FINANCIAL STABILITY REPORT
INFORME DE ESTABILIDAD FINANCIERA

November 2003

BANCO DE ESPAÑA

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ISSN: 1696-2621 (edición impresa)
ISSN: 1696-3520 (edición electrónica)
Depósito legal: M. 52740-2002

Printed in Spain by Artes Gráficas Coyve, S. A.

INTRODUCTION

The first half of 2003 saw a favourable change in the earnings and solvency trends of Spanish deposit institutions. The course of activity in Spain, along with the abatement of uncertainty in the international arena, contributed to these developments. However, low interest rates, strong competition and significant credit growth pose serious challenges for Spanish deposit institutions in relation to efficiency and to risk control and management.

Banking risks

As regards *credit risk,* doubtful assets ratios continued to diminish, particularly in credit to the private sector, and stood at very low levels. True, this is largely due to strong credit growth. But it is no less true that, in business in Spain, doubtful assets are practically unchanged, as compared with the high rates of increase in 2002. The sustained growth of the Spanish economy, together with the gradual tailing off of the impact of the crisis in Argentina, explain the stabilisation of doubtful assets. However, the doubtful assets ratio of foreign business continues to be much higher than in Spain.

In the first half of 2003, credit to construction and property development accelerated, although doubtful assets have not increased in these activities and the related doubtful assets ratios are very low. In any event, this situation requires institutions to properly assess credit approval, extension and monitoring in this business segment.

Excluding real estate activities, other credit to productive activities is picking up, in line with the slight recovery of economic activity in Spain and with the healthy situation of firms, which is partly a result of the low debt burden currently borne by them.

Credit to households for house purchases slowed slightly in the first half of the year. Although the debt burden borne by them has held steady thanks to low interest rates, their indebtedness now stands at around the average for the euro area countries.

The recovery of the stock market and the substantial fall in volatility help reduce institutions' *market risk,* while unrealised capital gains are rising after various years of uninterrupted decline.

With respect to June 2002, the substantial reduction in the foreign exchange losses of consolidated firms has almost completely halted the erosion of own funds reported in the previous Financial Stability Report (FSR). This is because the depreciation of Latin American currencies has moderated and, in particular, the *exchange rate risk* on structural positions in foreign currency is hedged to a greater extent.

Profitability

The earnings of Spanish deposit institutions again grew in June 2003, after the decline in 2002. The return on equity also increased, and the differential with respect to the return on risk-free assets widened significantly. The recovery of profits has been

based on tighter control of operating expenses, lower provisions and write-downs, higher extraordinary income and, finally, the impact of the stock market rally.

Despite this favourable profit trend, it should not be overlooked that margins, particularly the net interest margin, decreased for institutions as a whole, both in absolute and in relative terms. Low interest rates and strong competition are putting pressure on margins. Thus the cost of interest-bearing liabilities is very close to the interbank rate, which illustrates the challenges faced by institutions. The necessary response is to increase efficiency; although banks have progressed in the first half of 2003, they still have further to go, particularly savings banks.

The profitability of Spanish credit institutions in 2002 was considerably higher than the corresponding European average. Spanish institutions focus largely, although not exclusively, on retail banking services both to firms, particularly small and medium-sized enterprises (SMEs), and to individuals (largely mortgage lending), with an extensive geographical presence through a close-knit branch network. This business has higher margins, but also greater operating costs. In terms of efficiency (ratio of operating expenses to gross income), the difference with respect to the European average is smaller, but still positive. The different course of economic activity is one of the factors behind the lower doubtful assets ratio of Spanish institutions.

The available market indicators reflect a decrease in the exposure of Spanish institutions and more favourable prospects for 2003, in line with the trend shown by most European institutions.

Solvency

The solvency ratio of Spanish deposit institutions edged up slightly in June 2003, interrupting the mild but continuous descent of recent years. The ratio's current level is well above the regulatory minimum requirement, even under Spanish rules, which are considerably stricter than the recommendations of the Basel Committee on Banking Supervision (BCBS).

The strengthening of solvency is largely due to the rise in own funds. This rise can be attributed to higher amortisation of goodwill, larger reserves due partly to improved profits, and lower foreign exchange-related deductions and losses in consolidated companies.

An additional positive factor is the improvement in the quality of own funds, which is the result of an increase in Tier 1 capital and a slowdown in the growth of Tier 2 capital. Moreover, the weight of preference shares in Tier 1 capital has diminished in accordance with a Banco de España recommendation made two years ago and recently converted into a legal obligation.

The solvency of Spanish institutions is seen to be more solid if it is taken into account that there is a high coverage of doubtful assets by bad debt provisions which, in addition to specific provisions, include general and statistical provisions.

Based on estimates by the Banco de España, the application of the new credit risk measurement approaches arising from Basel II will not significantly affect the patterns of financing extended to Spanish firms or, in particular, that received by SMEs.

In short, Spanish deposit institutions have shown a certain recovery in profitability and very high solvency. Despite this favourable situation, the uncertainty over the world economic recovery, low interest rates, heightened competition and the growth of credit are factors that require institutions to strengthen their risk control and management policies and to make an ongoing effort to improve their efficiency.

CHAPTER I

Banking risks

I.1. Introduction to Spanish deposit institutions' risk

In contrast to the observations made in previous FSRs, the total assets of Spanish deposit institutions show greater buoyancy owing to the rise in credit to the private sector (1) in Spain and to the smaller fall in foreign business. Foreign assets continue to lose relative weight in bank balance sheets, simultaneously with the US dollar's depreciation against the euro, despite the overall relative stability of the main Latin-American currencies against the dollar since January 2003.

Consolidated balance sheets (2)

The total assets of Spanish deposit institutions have grown by 6%, as against 1.2% in the same period of the previous year (Table I.1) (3), thereby bringing to an end a stage of decelerating activity which began in June 2001. This notable pick-up was due to the faster growth of business in Spain – representing 83.5% of total business – where assets increased by 10.6%, nearly three percentage points (pp) more than in the previous year. At the same time, although foreign business continued to decline, it did so more slowly than in the previous year (a fall of 12.7% compared with 18.8%).

The relative weight of foreign business continued to decline, and now represents 16.5% of total assets, more than 10 pp below the high in December 2000. As mentioned in previous FSRs, this process is due not only to a more prudent attitude by the Spanish institutions in Latin America following a number of years of strong expansion, but also to the appreciation of the euro against Latin-American currencies (exchange rate effect).

In the first half of 2003 this effect was less significant because the depreciation of the Mexican and Chilean pesos against the euro was partly offset by the appreciation of the Argentine peso and the Brazilian real.

As regards *assets,* the relative weight of credit to the private sector increased by somewhat more than 2 pp to 57.9%. Also, the growth rate rose from 6.9% to 10.8%, breaking the slowing trend in lending reported in the previous FSR.

The higher growth in credit to the private sector is due to the pick-up in mortgage lending in Spain associated with the buoyancy of the Spanish property market and to the flatness abroad, as against substantial falls in the recent past.

(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 June 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 June 2003 and comparisons are always between that month and June 2002.

Table I.1. *Consolidated balance sheet of Spanish deposit institutions. €m*

ASSETS	Jun-03	Relative weight in Jun-03 (%)	Growth J-02/ J-01 (%)	Growth J-03/ J-02 (%)	LIABILITIES	Jun-03	Relative weight in Jun-03 (%)	Growth J-02/ J-01 (%)	Growth J-03/ J-02 (%)
Cash on hand and on deposit at Central Banks	26,902	1.8	6.7	5.2	Central Banks	23,631	1.5	32.1	0.1
Due from credit institutions	179,744	11.7	–6.4	4.6	Due to credit institutions	259,491	17.0	–5.6	8.5
Credit to public authorities	47,083	3.1	–2.4	–9.6	Credit from public authorities	45,745	3.0	–8.9	9.6
Credit to private sector	833,465	54.5	6.7	11.3	Customer deposits	792,232	51.8	5.3	4.3
Fixed-income portfolio	241,345	15.8	–6.9	0.9	Marketable debt securities	132,460	8.7	–12.9	21.4
Doubtful assets	12,268	0.8	1.6	6.8	Other liabilities	49,420	3.2	4.0	9.2
Equity portfolio	56,979	3.7	1.4	1.2	Accrual accounts	21,657	1.4	–5.2	–13.2
Property and equipment	25,223	1.6	–9.5	–5.3	Provisions	52,288	3.4	–5.4	–2.8
Goodwill in consolidation	17,126	1.1	1.3	–16.0	Negative difference in consolidation	211	0.0	–52.7	61.4
Intangible assets	1,561	0.1	–5.5	–9.1	Subordinated debt	33,174	2.2	20.5	7.4
Own stakes and shareholders	225	0.0	–3.8	–52.6	Minority interest	21,022	1.4	–11.5	1.2
Other assets	51,263	3.3	–6.7	1.4	Capital stock	8,690	0.6	4.2	1.0
Accrual accounts	23,805	1.6	–7.7	–11.2	Reserves	62,531	4.1	6.4	4.8
Prior year's losses at the controlling entity	568	0.0	52.9	17.7	Reserves at consolidated companies	20,831	1.4	23.6	1.9
Losses at consolidated companies	12,647	0.8	111.7	9.1	Net income	6,818	0.4	–9.6	7.7
					Group	5,925	0.4	–7.2	11.0
Total Assets	**1,530,254**	**100.0**	**1.2**	**6.0**	**Total liabilities**	**1,530,254**	**100.0**	**1.2**	**6.0**
Memorandum item:									
Credit to private sector	885,525	57.9	6.9	10.8					
Exposure to public authorities	223,258	14.6	–10.8	–2.5					

Meanwhile, total doubtful assets grew by 6.8% due to the change of trend in foreign business (from a 20.7% fall to 10.2% growth), which more than offset the slowdown in business in Spain (from 22.1% to 4.8%). Nonetheless, their relative weight held steady.

As a result of the growth of lending in Spain and the slowdown in doubtful assets, the private-sector doubtful assets ratio in total business decreased further to minimal levels (1.3%). In foreign business, this ratio is still high at 3.9%, although down 0.1 pp from June 2002.

Financing to public authorities continued to decrease in both relative and absolute terms, although less so than in 2002 because of the way in which risk exposure to foreign public authorities has moved.

The equity portfolio again lost relative weight in bank balance sheets (3.7% against 3.9% the previous year). However, its amount increased for the first time since end-2002, in line with the stock market improvement in the year to date.

On the *liabilities* side, customer deposits fell in relative terms by 0.8 pp to 51.8%. Moreover, their growth slowed by 1 pp to 4.3%. The slowdown in the growth of credit institutions' most traditional liabilities was also apparent in Spain (Chart I.1); it was partly due to lower interest rates and to competition from other savings instruments, which offer higher returns although also higher risk.

As a result of the increasingly divergent behaviour of private-sector loans and deposits, institutions have to resort to other sources of financing. Thus interbank financing increased in both absolute and relative terms. In addition, marketable debt securities grew by 21.4%, and their relative weight rose by 1 pp. Creditors from public authorities also gained weight, and their growth picked up to 9.6%. Subordinated debt continued to grow, although more slowly, while preference shares fell back slightly. The growth rate of own funds also quickened (from 1.3% to 3.4%).

Evolution of risks

Credit to the private sector (4) continued to increase briskly in the first half of 2003 as a

(4) Business in Spain plus the business abroad of branches of Spanish institutions, but without including the business abroad of the subsidiaries of such institutions.

Chart I.1. *Contribution to change in customer deposits (% and pp). Business in Spain. Deposit institutions*

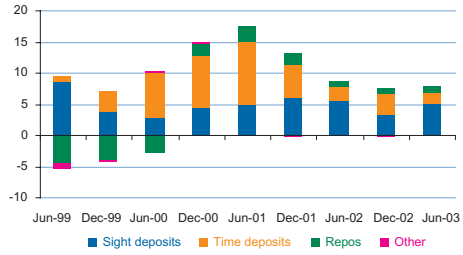
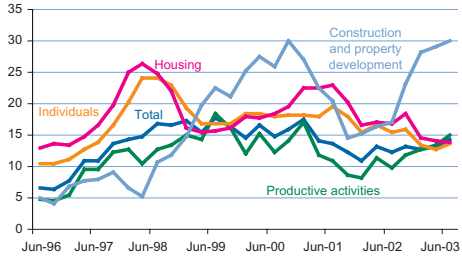


Chart I.2. *Annual rate of change of financing to individuals and productive activities (%). Banks and savings banks*



result of the substantial pick-up in financing of productive activities (firms) and the steady growth rate of financing to individuals (5). Since the beginning of 2002, the rates of change of lending to these two sectors have tended to converge, due largely to a slight moderation in the rate of expansion of house purchase financing and to a pick-up in credit to construction and property development (Chart I.2).

Since the last FSR, credit to construction and property development has continued to accelerate, reaching a rate of 30% in June 2003. Lying behind this expansion is the cyclical position of property development activity, which is explained by the sustained rise in employment, the ongoing decline in interest rates and the strong growth of house prices.

Excluding housing credit and credit to construction and property development, the rest of the credit portfolio also accelerated in the first half of 2003 across both firms and individuals. This was in line with the slightly higher GDP growth.

From the standpoint of prudence, it bears repeating that there is a need for a strict credit approval, extension and monitoring policy and a reminder is given that very high credit growth in past business cycles led to substantial increases in default rates.

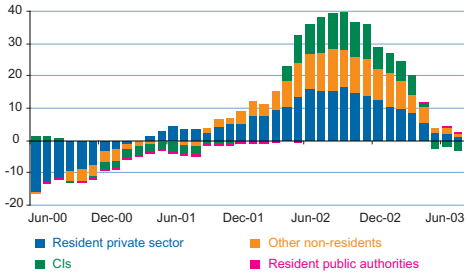
(5) Productive activities include sole proprietorships, which are therefore excluded from households, unlike in the National Accounts.

Since the previous FSR, the growth rate of *doubtful assets* on institutions' individual balance sheets has moderated substantially and, as a result, their amount has remained practically unchanged at around €8 billion. This behaviour in doubtful assets reflects the following. First, there was a substantially more moderate rise in doubtful assets vis-à-vis the resident private sector, as a result of the sustained high level of economic activity compared with other euro area countries. Second, doubtful assets vis-à-vis the non-resident sector, including credit institutions (CIs) are growing at very low rates now that the impact of the rise in Argentine default rates in 2002 has passed (Chart I.3).

The sharp increase in lending and the substantially more moderate rise in doubtful assets put downward pressure on the doubtful assets ratios of banks and savings banks, both in total and in the resident private sector. Analysis by loan purpose to the resident private sector shows that the doubtful assets ratio rose slightly only in consumer credit, while it decreased in housing, households and in all the productive activities, including construction and property development in which there was also a drop in the amount of doubtful assets.

