credit to the private sector granted by the branches, this percentage being much higher than that for deposit institutions as a whole. However, the weight of these sectors has fallen over the last eight years in favour of other sectors, such as construction and property development, which account for a further quarter of lending. As for lending to households, the higher weight of consumer lending stands out (7% of all lending) as against that for the acquisition and rehabilitation of housing (2%), the reverse of the relative weights for all deposit institutions. Meanwhile, the business of each of these institutions is highly specialised in certain sectors, with more than half of the institutions concentrating 75% (and practically all more than 50%) of all their lending to the resident private sector on loans for one or two purposes.

The extensive branch network of national institutions and their deep involvement in the household sector have been particularly significant for the *liabilities structure* of foreign branches, which have had to resort to a very high proportion of interbank borrowing. The funds obtained from the resident private sector represent only 11.8% of total liabilities (Chart C). However, the relative importance of this latter source of finance has gradually increased in recent years.

The type of business of the branches of foreign banks is reflected in the level of their margins and *results* (1) (Chart D). A relatively low net interest margin (as a percentage of average total assets, ATA), and also low commission income, not sufficiently offset by lower operating expenses, give rise to a low net operating income and to profit before tax that in 2003 represented only 0.45% of average total assets (ATA), practically half the level for all deposit institutions.

The *net interest margin* of foreign branches (0.78% of ATA in 2003) is much lower than for deposit institutions as a whole, despite the notable narrowing of the gap that occurred between 1996 and 2000 as a consequence of the greater assumption of credit risk in foreign branches' investment activity, together with the convergence of the average returns obtained on each of the asset instruments with those recorded by other deposit institutions. At the same time, the average cost of their liabilities is significantly higher, this being the main cause of their low net interest margin. The fundamental reason is the dependence on interbank borrowing, the cost of which is higher than funds from the resident private sector, although these, in turn, are raised at a substantially higher cost than they are by other deposit institutions. In recent years, the margin has been more stable as a result of the stability in the structure of their liabilities and the strong growth in their investment in credit institutions, with the consequent reduction in the average return obtained on their investments.

Commission income is one-third lower at foreign branches (0.46% of ATA) owing to the very low level of income from collection and payment services and from the sale of non-bank financial products. However, the com-

(1) The obligation to comply with the capital ratio falls on the parent institution, which includes the business of its foreign branches in its own business, so that the solvency of such branches cannot be analysed separately.

Box II.2 (cont'd)

mission income obtained on off-balance sheet exposures and securities services is relatively high. The downward trend in this income (relative to ATA) over the last three years, as well as the notable reduction in results on financial transactions, have led to a significant decline in the *gross margin*, to 1.24% of ATA.

As for *operating expenses*, the business of foreign branches, which most closely resembles that of corporate banking, with very little presence in the household sector, requires a smaller number of offices (0.3% of the total for deposit institutions), which translates into low levels of operating expenses, although the direct expenses per employee (€81 million) and per office (€1,391 million) are much higher than those of the other deposit institutions operating in Spain (55 and 126, respectively). The *efficiency ratio* of these institutions, which deteriorated notably in the late 1990s, has been more stable since 2000, with a significant improvement in 2003 (thanks to the containment of spending) when it reached 79%, practically the same level as in 1995, although significantly higher than the average level for all deposit institutions.

As a result of all the foregoing, *net operating income* as a percentage of ATA is very low in comparison with that of deposit institutions as a whole (Chart D). The weight of the items below this margin is small since the cost of credit and securities write-downs and the extraordinary income offset each other. The strong concentration of the activity of the branches on interbank business and, within the resident private sector, on large firms, means that their doubtful assets ratio has traditionally been below that of all deposit institutions. However, the low levels of doubtful assets in recent years have led to significant convergence in these ratios. The weight of credit write-downs (0.06% of ATA in 2003) is low in comparison with the corresponding weight for all deposit institutions, partly due to the fact that most of these institutions are not subject to Spanish law in this area, but to the law of their home country (2).

In short, the branches of foreign banks in Spain generally have a low market share and specialise, on both the assets and liabilities sides, in corporate banking. Commensurate with the type of business they engage in, their margins and results are low relative to those of the other deposit institutions operating in Spain.

