Activity, results and solvency of credit institutions

In 2008, the activity and results of credit institutions (CIs) and their consolidated groups (CGs)[1] were affected by the global financial crisis. As discussed in the previous Report on Banking Supervision, the financial turmoil which arose in mid-2007 as a result of the surge in defaults on subprime mortgages in the United States strangled liquidity across the board on finance (money and capital) markets globally. The consequent increase in funding costs, and the growing mistrust among agents participating in financial systems (from investment banks and hedge funds to rating agencies) have caused enormous difficulties for the management and activity of financial institutions.

At the same time, throughout 2008 the financial crisis in combination with the deterioration of the real sector resulted in a strong deceleration of the world economy. The Spanish economy, the particular features of which were reflected in pronounced unemployment growth, was not spared these difficulties, and this compelled credit institutions to operate and manage their risks in an adverse environment. Similarly, projections indicating that the world recession will last longer than initially expected, with the consequent postponement of recovery, create a feed-back loop prolonging the financial crisis and making it more severe. The scope of this crisis and the speed at which it has spread have led central banks and regulatory authorities to design and apply urgent coordinated measures never seen before. The measures approved to support the Spanish economy aim mainly to mitigate the conjunctural effects of the crisis, but also to prevent the distortion of competition among Spanish financial institutions, in addition to minimising the potentially adverse consequences for competition of measures adopted abroad. In the case of Spain, the Fund for the Acquisition of Financial Assets (FAFA), started up in 2008 Q4, has become a new tool making it easier for entities to obtain liquidity through the sale of high-quality assets and has furthered the purpose of the public guarantees provided for their issues from 2009.

The difficult economic and financial climate has affected the composition of the balance sheet, slowing its growth and reducing the earnings of Spanish CIs. At the level of both individual CIs and CGs, activity and the principal margins of the 2008 income statement showed lower rates of change than in 2007.[2] Most noticeably, net interest income and gross income grew, despite showing signs of deceleration. By contrast, as a result of the higher financial asset impairment losses and provisioning expenses, there was a significant reduction in operating income and profit for the year. By institutional group, banks show the highest profitability levels. Concurrently, the still favourable efficiency ratio has worsened slightly, underlining the need for action to be taken in the future by CIs to improve their income statement components and, in particular, to adjust operating expenses.

The entry into force of Circular 3/2008 of 22 May 2008 to credit institutions on the determination and control of minimum own funds, replacing the previous solvency Circular 5/1993, was worth noting in relation to the solvency of Spanish credit institutions and their consolidated groups. Although the new Circular did not entail any major changes in the determination of eligible own funds, it did make considerable changes in the area of capital requirements.[3] The

1. Although the data in the Banco de España's Report on Banking Supervision (RBS) are consistent with those contained in the Financial Stability Report (FSR), which is also produced by the Banco de España, there may not be an exact match. There are various reasons for this, including the different scope of analysis stemming from the groupings of institutions considered: credit institutions in the RBS and deposit institutions in the FSR. **2.** The available information has been summarised in the tables in Annex 3 of the internet version of this Report. **3.** See Chapter 3, Section 3.2.

internationally accepted line of thought behind these changes is that capital requirements should be more sensitive to the level of risk assumed and that new requirements have to be included. The CGs' solvency ratio improved in 2008 due to lower minimum regulatory capital requirements and higher eligible own funds. Although the growth of eligible own funds declined, its quality improved showing a higher weight of tier 1 capital in total own funds.

In addition to compliance with solvency requirements by CGs, the new rules include compliance with requirements at individual level for parents and Spanish subsidiaries included in consolidated groups. However, the possibility is envisaged that the Banco de España may exempt them if they meet certain conditions ensuring that capital is adequately distributed in the group and that flows and commitments can move freely between the group members. Also, in relation to requests for exemption submitted before 30 September 2008 on which no decision has been taken by the solvency reporting date, the new Circular provides that subsidiaries may continue to apply the reduction factors based on the parent's percentage of ownership of the subsidiary. At the date to which the data analysed refer, requests for exemption were still being assessed, so the 2008 solvency information for individual institutions will be affected by this situation. Minimum capital requirements for individual CIs included in CGs were comfortably met with a 164% level of coverage.[4]

Finally, the information sent by mixed groups and financial conglomerates supervised by the Banco de España (BE) indicates that insurance activities continued to strengthen the solvency of the CGs included in them, with a surplus of €60.6 bn in comparison with their CGs' surplus of €58.7 bn.