The perception of credit risk in *Latin America* further improved during 2003, continuing the trend initiated in October 2002. This improvement centred particularly on those countries that account for the bulk of Spanish banks' exposure in the area.

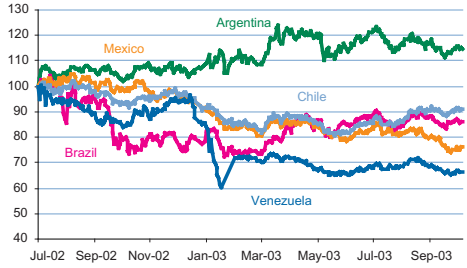
Chart I.3. *Year-on-year rates of change of total doubtful assets and contribution of their components (% and pp). Deposit institutions*



The *appreciation of the euro* against the Mexican and Chilean pesos and the Venezuelan bolivar in the first half of 2003 played a part in reducing the relative weight of the financial assets in the area (9.4% in June 2003 against 10.8% in December 2002), despite the appreciation of the Brazilian real and the Argentine peso (Chart I.4). Financial assets vis-à-vis residents in Spain represent 73.7% of the total, up 1.3 pp on December 2002.

The *strong competition* in the Spanish banking system, along with the progressively lower *level of interest rates,* is putting downward pressure on the net interest margin of institutions. A breakdown of the total spread between assets and liabilities in business in Spain (6) reveals the very low and declining amount of the liability spread

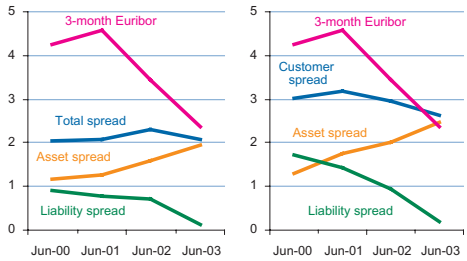
Chart I.4. *Exchange rate of the euro against Latin American currencies. 1 July 2002 = 100*



Sources: DataStream and in-house.

(6) 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 average cost of interest-bearing financial liabilities).

Chart I.5. *Asset and liability spread. Total (left) and on customers in euro (right). Deposit institutions*



(Chart I.5). The asset spread is growing, but a good part of it has to be used to absorb the risk premium, which tends to increase in periods of economic slowdown and of higher credit to the private sector.

Since the previous FSR, the *world stockmarkets* have recovered and the volatility of the main indices has decreased substantially. This change in trend has permitted a certain recovery in the unrealised capital gains on Spanish deposit institutions' equity portfolios following the deterioration of recent years.

The stock market recovery since March this year, heralding a pick-up in the world economy which is however slow in materialising, will help to improve the situation of insurance companies affected these last few years by falling stock markets and rising claims. Spanish insurance companies have around 5% of their assets invested in equities, a substantially lower proportion than other European companies. They have therefore suffered less from these three years of continuously falling stock market prices (Chart I.6).

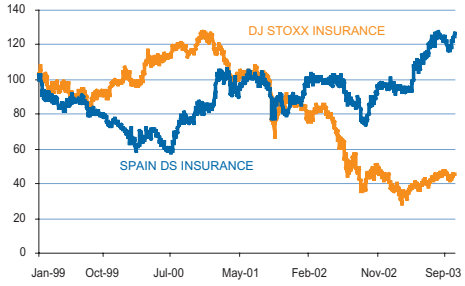
I.2. Credit risk

I.2.1. Impact of the macroeconomic background

I.2.1.1. Spain and the euro area

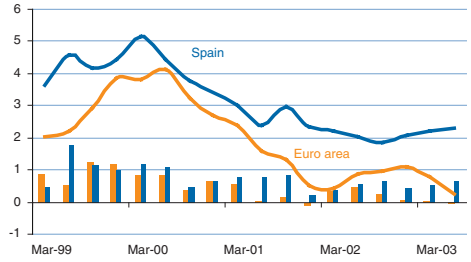
The latest available data show stagnation in *euro area* growth (Chart I.7). Thus in

Chart I.6. *Insurance stock indices. 1 January 1999 = 100*



Sources: DataStream and in-house.
Note: The Spanish index includes only two companies, compared with 34 in the European index.

Chart I.7. *Real GDP (%). Year-on-year (lines) and quarter-on-quarter (bars) rates*



Sources: INE and Eurostat.

2003 Q2, euro area GDP declined by 0.1%, and in year-on-year terms grew by 0.2%, 0.6 pp less than in the previous quarter. *Spain* continued to grow faster than the euro area average. In 2003 Q2 its GDP growth rate was 0.7% quarter-on-quarter and 2.3% year-on-year, both figures being 0.1 pp higher than in the previous quarter.

The sound relative performance of Spain's economy in the recent period should not, however, lead us to overlook the fact that medium-term risks, pointed out in the previous FSR, persist. Thus the higher indebtedness of the non-financial private sector, partly attributable to lower interest rates, means that its debt-servicing capability is now more sensitive than in the past to possible adverse disturbances in income or in the cost of debt.

Meanwhile, houses are somewhat overvalued. This overvaluation is similar to that seen in the previous upturn at the beginning of the 1990s and, as occurred then, may be absorbed in a gradual and orderly manner.

Finally, the inflation differential vis-à-vis the euro area, despite having narrowed recently, continues to post positive values (0.9 pp in September). The persistence of positive inflation differentials is a medium- and long-term risk factor for the competitiveness of the Spanish economy.

Non-financial corporations

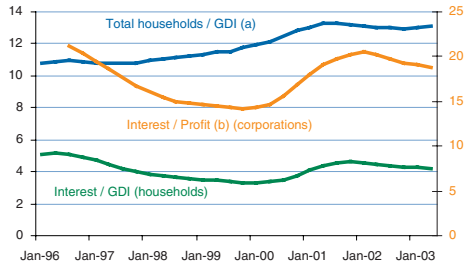
In the first half of 2003, the gross operating *profit* of the corporations that report to the Central Balance Sheet Data Office grew by 10%, in contrast to the fall posted in the same period of the previous year. The ordinary net profit, which includes financial revenue and financial costs, grew notably (10.8%), despite the slight fall in financial revenue and the small rise in financial costs as a result of higher indebtedness and commissions.

Net profit, which includes extraordinary income and expenses, was positive, following the negative figure in the first half of 2002 caused by the substantial net provisioning of corporations in that period, particularly the larger ones, to provide for losses in the value of investments abroad.

Against this background, the profitability *ratios* rose in the first half of 2003 with respect to the same period of 2002. Thus the ordinary return on investment rose from 8.3% to 8.4% and that on equity from 11.5% to 12.1%. This, together with the small reduction in the cost of debt, enabled the difference between the ordinary return on equity and the average cost of borrowed funds to remain above the level reported in the same period of 2002 (4.2%, against 3.8%).

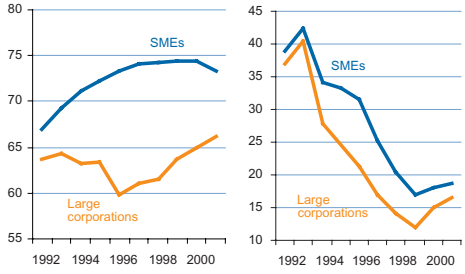
The total financing received by Spanish non-financial corporations as a whole continued to grow at high rates, although this

Chart I.8. *Indicators of the debt burden of non-financial corporations (right) and households (left) (%)*



(a) Includes interest and regular repayments. GDI: gross disposable income.
(b) Gross operating profit plus financial revenue.

Chart I.9. *Debt ratio (left) and debt burden (right). Large corporations and SMEs*



Sources: Registro Mercantil, Informa and in-house.
Note: The data are the yearly median for each group of firms.

pace has eased somewhat in the last few months. Thus in June the year-on-year rate was 13.6%, 1 pp lower than in December 2002. This behaviour gave rise to a further increase in the sector's *debt* ratios. In June 2003 the ratio of debt to gross operating profit plus financial revenue stood at 381.9%, against 369% in December 2002. However, this increase is the outcome of uneven behaviour depending on the type of corporation. Thus, while the larger corporations reduced their relative volume of borrowed funds, the small and medium-sized enterprises were responsible for raising the aggregate ratio.

The *debt burden* arising from interest borne by corporations (Chart I.8) decreased slightly in the first half thanks to the lower cost of debt, holding at moderate levels (19% of operating profit). According to the Central Balance Sheet Data Office, the debt burden indicator, which includes short-term debt and interest, also decreased in the same period.

If a distinction is made by corporate size (7), it is observed that the debt ratio (debt as a percentage of assets) of large corporations (annual sales above €50 million) differs from that of SMEs (annual sales below €50 million) (8). Chart I.9 shows that SME indebtedness has increased, although that of large corporations has also risen in the last few years. The convergence is more marked in the debt burden (financial costs as a percentage of profit before interest and taxes plus depreciation plus financial revenue). Although these financial costs have shown a slight rising trend since 1999, their levels in both large corporations and SMEs are substantially lower than in the first half of the 1990s.

Households

In the first half of 2003, credit to households continued to grow briskly and in June the year-on-year rate of change stood at 15.5%, up 0.5 pp on December 2002. This, along with more moderate growth of gross household disposable income, further raised the sector's *debt* ratio to 87% in June 2003, more than 4 pp higher than at end-2002. This ratio is somewhat above the euro area average but much lower than in the US and the UK.

Despite the increased indebtedness of Spanish households, the associated *debt burden* remained at moderate levels thanks to the favourable behaviour of interest rates (Chart I.8).

(7) The information is supplied by Informa from the Mercantile Register and, once appropriately filtered, enables researchers to work with a yearly average of 125,000 corporations (the minimum of about 35,000 was in 1992 and the maximum of 220,000 in 2000).

(8) There is no single definition of SME or of large corporation. The one used here is that included by the BCBS in its proposed New Capital Accord.

Net household *wealth* continued to increase in 2003 Q1 as a result of the rise in house prices, which offset the additional liabilities incurred and the stock market price falls still being recorded in the main equity markets. In Q2 the stock markets recovered, while the climb in property asset values continued. In short, the available indicators suggest that in the first half of the year, the wealth position of households improved, although the sector's higher debt levels meant that vulnerability to possible adverse disturbances increased.

I.2.1.2. Rest of the world

After a hesitant 2003 Q1, the international economic picture improved rapidly. Although this improvement and its prospects continue to be linked to the performance of the US, the upturn also spread to numerous parts of the world, except for the euro area and Latin America, which either remained sluggish or recorded a slowdown in recovery.

Geopolitical risk, which some months ago was a major source of uncertainty as to when the recovery would come and how strong it would be, tended to subside once the military conflict in Iraq ended. This, along with accommodative demand policies, encouraged the resurgence of activity.

Nonetheless, despite this renewed optimism, some of the macroeconomic imbalances present in 2002 continue uncorrected or have even worsened. The pattern of global recovery, based largely on the US economy, makes it more complicated to correct these imbalances. In addition to the large US external deficit, other reasons for caution are high household debt and the sharp deterioration in the levels and prospects of public finances in the major economies (USA, Japan and the euro area).

In the *United States,* GDP growth rose to 3.3% (annualised rate) in Q2. Although the contribution of government expenditure was significant (1.5 pp), other key items like business investment also performed well. Even so, the labour market has yet to recover, with net destruction of 600,000 jobs in the course of 2003. This phenomenon, should it persist, casts some doubt on the sustainability of private consumption. By contrast, the narrowing of the corporate bond differential indicates a reduction in the perception of risk associated with business credit (Chart I.10).

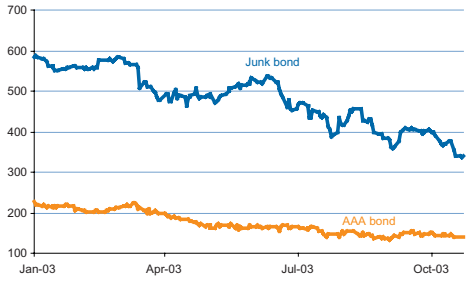
In *Japan,* GDP growth in 2003 Q2 stood at 3% (annualised rate), driven by private investment. Business confidence improved notably, underpinned by the rise in profits and by the gradual recovery abroad. In any event, the prospects for recovery are still fragile insofar as they depend on the global situation, since domestic demand continues to be handicapped by the falls in prices and wages and by the weakness of the financial system, which does not favour credit expansion.

Regarding *Latin America,* the first half of 2003 was marked by a slowdown in activity in the region as a whole, which choked off the incipient economic recovery initiated in 2002 Q2. Thus, after year-on-year growth of 1.6% in 2003 Q1, growth in 2003 Q2 was barely 0.7%. Behind this figure lie major differences among countries.

The recoveries of recent quarters in the two main economies in the region, *Mexico* and *Brazil,* were cut short, particularly abruptly in the latter country. *Chile* and *Colombia,* where the expansion had gained greater momentum, also saw a slowdown in their growth rates towards the end of the half. Only *Argentina, Venezuela* and *Uruguay,* emerging from deep recession, showed an upward growth path at the end of the first half. Excluding them, the region would have had slightly negative year-on-year growth rates.

The recent relaxation of demand policies and the prospects of increased global buoyancy suggest that the recovery seems to be under way, but the indicators made known in the second half do not clarify this question.

Chart I.10. *Interest rate differential between private-sector and Treasury bonds. USA (bp)*



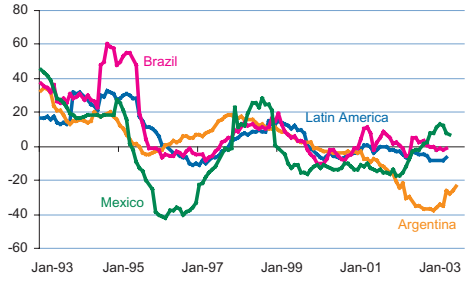
Source: Bloomberg.

Q1 saw an appreciable rise in inflation (15% year-on-year in the area as a whole), induced in certain cases by the cumulative currency depreciations. However, in Q2 prices returned to a moderate path, which left the year-on-year inflation rate at around 10%.

Against this background, *credit* extension by the banking system in real terms stabilised at negative rates of change of around 5% in Latin America as a whole (Chart I.11). In Argentina the sharp fall in credit in 2001 and 2002 eased; even so, negative year-on-year rates exceeding 20% were recorded. In Brazil, credit remained flat, whereas Mexico, after an appreciable surge towards the end of 2002, saw credit growth ease to 7% year-on-year.