Chart A. Share of the market of all deposit institutions (%). Activity with resident private sector



Chart B. Structure of assets (%)

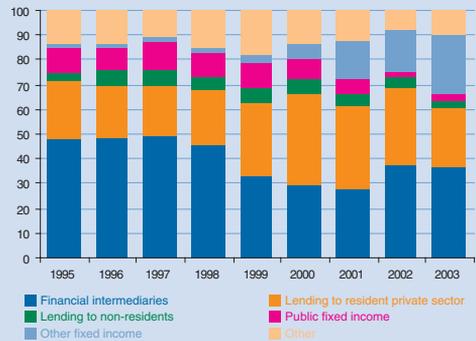


Chart C. Structure of liabilities (%)

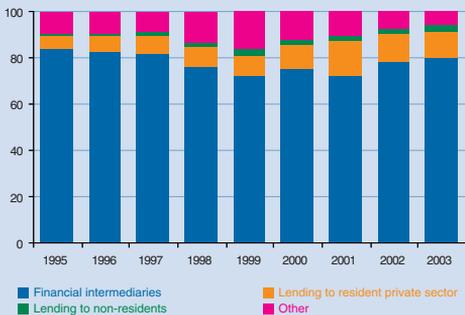


Chart D. Margins and profit before tax (as % of ATA). Branches of foreign banks and deposit institutions (ID)



(2) This possibility only applies to institutions of the European Economic Area.

CHAPTER III

Solvency

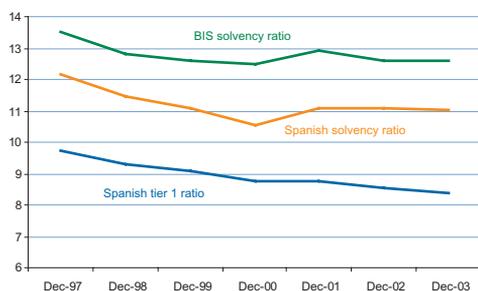
III.1. General situation

The *total solvency ratio* (eligible capital as a proportion of risk-weighted assets) of Spanish deposit institutions showed great stability throughout 2003, standing at around 11% and holding relatively unchanged since December 2001. Under the less strict BCBS definition, the ratio held stable at 12.6%, amply above the 8% minimum required (Chart III.1).

The *tier 1 ratio* (tier 1 capital as a proportion of risk-weighted assets) continued on its mild declining trend. Even so, its level of 8.4% is over twice the required minimum (Chart III.1).

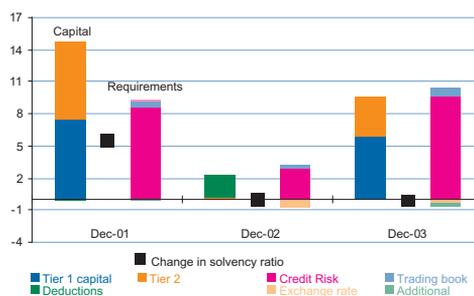
Capital accelerated in 2003, growing by 9.6% compared with 2.3% the previous year. While this rate was lower than those posted prior to 2002, there was a significant contribution from tier 1 capital, which increased by 7.7%. In parallel, *capital requirements* (1)

Chart III.1. *Solvency ratios of deposit institutions (%). Spanish and Basel (BIS) rules*



(1) Calculated as 8% of risk-weighted assets.

Chart III.2. *Contribution of capital and requirements to the change in the total solvency ratio. (% and pp). Deposit institutions*

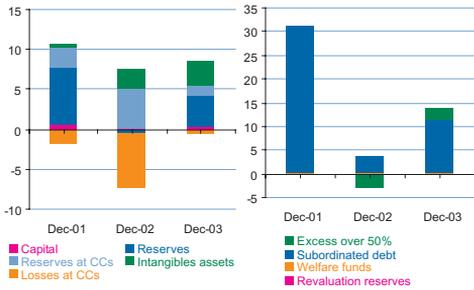


grew by 9.8%, in line with the pick-up in activity and the acceleration in lending to the private sector, with and without mortgage security (Chart III.2).

