Trend in the financial structure and results of firms in 2004

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Introduction

Every year, in the fourth quarter's Economic Review, the National Bank describes the developments taking place in the annual accounts of non-financial corporations. By the autumn, the Central Balance Sheet Office in fact already has a representative sample of the annual accounts relating to the previous year. The conclusions drawn on the basis of that sample can therefore be extrapolated relatively reliably to the population as a whole.

Historically, this article essentially comprised a study of developments in the profit and loss accounts of firms. In recent years, that study has been gradually supplemented by a financial and microeconomic analysis, not only of the profit and loss accounts but also of the balance sheets and the annexes to the annual accounts. Since last year, on the basis of the results of an internal business failure prediction model, an appraisal of the financial risks incurred by firms has also been presented.

This article is in three sections. Section 1 describes the methodology and the sample used. Section 2 presents an extrapolation of the main profit and loss account items. Finally, Section 3 assesses the financial situation of companies, particularly their level of profitability, solvency, liquidity and financial risk.

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(1) For the record, this proportion was only 1 p.c. on 31 December 2004.

(2) It is also necessary to note that, every year, there are some firms which fail to submit annual accounts, despite the statutory obligation to do so. The percentages stated inevitably disregard those firms.

1. Methodology and constant sample

1.1 Characteristics of the data used and construction of the constant sample

Since the late 1970s, the Central Balance Sheet Office has collected data on the accounts of non-financial corporations each year. For that purpose, the firms are required to submit their annual accounts using a standard form by no later than seven months after the end of the financial year. The data are then adjusted if necessary to meet the required quality standards, after which an initial analysis can be conducted from September onwards. However, every year the nature of the data available for the latest financial year examined – in this case 2004 – raises two methodological questions.

First, the population of annual accounts relating to 2004 is incomplete. This situation arises because many sets of annual accounts are filed late or do not pass the arithmetical and logical checks conducted by the Central Balance Sheet Office. For example, where 2003 is concerned, the proportion of accounts not filed or not usable on 31 August 2004 came to 23 p.c., (1) or around 58,000 sets of accounts. Since these problems mainly concern fairly small firms, these missing accounts represented 7 p.c. of the value added of all non-financial corporations: a small proportion but nonetheless significant (2).

Second, firms whose annual accounts are available late are in a structurally less favourable financial situation than other firms. Table 1 shows, for the 2003 financial year, the significant differences between firms according to the time of filing their annual accounts: firms which filed

TABLE 1 FINANCIAL PROFILE OF FIRMS ACCORDING TO THE TIME TAKEN TO FILE THEIR ANNUAL ACCOUNTS (1)

(2003 financial year, medians)

	Annual accounts filed before 31 August 2004	Annual accounts filed after 31 August 2004
Liquidity in the broad sense	1.23	1.13
Degree of financial independence	31.21	24.38
Return on equity	6.41	5.29

Source: NBB.

(1) The financial ratios are defined in Annex 2. Their implications are also explained in section 3 of this article.

their accounts after 31 August 2003 are significantly less liquid, less solvent and less profitable (1). In all probability, the data currently available for 2004 therefore present an over-optimistic view of reality.

Being subject to this double bias, the 2004 data are not directly comparable with those from previous years. In order to ensure comparability, the constant sample method is used. The constant sample for 2003-2004 comprises firms which filed annual accounts for both 2003 and 2004, and which satisfy the following conditions:

- both sets of annual accounts relate to a 12-month financial year;
- both sets of annual accounts satisfied the quality requirements of the Central Balance Sheet Office;
- the annual accounts relating to 2003 were filed before 31 August 2004;
- the annual accounts relating to 2004 were filed before 31 August 2005.

The method consists in extrapolating the 2004 results on the basis of the trends found in the constant sample: the 2004 figures are obtained by taking the final figures for 2003 and applying the rates of change recorded in the sample. It is therefore assumed that the trends seen in the sample are representative of the trends occurring in the population as a whole. As verified in previous editions of this article, that assumption is largely borne out since, in the vast majority of cases, the estimates give an accurate representation of the direction and scale of the actual movements.

(1) The time taken to file annual accounts is also one of the explanatory variables used in the business failure prediction model presented below: the greater a firm's delay in filing its annual accounts, the higher the risk of failure estimated by the model.

