Goodwill, balance sheet structures and accounting standards

Recent developments and issues for French groups

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This article aims to assess the economic issues related to the accounting treatment of goodwill, and more specifically the likely repercussions of the transition to International Financial Reporting Standards (IFRS) on the consolidated accounts of listed companies with effect from 1 January 2005.

Based on observations derived from a representative database of French groups, the article demonstrates a marked increase in the amount of goodwill and similar intangible assets in the balance sheets of large groups, and especially of CAC 40 groups, for whom the ratio of such assets to equity reached 82% in 2002.

The difficulties experienced in some sectors, especially telecoms and media, led some groups to record substantial write-downs of goodwill and similar intangibles, leading to huge accounting losses being reported in 2001 and 2002.

The gearing of these groups, which had risen as a result of external growth strategies partly based on debt financing, then increased further due to the contraction in equity caused by these losses. Hence the observation of a deterioration in balance sheet structure in 2002, extending into 2003.

In the light of these observations, can accounting standards yield information that accurately reflects deterioration in a company's financial structure as early as possible?

In view of the rapid developments in recent years described in this article, the question of whether or not to amortise goodwill is no longer a relevant issue. Nevertheless, in a broader perspective, the virtual disappearance of goodwill amortisation that is likely to result from the adoption of IFRS could, in an economic downturn, induce greater volatility in financial statements, at the level of both earnings and equity. This is because downward adjustments of valuations are likely to take the form of one-off charges rather than being spread over time.

Notwithstanding this potential additional volatility, the approach recommended by IFRS 3 on business combinations nonetheless gives financial statement users important information about changes in the wealth of a group during an economic downturn, and indicates any loss of that wealth due to over-priced acquisitions.

Recognition of goodwill as a separate asset thus has the effect of highlighting the potential fragility of corporate wealth which is based partly on goodwill. Furthermore, it contributes to the general drive towards greater international comparability of accounting standards.

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However, impairment tests cannot always rely on market prices. There is no guarantee that there will be a deep and liquid market in assets comparable with those that generated the goodwill, and the more specific the asset and the longer the period since acquisition, the more this will apply. It therefore becomes necessary to devise hypotheses, which provide some latitude in the choice of valuations.

Moreover, the extent of impairment losses may in itself send out a strong signal, leading to a reappraisal of expectations and share prices. This could trigger a downward spiral, which could only be contained in an efficient market.

In the final analysis, the impact of the reform of the accounting treatment of business combinations, and of goodwill arising on such combinations, will largely hinge on how the preparers of financial statements apply IFRS 3, and on the scrutiny brought to bear on the accuracy and meaning of the figures by auditors and analysts. Users will no doubt be able to place more reliance on financial statement preparation and analysis in sectors where only a few large groups have goodwill in their balance sheets, making comparisons between groups easier. Information will be harder to assess where valuations of goodwill and intangibles relate to highly specific or relatively new activities.

The very heavy losses reported by some large groups of companies in 2001 and especially 2002, caused largely by goodwill write-downs, have highlighted the importance of appropriate accounting treatment of this item in corporate balance sheets.

This study aims to assess the economic issues related to the accounting treatment of goodwill, and more specifically the likely repercussions of the transition to International Financial Reporting Standards (IFRS) on the consolidated accounts of listed companies with effect from 1 January 2005.

The first part looks at the consolidated accounts of companies for the period 1997-2002 so as to trace the effects on balance sheet structures of acquisition strategies, depending on the method used to finance these strategies. The second part assesses the effects of changes affecting certain sectors, in particular telecoms and media, in which companies built up substantial amounts of goodwill only to be forced to write it down and sell off assets in a bid to restore the soundness of their balance sheets. The final part focuses on the different methods of accounting for goodwill under current French standards and IFRS in order to stress, in the light of our earlier observations, the implications of the adoption of IFRS from 2005.

The data used in this study are derived from the consolidated balance sheet database maintained by the Companies Directorate of the Banque de France. This database comprised 2,700 records in 1997, and 3,700 in 2002. It only contains industrial and commercial enterprises; financial institutions and insurance companies are excluded. We extracted two data series from the database. The first covers the largest groups, which are included in the CAC 40 (or were during the period under review). The second series comprises the remainder of the groups in the database.

The decision to use these two populations reflects the rather unusual profile of CAC 40 companies in terms of their size and international exposure, and the fact that their method of financing relies primarily on the financial markets. A further benefit is that the two populations are broadly similar as regards their overall economic weight.