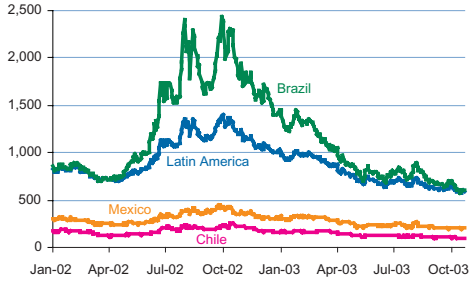
The sharp reduction in the *spread* on sovereign bonds with respect to US bonds was evidence of a notable improvement in international investor sentiment towards Latin America (Chart I.12). Influencing this outcome were, on the one hand, external factors such as the lower global perception of risk against a background of ample liquidity and, on the other, the economic discipline shown by the new governments in Brazil and Colombia, and the IMF support to various countries in difficulty, such as Ecuador, Colombia, the Dominican Republic, Uruguay and, in particular, Argentina.

Chart I.11. *Year-on-year rate of change of real credit to the private sector (%)*



Sources: National statistics and WEFA.

Chart I.12. *Sovereign spreads (bp)*



Source: Bloomberg.

The area spread narrowed to half, i.e. to 650 basis points (bp), from the high in October 2002. The improvment was transmitted relatively evenly, with falls of more than 50% in most countries. The country that benefited most was Brazil, where a reduction exceeding 70% took the spread to the lowest level since January 2000. Chile and Mexico, where the levels were already very low, also recorded minimums.

The rapid narrowing of spreads and their return to the levels prior to 2001 can be interpreted as a restoration of normality following the turmoil of the last few years. Recently the rise of approximately 100 bp in the US bond yield was offset by a fall in sovereign spreads, which means that financing terms in Latin America did not become harsher as a result of the rise in US long-term interest rates (9).

(9) Box I.1 analyses the structure of public debt in Latin America.

Box I.1

Level and composition of public debt in Latin America

The public debt of Latin American economies has grown rapidly in recent years, to relatively high levels if their limited ability to generate funds is taken into account. Owing to their turbulent financial history, these countries have difficulty in borrowing in local currency, at long term and at fixed interest rates, which means that they are excessively exposed to interest rate, exchange rate and refinancing risk. For this reason, another important factor in assessing the vulnerability associated with a given stock of public debt is its composition in terms of maturity, currency, interest rate and degree of indexation.

The gross public debt of the main countries in the region averaged 70.2% of GDP at the end of 2002 (Chart A). Although this figure is distorted by the exceptional case of Argentina (152%), the average without this country is still high (58.5%), due to the weight of Brazil (debt equal to 72.6% of GDP), Colombia (73.3%) and Uruguay (89%). Although this level is similar to that of industrialised countries as a whole (averge of 65% in 2002), the ability to generate funds through taxation is lower in Latin American countries and the cost of debt is notably higher. Moreover, the last five years have seen significant growth in the debt ratio due to currency depreciation, to interest rate rises resulting from the successive financial disturbances and to the continual recognition of contingent liabilities arising mainly from the recapitalisation costs of banking systems in crisis and, in certain cases, from the reform of welfare systems.

Another major difference between Latin American debt and that of industrialised countries is the higher proportion of *foreign debt,* defined as that held by non-residents (52.5% of the total), which is an additional source of vulnerability, given the scant ability to generate foreign currency of many of these countries (due to their low degree of openness) and their dependence on international capital markets, which may be inaccessible to them in times of turmoil. In addition, this debt, generally denominated in foreign currency, calls for appropriate management of exchange rate risk, for which the proper instruments are not always available in the scantly developed financial markets of these countries.

The composition of *domestic public debt* (Table A) is also significant because certain instuments, such as floating rate debt and debt tied to the exchange rate – the latter defined as both foreign currency debt issued domestically and domestic currency debt indexed to the exchange rate – are more sensitive to financial conditions, which are often volatile. Debt indexed to the inflation rate represented, on average, 27.6% of the total, with Chile, Colombia, Mexico and Argentina (1) above the average by a fair margin. Brazil and Uruguay have made notable efforts to raise the weight of this debt, yet it is still low. Most countries have a significant proportion of debt indexed to the exchange rate, although Mexico and Colombia have reduced it to minimal levels. This debt generates problems similar to those of foreign debt, since it increases public sector exposure to exchange rate risk.

Also noteworthy is the high weight of *floating rate debt* in countries such as Brazil and Venezuela, which makes debt and debt service more sensitive to interest rate risk in countries subject to frequent financial disturbances. Finally, mention should be made of the cases of Mexico and Colombia, the domestic debt of which consists predominantly of fixed-rate debt and of inflation-indexed debt, which is the healthiest combination from the standpoint of vulnerability.

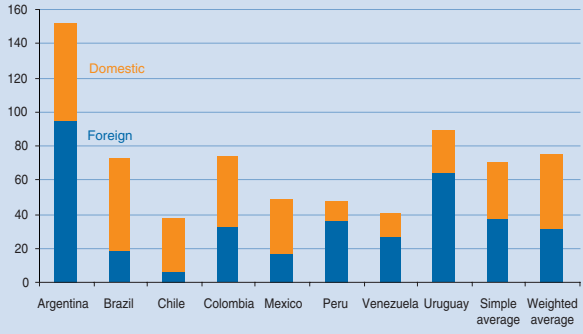
In sum, debt management strategy is a key element in reducing the vulnerability of these economies and should focus on limiting the exposure to interest and exchange rate risk. Inflation-indexed debt and particularly fixed-rate debt allow more predictable and stable financial management. Although agents tend to be reluctant to invest in this type of debt because it carries more risk, it seems advisable to look for mechanisms to heighten savers' interest in these instruments. A key factor in enhancing their appeal is a stable economic and financial environment, which mitigates the perception

(1) In Argentina the inflation-indexed debt rose from a zero weight to a 68.7% weight due to the pesoification of a considerable part of the domestic debt and its subsequent indexation to inflation following the 2001-2002 crisis.

Box I.1 (cont'd)

of risk by agents. In this connection, tight fiscal discipline is positive for debt behaviour, not only because it reduces the borrowing requirement, but also because it helps to ensure a stable environment conducive to the use of less costly financing instruments and therefore to improved debt management.

Chart A. *Gross public debt in Latin America. December 2002 (% of GDP)*



Sources: Ministries of Economy and Finance of each country, IMF and in-house.
Note: The data refer to the broadest definition of the public sector available for each country.

Table A. *Composition of Latin American domestic debt. December 2002 (% of total domestic debt)* (a)

	Argentina	Brasil	Chile	Colombia	Méjico	Perú	Venezuela	Uruguay	Promedio (e)
Inflation-indexed debt (b)	68.7	11.4	44.4	45	43.1	0	0	7.9	27.6
Exchange rate-linked debt (c)	25.1	33.6	28.9	4	0	39.3	6.8	87.5	28.2
Other	6.2	55	26.7	51	56.9	60.7	93.2	4.6	44.3
* Floating rate (d)	nd	41.9	22.9	9	11.1	6.4	78.4	nd	28.3
* Fixed-rate and other	nd	3.1	3.8	42	45.8	54.3	14.8	nd	27.3

Sources: Ministries of Economy and Finance of each country, IMF and in-house.
(a) In the cases of Brazil, Mexico and Uruguay the domestic debt analysed comprises government securities; in the other cases it is defined more broadly to include bank loans and other sources of financing.
(b) Includes domestic debt the principal or interest of which is in some way tied to the inflation rate.
(c) Includes domestic debt that is denominated in a foreign currency or the principal or interest of which is tied to an exchange rate.
(d) Depending on the country, includes floating-rate debt or debt the yield of which is tied to a reference interest rate.
(e) Unweighted simple average.

I.2.2. Impact of institutions' credit policy

Credit growth

The high growth rates of housing credit and of credit to construction and property development in the last few years (Chart I.2) have led to a progressive increase, more marked since mid-1999, in the relative weight of this type of financing in credit to the resident private sector (Chart I.13). In June 2003, it accounted for slightly less than two-thirds of credit growth, with the two business segments making nearly equal contributions.

Chart I.14 shows that the high growth rate of credit to construction and property development, rather than being concentrated in a small number of institutions, is a general process. A not insignificant percentage of institutions, with a notable relative weight, posted very high rates of increase which call for a rigorous credit screening policy.

The previous business cycle saw an expansion of credit to the real estate sector which, with the onset of recession in 1993, gave way to a much faster rise in the default rate than in the other business segments, in which lending had grown much more moderately (Charts I.15 and I.16).

Chart I.13. *Percentage structure (left) and contribution to the growth of credit to the resident private sector (right) (% and pp). Banks and savings banks*

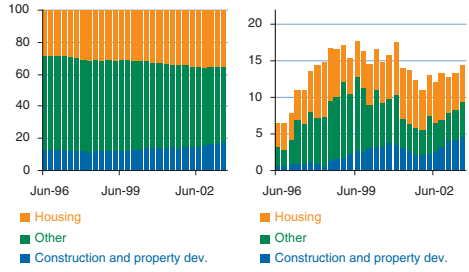
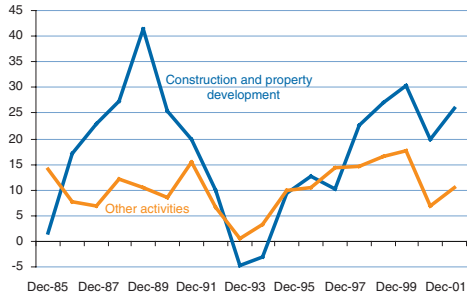


Chart I.15. *Year-on-year rate of change in corporate credit (%). Deposit institutions*



Asset securitisation

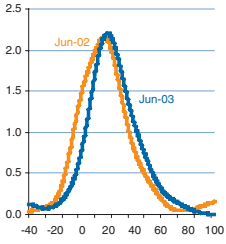
The total assets securitised by Spanish deposit institutions continued to increase in the first half of 2003, although the more moderate rates meant that their relative weight in credit ceased to rise (Chart I.17). The search for liquidity with which to finance the strong credit expansion, as well as the management of capital, are the main forces impelling securitisation.

If the impact of securitisation on the outstanding credit balance is neutralised, it can be seen that the credit portfolio would be growing at 15.5% year-on-year in June 2003 (up 1.1 pp), while if the amount of securitised mortgage assets is added to mortgage loans, the growth rate increases by 1.2 pp to 22.5%.

In the last twelve months Spanish institutions have substantially stepped up their fund raising via the issuance of mortgage certificates or *cédulas hipotecarias* (their amount has more than doubled since June 2002). Although this is not strictly securitisation (the assets remain on the balance sheet and liabilities increase by the amount of the certificates issued) and it does not free up any capital, it does provide liquidity through the issuance of securities linked to the mortgage credit portfolio. The cost of the financing obtained and the investor demand largely explain this behaviour.

Chart I.14. *Distribution of rate of change of credit to construction and property development by bracket (left) and density function (a) (right) of credit to the resident private sector. Deposit institutions*

Variation brackets	% tot. credit.	No. of inst.
No activity	0.7	50
<= 0	8.3	53
0 - 10	6.4	25
10 - 20	37.1	42
20 - 30	12.8	23
30 - 40	14.6	21
40 - 50	10.2	16
> 50	9.9	42



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

Risk profile of the credit portfolio

The risk profile of the credit portfolio (obtained by the standard method for calculation of the statistical provision) has decreased over the last three years (Chart I.18), in line with the higher relative weight of mortgage transactions. However, it is possible that transaction quality (probability of default) has trended differently, although no information is available in this respect.

Chart I.16. *Doubtful asset ratios for corporate credit (%). Deposit institutions*

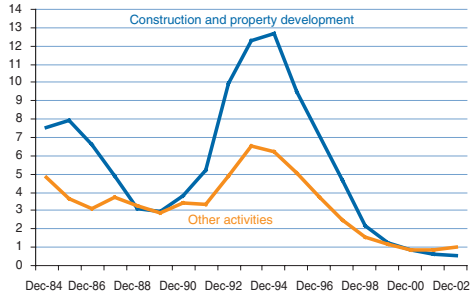
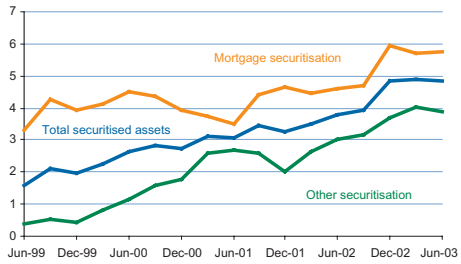


Chart I.17. *Relative weight of securitised assets in credit portfolio (%). Deposit institutions*



Box I.2 shows a possible way of monitoring more closely the quality of institutions' credit portfolios. In this connection, Basel II is a stimulus not only for institutions to develop their own credit risk models, but also for supervisors to do the same, particularly those that, as in Spain, have detailed credit default information through the Central Credit Register (CCR).

Doubtful assets

The practical absence of change in deposit institutions' doubtful assets at individual level, along with the strong credit growth, resulted in an additional decrease in the already low doubtful asset ratios in the first half of 2003. The doubtful assets ratios of banks and savings banks barely differed (Chart I.19).

In line with the lower default rates mentioned above, the distribution of doubtful assets ratios improved with respect to June 2002 (Chart I.20). Although a considerable number of institutions have doubtful assets ratios that are twice the average, their very

Chart I.18. *Changes in risk profile (%)*

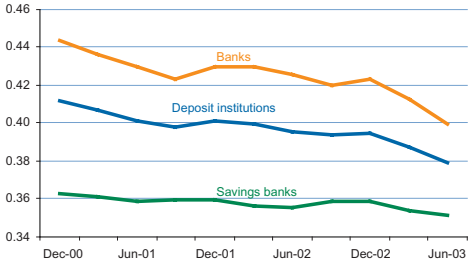
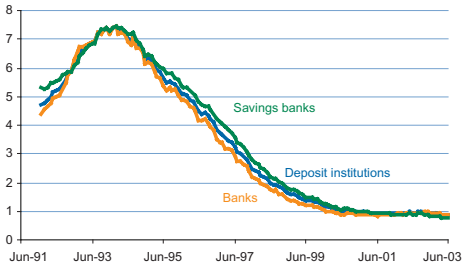


Chart I.19. *Doubtful assets ratio of the resident private sector (%)*



small size means that, in all, they represent less than 2% of the total credit portfolio.