1 Activity of credit institutions and their consolidated groups

Against the difficult backdrop in Spain and abroad described above, in 2008 the growth rate of CIs moderated. Nevertheless, balance sheet volume increased by 8.6% and continued to be more dynamic than nominal activity (see Chart A.2.1 A). As for the major balance sheet groupings, liabilities grew at a higher pace (9.0%) and, consequently, the year-on-year growth rate of net equity moderated (3.2% - see Table A.3.2).

On the assets side, the lower growth of activity was mainly due to the deceleration of financing extended to the resident private sector (from 16.6% to 5.7%). Accordingly, mortgage lending and, in particular, the residential component, increased more slowly than assets, thus losing relative importance in the balance sheet. Therefore, the structure of credit to the resident private sector continued, albeit more smoothly, the trend initiated in 2006 and, consequently, credit for productive activities continued to increase at higher rates than credit to households (see Table A.3.4). Similarly, the difficulties experienced on financial markets were reflected in an annual decline in deposits at central banks and credit institutions and in investments and other equity instruments (down by -2.8% and -6.9%, respectively - see Chart A.2.1.1 B). In this respect, growth of cash and balances with central banks (7.6%) was amply offset by the fall in loans and advances to CIs and, likewise, the increase in investments (11.1%) was easily outstripped by the decline in other equity instruments. In contrast, debt securities (mainly issued by central government and other resident private sectors different to CIs) and derivatives posted very large year-on-year rises.

Doubtful assets, which started out from a historically very low level, grew 288% in 2008 (in comparison with 50% in 2007) due to the worsening of the real economy, to the impact on

4. Please note that, for the reasons given, this figure cannot be easily compared with the data published in previous editions of the Report on Banking Supervision in Spain.

ACTIVITY OF CREDIT INSTITUTIONS (a) CHART A.2.1

Total business. Year-end data

SOURCE: Banco de España. Data available at 20 March 2009.

a. The data in this chart refer to the institutions active at each year-end.
b. The overall doubtful assets ratio is defined as doubtful assets as a percentage of total lending in the total business of CIs. The doubtful residential mortgage assets ratio is defined, for business in Spain, as doubtful assets as a percentage of credit to the resident private sector for house purchases. The overall coverage ratio is defined as the sum of allowances, provisions and valuation adjustments to total doubtful assets.

borrowers of rising interest rates for most of the year in a predominantly floating-rate system and to the fact that the deterioration of credit risk levels is rapidly reflected in CIs' accounts under bank accounting rules in Spain. The doubtful assets ratio for residential mortgages, which rose 167 bp (see Chart A.2.1 D), was especially affected by the brusque deceleration of this type of financing. Consequently, coverage ratios fell abruptly to levels closer to their historical average.

As for funding, retail business gained in importance to the detriment of wholesale funding, which was very limited given the problems on international funding markets. Deposits from other creditors (the main liabilities item) increased, with time deposits posting the highest rise

(16.7%),[5] while sight deposits declined slightly (–3.0%), thus conferring a greater degree of stability on funding, as well as a higher cost. As a result, for the first time in the last 13 years, the growth of funds raised from the private sector exceeded that of funds lent to it (see Chart A.2.1 C). At the same time, debt certificates including bonds and other financial liabilities fell in year-on-year terms (see Chart A.2.1.1 B). Despite ongoing pressure on liquidity, funding obtained from the ECB and other CIs rose in line with liabilities (10.8%), at a lower rate than in the previous year.