Year 2002

	Number of groups	Employees	Sales EUR billions	Total assets EUR billions	Equity EUR billions
CAC 40 Population	34	2,319,000	770	923	240
Other groups	3,515	1,964,700	919	1,150	241

Source : Banque de France – consolidated accounts database.

The study combines two approaches, the first based on average ratios and the second on the distribution of individual ratios around the median and quartiles. The first of these approaches gives an indication of the size of the deals carried out by the groups as a whole, but is heavily influenced by trends specific to the largest groups. The second approach aims to assess the diversity of the groups' behaviour by attaching equal weight to each of them, thereby giving a better understanding of the practices adopted by companies generally.

Box 1

A definition of goodwill

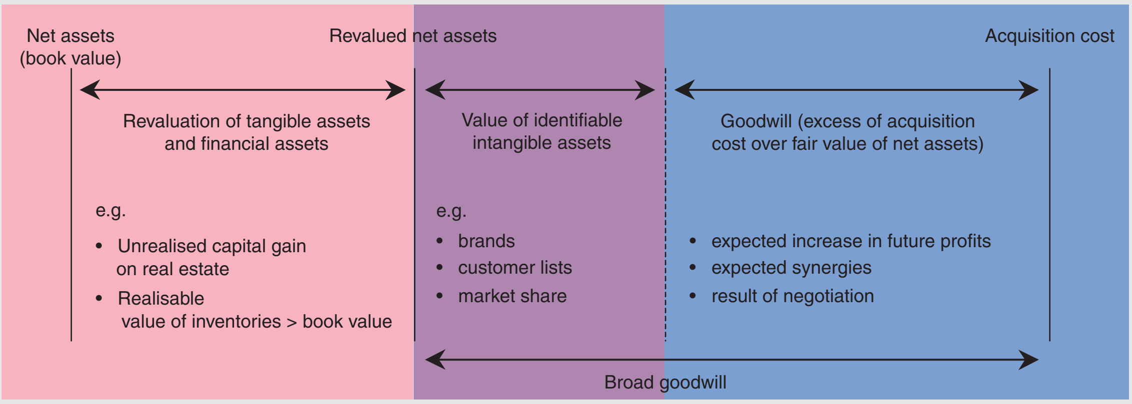
Goodwill is an asset recognised in consolidated balance sheets. It represents the difference arising on the first-time consolidation of an acquired company between the acquisition cost of the shares in that company and the fair value of its assets and liabilities on the acquisition date. In other words, it is the differential between the book value of a company's net assets, adjusted for any revaluations, and what a group is prepared to pay to acquire that company. Goodwill arises largely because of the difficulty of reflecting certain aspects of a company, such as human capital or negotiating power, in accounting terms.

From an economic standpoint, the main justification for recognising goodwill is that it represents an expected return or cost savings from the acquired company. Hence the very substantial amounts of goodwill recognised in the new information and communication technology sectors were in line with hopes that the target companies would deliver very large profits.

Intangible assets derived from acquisitions, such as brands or market share, are analogous to goodwill – so much so that it can be very difficult to distinguish between them. The IASB's new IFRS 3 standard on business combinations does offer a degree of clarification in this area by laying down two criteria, one relating to the existence of legal or contractual rights, and the other to the separability of the asset. Nonetheless, determining the value of these assets remains a difficult exercise based, like goodwill itself, on the expected return or cost savings from the acquired company.

For simplicity's sake, we have used the term "broad goodwill" to cover not only goodwill in the pure accounting sense as recognised in consolidated balance sheets (i.e. the excess of acquisition cost over fair value of net assets acquired), but also other intangible assets related to acquisitions.[1]

Breakdown of the difference between acquisition cost and the book value of the acquired company:



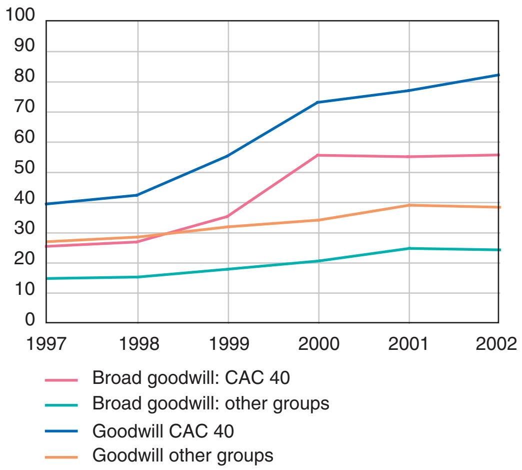
[1] *Such as brands, market share, customer lists, etc.*

1| Balance sheet deterioration associated with external growth strategies

1|1 Marked increase in goodwill, driven by a few very large listed groups

The external growth strategies followed by large industrial and commercial groups led to a surge in the amount of goodwill and other intangibles[1] in balance sheets between 1997 and 2002. The proportion of broad goodwill to equity doubled for the CAC 40 population, the average ratio rising from 40% to 82%. The trend for other groups was similar but much more modest: broad goodwill rose from 27% to 39% of equity over the same period.