I.3. Liquidity risk

Markets

Since the previous FSR, the liquidity conditions on Spanish markets have been generally positive. Such conditions on *stock exchanges,* measured in terms of the weighted average range of the market as a whole, gradually recovered from 2003 Q2 onwards. Specifically, the average contraction of this differential for the three firms with the largest market capitalisation on the Spanish stock market was nearly 14%. The correlation of this with the rise in the volume of shares traded on the stock market since July seems to confirm that the deterioration in liquidity conditions noted in previous reports was partly circumstantial.

The *government debt market* spreads between bid and ask prices continued to fluctuate around 4 bp for ten-year bonds and around 3 bp for three-year bonds. On the information available up to 2003 Q3, the central government debt trading volumes, measured as daily averages, were similar to those in 2002. Regarding primary market liquidity, significantly the favourable trend of State revenue prompted the announcement in September to cut the gross issue volume planned for 2003 by €8.7 billion.

On the *AIAF market,* cumulative trading until September was up by more than 33%

Box I.2

How the probability of default is affected by certain characteristics of loans, lenders and the economic environment

Pillar 1 of the New Capital Accord provides that, for the determination of capital requirements, institutions can develop their own internal models for calculating the *probability of default (PD)* associated with a borrower. The supervisor must examine and, if appropriate, validate these models. Extremely useful for this purpose is the supervisor's own experience acquired in developing its own models to determine PD based on available information.

In this respect, it may be of interest to measure how the PD is affected by certain characteristics of credit transactions and of lenders, while controlling for the economic environment (cycle, sector of activity and region in which the borrower operates). This analysis complements that conducted at borrower level (1) because the transaction-by-transaction analysis does not involve the loss of information that, however, does disappear when aggregating at borrower level (e.g. existence or not of guarantees, term, type of instrument, currency and type of lender).

By means of regression analysis *(logit* model) using data on more than three million *corporate loans* from the Central Credit Register (CCR) covering a full cycle of the Spanish economy (1988 to 2000), it is possible to simulate how the PD is affected by changes in the characteristics of transactions, of the lender or of the economic environment (2). It is also possible to distinguish between various alternative hypotheses described in the theoretical literature (regarding the role of guarantees, the type of lender and the lender-borrower relationship). A novel aspect of this analysis is that it is conducted using an *ex post* measure of risk, unlike the *ex ante* variables to date in the empirical literature.

Table A shows the main results (3). Loans extended by *savings banks* have a PD that is 0.6 pp higher than that of bank loans. This difference can be explained by the lesser historical specialisation of savings banks in corporate lending and their aggressive entry into this business segment in the late 1980s and early 1990s. A certain unfamiliarity with the corporate credit market, along with a desire to rapidly build market share, contributed to the occurrence of adverse selection. A larger *number of banks doing business with the borrower* reduces the PD, perhaps because it evidences a lesser role of relationship banking and closer screening of transactions by lenders. The PD increases with *loan size,* whereas *borrower size* is negatively related to it. The existence of *collateral* in loans is an *ex post* sign of risk, i.e. a 100% secured loan has a PD that is 1.2 pp higher than an unsecured loan. Apparently lenders classify borrowers by the quality observed and those of lesser quality have to provide collateral as a condition for receiving the loan. Other guarantees (from other banks or from the public sector) scarcely influence the PD. Regarding *term,* shorter-term loans have a higher PD than longer-term loans, which could be evidence that banks are more selective in assuming credit risk when the transaction term is longer. Much the same happens in *foreign currency* loans. Also, the *cyclical profile of credit risk* is clearly observable, the PD being much higher in 1993 than in the other years analysed.

Table A. *Marginal effect in percentage points on the probability of default (PD)*

Variable	Marginal effect	Variable	Marginal effect
Savings banks	0.60	Term <1 year	1.10
Co-operatives	0.05	Term 1 to 5 years	0.27
Specialised credit institutions	0.76	Currencies other than the euro	–2.13
Number of banks doing business with the borrower	–0.05	1987	–2.55
Loan size (€m)	0.04	1990	–2.46
Net borrower size (€m)	–0.87	1997	–2.14
100% secured	1.20	2000	–3.28
Partially secured (>50%)	1.90		
Other guarantees	0.01		

Note: Marginal effect on the PD of an unsecured euro-denominated financial loan from a bank in 1993 with a term exceeding five years, i.e. the difference between the PD estimated for the reference group at the average values of the continuous variables when the loan has that characteristic and the PD when the loan does not have that characteristic. For continuous variables, the derivative thereof.

(1) See Trucharte, C. and A. Marcelo (2002): "Un sistema de clasificación *(rating)* de acreditados", *Estabilidad financiera,* n.º 2, marzo, pp. 93-115.

(2) For the analysis methodology, information characteristics and robustness of results, see the paper by G. Jiménez and J. Saurina entitled "Collateral, type of lender and relationship banking as determinants of credit risk", forthcoming in the *Journal of Banking and Finance.*

(3) Results by type of instrument, sector of activity and region are not shown, although these variables have been included in the regression.

Chart I.20. *Breakdown of the resident private sector doubtful assets ratio into brackets (left) and credit density function (right). Deposit institutions*

Brackets doubtful r.	% cred.	No. of inst.
0	1.4	53
0.0 - 0.5	21.9	45
0.5 - 1.0	59.9	62
1.0 - 1.5	10.4	40
1.5 - 2.0	4.6	24
2.0 - 2.5	0.4	9
> 2.5	1.5	39

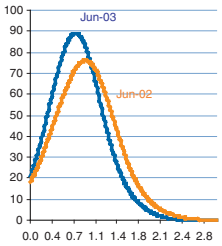
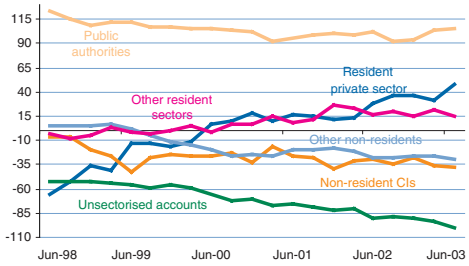


Chart I.21. *Net balances. Total business (€ bn). Banks and savings banks*



with respect to the same period of 2002. Looking at the various instruments, promissory notes, particularly those of finance companies, showed notable buoyancy in terms of trading volume, as is natural given their short original term. Also striking was the growth up to September of trading in corporate bonds and mortgage certificates (102% overall) and in securitisation bonds (85%).

An appropriate market infrastructure is a factor contributing to increased liquidity. Box I.3 examines the recent establishment of the Central Counterparty Entity on the Spanish financial market.

Institutions

The net debit balance with the resident private sector continued to grow in the first half of 2003 (Chart I.21). As mentioned in the previous FSR, traditionally this balance has been financed through unsectorised accounts (own funds and special provision funds), by recourse to the non-resident sector and via lesser net financing to general government. In the first half of 2003, the first two of these sustained the increase in net financing granted to the resident private sector (10).

Financing extended to non-residents comes mainly from credit institutions (57% in June 2003), the remainder being attributable to other non-resident sectors consisting mainly of bank subsidiaries other than credit institutions domiciled in offshore centres whose funds come from the issuance of debt securities, subordinated debt and preference shares (11).

As regards financing that comes from non-resident credit institutions, 75% is received by the branches of foreign banks operating in Spain. These institutions have taken advantage of the euro area's single interbank market to replace financing from resident institutions by that from non-residents, possibly their own parent companies. 91% of financing received from non-resident credit institutions is denominated in euro, which bears out the foregoing comment.

The funds from other non-resident sectors are received mainly by Spanish banks. Although predominantly in euro (63% of the total balance), they are also denominated in US dollars and pounds sterling.

Savings banks are stepping up their net financing from other non-resident sectors, although the balance is substantially lower than that of banks (about a quarter).

Maintaining a growing net debit balance with the resident private sector requires a sustained increase in institutions' own funds, a reduction of the financing extended to credit insti-

(10) The analysis refers to total business (business in Spain plus Spanish banks' branches abroad). Examination of the net balances of business in Spain leads to very similar conclusions although the amounts are higher.

(11) To the extent that these securities may finally be placed with resident customers, the financing extended to non-residents and the net balance of the resident private sector are overvalued.

Box I.3

Central Counterparty for Spanish markets

On 23 July 2003 the Ministry of Economy authorised MEFF Renta Fija to provide central counterparty services to markets other than the organised derivatives markets already being served by it. Initially these new services will be provided to public debt repo and spot markets. On 18 September 2003 *Meffclear,* the trademark under which the central counterparty services will be provided, commenced operating. Meffclear's potential competitors or collaborators in Europe are LCH (1), Clearnet and Eurex Clearing.

The establishment of Meffclear is a notable contribution to the basic infrastructure of the Spanish markets. The main objective of a central counterparty is to reduce as much as possible the counterparty risk in trading. In practice this is achieved by interposing between the two contracting parties an entity that has high solvency and risk management capability, which can thus act as purchaser vis-à-vis the seller or as seller vis-à-vis the purchaser.

The basis for the robustness of any central counterparty lies in an exacting selection of members, an appropriate incentive scheme in relation to customer accounts and a safe risk management scheme. Regarding the latter requirement, Meffclear has a real-time risk control system that can monitor compliance with strict risk limits for each customer's or Meffclear member's account. From the standpoint of incentives, it should be pointed out that the calculation and provision of guarantees to cover these exposures is based on the modus operandi of each account, i.e. without permitting any offset between own and customer accounts or between the customer accounts of any one Meffclear member. In this respect, Meffclear differs from other central counterparties. The members have joint and several liability to Meffclear for customer risk. Finally, the criteria for selecting Meffclear members give priority to the requirement for solvency (€100 m of own funds) (2).

The introduction of Meffclear lends legal and institutional solidity to processes which, while typical of central counterparties, already existed in the wholesale public debt trading segment, such as daily profit and loss settlement until the transaction is effectively recorded. The greater confidence in trading security will enable the removal of any possible trading bottlenecks that may have been produced by the control of the bilateral lines of credit between institutions and outside which they are not willing to transact. However, the saving in terms of consumption of own funds will foreseeably be low or non-existent for institutions making use of central counterparty services if the bulk of the services provided relates to public debt trading.

Another interesting aspect of Meffclear is that its introduction is neutral for the public debt settlement procedures applied, as follows: Meffclear members and customers do not perceive any significant change in the post-trading processes managed by Iberclear. In economic terms this neutrality signifies task-splitting and specialisation in the management of transaction risk: settlement risk is allocated to Iberclear and counterparty risk to Meffclear. The viability of this specialisation derives from the close co-ordination between the central counterparty and the settlement system, unlike what occurs in other central counterparties.

(1) Acronym of *London Clearing House.* LCH and Clearnet are finalising the measures required for their merger.

(2) In the initial intake of members until the end of 2003, Meffclear estimates that some 45 members (27 Spanish and 18 foreign) may be admitted.

tutions and general government (normally involving lower credit risk) or an increase in indebtedness to the non-resident sector (facilitated by the introduction of the euro). These options pose differing levels of risk and cost and present the institutions with different implicit requirements to be met in order to gain continuous access to the markets.

I.4. Market risk

Markets

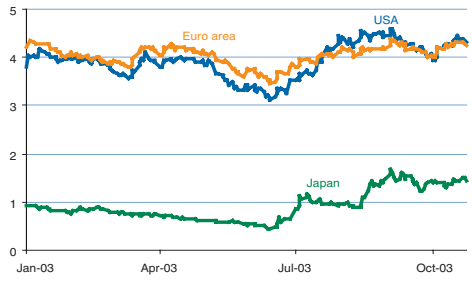
In the first half of 2003, the US *dollar* depreciated sharply, particularly against the *euro,* which thus recorded a high in early June (Chart I.22). This movement was associated with a worsening of the US external and budget deficit, and the Federal Reserve made it known that it might respond with additional cuts in official interest rates to guard against the possibility of deflation, which, although remote, would have serious consequences if it eventuated.

Subsequently, once the economic data started to point to a more positive setting for global economic recovery, the dollar's tendency to depreciate ceased and it recovered some of the value it had lost. This movement coincided with the evaporation

Chart I.22. *Dollar/euro exchange rate*

Source: DataStream.

Chart I.23. *Ten-year bond rate (%)*



Source: Bloomberg.

of market expectations of a declining trend in official interest rates, evidenced by the return of a steep positive slope to the money market yield curve, with a sudden notable rise in *long-term rates* to levels above those in the euro area.

Finally, the course of the exchange rate was also affected by the statement that more flexible exchange rates in the main countries or areas would be advisable, made in a communication by the G-7 following the IMF meeting in Dubai in mid-September. In response to this communication, the dollar reversed its previous gradually appreciating trend and weakened rapidly, particularly against the Japanese yen, triggering exchange rate intervention by the Japanese authorities.

The rise in interest rates on debt (Chart I.23) came when they were at minimal levels. This caused some tension in the markets because debt prices are more sensitive to changes in interest rates when these are particularly low and because of the hedge transactions in the US mortgage market. On this occasion, the interest rate rise did not lead to a broadening of corporate bond spreads, which, as mentioned above, narrowed (Chart I.10).

In any event, the outlook for the US dollar exchange rate continues to be uncertain since, on the one hand, the US economy has shown high productivity gains which favour the appreciation of the dollar, but, on the other, the larger external deficit acts in the opposite direction.

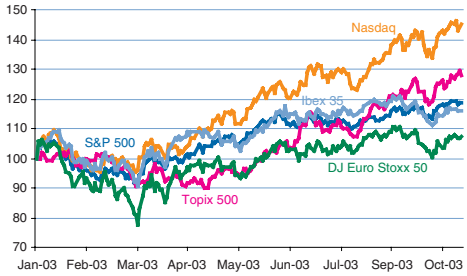
Meanwhile, the *equity markets* put in a positive performance as regards both the market price rally (Chart I.24) and the reduction of volatility. Initially, price gains were induced by the ample liquidity resulting from accommodative monetary policies. Subsequently, the expectations of recovery and the positive data on corporate earnings, especially those associated with the technology and communications sector, also spurred an upward movement, which broke the declining trend of the previous three years.

The rise in Spanish share prices outstripped that in Europe, being near that observed in the US. Thus at the beginning of October 2003 the IBEX 35 stood 11% above its level in December 2002, while the S&P 500 and DJ Euro Stoxx 50 indices had recovered 13.2% and 0.4%, respectively, of their value in the same period. By sector, the most marked rise was in new technologies and telecommunications, with cumulative gains at that same date of 35.5% and 22.9%, respectively, in the case of Spanish firms, and of 14.1% and 9.5% in European firms.

The recovery in stock market prices led to a slight rise in PERs (ratio of price to average earnings per share) which, however, remained close to their average values (Chart I.25).