The change in *tier 1 capital* (Chart III.3) was due to the strong reduction in intangible assets, attributable virtually in its entirety to the accelerated amortisation of goodwill (Chart III.4). Adding to this was the positive contribution of reserves, in step with the recovery in institutions' results. A further factor was the substantial reduction in the erosion arising in previous years from the losses at consolidated companies linked to the depreciation of the Latin-American currencies against the euro. The adverse impact of this latter factor diminished in 2003 owing to the greater hedging of the structural positions in foreign currency by Spanish institutions and because the appreciation of the euro was less, in weighted terms, than that in 2002.

Outstanding preference shares fell by 6.6% from December 2002, as a result especially

Chart III.3. Contribution to the change in tier 1 (left) and tier 2 (right) capital (% and pp). Deposit institutions



of the redemption of dollar-denominated issues by banks (Chart III.4). Thus, the ratio between preference shares and tier 1 capital, for those institutions that had issued such shares, fell by 3 pp to 19.3%.

In December 2003, tier 2 capital recorded growth of 13.7%, well above the 0.6% rate of 2002. This was basically attributable to the strong pick-up in subordinated financing (growth of 11.5%) and, to a lesser extent, to the indirect contribution of the increase in tier 1 capital. This permitted certain institutions to include tier 2 capital that previously exceeded 50% of their tier 1 capital and was therefore not eligible regulatory capital (Chart III.3).

Risk-weighted assets (RWA) recovered their 2001 buoyancy with growth of 9.8%, four times the 2002 increase (Chart III.2). Behind this substantial acceleration lies the behaviour of credit risk (with a weight of

Chart III.4. Contribution to the change in goodwill (left) and in preference shares (right). (% and pp). Deposit institutions

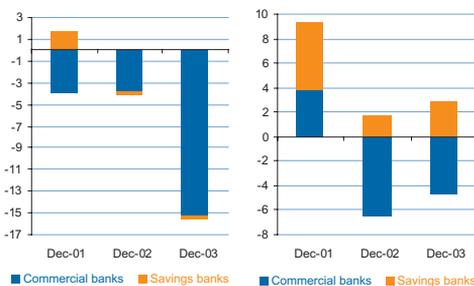
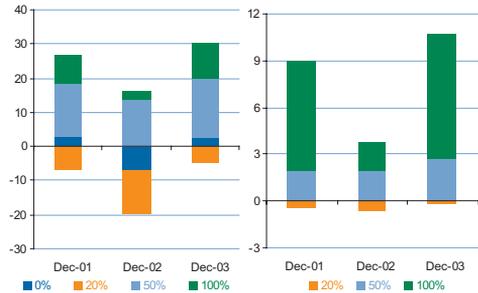


Chart III.5. Change in the stocks of balance-sheet assets (left) and contribution to the change in their requirements (right) (% and pp). Deposit institutions (2)



95% in total requirements) and, especially, the balance-sheet assets (88% of total RWA for credit risk) (3). Unsecured lending to the private sector accelerated and, since it is weighted at 100%, it contributed significantly to the increase in RWA, while mortgage lending continued to grow at high rates which, despite only being weighted at 50%, also resulted in a significant impact on RWA and, ultimately, on the capital requirements (Chart III.5).

III.2. Analysis based on individual institutions

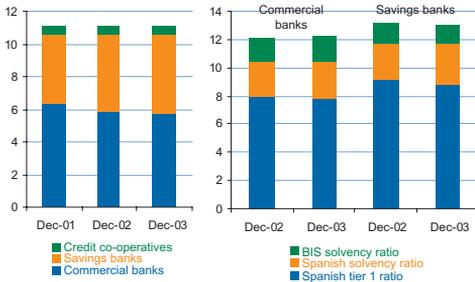
The breakdown of the solvency ratio (4) by type of institution shows the weight of commercial banks decreasing in favour of savings banks. Thus, the contribution of savings banks increased by 6 pp over the last three years to 43.8% in December 2003. Meanwhile, the level of the total solvency ratio for commercial banks remained unchanged (10.5%), while for savings banks it fell by 7 pb to 11.7%, although this was still above the level for commercial banks (Chart III.6). In December 2003 the tier 1 ratio edged

(2) The contribution is calculated as the sum of the rates of change in the stocks of each group weighted by their requirements expressed as a proportion of the total.

(3) The remaining 12% are off-balance sheet assets.