Chart 1
Goodwill/equity
Broad goodwill/equity
CAC 40 and other groups
(average ratios as a percentage ; gearing)

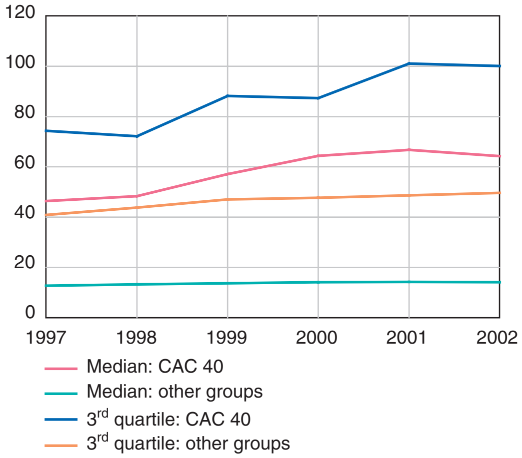


Source: Banque de France – consolidated accounts database

Within the CAC 40 population, this surge in goodwill and intangibles, notwithstanding a particularly marked effect in a few very large groups in the sample, is a fairly widespread phenomenon. The median ratio of broad goodwill to equity rose from 46% to 64% during the period under review. In the more recent years, broad goodwill actually exceeded equity for a quarter of the sample groups.

By contrast, the vast majority of the other groups in the database show stable broad goodwill over the period. However, only just over half of these groups recognise goodwill as an asset in their balance sheets.

Chart 2
Broad goodwill/equity
CAC 40 and other groups
(median and 3rd quartile ; as a percentage)



Source: Banque de France – consolidated accounts database

So while the median value of broad goodwill was close to 2/3 of equity for the CAC 40 population in 2002, it was only 14% of equity for the other groups in the same year. However, this relatively modest figure conceals a fairly wide dispersion, with a quarter of the "other groups" population showing a ratio of over 47% for the last four years of the period.

Under French accounting standards, the decision as to whether to treat the excess of acquisition cost over net assets acquired as goodwill or as identifiable intangible assets has significant implications for corporate earnings. This is because any amount not allocated to identifiable intangible assets but recognised as goodwill must be systematically amortised,[2] depressing future profits. By contrast, intangible assets are not subject to amortisation, and hence do not affect earnings unless a one-off impairment loss is recognised. On this point, within

[1] *"Broad goodwill" also includes intangibles associated with acquisitions: see explanation in the introduction.*
[2] *However, the amortisation period varies widely under French accounting standards, and may be as much as 40 years, thereby eroding the effect of the distinction between goodwill and intangible assets.*

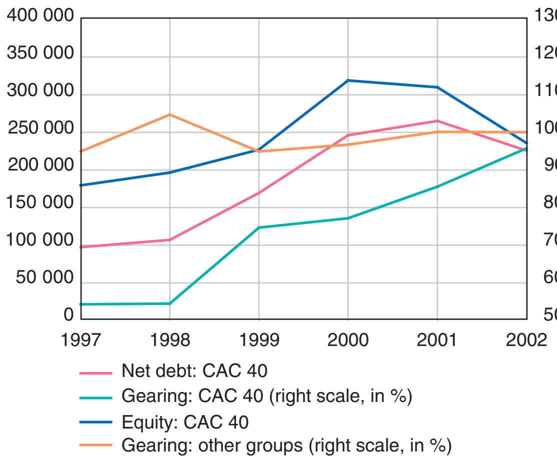
the CAC 40 population nearly 2/3 of all excess of acquisition cost over net assets is not allocated to intangible assets. Interestingly, however, the higher the ratio of broad goodwill to equity, the greater the proportion allocated to intangible assets.

It is also worth noting that the overall proportion of broad goodwill would have been even greater had not some large mergers (Total, Petrofina and Elf; Cap Gemini and Ernst & Young) been accounted for using the pooling of interests method. This involves offsetting the excess of acquisition cost over the fair value of net assets acquired against equity, which means that no goodwill is shown in the balance sheet (see section 3.1.).