In 2008 there were no major changes in the distribution by institutional group (see Table A.3.3) of loans and advances to other debtors and deposits from other creditors. Nevertheless, a slight redistribution was observed in specific items between Spanish banks, branches of CIs and savings banks, while cooperatives and SCIs did not experience significant changes. Accordingly, the weight of banks in cash and balances with central banks decreased considerably (–11 pp) and the weight of savings banks in loans and advances to credit institutions fell (–9.8 pp), whereas branches of foreign CIs increased their share of both captions. As for non-monetary financial assets, banks increased their share of other equity instruments and of other financial assets (14.7 pp), savings banks increased their share of debt securities (7.3 pp) and investments, and the share of branches of foreign CIs in the above-mentioned items declined, this decrease being particularly significant in the case of other financial assets (–13.5 pp). On the liabilities side, savings banks increased their share of funding from central banks and CIs, while banks were more active in the issuance of marketable securities other than mortgage securities.

As a result of the economic and financial situation, the issuance of securitisations stagnated, reflecting, on the one hand, the decline (–13.9%) in asset securitisations of CIs, which had shown accelerated growth in previous years, and, on the other hand, the boom in securitisation of CI liabilities (33.6%), basically covered bonds. The decline in asset securitisations of CIs is not as large if the effect of the ICO's one-off securitisation of €13.2 bn of interbank loans in 2007 is stripped out. In any event, in view of market conditions, the asset-backed securities stemming from securitisations were retained on a massive scale by originator credit institutions, thus increasing their capacity to manage liquidity risk (see Tables A.3.7 and A.3.8).

Covered-bond securitisations, which grew 29.1%, are very safe for investors and are used as collateral for operations with the ECB and also with the FAFA implemented by the government from 2008 Q4. The distribution by originator and issuer institution of the securitised liabilities shows once again, the predominance of banks and savings banks, which represented in each case around 47.4% of total issues.

The growth rate of CGs' activity decreased in 2008 to 8.8% (compared with 14.8% in 2007), while the total amount of their balance sheet exceeded €3.6 trillion. The balance sheet items followed the same pattern already mentioned at individual level. On the assets side, cash and balances with central banks rose 16.2% (80% in 2007), loans and advances to other debtors continued to moderate, growing at rates of 7.2%, and debt securities increased 10.7%, whereas investments fell (-29.8%). On the liabilities side, deposits from central banks and CIs were up by 9.5% (16.0% in 2007) and deposits from other creditors grew at much the same rate as the previous year (12%), while debt certificates including bonds declined. Likewise,

5. This rate of deposits growth is consistent with that published in the FSR, although the rates are somewhat different. The lower growth posted in the data in this report is because the FSR considers deposits from households and firms' business in Spain whereas in this report the definition is broader since, for example, it covers total business and includes, among others, general government.

ACTIVITY OF CONSOLIDATED GROUPS (a) CHART A.2.2

Total business. Year-end data

SOURCE: Banco de España. Data available at 20 March 2009.

a. The data in this chart refer to the institutions active at each year-end.

equity decreased 3.9%, due mainly to valuation adjustments (of a general nature and those made to minority interests), although own funds continued to grow at a slightly higher rate than the balance sheet, boosted by increases in capital and reserves (see Chart A.2.2 A and Table A.3.5).

The contribution to the total consolidated balance sheet of business in Spain decreased very slightly in overall terms, standing at 78.4% (–0.5 pp) at 2008 year-end. However, the annual appreciation of the euro against the major currencies (by between 20% and 30%) in which Spanish institutions have interests, masked on appreciable growth in the volume of business abroad. The above-mentioned fall in investments in consolidated business stemmed from a drastic reduction of investments in business abroad, since they increased in business in Spain from 53.6% in 2007 to 87.5% of the consolidated figure. As for geographical distribution, in CGs' business abroad financial assets grew to a lesser degree than financial liabilities, with the result that the net credit position of the "rest of the world" (excluding the EU and Latin America) increased, while the overall debit positions of activity in the EU and Latin America remained the same (see Chart A.2.1.2 B and Table A.3.6). The decrease in money market and other funds managed in the EU was worth noting.

2 Results of credit institutions and their consolidated groups

In 2008 the income statements of CIs performed less favourably at aggregate level than in previous years. As discussed above, the earnings of Spanish CIs were appreciably eroded by, on the one hand, the international financial crisis unleashed in 2007 and the subsequent paralysis of financial markets with its highly negative effects on the real economy and international trade, and, on the other, the deterioration of the Spanish economy, which was not immune to those external conditions or to the sharp contraction of real estate activity.