(4) Algebraically, the total solvency ratio can be expressed as the weighted average of the solvency ratio of the three types of institution, the weights being RWA as a percentage of the total.

Chart III.6. Breakdown of the total solvency ratio by type of institution (left), and the Spanish and Basel solvency ratios for commercial and savings banks (right) (% and pp)



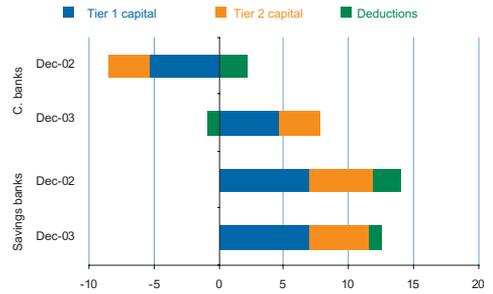
down, both for commercial banks (7.8%, 6 bp less than in 2002) and for savings banks (8.8%, 33 bp less than in 2002).

The capital of *commercial banks* grew by 7%, driven by the increase in tier 1 capital (6.2% in 2003) and in tier 2 capital (11%). The latter rose by 1 pp of total capital to 30.1% (Chart III.7). Behind this behaviour of tier 1 capital lie the significant accelerated amortisation of goodwill, the reduction in losses at consolidated companies, owing to greater hedging of the exchange rate risk in structural positions and a smaller appreciation of the euro with respect to the previous year and, finally, the significant decline in the negative contribution of reserves (despite the 7.7% fall in outstanding preference shares), attributable to the notable recovery in commercial banks' results in 2003.

Commercial banks' subordinated debt grew again (6.4%), following its decline in 2002, but at much lower rates than in previous years. Also, tier 2 capital rose on account of the indirect effect of the growth of tier 1 capital (Chart III.8).

Savings banks, with an improved performance in 2002, increased their tier 1 capital (9%) continuously as a result of the sustained increase in their reserves (8.6%), albeit with a mild slowdown in 2003 (Chart III.8). As for preference shares, their policy differed from that of commercial banks as they increased their issuance (7.2% increase in the outstanding stock, 2 pp more than in 2002).

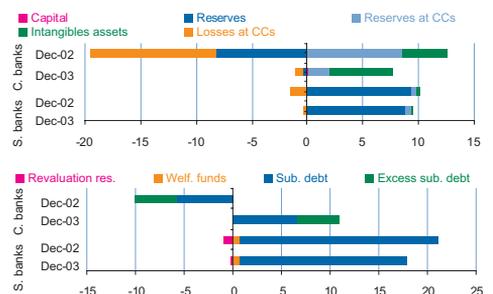
Chart III.7. Contribution to the change in total capital (%). Commercial and savings banks



Meanwhile, savings banks' tier 2 capital continued to grow strongly (17.8%) given the extensive recourse to subordinated debt, which grew by 20.3%. All this meant that savings banks' total capital increased by 12.5%, nearly 2 pp less than in the previous year (Chart III.7).

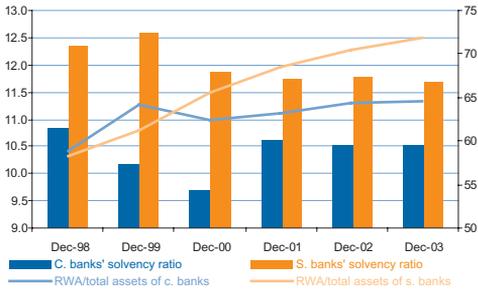
In 2003, *risk-weighted assets* rose at commercial banks (7%), after falling in 2002, although their growth was significantly lower than at savings banks last year (13.2%). The higher growth in savings banks' lending in recent years has resulted in a progressive rise in the ratio of RWA to total assets to 71.8%, while at commercial banks this ratio held much more stable, reaching 64.5% in December 2003 (Chart III.9) (5).

Chart III.8. Contribution to the change in tier 1 capital (top) and in tier 2 capital (bottom) (% and pp). Commercial and savings banks



(5) However, it should be recalled that this measure of the risk profile of the institutions has serious limitations, which the BCBS pointed to as one of the triggers of the process of reform of the 1988 capital accord.