1|2 Deterioration in balance sheets due to extensive use of debt financing for external growth purposes

External growth strategies are funded either by debt or by equity issuance, or more usually by a combination of the two. The mechanism of consolidation is such that a mix of debt and equity financing will almost always increase gearing. This is because post-acquisition equity will still consist solely of the equity of the acquiror (including any new share issue), but the post-acquisition debt figure will be the sum total of the debt of all the consolidated companies plus any debt contracted to fund the acquisition.

Chart 3
Net debt and equity
(in millions of euros)



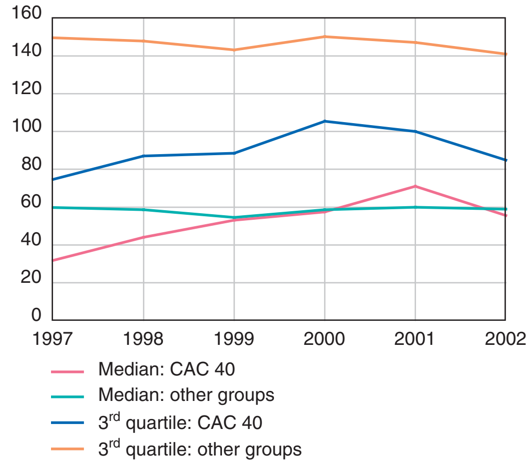
Source: Banque de France – consolidated accounts database

The increase in both net debt and equity shows that CAC 40 companies financed acquisitions using a mix of debt and equity issuance. As could be expected, debt rose faster than equity, driving average gearing sharply upwards (from 54% to 96%) between 1997 and 2002.

Despite the fall in outstanding debt during 2002, average gearing continued to rise as the result of an even more pronounced fall in equity. This was due to write-downs of goodwill and intangibles, plus negative movements in translation differences on foreign subsidiaries and, in some cases, losses on divestment of financial assets.

The average gearing of other groups increased to a much lesser extent, from 95% in 1997 to 100% in 2002.

Chart 4
Net gearing
CAC 40 and other groups
(median and 3rd quartile ; as a percentage)



Source: Banque de France – consolidated accounts database

The median gearing for groups outside the CAC 40 population shows little variation during the period under review, ranging from 55% to 60%. By contrast, the median gearing for the CAC 40 groups shows a marked uptrend. While it was significantly lower than the median ratio for the other groups at the start of the period, it caught up in 1999 and moved well ahead in 2001, before ending the period at a comparable level.

However, the other groups show wider dispersion in gearing than the CAC 40 population. In 2002, the most heavily indebted quartile of groups had net gearing of over 140%. This compares with less than 100% for the most heavily indebted quartile of the CAC 40 population over the whole period (with the exception of 2000).

Box 2

The Banque de France consolidated balance sheet database

As part of its work assessing French companies, at both microeconomic and macroeconomic level, the Banque de France analyses issues relating to membership of a group of companies. This led to the creation in 1992 of a database containing the consolidated accounts of non-financial groups. The Bank's branches collect these balance sheets from companies and enter the figures into the database, while at the same time checking the accounting methods used so as to ensure that the data are consistent. The database includes a large number of groups required to file consolidated accounts, as well as smaller groups. The number of balance sheets collected has gradually increased over the years.

The table below shows the number of groups included in the consolidated accounts database. While the increase in the number of groups to some extent reflects the collection of more consolidated balance sheets, it also reflects the proliferation of group structures in the productive sector over recent years, largely as a result of external growth strategies pursued by groups.

Number of groups in the banque de France database

Number of groups Segmented by sales	1997	1998	1999	2000	2001	2002
Sales > 200 millions	864	973	1,042	1,037	1,060	1,020
Sales > 30 millions et < 200 millions	1,259	1,406	1,598	1,740	1,941	1,936
Sales < 30 millions	612	651	685	723	761	767
Total	**2,735**	**3,030**	**3,325**	**3,500**	**3,762**	**3,723**

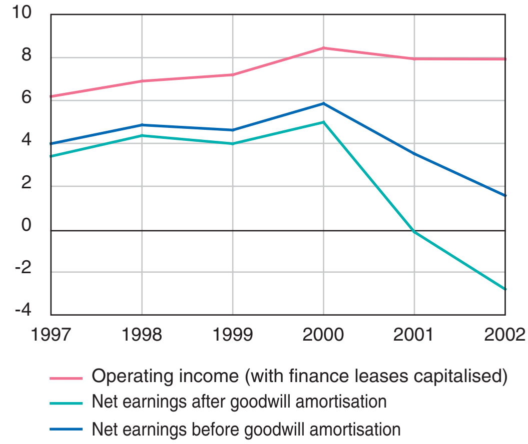
Source : Banque de France — consolidated accounts database