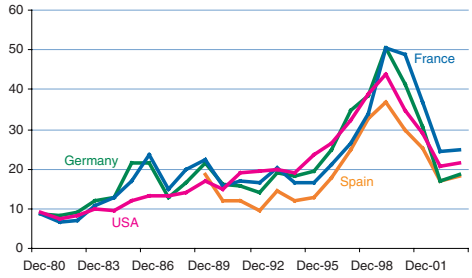
There has been a substantial correction in the very high (positive) correlation between the movements in long-term interest rates and in the stock market. The correction has

Chart I.24. *Stock market indices. 1 January 2003 = 100*



Sources: DataStream and in-house.

Chart I.25. *PERs* (a)



Sources: Morgan Stanley and in-house.

(a) Calculated as the moving average of profits over the past 10 years expressed in constant monetary units using consumer price indices. The last data item relates to August 2003, calculated using the moving average of profit in July.

re-established behaviour more in line with the historical average of this correlation.

The *Latin American stock markets* rallied notably, particularly from the end of Q1, with sharp rises in Argentina, Brazil and Chile (more than 40%) and more moderate gains in Mexico (15%). This performance brought an additional correction in the region's stock markets with respect to international bourses, but contrasted with the weak economic growth of most countries in the area.

Most *Latin American currencies* followed a steady course against the dollar, with the principal exceptions of the Brazilian real and the Argentine peso, which appreciated notably with respect to the levels at end-2002 (20% and 14%, respectively). The Chilean peso also tended to appreciate, particularly from the end of August, strengthening about 11% compared with the beginning of the year. Thus the depreciating trend of Latin American currencies against the dollar seems to have been broken. By contrast, the Mexican peso showed marked volatility during the half, finally depreciating by around 7%.

Meanwhile, the recovery of *capital flows* to the region allowed sovereign issuers to return to markets on financing terms similar to those prevailing in the first half of 2002, after having their access restricted for some months. Thus in the first half of 2003, sovereign debt issues exceeded USD 14 bn, more than 40% higher than in the first half of 2002.

The main protagonist in the primary market was Mexico, not only because of the amount of its issues (USD 6.3 bn), but also because of their significance, since in February Mexican bonds started to include collective action clauses (CACs) which enable the borrower to restructure debt, as the unanimous consent of creditors is not required. Subsequently, Brazil and Uruguay also launched issues including CACs. In no case was there a significant additional risk premium in issues with CACs.

The issuance of corporate bonds in the first half of 2003 exceeded that in the whole of 2002. However, bank and syndicated loans continued to decline. A particularly notable aspect of capital flows recently is the declining trend of foreign direct investment in the region: from more than USD 70 bn yearly (gross) at the beginning of the 1990s to barely USD 32 bn in the twelve months up to March 2003.

Institutions

Market risk or price risk is defined as the possibility of loss on market positions as a result of adverse movements in market prices. This is the typical risk of treasury or trading operations. The standard measure used by institutions to quantify it is value at risk (VaR). VaR is defined as the maximum potential loss in market value that can be incurred in a portfolio under normal market

conditions over a given time horizon for a certain confidence level.

Generally the risk arising from treasury operations, although it has grown in importance in recent years, is relatively low in most institutions. Nevertheless, in some of them, while not going so far as to pose serious solvency problems, it could have major negative effects on earnings. For this reason, institutions engaging in these activities are required to meet certain standards of good organisation and to have appropriate internal control procedures, and minimum capital requirements are established for coverage of the associated risk.

To calculate the minimum level of own funds to cover market risk on the trading book, Banco de España Circular 5/1993 establishes a standard method based on applying fixed coefficients to different financial instrument categories. The main limitations of this system are that the coefficients are static, i.e. they do not vary according to market conditions, and that it does not properly reflect the effect of risk diversification. To overcome these problems, Banco de España Circular 3/2003 recently permitted institutions to optionally use their internal VaR models to calculate the capital requirements to cover market risk on the trading book, on exchange rates and on commodity and gold positions.

Although the information regularly reported to the Banco de España by institutions to date is based on the standard method, it allows an approximation of the relative weight of this risk. Thus in June 2003 the requirement for market risk on the trading book of all credit institutions represented around 3% of total regulatory minimum capital. That said, the institutions vary widely, to the extent that in marginal cases this requirement represents practically half of the total requirement (Table I.2). In absolute terms, three institutions alone account for approximately 80% of the requirement arising from this risk.

Table I.2. *Distribution of relative weight of capital requirements to cover market risk. June 2003. Deposit institutions*

Requirements brackets	% of ATM	% of institutions
0	12.5	75.3
0 - 1	26.1	12.9
1 - 3	8.9	6.7
3 - 5	31.3	2.2
5 - 10	20.2	1.1
>10	1	1.7

Finally, regarding the VaR information on market risk level used by institutions for management purposes and summarised in their annual reports, it should be noted that these VaR models estimate lower capital requirements than the standard method. These estimates, however, are not directly comparable because the institutions normally use an internal definition of trading book that differs from that established in Banco de España Circular 5/1993. To mitigate this problem in the event that in the future the institutions should opt to use internal models to calculate their capital requirements for market risk, Banco de España Circular 3/2003 has changed the definition of regulatory trading book to approximate it to that used by institutions for management purposes.

CHAPTER II
Profitability

II.1. General situation

In June 2003, the profitability of Spanish deposit institutions increased once more following the moderate decline in 2002. The rise was against a background characterised by both a slight pick-up in economic growth in Spain, in contrast to the flatness in the main euro area economies, and the rally on stock markets. The interest rate cuts in the first half of 2003 by the European Central Bank (ECB) have exerted downward pressure on institutions' margins, in a fiercely competitive context. Further, the appreciation of the euro against most Latin American currencies over the past twelve months has continued to bear adversely on deposit institutions' earnings.

Attributable *net income* at the group level grew at a rate of 9.3% in relation to the first half of 2002 (1) (Table II.1) (2), apparently marking the start of the recovery in income following the declines recorded in the past three half-year periods (Chart II.1). This increase in income in absolute terms entailed, moreover, a rise of 6 bp in terms of ATA to 0.83%. However, margins have fallen in both absolute and relative terms.

Table II.1. *Consolidated profit and loss account of deposit institutions (€m and % ATA)*

	Jun-02		Jun-03		
	% ATA	Change J.02-J.01	Amount	% ATA	Change J.03-J.02
Financial revenue	5.58	–15.3	32,838	4.69	–14.7
Financial costs	2.88	–28.0	15,780	2.26	–20.7
Net interest income	**2.70**	**4.2**	**17,059**	**2.44**	**–8.4**
Net commissions	0.98	–1.6	6,495	0.93	–4.2
Result on financial transactions	0.10	–14.6	1,182	0.17	63.3
Gross income	**3.79**	**2.0**	**24,735**	**3.54**	**–5.3**
Operating expenses	2.22	–2.7	14,262	2.04	–6.7
Net operating income	**1.57**	**9.4**	**10,473**	**1.50**	**–3.3**
Provisions and write-downs (net)	0.62	15.4	3,427	0.49	–19.9
Profits from group transactions	0.15	143.8	337	0.05	–66.7
Extraordinary income (net)	0.07	–78.9	1,236	0.18	138.2
Profit before tax	**1.17**	**–10.8**	**8,619**	**1.23**	**6.7**
Net income	0.92	–9.2	6,707	0.96	6.2
Memorandum item:					
Group net income	0.77	–6.7	5,814	0.83	9.3
ATA	100	3.5	1,399,361	100	1.4

The ROE (3) of deposit institutions as a whole improved by 1.1 pp, compared with June 2002, to 14%. Taken with the decline in Spanish 10-year government bonds, this has widened the spread between both returns to 10.3 pp.

Net interest income posted a marked fall, both in absolute terms and as a proportion of ATA, in contrast to the increase the previous year. This decline reflects the narrowing of the spread between the return on assets and the cost of liabilities (total spread) against a background of interest rate cuts, as well as the exchange rate effect, which also affects activity.

(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 accounts for analytical purposes in this chapter differs to some extent, in certain groupings of headings, from the public profit and loss account. The percentages of average total assets (ATA) are annualised, but not the absolute values (for the year to June).

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

Chart II.1. *Year-on-year rate of change in attributable net income at the group level (%). Deposit institutions*

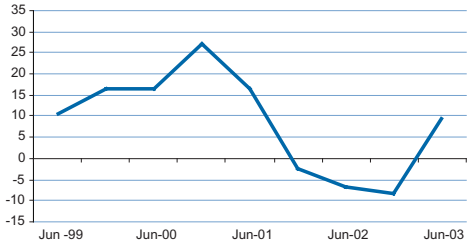
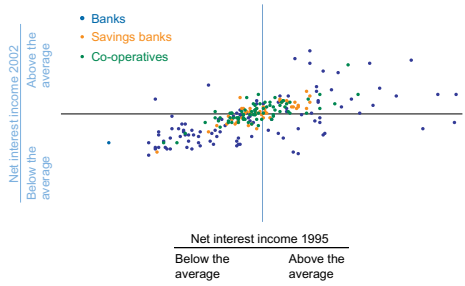


Chart II.2. *Net interest income margin (% of ATA). Deviations from the annual average: 1995 compared with 2002.Deposit institutions*



As already seen in Chapter I (Chart I.5), the breakdown of the total spread for business in Spain into one for assets, the other for liabilities, illustrates the impact of the successive reductions in interest rates. In particular, in June 2003, following more than two years of interest rates cuts, the average cost of financing was very close to the interbank rate. Meanwhile, the asset-side spread has increased mildly in recent years, which have been marked by a slowdown in economic growth and, therefore, by higher risk being associated with lending.

The trend of net interest income and, more specifically, of the liabilities-side spread, poses significant challenges to institutions in terms both of profitability and of fund-raising to finance lending activity. The provision of higher value added customer services and product differentiation, with strict cost control always a constant, are some of the possible responses.

Despite the trend decline in net interest income in terms of ATA, the Spanish institutions with the biggest margins in 1995 have generally retained this position, albeit – logically – showing lower values (Chart II.2).

Adding to the decline in net interest income is the deterioration in commission income, in both absolute and relative terms. That has given rise to a reduction in *gross income,* despite the significant recovery in the result on financial transactions (7 bp) following the decline in recent periods.

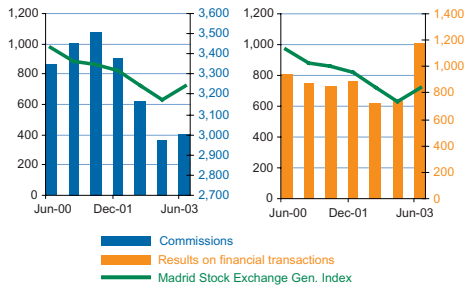
The year-on-year decline in *commissions* is due to the falls in those linked to collection and payment services (3 bp), securities services (2 bp) and the marketing of non-bank products (1 bp). However, the latter two types of commission, which are fairly closely tied to stock market developments, have increased slightly over the past six months, following cumulative falls over the previous three half-year periods (Chart II.3).

The pick-up on stock markets in 2003 has also been conducive to a strong increase in the *result on financial transactions.* Underpinning these were substantial trading book profits (18 bp), countering prior years' losses, and, to a lesser extent, higher profits on the available-for-sale fixed-income portfolio (3 bp). Conversely, income on futures transactions and exchange differences deteriorated compared with the first half of 2002 (by 8 bp and 4 bp, respectively).

Net operating income fell by 3.3%, a decline of 7 bp in terms of ATA. This contrasted with the growth of recent years and came about despite the decline in *operating expenses,* in both absolute (6.7%) and relative (18 bp) terms. This drive to contain operating expenses was predominantly at banks, especially the major banks where, nevertheless, international comparisons were affected by the exchange rate effect which, in this case, bore favourably on the profit and loss account.

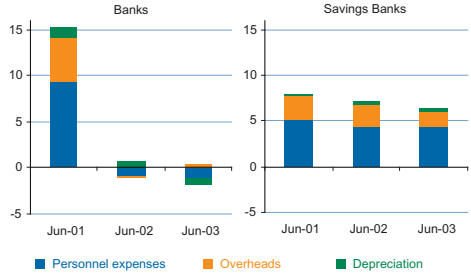
Analysis of operating expenses for business in Spain (undistorted by the exchange rate effect) shows a very significant contrast between banks and savings banks (Chart II.4).

Chart II.3. *Net commission income on marketing of non-bank products and on securities services (left-hand) and result on financial transactions (right-hand). €m*



Sources: Madrid Stock Exchange and in-house.

Chart II.4. *Year-on-year rate of change of operating expenses and contribution of their components (% and pp). Spain-based business*



Banks are making a notable effort to contain all costs, largely as a result of restructuring in the wake of mergers of major banks, while savings banks have only slowed the growth of their costs slightly in the past three years. Operating expenses at savings banks, particularly personnel costs, are outgrowing inflation, although they are below the growth rate of total assets (4).

The bigger decline in operating expenses relative to gross income made for a improvement in the *efficiency ratio* (percentage of gross income absorbed by operating expenses), which rose from 58.6% in June 2002 to 57.7% in June 2003. This ratio remains significantly lower at banks (55.8%) than at savings banks (60.6%).

Provisions and write-downs fell considerably with respect to June 2002 owing, above all, to the heavy reduction in net provisions to other specific funds (13 bp). Moreover, bad debt provisioning to cover credit risks diminished substantially, since the strong decline in the growth rate of doubtful assets in Spain translated into a far lower specific provision than in the first half of 2002 (13 bp). Nonetheless, this was largely offset by opposite movements in the general provisions (3 bp), in step with the higher growth of credit, and in the statistical provision (6 bp) which, given the way it is designed, moves in the opposite direction to the specific provisions.

Provisions to the security price fluctuation fund, movements which are closely and inversely related to stock market trends, were far lower than over the past twelve months, in line with the pick-up on international bourses in 2003 (Chart II.5).

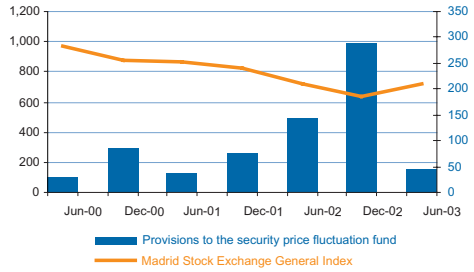
Net income on *group operations* was lower than in the first half of 2002 (10 bp), owing to the sizable provisions for the amortisation of goodwill (up 10 bp), which were centred on the two biggest banking groups. Higher (net) income for disposals of holdings in the group was offset by the lower income of companies valued by the equity method. Profits from holdings in the income of companies valued by the equity method were slightly down on the first half of 2002, although they improved in relation to the second half, in keeping with the more favourable trend of corporate earnings in recent months.