Chart III.9. Solvency ratios of commercial and savings banks (left), and risk-weighted assets (RWA) as a percentage of total assets (right)



At commercial banks, the increase in requirements for credit risk (7.3%) set the tone for total requirements as a result of a rise in lending activity in Spain and of the fact that its fall abroad was checked. This gave rise to a significant increase in requirements for assets with a 100% weighting and, to a lesser extent, with a 50% weighting. Savings banks have recorded growing requirements, in line with their policy of strong credit growth.

The number of institutions that have issued preference shares continued to rise in 2003 following the incorporation of three new savings banks. However, in December 2003, only two institutions had preference shares beyond the limit of 30% of tier 1 capital. In this respect, the distribution in terms of ATA of this ratio shifted leftwards as a result not only of the increase in the institutions' tier 1 capital, but also owing to the redemption of shares issued in dollars by the two major commercial banks (Chart III.10).

Chart III.10. Preference shares (% of tier 1 and number of issues, left) and their distribution in terms of ATA for those that had issued such shares (%), right). Deposit institutions

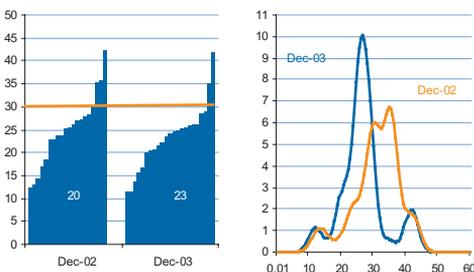


Table III.1. Distribution of the solvency ratio (%). Deposit institutions

Solvency ratio brackets	Dec-02		Dec-03	
	% of ATA	No. of inst.	% of ATA	No. of inst.
<8	0.0	0	0.0	0
8-10	33.4	43	11.9	37
10-12	48.1	44	76.1	62
12-15	16.0	34	10.3	26
15-20	2.0	23	1.4	21
20-25	0.1	13	0.1	7
>25	0.3	18	0.3	19

The number of *large exposures* (those whose amount exceeds 10% of the group's capital) fell by 3.3%, which involved a fall of 24.6% in their amount. The exposures subject to the overall limit (eight times the capital of the group), which in volume terms represent 62.4% of all large exposures, fell by 14.3%. The reduction was more pronounced at commercial banks than at savings banks.

Despite the stability of the solvency ratio at the aggregate level, there was an increase in the concentration of the institutions at around a ratio of 11% as a result of the decline in the solvency ratio of some medium-sized institutions and the increase in the ratio of one large institution (Table III.1).

Statistical fund

Since the statistical fund was established in Spain in July 2000, it has not stopped rising, as already mentioned in previous FSRs (6). As at end-2003, it stood at somewhat more than €6 billion, equal to 0.7% of total lending. Also, it represents around one third of the total provisions for bad debts of Spanish deposit institutions.

The statistical fund has a maximum limit (three times the latent risk). This limit varies over time since the latent risk does too.

(6) Given the mechanics of the statistical fund, resources are accumulated during the favourable phases of the business cycle when non-performing loans and specific bad-debt provisions are low. This has been the case of Spain in recent years.

Box III.1**Extension of the Lamfalussy approach to regulation of the European banking sector**

In November 2003, the European Commission published a set of measures to extend the “*Lamfalussy approach*” (1) to the regulation of banking and insurance in Europe. The Lamfalussy approach was developed in 2000 as a response to the need to establish in Europe a regulatory framework for financial instruments more sensitive to market developments and to promote an integrated capital market. The approach has four levels:

Level 1: consisting of the major principles that shape the legislation of the European Union (EU) and subject to the normal co-decision procedure involving the European Parliament and the EU Council of Ministers. Level 1 measures should also specify the more technical elements to be agreed subsequently at level 2. *Level 2:* consisting of a formal regulation committee (known as the “level 2 committee”), a network of national supervisors (the “level 3 committee”) and the European Commission. Each of these parties performs a certain function in the definition, proposal and decisions on the technical elements that should have legislative force, as established by level 1. *Level 3:* the national supervisors of the so-called “level 3 committee” co-operate with each other to improve the consistency of the transposition and application of the legislation agreed at the previous levels. *Level 4:* to strengthen compliance with EU rules.