2| In some sectors, groups have been forced into massive goodwill write-downs and balance sheet restructuring

2|1 A sharp fall in earnings for some large groups, due mainly to goodwill write-downs

Contrary to the performance that might have been expected during an economic slowdown, corporate operating margins held steady in 2001 and 2002. On the other hand, the CAC 40 population shows a pronounced decline in net earnings before (and especially after) amortisation of goodwill, to the extent that net income fell to zero in 2001 and moved into the red in 2002.

Chart 5
Return on sales
CAC 40
(average ratios ; as a percentage)



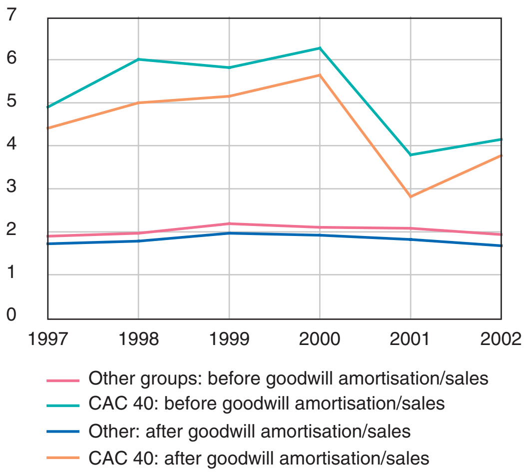
Source: Banque de France – consolidated accounts database.

This trend was largely driven by the biggest groups, which downgraded their forecasts of earnings from recent acquisitions without, in the majority of cases, seeing any decline in overall operating profitability.

It should be noted that the write-downs related not only to goodwill, but also to intangible assets. Indeed, most of the decline in earnings before goodwill amortisation was due to write-downs of intangibles. The deterioration in net financial items – due to impairment of investments, foreign exchange losses, higher interest charges and a drop in investment income – seems to have been only a secondary factor.

Median ratios, however, give a different picture. The fall in net earnings in 2001 and 2002 was less marked for the CAC 40 population, and was only partly due to write-downs of goodwill and intangibles. The main cause of the drop in net earnings seems to have been difficulties at foreign subsidiaries, especially in South America and South-East Asia, and more recently in the United States

Chart 6
Net earnings before & after goodwill amortisation/ sales
CAC 40 and other groups
(median ; as a percentage)



Source: Banque de France – consolidated accounts database

Unlike the CAC 40 sample, the other groups show, in median value terms, relatively stable earnings over the period as a whole. Nonetheless, the CAC 40 companies continue to outperform the other groups, with return on sales ratios fluctuating between 3% and 6%, compared with barely 2% for the other groups.

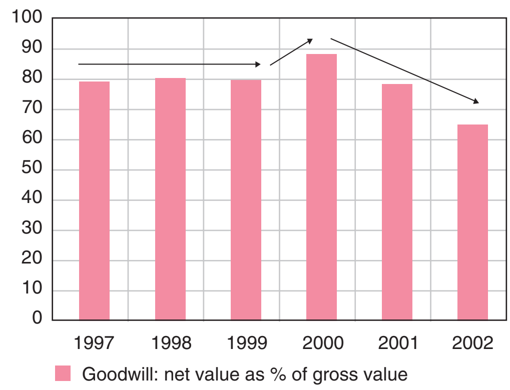
The average return on capital employed (net income/ capital employed) for the CAC 40 groups, having risen from 4.5% in 1997 to 6.5% in 2000, deteriorated at the end of the period (-3.5% in 2002).

Return on equity (net income to equity) varied between 9% in 1997 and 11.1% in 2000, but became negative in 2001 and 2002 (-9%).

The other groups marginally underperformed the CAC 40 groups at the start of the period, but remained stable over the six-year period, with a return on capital employed of about 2% and a return on equity of about 7%.

The write-downs recorded by the CAC 40 groups were reflected in their balance sheets by a big drop in the impairment ratio of goodwill (net vs. gross value), which fell from 88% in 2000 to 65% in 2002.