Net extraordinary income was far higher than the previous year, owing both to the increase in profits and to lower losses.

In sum, in the first half of 2003 a recovery in the profitability of Spanish deposit institutions began to be discernible. The pick-up was based on a reduction in operating expenses and in provisions and write-downs, against the backdrop of the substantially moderating growth of doubtful assets and the recovery of stock markets. However, the

(4) It should be borne in mind that the total number of savings-bank employees, as opposed to those at banks, continued to increase.

Chart II.5. *Provisions to the security price fluctuation fund (right-hand) (€m) and stock market index (left-hand). Deposit institutions*



Sources: Bolsa de Madrid and in-house.

main margins have declined, in both absolute terms and as a proportion of ATA.

The environment of low interest rates and stiff competition pushes institutions to accelerate their lending activity. The medium-term profitability of Spanish institutions will depend on their capacity to integrate growing activity and risk control. And they must further increase efficiency through ongoing pressure on operating expenses.

II.2. Analysis based on individual institutions

The comparison of the distribution of institutions according to their *ROE* in June 2003 with that in June the previous year highlights an increase in the concentration of institutions in the intermediate distribution brackets, to the detriment of the relative weight of the most and least profitable institutions. Therefore, the aggregate increase in ROE is accompanied by greater homogeneity in institutions' profitability. Moreover, the distribution of ATA by ROE bracket shifted towards the higher ROE brackets. Table II.2 shows that the biggest institutions (greater relative weight of ATA) obtain a higher return, in excess of 10%.

The distribution of institutions according to their *efficiency ratio* did not change considerably from that of the first half of 2002. However, there was an improvement in the breakdown of ATA by efficiency ratio bracket, as reflected in the increased efficiency of certain large institutions (Table II.3).

Table II.2. *Breakdown of profitability by bracket. June 2003. Deposit institutions*

ROE brackets	% ATA	No. of institutions
<0	0.3	7
0 - 5	2.6	20
5 - 10	8.1	75
10 - 15	42.1	51
15 - 20	43.6	19
>20	3.3	2

Box II.1 offers a more detailed analysis of credit co-operatives, the group of credit institutions which is most numerous and which has a modest though growing weight in the Spanish banking market.

Comparison with European banks

There was a substantial slowdown in economic activity in the European Union (EU) throughout 2002 (GDP growth of 1% compared with 1.6% in 2001 and 3.5% in 2000). At the same time, the stock markets continued to fall (the DJ Stoxx 50 index fell by 35% last year).

Consequently, the situation facing European banks was not straightforward. The difficulties undergone by many institutions, along with the slackness of capital markets, exerted downward pressure on institutions' earnings, particularly in investment banking and asset management. Conversely, retail banking contributed positively to shoring up profitability.

Table II.3. *Breakdown of the efficiency ratio by bracket. June 2003*

Efficiency ratio brackets	% ATA	No. of institutions
>100	0.4	9
90 - 100	0.6	4
80 - 90	1.4	8
70 - 80	2.4	24
60 - 70	20.9	58
50 - 60	69.7	51
40 - 50	1.3	13
<40	3.3	7

Box II.1

Credit co-operatives

Credit co-operatives are private entities whose corporate purpose is to meet, through activities proper to credit institutions, the financial needs of their members and of third parties, although overall lending operations with the latter must be less than 50% of their total funds. Following the crisis and restructuring of the sector in the 1980s, there are 84 credit co-operatives (78 rural and 6 non-rural) at present. Rural co-operatives can be classified by their geographical location as local, provincial, regional or national. Most are grouped under the Asociación Española de Cajas Rurales (the national association for these institutions) and its central operational structures: Banco Cooperativo Español, Rural de Servicios Informáticos (IT arm) and Seguros RGA (insurance).

Credit co-operatives have traditionally been small, with a scant presence outside their home province and activity concentrated significantly in the sector in which they were created. This remains the case for most co-operatives. But at the same time, there has been an expansion by certain entities towards both non-traditional activities and new territories, a development driven, in some cases, by recent mergers. One of the consequences of this has been the *reduction in fragmentation* since 1999 (Chart A).

Taking co-operatives as a whole, *business* has increased notably in recent years, with annual average balance sheet growth of 12.5% since 1995. This has allowed them to increase their market share in respect of all deposit institutions by almost 1 pp over the past seven years, though their relative weight remains small (3.8%). Underpinning this growth has been business with the resident private sector, at the expense of other items which had traditionally accounted for a sizable portion of co-operatives' investment (government securities or interbank loans). Of note has been the gain in market share in resident sector credit and deposits (Chart B). Yet co-operatives' activity remains closely linked to the more traditional banking business, with the weight of credit to the resident private sector standing at 72% of assets in June 2003. The type of customers they have enables them to maintain a financing structure in which deposits account for 75% of total liabilities, whereby they resort to a much lesser extent than banks and savings banks to the interbank or international markets, and their foreign currency operations are virtually zero.

The *geographical distribution* of co-operatives is very uneven. They are greatly concentrated in the Valencia region (37 entities), while there is an absence of any head office in 19 provinces. It should be added that three-quarters of all co-operatives pursue their business practically in a single province, and only four maintain a sizable level of activity in more than three provinces, a situation which has not changed significantly in recent years. That said, co-operatives as a whole have an active presence in virtually all Spanish provinces, with a most substantial market share in some of them (Chart C) that has even risen in recent years.

Traditionally, co-operatives' types of activity and customer have enabled them to maintain a different investment-financing structure from other deposit institutions, accompanied by the application of higher lending rates and cheaper borrowing costs, making for wider *financial margins.* These characteristics remain the same at present, though the differences from banks and savings banks have narrowed significantly. Heightened competition in the industry, lower interest rates and the diversification of activity have impacted co-operatives' differential more unfavourably, and they have seen a bigger reduction in their average return on investment and a smaller fall in the average cost paid on liabilities. Accordingly, margins (the net interest income margin in particular) have declined notably over the past seven years (Chart D).

Turning to *operating expenses,* co-operatives' activity, characterised by physical proximity to customers, means they maintain an extensive network of offices, which are smaller than those of other deposit institutions, and a large workforce, in relative terms. The outcome is higher costs than at banks and savings banks: co-operatives' operating expenses accounted for 2.3% of ATA in June 2003. However, this proportion has fallen since 1995 despite annual growth in the number of employees and offices of around 5%. Co-operatives' efficiency ratio has worsened over the past seven years, standing at 60.6% in June 2003.

The *doubtful assets* ratio of co-operatives has been on a declining course since 1995, though it has fallen to a lesser degree than that of savings banks. Greater specialisation in credit to the resident private sector

Box II.1 (cont'd)

– and, hereunder, to small firms – coupled with a high regional concentration of risk are factors that may explain this result. In parallel with the higher default rate, co-operatives make a greater provisioning effort, though a sizable portion of this has, since 2000, been for the statistical fund. Loan provisions in June 2003 accounted for 31.3% of net operating income.

All these factors have prompted a fall in co-operatives' *profit before tax* in terms of ATA since 1995 of 0.38 pp, to the current figure of 1.1%, converging towards the profitability of banks and savings banks. The decline was even more notable in terms of the *ROE* which, in June 2003, was 9.7%, 4.5 pp less than in 1995 and below that of banks and savings banks. This fall was the outcome of the lower average growth of income (8.2%) and the bigger increase in own funds (13.8%).

Currently, the total *solvency* ratio of credit co-operatives stands at 11.6%, far above the required minimum of 8%. However, this percentage has fallen considerably in recent years, the result of the growth of risk-weighted assets at an average rate of 18% (increased business and change of structure), compared with a 14% increase in regulatory own funds. That has pushed co-operatives' solvency ratio to levels close to those of savings banks. But mention should be made of the high number (36% of the total) of small (4% of the sector's total assets) co-operatives with a ratio of over 15%.

In sum, the environment of low interest rates and heightened competition among institutions is forcing credit co-operatives' margins and profitability to converge towards the traditionally lower corresponding values of banks and savings banks. Similarly, the solvency ratio, in a period of high increases in exposure, is also converging. This poses significant challenges for co-operatives. First, they need to increase their efficiency and substantially cut their operating expenses. Second, the strong growth of assets and, in particular, of credit, combined with the expansion by certain co-operatives outside their traditional territory, require careful management and control of credit risk, as past experience indicates (savings banks in the early 1990s). The performance of these institutions over the medium term will hinge on their response to both challenges.

Chart A. *Concentration of total assets (%)*

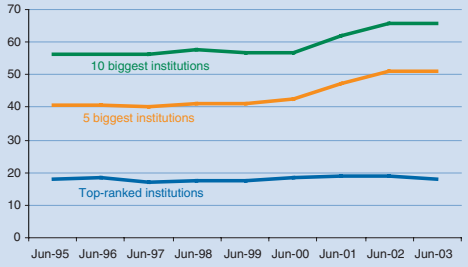


Chart B. *Market share of co-operatives vis-à-vis deposit institutions (%). June 1995 and 2003*

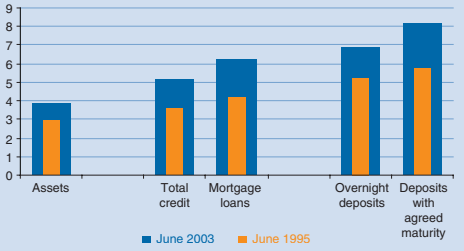


Chart C. *Provincial market share. Credit to the resident private sector. June 2003*

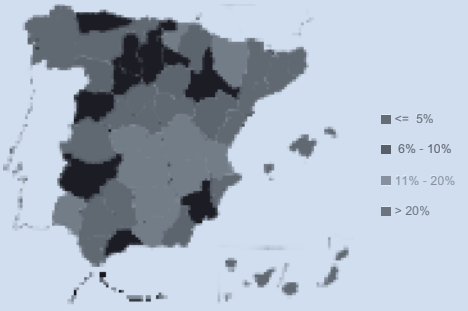


Chart D. *Margins and profit before tax*

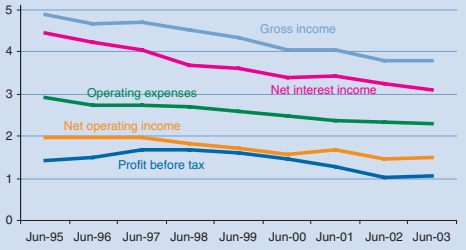


Table II.4. *Comparison of Spanish credit institutions with the European average. December 2002*

Net interest income / TA	168.6
Net commissions / TA	144.7
Gross income / TA	148.7
Operating espenses / TA	141.2
Efficiency ratio	94.9
Doubtful assets ratio	38.3
Provisioning / TA	134.4
ROA	237.7
ROE	171.9

Sources: *EU banking sector stability,* ECB and *Banking Supervision Committee* of the European System of Central Banks (ESCB), forthcoming, and in-house.
Note: Data relative to the EU weighted average, normalised to 100.

Against this backdrop, Spanish institutions posted reasonably good results compared with those observed for European credit institutions on average (Table II.4). The ROA was over twice that of the EU average, and the ROE (5) was 72% higher. Moreover, this differential widened in relation to 2001 owing to the greater relative deterioration in the EU.

As a proportion of total assets, the net interest income margin was 69% (6) higher, partly as a result of the different type of business being pursued, and without forgetting that these data also covered business in Latin America, where margins are wider. The foregoing, combined with higher net commissions as a proportion of total assets than the related European average (45%), explains why the gross income margin was, in relative terms, almost 50% higher than said average.

Spanish institutions' greater income-generating capacity enabled them to offset greater operating expenses (41%), whereby the efficiency ratio remained slightly below the European average. In relation to 2001, the difference in this ratio trended favourably for Spanish institutions thanks to the bigger reduction in operating expenses.

Spanish banks showed a doubtful assets ratio substantially lower than the EU average and higher bad debt provisioning (7), partly as a result of the statistical provision. Together, both elements highlight the robustness of the Spanish banking system.

Were the foregoing comparison to be confined to *large institutions* (8), the conclusions would be the same. Major Spanish institutions thus obtained higher income thanks to higher net interest income and higher commissions, which enabled them to more than offset what were also higher operating expenses, in such a way that the efficiency ratio stood at around the average of the major European banks. Moreover, the doubtful assets ratio was relatively lower and provisioning higher. The ROA was 159% greater than the EU average while the ROE was 87% higher. As was the case for institutions as a whole, compared with 2001 the relative position vis-à-vis the EU improved appreciably.

In short, the information available for 2002 indicates that Spanish institutions stood at a better relative level than the European average, partly as a result of the Spanish economy's cyclical position and of its greater specialisation in retail business. Nor should the difficulties undergone by certain European countries' institutions be forgotten, which exerted downward pressure on the EU average.

With regard to the first half of 2003, the situation appeared to improve appreciably for the major European banks, including Spanish institutions. There was a recovery in half-yearly earnings and, for the most distressed institutions, a substantial easing in the rate of decline.

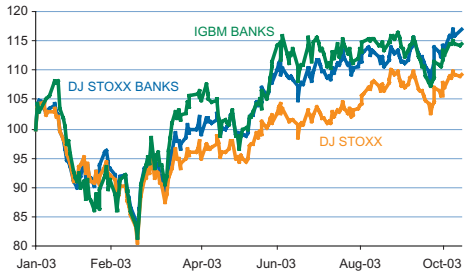
(5) The ROE is defined as income after tax divided by Tier 1 capital. This definition differs substantially from that used throughout the FSR. However, it allows a uniform comparison across the 15 EU countries.

(6) Note that assets are not averaged out, i.e. they are not ATA. There are, moreover, certain differences in the definitions of margins. Once again, the advantage is that the data are homogenous from one country to another.

(7) The definition of doubtful assets varies from country to country, as do bad debt provisioning requirements. Consequently, cross-country comparisons of both these variables should be made with caution.

(8) Those whose consolidated assets exceed 0.5% of overall EU credit institutions' total consolidated assets.

Chart II.6. *Stock market prices*



Sources: DataStream and in-house.

This ongoing improvement at European banks was reflected in their *stock market prices,* which tended to pick up more quickly than those of the market as a whole in the first half of the year (Chart II.6). Spanish banks were not far removed from this process. As regards the market perception of the risk assumed by institutions, the *implied volatility* of stock market prices indicated that risk had diminished both for Spanish institutions and for European banks on the whole.

The risk premium implicit in *credit default swaps* (9) (CDS) fell substantially this year while, in general, it tended to converge among the different European countries' institutions. The differences shown by one Spanish bank at the end of last year disappeared. In addition, the spread between senior and subordinated debt also narrowed, denoting a reduction in the risk perceived by the market.