The European economy ministers agreed, at the end of 2002, to extend this approach to banking and insurance. This decision represented the culmination of various reports and consultative processes on the adequacy of the provisions for financial stability, crisis management and integration of the EU financial sector as a whole. When designing a package of measures to make this decision effective, the Commission had to consider the impact on existing committees, some of which are formally recognised by current European Law. Another key consideration is the existence of agreements between the three EU institutions (the Council, Commission and Parliament). As regards banking, the measures published by the European Commission in November 2003 provided for the creation of two new committees: the European Banking Committee (level 2), and the Committee of European Banking Supervisors (level 3), similar to the Committee of European Securities Regulators which has already been working in relation to the capital market for almost three years.

The intention is that the *European Banking Committee*, a level 2 committee, should be made up of representatives of the economy ministries and that it should act as a regulatory committee (voting on the technical measures proposed by the European Commission at level 3) and also as a consultative committee assuming some of the tasks of the current Banking Advisory Committee, which will disappear. The latter committee, with a broad remit, has historically been made up of representatives of the economy ministries and of the banking supervisory authorities. For the *European Banking Committee* to become fully operational, a change in European law is required. The Commission’s package therefore includes a Directive (as well as other similar measures concerning other committees in other sectors), which is currently going through the European co-decision process.

Meanwhile, the *Committee of European Banking Supervisors (CEBS)*, a level 3 committee, was established on the basis of a decision of the European Commission. It formally commenced its duties on 1 January 2004, although its members had already begun to work prior to that date, to establish the foundations for the Committee to be able to carry out its tasks as soon as possible following its formal creation, including developing its provisional charter. Its *three basic functions* are: 1) to advise the Commission on the preparation of banking legislation (it should be noted, however, that the Committee will not receive any formal mandate to prepare the draft of any level 2 text until the necessary legislation has been approved); 2) to contribute to the consistent implementation of Community Directives and to the convergence of Member States’ supervisory practices throughout the Community; and 3) to enhance supervisory co-operation, including the exchange of information.

The CEBS is comprised of high level representatives from the banking supervisory authorities (who are the voting members) and central banks (whether or not they themselves are the competent supervisory authority) of the European Union, including the European Central Bank. The EU acceding countries will participate as observers until 1 May 2004, whereupon they will become full members. Meanwhile, the Commission and the EEA (European Economic Area) countries that are not members of the EU will participate as observers on a permanent basis. The first Chair of the CEBS is from the Banco de España. The Chair is supported by a Vice Chair and by a Bureau comprising three members of the Committee selected to reflect the latter’s composition. The Bureau will be particularly important for the efficient working of the Committee, given its size when the EU acceding countries are incorporated. The EU economy ministers agreed in January this year that the Secretariat of the CEBS would be based in London.

At the first formal meeting of the CEBS, held in Barcelona in January, it was decided that one of the main priorities in the near future would be the application in Europe of the New Basel Capital Accord. Priority is also going to be given to addressing accounting issues, especially in relation to International Accounting Standards and their impact on prudential requirements. The CEBS will also address other areas in order to identify best supervisory practices and promote their convergence, co-operating with the various committees of the other sectors included in level 3. The Committee will operate openly and transparently and shall extensively consult market participants, consumers and final users. In fact, the Committee has already established a provisional website (www.c-eps.org) as a tool for communicating with the public.

(1) Named after Alexandre Lamfalussy, the Chairman of the group of experts that developed this method in 2000.

Table III.2. *Distribution of the number of institutions and of the relative weight of ATA according to the covered limit of the statistical fund (%). Deposit institutions*

Statistical fund as % of limit	% of ATA	No. of institutions
No statistical fund	6.2	39
<10	1.7	11
10 - 25	1.2	10
25 - 50	21.7	23
50 - 75	41.1	38
75 - 90	12.9	29
90 - 100	4.5	19
100	10.6	94

As at end-2003, the fund represented 64% of the maximum limit (Chart III.11). This limit has been reached by 94 institutions although they are generally small credit co-operatives or minor banks, with a low weight in the total (Table III.2).

It can be seen that small institutions have high solvency ratios and statistical funds (Tables III.1 and III.2), above the sector average. The difficulties of these institutions to rapidly build their capital and the consequent precaution of their managers largely explain this prudent behaviour, widespread among such institutions.