(2) Details of these criteria can be found in Article 15 of the Companies Code.

(3) For more details on this reclassification, see the article published in the Economic Review for the 4th quarter of 2003.

1.2 Classification of firms by size and branch of activity

Non-financial corporations form a diverse population within which very divergent trends may be seen. The tendencies detected by analysis of the overall results therefore have to be refined by analysis according to the firms' size and branch of activity. For one thing, the method of financing and – more generally – the financial position of firms varies according to whether the firm is large or small. Also, firms are subject to cyclical movements specific to each branch of activity, and these are generally reflected in the movement in the annual accounts.

The distinction according to size is based on the criteria specified by the Companies Code. According to the Code, the following are classed as large:

- firms employing over 100 people, as an annual average, or
- firms which exceed more than one of the following limits:
  - annual average number of employees: 50;
  - annual turnover excluding VAT: € 6,250,000;
  - balance sheet total: € 3,125,000. (2)

Firms which do not exceed these criteria, i.e. SMEs, can draw up their annual accounts in an abbreviated format, unlike large firms which are obliged to use the full format. However, not all SMEs use the option available to them. As a result, the population of annual accounts filed in the full format contains not only the annual accounts of large firms, but also those of a significant number of SMEs. For example, in 2003 the 16,000 sets of full-format accounts filed included 7,000 sets of accounts relating to SMEs. The firms therefore cannot be classified strictly by size according to the type of format used. For that reason, since 2001 the distinction has no longer been based on the type of format used but is applied strictly according to the Companies Code criteria. SMEs filing full-format accounts are thus no longer included in the population of large firms but are placed in the SME category. (3)

The distinction according to branch of activity is based on the NACE-BEL nomenclature of activities, used in most of the statistics offering a breakdown by branch in Belgium. The composition of the branches of activity studied is shown in Annex 1.

1.3 Representativeness of the constant sample

The constant sample for 2003-2004 is shown in table 2. It contains 130,758 firms, or 53 p.c. of the total number of sets of annual accounts filed in 2003. As in previous years, the representativeness measured in relation to the balance sheet total is considerably higher, since it exceeds 83 p.c. The reason is that large firms are traditionally more representative than SMEs. Within the 2003-2004 sample, the coverage of large firms is thus 19.6 points higher in terms of the number of firms, and 27.7 points higher in terms of the balance sheet total. In fact, large firms have a natural tendency to submit their annual accounts more promptly; moreover, they are the focus of special attention on the part of the Central Balance Sheet Office, which makes sure that it obtains a high degree of representativeness in terms of value added as quickly as possible. Furthermore, primarily because of the preponderance of large firms, manufacturing industry has a higher coverage rate than non-manufacturing branches. Finally, the representativeness of the sample has increased considerably in recent years. This improvement is due to the provisions of the programme law of 8 April 2003, which introduced administrative fines for late submission of annual accounts. These fines came into force with effect from annual accounts for the year ending 31 December 2002, and have had a clear impact on the promptness with which accounts are filed.

TABLE 2 COMPOSITION AND REPRESENTATIVENESS OF THE CONSTANT SAMPLE FOR 2003-2004

	Firms in the 2003-2004 sample	All non-financial corporations in 2003	Representativeness of the sample, in p.c.
Number of firms	**130,758**	**248,740**	**52.6**
Large firms	6,160	8,612	71.5
SMEs	124,598	240,128	51.9
Manufacturing industry	12,419	22,100	56.2
Non-manufacturing branches	118,339	226,640	52.2
Balance sheet total (millions of euro)(1)	**760,359**	**914,545**	**83.1**
Large firms	663,298	753,512	88.0
SMEs	97,061	161,032	60.3
Manufacturing industry	194,849	206,936	94.2
Non-manufacturing branches	565,510	707,609	79.9

Source: NBB.
(1) For firms in the constant sample, the balance sheet total taken into account is the 2003 figure.