Specifically, the profits of CIs as a whole totalled €18.968 bn, down 26.5% on those obtained in 2007. Profits represented 0.63% of average total assets –ATA– (0.97% in 2007) and 11.3% of equity (17.7% in 2007). The efficiency ratio worsened slightly, rising to 44.3% (see Table A.3.9).

The difficult economic and financial conditions of the operating environment for CIs was reflected, albeit unevenly, in all income statement margins. Consequently, profit for the year dropped to the levels of the mid-nineties, coinciding with the phase of recovery that followed the last recession. However, the time series of profits must be analysed with due caution as a result of the successive entry into force of various legal provisions in the accounting field. The latest modification to accounting rules, with a moderate impact, was introduced at the end of last year through Banco de España Circular CBE 6/2008[6] amending CBE 4/2004.

One of the most notable changes introduced by Circular 6/2008 concerns the definition and name of profit margins habitually used in profitability analysis. Thus, broadly speaking, the new definition of net interest income (NII) – the difference between financial income and financial cost – replaces the old definition of this first income statement margin. The newly defined gross income (GI) includes returns on equity instruments. The newly defined net operating income includes provisioning expenses and impairment losses on financial assets (previously included in profit before tax). Lastly, the calculation of profit or loss for the year includes income tax and the mandatory transfer to welfare funds.

Generally, the 2008 figures show that NIM stabilised in relation to previous years (see Chart A.2.3 A). By contrast, the gross margin (GM) decreased due to the poorer performance of gains or losses on financial assets and liabilities and exchange differences. Net operating margin (NOM) and profit before tax (PBT) are considerably lower than those previously obtained as a result of the performance of impairment losses on assets and provisioning expenses.

Specifically, NIM fell 2 bp as a percentage of ATA with respect to 2007, to 1.25%. This figure shows that the growth of financial income (24.7%), basically originating from loans and advances to other debtors, was offset by that of financial cost (30.4%), the largest item of which is deposits from other creditors. Notably, the cost associated with the latter increased as a result of the growing importance of time deposits in relation to sight deposits.

Although GI increased 3.2% in absolute terms, it fell 20 bp in relative terms (as a percentage of ATA) to 2.34%. By component, the return on equity instruments performed most favourably (up by 6.9%). Nevertheless, lacklustre net fees and commissions (down 2.5%), prompted by the decline in the activity of certain services, mainly those related to the marketing of non-bank financial products and securities services, and lower gains on financial assets and liabilities and exchange differences (20.8%) contributed to explaining the moderation of GI.

For CIs as a whole, NOI decreased in absolute terms (33.4%), as well as in relative terms (44 bp) to 0.63% of ATA. It is worth noting that these figures are the result of the divergent behaviour, on the one hand, of administrative expenses (mainly personnel expenses) and depreciation and amortisation, which experienced more moderate growth rates than in previous years and, on the other, of impairment losses on financial assets (92.9%) and provisioning expenses (145.7%), which made a highly significant contribution to the deterioration in NOI. In spite of the above-mentioned containment of administrative expenses, developments in GI cut short somewhat the positive trend shown in recent years by the efficiency ratio (see Chart A.2.4 C).

The decrease in PBT was very similar to that described above for NOI (30.1%), with the result that the former's weight in ATA fell from 1.14% in 2007 to 0.71% in 2008. These figures are accounted

6. Banco de España Circular 6/2008 of 26 November 2008 to credit institutions amending Circular 4/2004 of 22 December 2004 on public and confidential financial reporting rules and formats.

PROFIT AND MARGINS OF CREDIT INSTITUTIONS AND OF THEIR CONSOLIDATED GROUPS (a) — CHART A.2.3

Percentage of ATA. Yearly data

SOURCE: Banco de España. Data available at 20 March 2009.