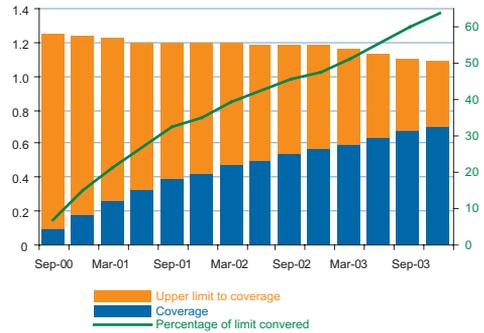
Comparison with European banks

In the previous FSR, with data to December 2002, the solvency ratios of Spanish deposit institutions were slightly above the European average, both for all institutions and if the comparison is restricted to large banks. The available data, for December 2003, again show very similar results to those of the large EU banks (Chart III.12).

Dividends

As indicated in the May 2003 FSR, the large Spanish banks increased their pay-out (ratio of dividends to group net income) significantly in 2002, at a time when their profits fell substantially. In 2003, however, the pay-out fell to close to 50%, with a

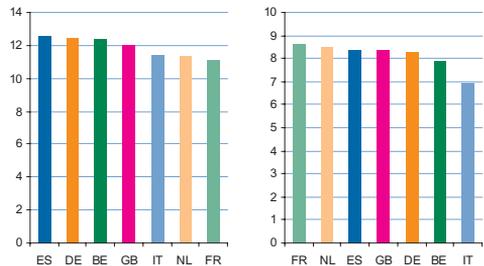
Chart III.11. *Coverage and limit of the statistical fund as a percentage of lending. Deposit institutions. ID*



smaller increase in dividends than in group net income (Chart III.13).

The pay-out of savings banks (the ratio of the annual transfer to the welfare fund to group net income) declined slightly in 2003, owing to the significant recovery of net income and the maintenance of the transfer to the welfare fund at its 2002 levels (Chart III.14). In any case, the level of savings banks' pay-out is substantially lower than that of banks, owing to the different characteristics of these two types of institution and to the need for savings banks to transfer a larger proportion of their net income to reserves to strengthen their capital, given their inability to issue shares.

Chart III.12. *Total solvency ratio (BIS) (left) and tier 1 (right). (%). Large European banks grouped by country*



Sources: Annual reports of the institutions, Bloomberg and BE calculations.

Note: Information is included for the 20 leading EU banks by volume of assets. For each country, what is shown is the average weighted by total assets.

Chart III.13. *Pay-out of the banks included in the IBEX-35 and year-on-year rate of change of its components (%)*

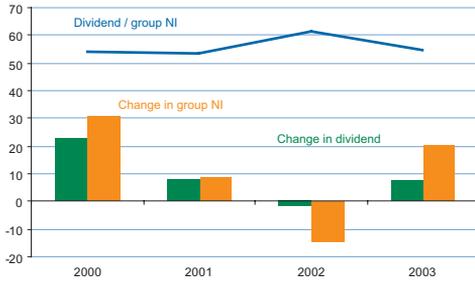
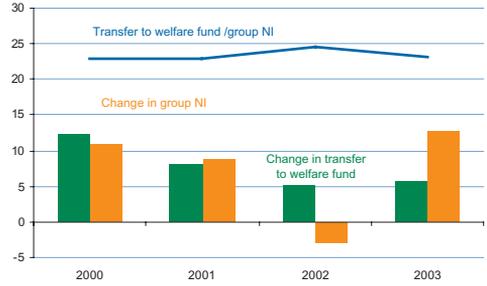


Chart III.14. *Pay-out of savings banks and year-on-year rate of change of its components (%)*



Initiatives of supervisors and regulators

The degree of banking integration in Europe, analysed in Chapter I, would suggest that co-ordination between European banking supervisors is currently the best strategy to follow, given the relatively low, albeit upwardly trending, level of European banking integration.

Since the creation of the euro, co-ordination between supervisors has taken place through the Banking Supervision Committee of the European System of Central Banks. This co-ordination will be boosted and strengthened by the recently created CEBS (Committee of European Banking Supervisors), whose functions are detailed in Box III.1.