Chart 7
Goodwill impairment ratio
CAC 40
(average ratios ; as a percentage)



Source: Banque de France – consolidated accounts database

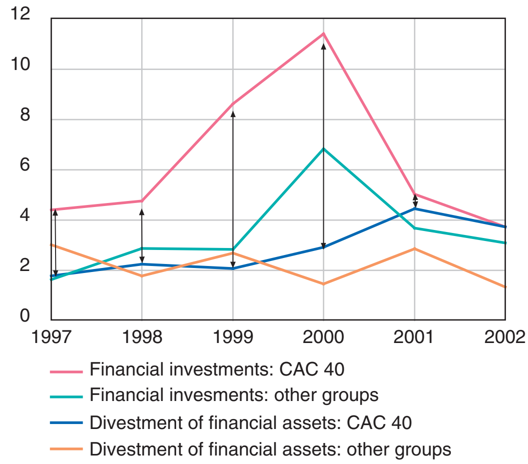
In the case of the other groups (around half of which recognise goodwill as an asset), the impairment ratio increased from 72% in 1997 to 77.2% in 2000, before gradually easing again to 73.4% in 2002.

2|2 Major divestments aimed at restoring balance sheets to soundness and meeting debt repayment obligations

While writing down goodwill and intangibles may result in substantial accounting losses, it has no impact on cash flows. However, the downward revisions of future cash flow expectations which underlie these write-downs may, if they are big enough, point up a mismatch between the amount of debt in the balance sheet and the company's ability to generate the cash needed to service its debt. In practical terms, a company may in such circumstances face difficulties refinancing its debt and hence be forced, provided it has the means, to reduce its debt by selling off assets.

This process, which starts with goodwill write-downs and leads to an increase in gearing and potentially to cash-flow problems, highlights the risk incurred by companies when they resort to debt financing for external growth purposes.

Chart 8
Financial investment & divestment/total assets
CAC 40 and other groups
(average ratios ; as a percentage)



Source: Banque de France – consolidated accounts database

Trends in investment and divestment of financial assets for the CAC 40 population show a very uneven profile. Initially, in 1999 and 2000, investments were running at a very high level, exceeding 11% of total assets in 2000. Then followed a period of reduction in investment combined with increased divestments, culminating in 2002 when investments in financial assets were balanced by divestments. By contrast, investment in tangible and intangible assets remained fairly stable over the period, fluctuating between 4.5% and 6% of total assets, with disposals at around 1%.

The pattern of investment and divestment for the other groups was similar, but the fluctuations were much less marked. In 2000, the increase in financial investment rose to nearly 7% of total assets, while in 2001-2002 divestments were close to 4% of total assets, double the levels at the start of the period.

2|3 The situation at the end of the period gives an indication for 2003 for the largest groups

Between 1998 and 2000, the CAC 40 groups made major acquisitions, especially in new technologies. This led to the recognition of ever-larger amounts of goodwill and intangibles in balance sheets. In 2001-2002, it emerged that profit forecasts for acquired companies had often been heavily overestimated. The CAC 40 groups were therefore forced to take substantial write-downs of goodwill and intangibles on these companies. At the end of 2002, despite maintaining a high level of operating performance, several of the biggest CAC 40 groups showed deteriorated balance sheets as a result of the lower than expected returns yielded by acquisitions.

The same applies to the other groups as a whole, although the most pronounced trends (as in the case of the CAC 40 companies) are attributable to a minority of groups with a heavy weighting in the sample. In addition, the fluctuations are much less marked for groups outside the CAC 40.

Despite substantial write-downs in 2001 and 2002, broad goodwill is still rising relative to equity as a result of the decline in equity[3] (see chart 1). Gearing is also still rising, for the same reason (see chart 3).

So, write-downs of goodwill and other intangibles, which were intended to restore corporate balance sheets to soundness, are only a first phase, prior to the almost inevitable process of debt reduction upon which a number of large groups have yet to embark. In addition, the end-2002 level of broad goodwill in balance sheets still looks very high, both for CAC 40 groups and for other groups, at 82% and 38% of equity respectively.

During 2003, we saw some further substantial write-downs. Divestments of financial assets are still sizeable, while investments remain at low levels. Overall, debt reduction continued during 2003, though with the equity base again contracting this has not led to a drop in gearing.

[3] *A decline accentuated by negative movements in translation differences on foreign subsidiaries, due to adverse exchange rate developments for euro-zone groups.*

3| Implications of adopting IFRS standards on goodwill

In the light of these observations, what is the role of accounting standards in delivering information that might provide an early warning of the risk of deterioration in corporate balance sheets?

3|1 French accounting standards are relatively flexible

French accounting standards offer a degree of choice in accounting for acquisitions.