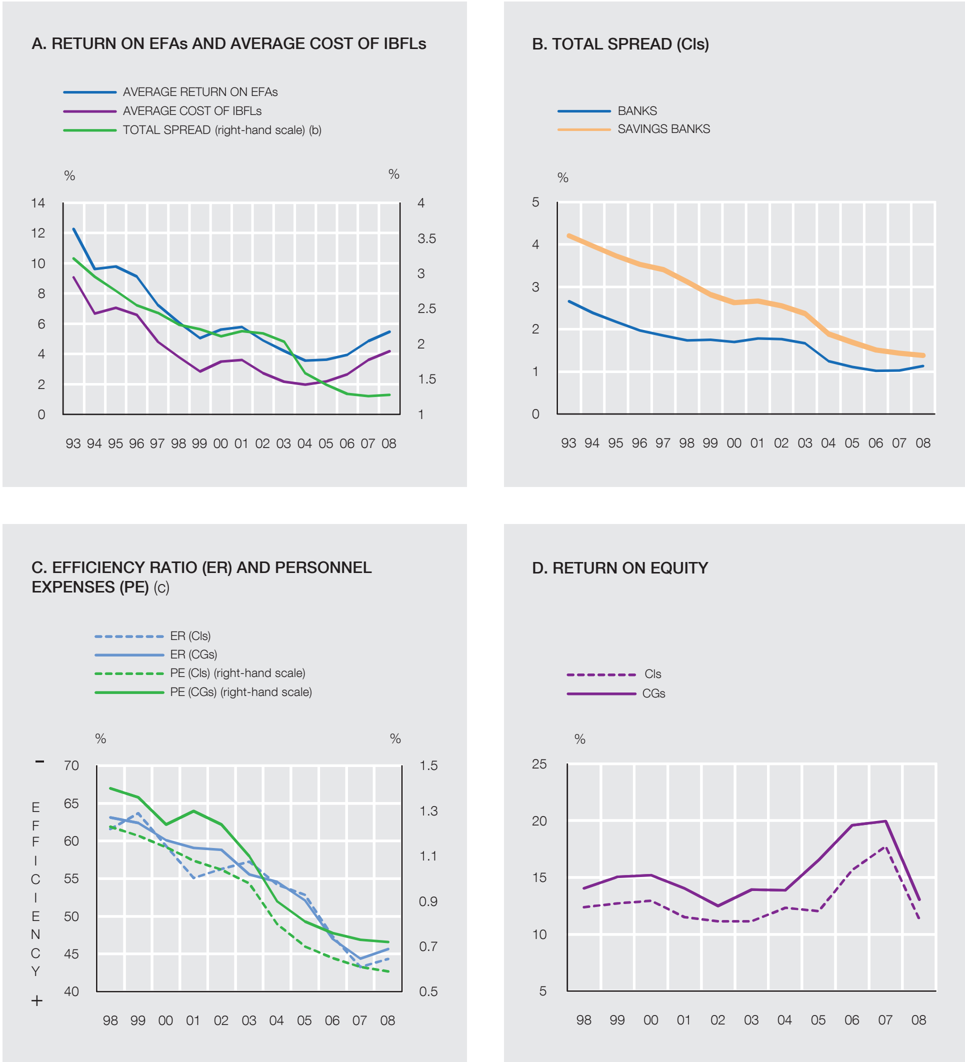
a. The data in this chart refer to the institutions active at some time during each year. The label “CIs” denotes individual data and “CGs” denotes consolidated data, which include those relating to individual CIs not belonging to a CG.
b. Uniform information is not available for the years prior to 1998 for the SCIs institutional group.
c. Uniform information is not available for the NOM of CGs for years prior to 2004 due to the conceptual changes introduced by Circular 6/2008.

for by the decrease (23.3%) in losses associated with impairment of other financial assets (including goodwill) and the growth of gains on investments and other equity instruments (157.6%).

By institutional group (see Table A.3.10), there was a notable degree of convergence in the process of adjustment undergone by all income statement margins. Chart A.2.3 B shows the correction in PBT in 2008, which is more pronounced in the case of savings banks (down 59 bp to 0.56%) than in the case of banks (0.84%). Nevertheless, the differences detected in the analysis by institutional group focus mainly on the top part of the income statement (NII

RETURNS AND EFFICIENCY OF CREDIT INSTITUTIONS AND OF THEIR CONSOLIDATED GROUPS (a) CHART A.2.4

Yearly data



SOURCE: Banco de España. Data available at 20 March 2009.

a. The data in this chart refer to the institutions active at some time during each year. The label "CIs" denotes individual data, whereas "CGs" refers to consolidated data, among which are included those relating to individual CIs not belonging to any CG.
b. Total spread is defined as the average return on EFAs minus the average cost of IBFLs.
c. The efficiency ratio is defined as operating expenses over gross income and personnel expenses are expressed as a percentage of ATA.

and GI). In both cases the values for SCIs in recent years have been more than 1 pp higher than those for banks.