2. Movement in the main components of the profit and loss account

2.1 Cyclical context and movement in the main components of the profit and loss account

After three successive years of weak expansion in activity in Belgium, GDP growth accelerated in 2004 to reach 2.6 p.c. The revival of economic activity had already begun in the autumn of 2003, and GDP grew steadily up to the third quarter of 2004. As in the previous year, household spending was a major factor bolstering growth, while gross fixed capital formation by enterprises recovered after contracting for two consecutive years. Foreign demand was another factor driving the economy, as is evident from the marked growth of exports. However, owing to the even more pronounced expansion of imports, the contribution of foreign trade to growth was slightly negative. Finally, as in the two preceding years, the Belgian economy grew at a faster rate than that of the euro area in 2004.

In this context, the total value added created by non-financial corporations, i.e. the difference between sales revenues and the cost of goods and services supplied by third parties, exceeded € 139 billion (at current prices) in 2004. Between 2003 and 2004, value added thus grew by 6.3 p.c., the strongest growth since 2000 (table 3).

The value added created by a firm enables it to cover its operating expenses, with any surplus recorded as a net operating profit. That represents the income generated by the firm's normal commercial and industrial activity. Staff costs make up the bulk of the operating expenses: in 2004 they accounted for over 57 p.c. of value added. Following a weak increase in 2003, they regained momentum in 2004 with growth of 3.5 p.c. The main reason for this resurgence was the small increase in the number of workers recorded in the staff register, after a decline in 2002 and 2003. After staff costs, depreciation is by far the largest item in the operating expenses. In 2004, despite the marked recovery in investments, depreciation contracted for the third consecutive year, continuing to be influenced by the low rate of investment in the two preceding years. Total operating expenses increased by 2.7 p.c., being greatly affected by the movement in staff costs and depreciation.

As in the previous year, the growth of value added therefore far exceeded the rise in operating costs. As a result of these contrasting movements, the net operating result once again increased particularly strongly to over 24 p.c. Such strong growth in two successive years was

TABLE 3 MAIN COMPONENTS OF THE PROFIT AND LOSS ACCOUNT

	Percentage changes compared to the previous year					Millions of euro	Percentages of value added
	2000	2001	2002	2003	2004 e	2004 e	2004 e
Value added	**7.6**	**2.1**	**1.5**	**4.3**	**6.3**	**139,008**	**100.0**
Staff costs (–)	6.0	3.9	3.2	1.6	3.5	79,999	57.5
Depreciation, downward value adjustments and provisions (–)	10.2	5.2	–2.0	–3.2	–2.2	23,842	17.2
Other operating expenses (–)	11.4	7.8	–2.2	9.3	10.5	8,221	5.9
Total operating expenses	*7.3*	*4.4*	*1.6*	*0.9*	*2.7*	*112,062*	*80.6*
Net operating result	**8.7**	**–10.6**	**0.7**	**25.5**	**24.3**	**26,946**	**19.4**
Financial income (+)	38.6	5.4	24.5	6.8	–7.2	46,465	33.4
Financial charges (–)	33.1	4.6	38.8	4.5	–11.8	39,639	28.5
Financial result	*73.7*	*9.4*	*–42.2*	*31.8*	*34.2*	*6,827*	*4.9*
Ordinary result	**19.5**	**–5.8**	**–11.3**	**26.7**	**26.2**	**33,773**	**24.3**
Exceptional result [1] (+)	–	–	–	–	–	–255	0.2
Net result before tax	**4.3**	**–10.1**	**–26.9**	**77.0**	**2.2**	**33,518**	**24.1**
Taxes on profits (–)	11.5	–0.2	–4.9	6.9	10.4	7,273	5.2
Net result after tax	**2.3**	**–13.1**	**–34.5**	**112.0**	**0.5**	**26,244**	**18.9**
p.m. Net result after tax excluding the exceptional result	*22.6*	*–7.7*	*–13.7*	*34.8*	*31.3*	*26,500*	*19.1*

Source: NBB.
(1) There is little point in calculating the percentage change for this aggregate, which may be either positive or negative and does not lend itself to reliable estimation.