The *betas* (10) of the major Spanish banks held at their 2002 levels. Ranking the betas of the main European banks from highest to lowest, those of Spanish banks remained in the third quartile, below institutions in which *bancassurance* activity is very significant. In previous years they were in the fourth quartile, with close-to-maximum levels.

The improved earnings and lesser risk observed in the first half of 2003 across European banks were due, in part, to the deterioration in certain business sectors coming to a halt. Moreover, the capital markets picked up in relation to prior years. Finally, many institutions have attempted to heighten their operating efficiency through cost cuts, while setting about reorganising their activities. A lasting recovery in the European banking industry will depend on the above-mentioned factors firming and, in particular, on a prompt and sustained pick-up in economic activity.

Despite the foregoing, there are in fact considerable differences among European institutions, owing partly to their different activities and degree of specialisation. Differing levels of efficiency and profitability can be explained by the type of business in which each institution specialises.

The latest edition of *Estabilidad financiera* includes an article (in Spanish) that analyses this matter (11). It considers different banking models: diversified institutions (universal banking), entities specialising in loans to SMEs, those specialising in mortgage lending and institutions focusing on corporate banking.

It can be seen, firstly, that there are no significant differences in respect of ROE between universal banking institutions and banks specialising in different types of business. That is to say, the actual differences there are in margins and efficiency cancel each other out.

Further, the country in which each institution operates is important in explaining the level of profitability and efficiency obtained, even after considering business specialisation. Therefore, a single market for financial services in the EU is a long way off, owing partly to obstacles but also to the very nature of the banking business.

A cross-country comparison of institutions highlights the sound position of banking in the Anglo-Saxon countries. For their part,

(9) The acquisition of a CDS offers hedging against potential default by a third party. As a result, the premium paid for hedging is an indicator of the probability of default by the third party.

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

(11) "Especialización crediticia y resultados en la banca europea", by J. Delgado, D. Pérez and V. Salas Fumás.

Spanish banks show a better relative position vis-à-vis the Mediterranean, central European and Scandinavian countries, which may allow them to face the immediate future with a degree of security. That said, against a background of heightened competition, low interest rates and uncertainty over the recovery of the world economy, it would be advisable for Spanish institutions to cover as soon as possible the distance separating them from other countries' top banks in terms of efficiency.

CHAPTER III

Solvency

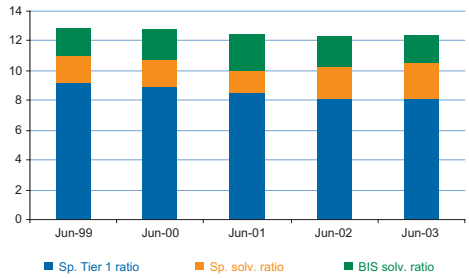
III.1. General situation

The *total solvency ratio* (eligible capital as a proportion of risk-weighted assets) increased by 0.2 pp in June 2003, to 10.5% (Chart III.1). Under the less strict BCBS definition, the solvency ratio was 55% higher than the minimum regulatory requirement, being unchanged at 12.4%.

The change in the solvency ratio is explained by the larger increase in total capital than in capital requirements. The former, having grown by 7.2% in June 2002, grew by 9.9% a year later, as a consequence of the growth of Tier 1 capital and the decline in deductions (Chart III.2). Meanwhile, the latter grew by 7.9% relative to the previous year, as a result of the acceleration in lending to the private sector.

The sharp increase in Tier 1 capital, following its fall in June last year, checked the smooth decline in the *Tier 1 ratio* that had lasted for nine years, keeping it at its 2002 level (8.1%).

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



The rise in *Tier 1 capital* was caused by a larger increase in reserves and the decline in the deductions for intangible assets. The latter was a consequence of the fall in goodwill (Chart III.3), which is explained by the prudent policy used for its amortisation, the practical stagnation of acquisitions and some divestment. Losses at consolidated companies were significantly lower than in June 2002 owing to the smaller losses arising from translation differences, given the moderation in the depreciation of the Latin American currencies and, especially, the greater hedging of the structural positions in such currencies. In addition, the

Chart III.2. *Contribution to the change (% and pp) in total capital (top), Tier 1 capital (lower left) and Tier 2 capital (lower right). Deposit institutions*

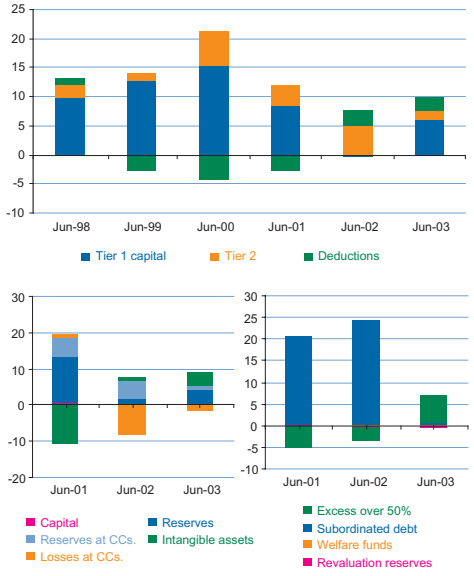
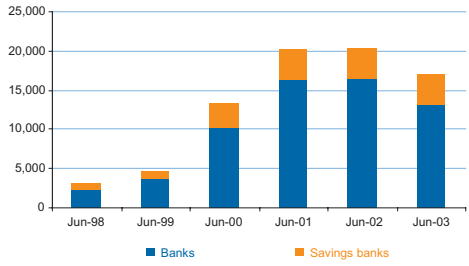


Chart III.3. *Goodwill. Deposit institutions (€m)*



quality of Tier 1 capital improved for the second year running, with preference shares falling by 3.5%.

Tier 2 capital decelerated markedly (Chart III.2). Subordinated debt, which accounts for 93% of such capital, stagnated, following the strong growth last year (25% in June 2002). However, the increase in Tier 1 capital enabled subordinated debt to be included in Tier 2 which had previously exceeded the maximum limit for Tier 2 (50% of Tier 1 capital).

Finally, the deductions from total capital fell markedly (by 34.8%) in June 2003, as a result of the sale, by some institutions, of holdings in non-consolidated financial institutions which accounted for more than 10% of their capital.

The relative significance of *risk-weighted assets* continued to increase (Chart III.4). This greater risk has been offset, from 2002, by the parallel increase in the solvency ratio analysed above.

Chart III.4. *Risk-weighted assets (RWA) as % of total assets (right-hand scale) and solvency ratio (%) (left-hand scale). Deposit institutions*

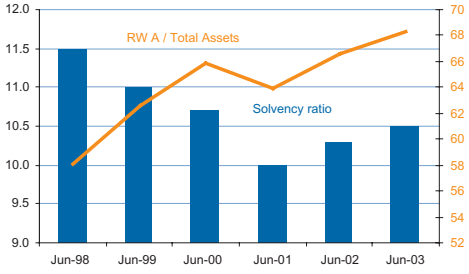
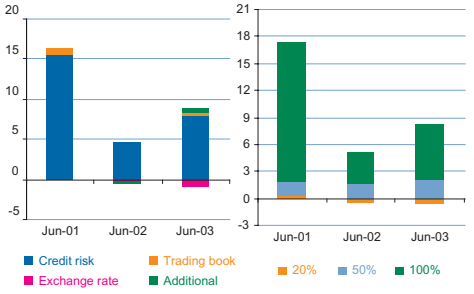


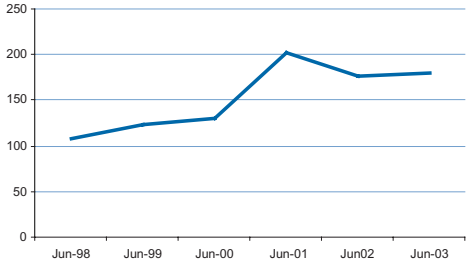
Chart III.5. *Contribution to the change (% and pp) in total requirements (left) and in those for credit risk (right). Deposit institutions*



The increase in risk-weighted assets has resulted in larger capital requirements (Chart III.5), basically for credit risk (whose relative weight is 95%). At the same time, the behaviour of the latter is a consequence of the increase in lending to the private sector (100% weighting) and the sharp growth of mortgage lending (50% weighting), which is analysed in Chapter I.

Apart from its capital and assumed risk, the solvency of an institution also depends on the coverage of losses incurred, both those already and those yet to be identified. An indicator of the coverage of losses already incurred and identified is the ratio between provisions for bad debts and doubtful assets (1). It can be seen (Chart III.6) that

Chart III.6. *Provisions for bad debts as a percentage of doubtful assets. Deposit institutions*



(1) It would be interesting to analyse, first, the ratio between the specific provision for bad debts and, second, the ratio between the general provision and the statistical fund and expected losses (those which have been incurred but not yet identified). However, information is only available from mid-2000 to calculate the former and the latter requires that expected losses be estimated.

doubtful assets are more than covered by such provisions.

III.2. Analysis based on individual institutions

In June 2003, the bank solvency ratio (Spanish rules) underwent a change in trend, growing by 0.4 pp (to 9.9%), to stand 23% above the 8% minimum. Meanwhile, the surplus capital of savings banks fell slightly to 41%, the solvency ratio having reached 11.3%. The Tier 1 ratio rose at banks by 0.2 pp (to 7.5%) and fell at savings banks by 0.2 pp (to 8.6%), the third consecutive year of decline. The trends were similar under the Basel rules (Chart III.7).

The trend in the *bank* solvency ratio stemmed from a significant increase in capital (7.7%), which outstripped the growth in requirements for credit risk (3.9%). In June 2002, by contrast, capital and requirements both declined. The factors responsible for this turnaround were the recovery in activity and profitability and the improvement in the situation in Latin America (Chart III.8).

The increase in capital was largely due to the increase in Tier 1 capital, following its decline in 2002. This behaviour is explained by the greater amortisation of goodwill and the smaller losses at consolidated companies (linked to Latin American investments). The decline in the outstanding balances of subordinated debt and preference shares (due partly to their redemption and partly to the appreciation of the euro against the dollar), which fell by 8.7% and 9.2% respectively, enabled the quality of capital to improve (together these two instruments represent 46% of total capital, as against 54% in June 2002).

Chart III.7. *Solvency ratios (%). Spanish rules and Basel rules. Banks and savings banks*

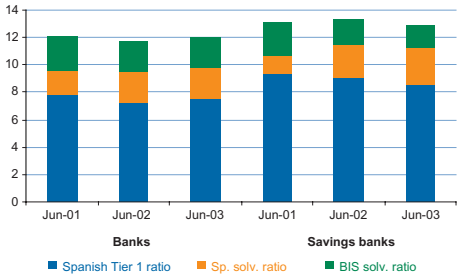
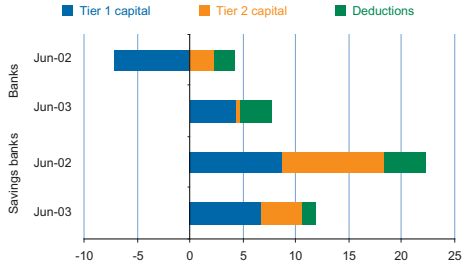


Chart III.8. *Contribution to the change in total capital (% and pp). Banks and savings banks*



The capital of *savings banks* increased at a faster rate than that of banks, despite decelerating sharply (to 11.9% in June 2003, from 22.2% in June 2002), as a result of the slowdown in the growth of Tier 1 capital and, especially, of Tier 2 capital (Chart III.8). Savings banks chose to increase their reserves (9%), including an increase in the growth of the outstanding balance of preference shares (6.2%), while their recourse to subordinated debt moderated significantly (18% as against 56.5%). All in all, the relative weight of these two instruments did not change significantly in savings banks, holding at 37%.

The change in capital requirements for savings banks was four times higher than for banks, which shows how different the policies followed by these two groups of institution were (Chart III.9). While savings

Chart III.9. *Contribution to the change in requirements for credit risk (% and pp). Banks and savings banks*

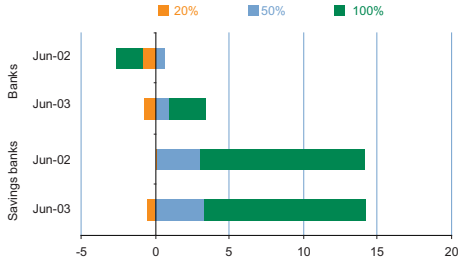
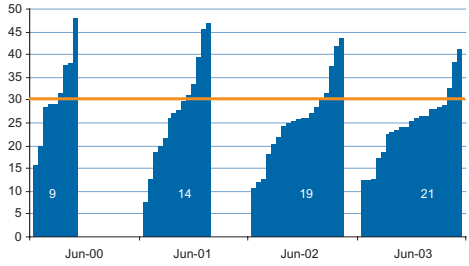


Chart III.10. *Preference shares as a proportion of Tier 1 capital (% and number of issuers). Deposit institutions*



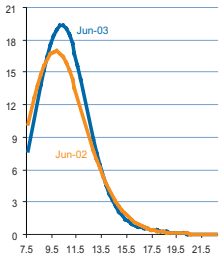
banks continued to increase their lending, especially mortgage loans, at a healthy rate, banks' lending grew at a much slower rate, which was mainly attributable to the two largest groups of banks. The causes of this slowdown were the exchange rate effect on banks' Latin American business and the slower growth in their business in Spain, although the latter is accelerating in 2003.

Another indicator of the improvement in the quality of capital is the decline in the numbers of institutions exceeding the 30% limit for preference shares in Tier 1 (2). Moreover, the surplus over the limit is gradually falling (Chart III.10).

In line with the increase in the solvency ratio at the aggregate level, the ATA density function has shifted to the right (Chart III.11), indicating an improvement in the distribution of this ratio among institutions.

Chart III.11. *Distribution of the solvency ratio by bands (left) and ATA density function (right). Deposit institutions*

Brackets solvency ratio	% of ATA	No. of inst.
<8	0.0	0
8 - 10	38.6	37
10 - 12	43.5	55
12 - 15	16.2	34
15 - 20	1.4	21
20 - 25	0.1	9
>25	0.2	18



(2) This limit has recently become a legal obligation (Law 19/2003 of 4 July 2003 on capital movements and cross-border transactions and on certain measures to prevent money laundering).

As for *large exposures* (those whose amount exceeds 10% of the group's capital), their total amount fell by 11.5% and their numbers by 3%. The number of large exposures subject to the overall limit (eight times the group's capital) fell by 4% from June 2002, but only by 0.5% in volume terms.