The performance of the income statement of CGs was characterised by the same combination of patterns (adjustment and deceleration) already discussed for CIs individually (see Tables A.3.11 and A.3.12). Notably, the more favourable figures for CGs in the analysis of developments in margins, profits and efficiency in prior years, remained relatively constant in 2008 (see Chart A.2.3 C, Chart A.2.4 C and Chart A.2.4 D). This suggests that there is a correlation between the monetary and financial conditions of the various geographical markets where Spanish institutions are present, and that, circumstantially, this correlation is more pronounced due to the effects of the global financial crisis.

Consolidated profit for 2008 decreased 23.0%, 3.9 pp less than the fall posted by individual CIs as a whole. By contrast, the volume of CGs' ATA rose 9.4%, in comparison with 12.4% for CIs. This relative moderation of the figure for CGs is explained, among other factors, by developments on currency markets in 2008. Specifically, in the last four months of the year, there was a significant devaluation against the euro of the national currencies of markets in which Spanish institutions have a larger presence.

3 Solvency of consolidated groups of credit institutions

In 2008 the entry into force of the new Banco de España circular CBE 3/2008 of 22 May 2008 introduced significant changes (see Chapter 3, Section 3.2 of this Report). This gave rise to a certain break in the data analysed in this section, since those relating to 2008 were reported by consolidated groups and individual institutions not belonging to any group of credit institutions (CG) in accordance with the new Circular, while prior year data were reported in accordance with CBE 5/1993. This break affects both the broad solvency data items and the breakdowns resulting from the entry into force of the new Circular. Accordingly, the pre-2008 figures constitute what has been considered a best approximation in terms of both amount and item description. For breakdowns relating to completely new items (for example, the IRB approach), the series of course start in 2008.

The behaviour of the broad solvency data items reveals the following significant developments (see Table A.3.13). First, the solvency ratio of CGs at end-2008 was 11.3%, up from 10.6% the previous year, as a result of an increase in eligible own funds and slightly lower capital requirements, which left the own funds surplus at €69 bn, a historical high (see Chart A.2.5 A and Chart A.2.5 B). Although eligible own funds increased by less than in 2007, the overall quality of CG capital improved despite the unfavourable economic environment during the past year. Tier 1 capital continued to grow faster than total own funds in 2008 and, within tier 1 capital, the captions representing higher quality capital (capital stock and reserves) held at the same growth rate as in 2007, quadrupling the rate shown by total own funds. As a result, the weight of tier 1 capital in total own funds increased by nearly 4 pp to 74.8% (see Chart A.2.5 C) and the tier 1 solvency ratio rose by nearly 1 pp to 8.5%. It is important to realise that this strengthening is not principally attributable to the new Circular, since this did not introduce very significant changes in own funds.