- Subject to a number of conditions (the main one being that consideration for capital infusion must be primarily in the form of shares), a company making an acquisition may opt to use the pooling of interests method as an alternative treatment.

  Under this method, differences (goodwill and other valuation adjustments) between acquisition cost and book value are offset immediately against equity. This has two advantages for the company. First, the issue of goodwill amortisation does not arise, thereby protecting future earnings. Second, there is only a marginal impact on gearing: the share issue usually cancels out the reduction in equity caused by the immediate offsetting of the goodwill.

  In practice, the requirement that the acquisition be paid for primarily by issuing shares severely restricts the number of companies able to opt for this approach.

- The standard treatment is the purchase method of accounting. This method also offers companies a degree of latitude, firstly in how the excess of acquisition cost over the fair value of net assets is split between non-depreciable intangibles (brands, market share, commercial sites, etc) and goodwill, and secondly in deciding on the goodwill amortisation period. French standards also provide for the recognition of impairment losses in order to avoid goodwill and intangibles remaining in the balance sheet at more than their economic value.

  This latitude enables companies, with approval from their auditors, to cushion the impact of acquisitions on future earnings. In financial reporting terms, the goodwill amortisation charge is shown on a separate line above net income, enabling companies to report an earnings figure unaffected by amortisation charges.

3|2 Question marks over international accounting standards

Under the new IFRS 3 on business combinations, adopted by the IASB during the first quarter of 2004 to replace the old IAS 22, only the purchase method is allowed.

Allocation of the excess of acquisition cost over the fair value of net assets acquired is subject to tighter restrictions than under French standards. Intangible assets may not be recognised on a separate line from goodwill unless they are covered by legal or contractual rights, or are separately identifiable.

Unlike under French standards, goodwill is not amortised. Conversely, intangibles recognised as having a finite useful life are amortised over that period.

The absence of any practical experience of companies applying these standards makes it difficult at this stage to form a judgment as to their precise impact. That said, other things being equal, this accounting method could in the medium term lead to substantial increases in the amount of broad goodwill in the balance sheet. This is because the restrictions on the recognition of separately identifiable intangible assets (see above) are liable to reduce the amounts classified as intangible assets, thereby significantly reducing the amount of broad goodwill subject to systematic amortisation.

The international standard builds in the principle of impairment tests. These involve reassessing the value of goodwill and intangibles annually by reference to indicators of impairment in value, such as the market value of the acquired company, the situation of markets in which that company operates, or the level of interest rates. In theory, this provides a safeguard against goodwill and other intangibles being shown in the balance sheet at more than their economic value.

Given that in the vast majority of cases goodwill has no market value, impairment tests are based on a discounted cash flow approach. This approach builds in growth forecasts and discounting assumptions; it is inherently uncertain, and offers considerable latitude in the way it is put into practice. Consequently, the corrective effect that impairment tests are expected to offer cannot be viewed as an exact reflection of the loss of value suffered by the company, but rather as a perception of the potential loss of value at a specific moment in time.

Box 3

Asset impairment methods under IFRS

Fixed assets, including goodwill and intangibles, are subject to impairment tests. An impairment loss must be recognised in the income statement if the book value ("carrying amount") of an asset is greater than its recoverable amount, defined as the greater of net selling price or value in use. Value in use is defined as the present value of estimated future cash flows from the continuing use of an asset, plus any residual value at the end of its expected useful life.

Replacing an approach that combines the systematic amortisation of goodwill and impairment losses with a system based essentially on impairment tests will undoubtedly induce companies with acquisition strategies to make significant corrections to their financial statements much more frequently. With no amortisation charges being booked, groups will not recognise any expense at all in the good years, while at the slightest downturn they may be hit by a double blow: lower earnings as a result of tougher economic conditions, plus charges arising from the impairment of goodwill and other intangibles.

From a financial stability perspective, the key issue is the potential impact on investor and lender behaviour of the discontinuity in financial information caused by these corrections, which as things stand are likely primarily to depress earnings (impairment losses on goodwill are non-reversible).

3|3 These questions feed into the fair value debate

The switch from the old IAS 22 to IFRS 3 is linked to the process of convergence with US standards. The changes introduced by IFRS 3 are the outcome of a compromise made by the US standard-setter (FASB) in June 2001: the FASB prohibited the pooling of interests method, which it believed was being abused, but in return agreed to scrap goodwill amortisation in order to avoid an excessive adverse impact on the earnings of companies that had made acquisitions.