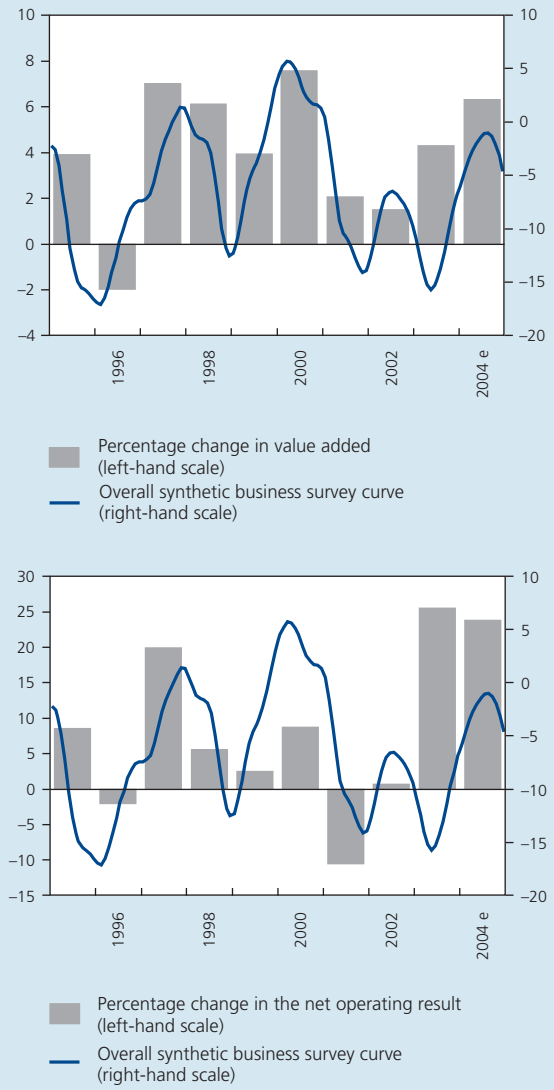
unprecedented during the past two decades, bearing witness to the remarkable performance achieved by firms in their core activity. The movements in value added and in the net operating result can also be compared with the movement in the business survey indicator (chart 1). These three variables traditionally move in parallel. This proved to be the case once again in 2004: the strong and widespread recovery of business confidence which had begun in 2003 and persisted in 2004 can be linked with the robust growth of value added and the net operating result.

In line with the trend of the past decade, the financial result increased once again in 2004, to reach almost 6.8 billion euros. However, in contrast to previous years, this increase was the outcome of a fall in both financial expenses and financial income, the fall being more pronounced in the case of income. In the space of ten years, the share of the financial result in the current result [1] has increased fivefold, rising from 4.2 p.c. in 1995 to over 20 p.c. today (chart 2). This increase is due essentially to the growing proportion of financial assets in the balance sheet of firms, resulting partly from the expansion in transactions between companies in the same group (and more particularly via coordination centres), and partly from the mergers and acquisitions which have proliferated in recent years.

After recording a surplus of almost € 6 billion in 2003, the exceptional result was close to balance in 2004, with a small deficit of less than € 0.3 billion. [2] This considerable reduction in the exceptional result practically cancelled out the growth of the operating result, so that pre-tax profits increased by only 2.2 p.c. Taxes on the result continued to increase because of the renewed rise in the operating result, which is by far the largest component of corporate taxable income.

(1) I.e. the sum of the net operating result and the financial result.
(2) In 2003, the substantial exceptional profit was due mainly to a capital gain on the realisation of fixed assets in the telecommunications branch.

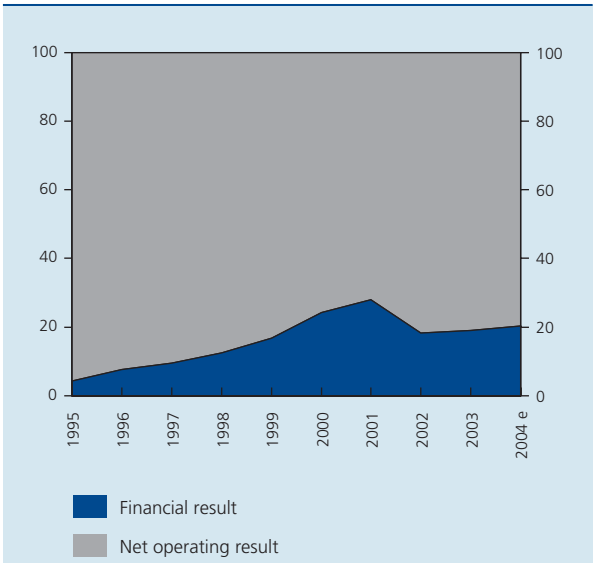
CHART 1 VALUE ADDED, NET OPERATING RESULT AND BUSINESS SURVEY INDICATOR



Source : NBB.