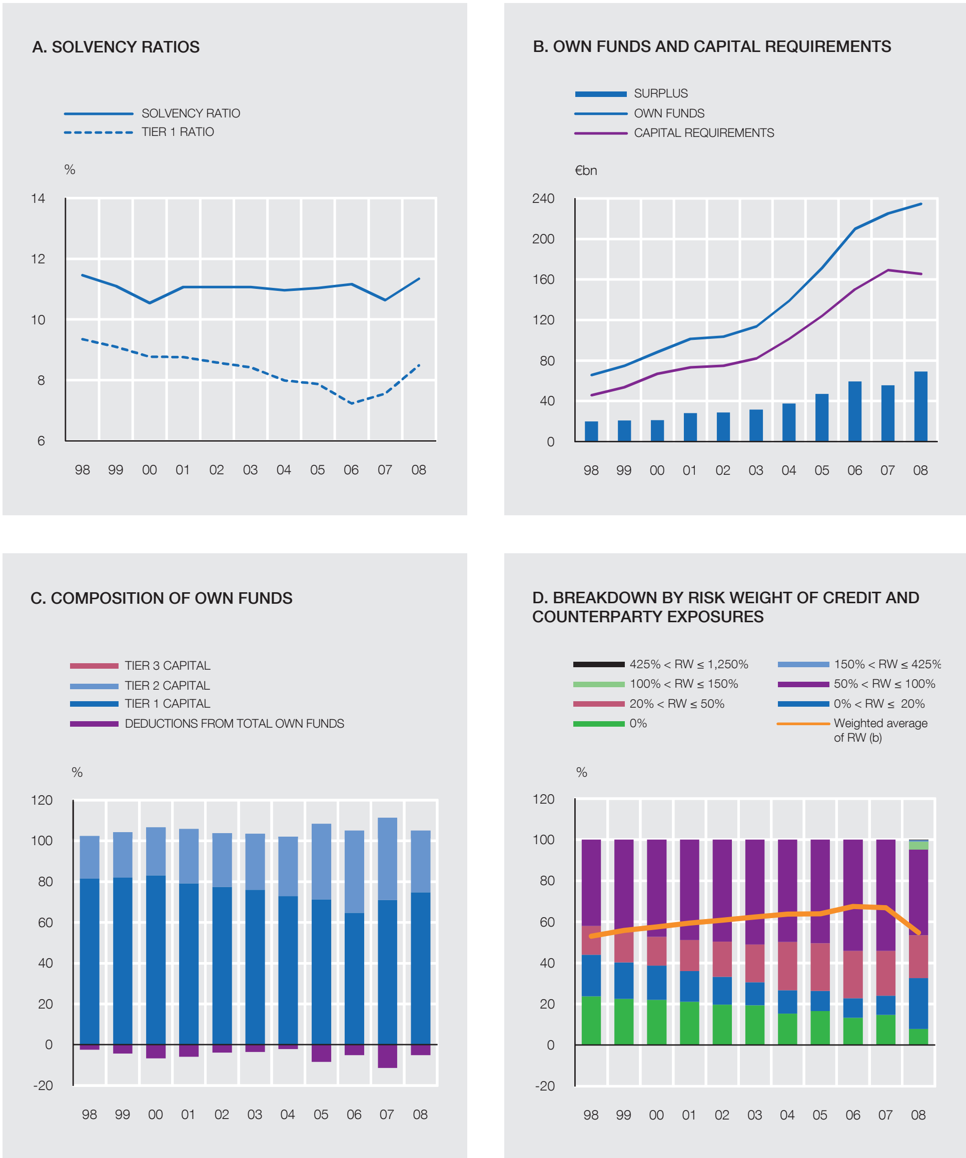
The changes introduced by the new Circular mainly concern capital requirements. The slight decrease in these requirements in 2008 (by 2.2%) is in line with the expected effect of the changes made by Basel II to make the capital requirements for credit risk more commensurate with the credit risk profile assumed. The expected fall in the credit risk capital requirements is largely offset by new operational risk capital requirements not so far considered and by some transitional requirements applied in the period 2008-2009 to smooth the transition in those CGs authorised to apply internal models.

Turning again to own funds, despite the aforementioned improvement in their quality, various factors limited their growth to an overall rate of 4.3% in 2008. First, the difficult international and national environment in which CGs had to operate in 2008 significantly reduced profits, as explained in the preceding section. This, together with the losses on available-for-sale asset portfolios, constrained the growth of tier 1 capital. Second, tier 2 capital fell by 21.5%, mainly due to the absence of gains on debt securities and on equity instruments accounted for as available-for-sale financial assets, a certain proportion of which can be counted as capital since the entry into force of CBE 2/2006.[7] Additionally, one of the most important components

7. Note that gains and losses on these portfolios are treated asymmetrically, since gains (net of losses) qualify, subject to limits, as tier 2 capital, whereas losses are deducted in full from tier 1 capital.