Conceptually, the issue of whether or not goodwill should be amortised is still controversial. On the one hand, systematic amortisation charges do not always seem wholly justified, at least as regards the amount involved. On the other, goodwill requires some maintenance expenditure (advertising, promotions, research, etc.) in order to retain its value. In other words, goodwill loses some of its value if a company does nothing. Consequently, failure to recognise this loss of value (*via* amortisation charges) is effectively tantamount to recognising internally-generated goodwill in the balance sheet (reflecting the enhancement of the future earnings capacity of the group as a whole). However, no accounting system allows recognition of internally-generated goodwill.

As it stands, IFRS 3 is ambivalent. On the one hand, IFRS 3 disallows recognition of internally-generated goodwill on the grounds that it cannot be measured with sufficient reliability. On the other, IFRS 3 allows companies to retain goodwill arising on acquisitions in their balance sheets without taking account of the fact that the more time has elapsed since the acquisition, the more the value of the goodwill (initially based on a market value) becomes uncertain or even arbitrary.

In IFRS 3, the IASB acknowledges goodwill to be an asset in its own right, the valuation of which – in the absence of an active market – is based on discounting future cash flows. In doing so, it validates an asset valuation method based on companies' expectations of future earnings. Does this not risk creating a circular relationship between financial information and the way such information is perceived by the financial markets?

The disclosures on the valuation of goodwill required in the notes to the financial statements under IFRS, in particular disclosure of the sensitivity of valuations to changes in growth rates and discounting rates, would appear to give users of accounts the scope to adjust the valuations adopted by the group in the light of their own judgment. More generally, it is to be expected that the markets, and all users of accounts, will adapt to the new rules that will underpin the financial information published by listed companies from 2005. But are the tools they are being provided with appropriate? There is a risk that the resulting fluctuations in profits, and hence in equity, will skew the message put out by financial statements, making it more difficult to take long-term decisions.

These questions are part of the broader fair value debate. In the existing accounting standards context, they are probably among the most sensitive issues faced by non-financial companies. The prospect of future IASB decisions that effectively enhance the role of fair value in international accounting standards makes these questions all the more pressing.

Box 4

Methodological approach and definition of variables

Populations examined

– "CAC 40" population: *comprises all non-financial corporations included in the CAC 40 at least once during the period from 1997 to 2002. In order to achieve a relatively constant sample despite significant changes in the composition of some groups, our sample also includes spun-off and merged companies.*

  To avoid double-counting, CAC 40 companies consolidated by another CAC 40 company were excluded from the sample. In total, the sample size varies between 33 and 35 groups.

– "Other groups" population: *comprises all groups represented in the Banque de France consolidated balance sheet database, except for companies included in the CAC 40 population and (to avoid double-counting) the parent companies or subsidiaries of such groups. We have assumed that the increase in the population during the period under review, related to the gradual enlargement of the database, has no significant impact on our statistical findings.*

Variables used

– Goodwill and broad goodwill: *goodwill is shown on a separate line in French consolidated balance sheets and hence is easily identifiable. However, broad goodwill, defined as including items analogous to goodwill but capable of classification as intangible assets, raises the issue of how to distinguish these assets from other intangible assets. In practice, we arrived at a figure for broad goodwill by adding together the "goodwill" line and the "intangible assets" line, after subtracting from the latter (where this information was available) the amounts shown for incorporation costs, research and development costs, software and patents.*

  In both cases, we used net values.

– Equity: *this comprises shareholders' equity, including minority interests.*

– Net debt: *this comprises gross debt less cash and equivalents and current investments. In the interests of consistency, debt includes a standard adjustment to bring finance lease obligations and securitised receivables onto the balance sheet (where such information is disclosed off balance sheet).*

  We used net debt rather than gross debt because in our view this reflects the approach usually adopted by the groups under review. In practice, trends in net and gross debt are broadly similar, although the amounts are different.

…/…

Investments and divestments*: we took our investment and divestment variables from the cash flow statement lines showing acquisitions and disposals of financial assets.*

Statistical concepts

- Average ratio: *the relationship between the sum total of numerators and the sum total of denominators for all the individual ratios.*
- Median: *the median was obtained by sorting ratio values for the entire sample in ascending order of size. The median value is the mid-point in this series: 50% of companies lie below the median, and 50% above it.*
- Quartiles: *quartiles split the distribution of a ratio into four parts, each containing 25% of the individual values observed:*

  25% of companies have a ratio below the first quartile (Q1).
  50% of companies have a ratio below the median quartile (Q2 or median).
  75% of companies have a ratio below the upper quartile (Q3).