Comparison with European banks

As indicated in Chapter II, European credit institutions encountered certain difficulties in 2002. Even so, they maintained their solvency levels consistently and substantially above the required minimum, proving their resilience in an adverse economic environment.

Table III.1 shows that Spanish institutions had total solvency and Tier 1 ratios slightly above the European average. The ratio between risk-weighted assets and total assets is one-third higher than the European average. This circumstance is largely explained by the type of business engaged in by Spanish institutions, which is more focused on financing SMEs and individuals than on government debt and interbank loans.

Meanwhile, if the ratio between provisions for bad debts and doubtful assets is studied, in addition to the above analysis of the solvency ratio, it can be seen that, the cover ratio (provisions for bad debts as a percentage of doubtful assets) of Spanish institutions is more than three times the European average. The strength of this ratio is explained by the introduction of the statistical fund in mid-2000, by the general provisions, against a background of sustained growth of lending and, finally, by the low level of Spanish institutions' doubtful assets, in a relatively more benign macroeconomic environment.

As already mentioned in Chapter II, the doubtful assets ratio, an ex-post measure of credit risk, is below the European average. Given that the definition of doubtful assets

Table III.1. *Comparison of Spanish credit institutions with the European average. December 2002*

Tier 1 ratio	103.5
Total ratio	103.3
Risk-weighted assets / TA	133.5
Provisions / doubtful assets	359.9
(Doubtful assets - provisions) / lending	–56.3

Sources: *EU banking sector stability,* ECB and *Banking Supervision Committee* of the ESCB, forthcoming publication, and in-house.
Note: Data relative to weighted EU average, normalised to 100.

varies from country to country, a more comparable ratio is doubtful assets net of provisions for bad debts as a proportion of total lending (3). Spain's ratio is below the European average, as a result of the high cover ratio for doubtful assets (4).

If the comparison is restricted to *large institutions,* the situation is not very different. First, the Tier 1 ratio is slightly above the European average (3%), while the total ratio is somewhat more so (6%). Weighted risks exceed the European average (34%), while the cover ratio and the doubtful assets ratio corrected for provisions for bad debts are almost double the European level (172% and 185%, respectively).

In short, Spanish institutions engage in a type of business more focused on retail lending, with solvency ratios at around the average level for European institutions and well above the regulatory minimums. The level of coverage of their doubtful assets by provisions is high and they also report high rates of return, which are the first line of defence against the possible emergence of difficulties.

Basel II and SMEs

In 1988 the BCBS set uniform minimum capital requirements for internationally active banks. The aim was, on one hand, to strengthen the solvency of the international financial system, after a long process of liberalisation and deregulation and, on the other, to level the playing field on which banks competed. With the passage of time, banking regulators have seen how the simple arrangements of the 1988 accord have not been capable of responding either to the changes associated with financial innovation, which have led to the emergence of new more complex assets (credit derivatives) and have facilitated the mobilisation of others (securitisation), or to the substantial improvement in the identification, measurement and control of risks (including operational risk). Accordingly, the BCBS set in motion a process for reform of the 1988 accord with the aim of incorporating the improvements in risk management and correcting some of the deficiencies that have become more noticeable with time.

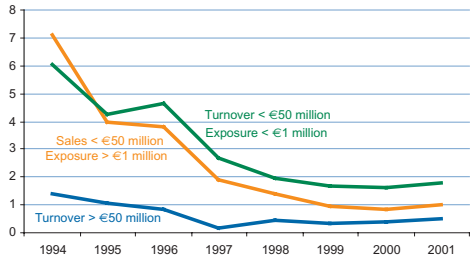
The BCBS seeks to secure a much closer relationship between capital requirements and the level of risk incurred by an institution. It does not seem appropriate that lending to non-financial firms should consume 8% of capital, irrespective of the risk of the borrower. The probability of default is very different for firms with AAA and CCC credit ratings. To correct these distortions, the BCBS has developed, through a dialogue with the banking industry, capital-requirement curves that depend on a number of parameters directly related to the credit rating of each counterparty (probability of default or PD and loss given default or LGD) and to the characteristics of the transaction (amount, maturity and security).

Among the issues to have aroused most interest in the New Capital Accord is the treatment of financing to SMEs. The latest proposal (April 2003 consultative document) defines SMEs as enterprises with an annual turnover of less than €50 million and establishes capital requirements calculated in a similar way to those for large firms, but adjusted in accordance with the

(3) This corrects for the distortion introduced when fully provisioned doubtful assets are maintained on the balance sheet until recovery. In Spain they must be written off after three years from default (six years when there is mortgage security).

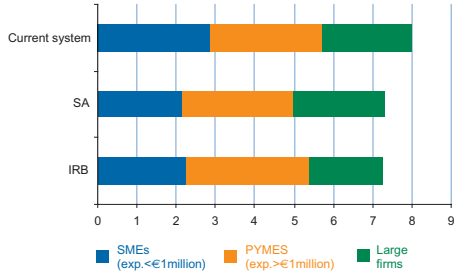
(4) The negative sign in Table III.1 indicates that on average European institutions' doubtful assets are insufficiently covered, unlike in the case of Spain.

Chart III.12. *Probabilities of default (PD) by type of firm (%). Credit institutions*



Note: The probability of default is approximated by the average percentage of borrowers who default each year.

Chart III.13. Capital ratios and the contributions of various groups of firms (%). Credit institutions



size of each firm. Alternatively, those institutions whose total exposure to an SME does not exceed €1 million may apply the requirements for the other retail portfolio.

Obviously, the impact of the new capital requirements for financing to firms will depend on the probability of default and the relative weight of the various segments considered. In a recent paper (5), which considers all Spanish credit institutions, the probability of default is seen to vary according to the type of firm and, to a lesser extent, with time. (Chart III.12).

The data in Chart III.12 show the difference in the level of credit risk between large firms and SMEs and, accordingly, the distortion that an identical capital requirement for both types of exposure may generate. However, when there is a very large number of loans, as in the case of the portfolio of loans to SMEs, the risk is more diversified.

Given the distribution of loan exposure between large firms and SMEs (the latter being separated into those to whom the bank exposure is greater or less than one million euro), the average PD of the three groups and the associated capital requirements, it is possible to calculate the impact of Basel II on the financing of firms.

(5) "The impact of Basel II on lending to small and medium-sized firms. A regulatory policy assessment based on the Spanish Credit Register" by J. Saurina and C. Trucharte, available at the Banco de España website.

Chart III.13 compares the contributions of these three groups of firms to the total capital ratio under the present system and under the two Basel II proposals, namely the standardised approach (SA) and the internal ratings-based (IRB) approach. It can be seen that under Basel II, as currently formulated, and without considering the additional requirements for operational risk or other risk-mitigating elements, the capital requirements for the total exposures of Spanish credit institutions would be moderately reduced (by somewhat less than 10%), the magnitude of the reduction being practically the same under both approaches. The basic IRB approach would entail a reduction in capital requirements, both for loans to large firms and for loans to SMEs, especially when the exposure to the entity is less than one million euro.

In short, and with the caveats that a study of this nature implicitly involves, the current proposals of the BCBS will not significantly affect the existing patterns of bank financing to firms in Spain. The results presented here are for the aggregate level of all credit institutions. It is possible that the impact will be different at the level of the individual institution.

Initiatives of supervisors and regulators

The BCBS has, very recently, made substantial progress towards finalisation of the New Capital Accord, which is analysed in more detail in Box III.1.

Box III.1

Significant progress on the New Basel Capital Accord

The BCBS has been working since 1998 to develop a new capital accord to overcome the shortcomings of the existing accord, known as Basel I. In April 2003, after conducting a comprehensive study of the impact of its proposals, the BCBS opened a third consultation period, issuing the consultative paper known as CP3. During this period, which closed at the end of July, more than 200 comments were received from interested entities. Most of the responses received show clear support for the objectives of the BCBS and the proposed structure. However, some suggestions of great importance were also received (capital requirements for unexpected losses only, complexity in the treatment of securitisation, etc.). In August and September the BCBS and its working groups analysed the comments received, seeking and identifying the appropriate solution for those suggestions that improve the existing proposals, while maintaining the objective of concluding the Accord within the next few months.

The BCBS met on 10 and 11 October in Madrid to analyse the reaction of the industry to its proposals and to decide which elements should be taken into account to improve the Accord. The result of the meeting was very positive, demonstrating among other things the receptiveness of the BCBS to the comments received. Consensus was reached between the member countries of the BCBS to resolve the outstanding issues by mid-year 2004. This commitment provides the institutions with certainty regarding the final implementation of the New Accord and encourages them to press ahead with their efforts to improve their internal risk management and measurement systems. The decisions taken by the BCBS were published in a press release issued on 11 October. This release identifies the following main areas in which the Accord might be improved and which will be the focus for work in the coming months:

1. The treatment of expected and unexpected losses.
2. Simplifying the treatment of asset securitisation. In particular, a simpler method is needed to treat asset-backed securities without an external rating than that of the existing supervisory formula.
3. The treatment of credit card commitments and related issues.
4. The treatment of certain credit risk mitigation techniques.

Notable among these subjects is the *treatment in the Accord of expected and unexpected losses.* Under the existing proposals credit institutions' capital requirements would be based on the sum of both types of loss, with a relatively complex treatment of provisions (distinguishing between specific and general provisions). This proposal was the result of a practical compromise between supervisors to ensure that expected losses were adequately covered in one way (provisions) or another (capital), irrespective of each country's accounting rules.

However, the comments received and the BCBS's own internal studies have led the latter to modify the Accord so that capital requirements are only based on unexpected losses. The treatment, besides being conceptually more correct, would not discriminate between the different types of provision, would resolve the problems involved in recognising additional elements that could be used to offset expected losses (such as future margin income) and, finally, would be simpler. Given the conceptual importance of this change, the BCBS has decided to request public comment on this particular matter by 31 December 2003. The most notable aspects of the proposed new treatment, in comparison with the internal ratings-based (IRB) approach, are the following:

1. The capital requirements would be calculated only on the basis of unexpected losses. Accordingly, certain offsets, in particular future margin income, would no longer be necessary.
2. All provisions, specific, general and statistical (in the Spanish case), would have the same treatment. Also, the general provision (up to the limit of 1.25% of risk-weighted assets) would not be included as such in Tier 2 capital.
3. A system has been designed to take into account the relationship between expected losses and the provisions made by institutions, so as to ensure that the former are properly covered and that incentives exist for the latter to be made:
   - *i)* If there is a provision shortfall, i.e. if expected losses exceed the sum of all the institution's provisions, then the shortfall amount shall be deducted from capital (50% from Tier 1 and 50% from Tier 2).
   - *ii)* If, on the other hand, there are excess provision amounts, they may be included in Tier 2 capital, like general provisions at the moment, but subject to a limit of 20% of total Tier 2 capital.

As regards the effect of this proposal on the standardised approach, the BCBS does not believe that any adjustments are necessary. Another two subjects specifically mentioned in the press release are calibration, the BCBS recognising the importance of ensuring that errors have not been made in relation to the objectives pursued, and the implementation of the accord, the BCBS noting that it has intensified its efforts to facilitate implementation.

In short, the Madrid meeting of the BCBS was an important step forward for the conclusion of Basel II.

Box III.2

Activity of the Joint Forum

The Joint Forum was set up in 1996 under the auspices of the BCBS, the International Organization of Securities Commissions (IOSCO) and the International Association of Insurance Supervisors (IAIS). It is made up of a similar number of experts representing the three sectors banks, securities and insurance. There are 13 countries represented in the Joint Forum: Germany, Australia, Belgium, Canada, Spain, the United States, France, Italy, Japan, the Netherlands, Sweden, Switzerland and the United Kingdom.

Since it was set up, the Joint Forum has been addressing issues relating to the supervision of so-called *financial conglomerates,* as well as diverse aspects of an intersectoral nature of interest to the supervisors of the three sectors. The existence of financial conglomerates (1) and the increasing interrelatedness of the activities of the institutions in each financial sector have intensified the need for co-operation between the supervisors of the three sectors. The presidency of the Joint Forum rotates among the three sponsoring organisations every two years. Since January 2002 the presidency has corresponded to a representative of the BCBS, which appointed the Banco de España to perform the task. During the last two years diverse intersectoral studies have been conducted in the Joint Forum, some of which have been published:

1. Initiatives by the BCBS, IAIS and IOSCO to combat money laundering and the financing of terrorism (2).

2. Operational risk transfer across financial sectors (3). This report focuses on insurance as the instrument most widely used to transfer operational risk. The analysis highlights diverse aspects of risk management to be considered by institutions involved in such operations, both from the perspective of the protection buyer and of the protection seller, as well as the implications of this type of operation for the respective supervisors.

3. Trends in risk integration and aggregation (4). On the basis of a survey of 31 financial institutions in 12 jurisdictions, this report describes the main trends observed. These are, first, from an organisational viewpoint, an increasing emphasis on the management of risk on an integrated firm-wide basis and, second, from a quantitative viewpoint, a growing use of mathematical models to calculate capital requirements. Also, the report notes the main regulatory changes (the EU Directive on Conglomerates and the Gramm-Leach-Bliley Act in the United States) and supervisory trends (increasing integration of processes for the supervision of groups whose activities straddle the traditional boundaries of each sector).

The latter two reports, together with the prior study of risk management practices and capital approaches in each sector (5), form the basis for a round table organised for 6 November in New York with representatives of credit institutions, securities firms and insurance companies. The purpose is to enhance the interaction between supervisors and supervised institutions in the three sectors and to share the different viewpoints that exist.

In addition, the degree of compliance by the financial institutions of the three sectors with the recommendations for disclosure of information on financial risks contained in the "Report of the Multidisciplinary Working Group on Enhanced Disclosure" (known as the "Fisher II Report") (6) has been monitored. The main conclusions of this analysis are to be published shortly.

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(1) The European Directive on the supervision of financial conglomerates is based on the principles published by the Joint Forum. Since 1995, the Spanish legislation in this area (on non-consolidated mixed groups) also follows the principles laid down by the forum.

(2) June 2003. http://www.bis.org/publ/joint05.htm

(3) August 2003. http://www.bis.org/publ/joint06.htm

(4) August 2003. http://www.bis.org/joint07.htm

(5) "Risk Management Practices and Regulatory Capital – Cross-sectoral Comparison" (November 2001) http://www.bis.org/publ/joint04.htm

(6) April 2001. http://www.bis.org/publ/joint01.htm

The increasing interrelatedness between the activities engaged in by banks, securities firms and insurance companies and the transferring of risk between these three sectors have stimulated co-operation between the regulators and supervisors of these sectors. Recent developments in this respect are examined in Box III.2.

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