SOLVENCY OF CONSOLIDATED GROUPS OF CREDIT INSTITUTIONS (a) CHART A.2.5

Year-end data



SOURCE: Banco de España. Data available at 23 April 2009.

a. The data in this chart refer to the CGs and to the individual CIs not belonging to any CG existing at year-end.
b. Using exposure values as weights.

of tier 2 capital, namely general provisions, also fell significantly due to the greater need to record specific provisions. This led to a drop of 10 pp in the weight of tier 2 capital in total eligible own funds. All these developments contributed to moderating the growth of total own funds. It was notable, however, that, in addition to the strength of capital stock and reserves, a factor which helped to counter the aforementioned negative effects was the decrease in deductions from overall own funds, which returned to more normal levels as a result of the decrease in CGs' holdings in other credit and financial institutions amounting to more than 10% of their capital and in their participations of more than 20% in insurance undertakings, reinsurance undertakings and insurance holding companies.

Capital requirements deceased by 2.2% in 2008 as a result of the declines in requirements for credit and counterparty risk (down 10.8%) and market risk (down 15.8%). However, it should be pointed out that the new Circular introduced operational risk requirements which, as mentioned above, contributed, along with the temporary requirements, to offsetting those decreases.

As defined in Basel II, operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events,[8] and includes legal risk but not strategic or reputational risk. Under Circular 3/2008 three possible methodologies can be used to calculate requirements for operational risk: a) the basic indicator approach; b) the standardised or alternative standardised approach, which requires the segmentation of CIs' activity by business lines; and c) the advanced approach, whereby to the latter are added the in-house measurement systems of each institution. In 2008 most CGs applied the basic indicator approach, but the major CGs in the Spanish banking system chose the standardised approach, which calls for a more demanding level of management of this risk. Thus, of the €12.7 bn of requirements for operational risk of CGs as a whole in 2008, €8.5 bn were recorded in the standardised approach category, since no institution reported under the alternative standardised approach. Lastly, the advanced approach was only used by three subsidiaries whose foreign parent had been recognised for this purpose by the competent authority in its EU Member State. The data of these institutions reflect decreases of some importance in the application of the advanced approach with respect to the other approaches.

With regard to so-called "other and transitional capital requirements", which amounted to €2.3 bn compared with €0.2 bn in 2007, most of this increase (€1.9 bn) stemmed from the introduction of limits (known as floors) below which it is not permitted to reduce the capital requirements of institutions applying the IRB approach in 2008 and 2009. This prohibition is a prudent measure taken by the regulator to prevent the increased flexibility permitted by the new Circular in calculating capital requirements from being reflected in a sharp drop in requirements.

The main new development in the capital requirements for credit and counterparty risk is the introduction of the internal ratings-based approach as an alternative to the standardised approach. In 2008, 14 CGs were authorised to use these internal models for one or more of their portfolios.[9] These models introduced changes in regard to the weights used to calculate risk-weighted exposures, so the analysis of the distribution by risk weight of credit and counterparty risk from 2008 onwards has to be made using ranges instead of fixed weights, as shown in Chart A.2.5 D. This chart shows a significant decrease in the proportion of exposures weighted at 0% and at 100%, and an increase in those weighted at between 0% and 20%. There is thus a significant increase in the proportion of exposures assigned weights up to 20%, which are exposures basically corresponding to external credit ratings in the range AAA to AA-. As regards the other type of risk for which total requirements decreased (market risk, which is of marginal importance in the Spanish banking system), it should be mentioned that the increase in requirements under internal models is basically due to an increase in the number of institutions which used these models in 2008 (4) compared with 2007 (3), since if their number had remained unchanged, these requirements would have grown only by 7.1%, as against the rise of 85.4% recorded.

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8. For more details about the history and development of the regulation of operational risk, and about measurement methodologies, see Nieto Giménez-Montesinos, M.A.: "El tratamiento del riesgo operacional en Basilea II". Revista de Estabilidad Financiera No. 8 (May 2005), BANCO DE ESPAÑA. **9.** Of these 14 CGs, 8 are Spanish and 6 are subsidiaries of EU groups. In the Spanish CGs, the internal models were validated by the Banco de España. In the latter, they were validated by the supervisors in their respective home Member States; nevertheless, certain parameters of the models are consistent with the Spanish context.