CHART 2 FINANCIAL RESULT AND NET OPERATING RESULT AS PERCENTAGES OF THE ORDINARY RESULT

(percentages)



Source : NBB.

After aggregation of all the components of the profit and loss account, non-financial corporations made a net profit after tax of more than € 26 billion, equivalent to the 2003 figure. Although profits therefore stagnated in 2004, it should be remembered that they had more than doubled in the previous year to reach a record level. Moreover, these movements reveal the substantial influence which the exceptional result may exert on corporate profits : excluding the exceptional result, profits would have risen by 31.3 p.c. in 2004, against 34.8 p.c. in 2003.

2.2 Results by branch of activity

In manufacturing industry, the growth of value added accelerated once again to reach 4.2 p.c. in 2004, the strongest rise since 2000 (table 4). The branches which had the greatest impact on this trend were metallurgy and metal manufactures which, after three years of sluggish activity or even contraction, benefited from the strong global demand for their products. The agricultural and food industry, where activity was underpinned by higher retail sales and exports, also recorded growth above the industrial average. In chemicals, despite buoyant exports, value added increased at a fairly modest pace, mainly because of the renewed rise in oil prices.

In 2004, the operating result of manufacturing industry increased strongly for the third consecutive year (+29.4 p.c.). This performance was due to control of operating costs in a context of strong business activity. On the one hand, staff costs increased more slowly than value added, mainly because the number of workers remained steady. Also, 2004 saw a further decline in depreciation, reflecting the sluggishness of industrial investment over the past four years. While the majority of manufacturing branches followed these trends and therefore recorded a very marked rise in their operating result, it was metallurgy that achieved the most notable increase

(+ 120.3 p.c.). While benefiting from the strong foreign demand for their products, firms in this branch made very substantial cuts in their operating costs, as is evident from the high capacity utilisation rate and the stable level of employment in the branch in 2004.

In the non-manufacturing branches, the expansion of activity which had already strengthened markedly in 2003 accelerated further to reach 7.3 p.c. in 2004. Overall, the non-manufacturing branches benefited from the vigour of domestic demand and particularly household consumption. The wholesale trade, which made the largest contribution to the growth of value added in services, was also stimulated by the rise in oil compagnies' profit margins, while in real estate and construction, growth was supported by the maintenance of interest rates at historically low levels.

As in industry, the operating result of non-manufacturing branches rose sharply in 2004 (+21.8 p.c.). It thus confirmed the robust recovery which had begun in 2003 after three years of stagnation or even contraction. The main factor here was that staff costs increased by significantly less than value added, primarily because of the limited rise in the number of workers. Moreover, despite the revival in investments in 2004, depreciation remained static or actually declined in many non-manufacturing branches.

TABLE 4 VALUE ADDED AND NET OPERATING RESULT BY BRANCH OF ACTIVITY

(Percentage changes compared to the previous year)

	Value added		Net operating result		*p.m. Percentage share of the branches in total value in 2004 e*
	2003	2004 e	2003	2004 e	
Manufacturing industry	**3.2**	**4.2**	**23.6**	**29.4**	***33.1***
of which:					
Agricultural and food industries	6.3	4.6	31.6	18.4	*4.4*
Textiles, clothing and footwear	–8.9	0.3	–23.4	7.8	*1.5*
Timber	48.6	8.0	211.4	50.4	*0.7*
Paper, publishing and printing	–1.2	3.5	15.4	19.9	*2.5*
Chemicals	0.1	2.5	8.3	16.1	*8.6*
Metallurgy and metalworking	0.4	13.7	60.9	120.3	*4.8*
Metal manufactures	–1.1	8.3	63.3	18.8	*6.9*
Non-manufacturing industry	**4.9**	**7.3**	**26.5**	**21.8**	***66.9***
of which:					
Retail trade	6.7	5.6	24.4	15.7	*8.3*
Wholesale trade	7.7	11.1	22.6	34.8	*13.1*
Horeca	5.5	5.0	–9.5	49.1	*1.7*
Transport	5.2	5.5	59.5	259.1	*7.3*
Post and telecommunications	3.5	5.7	56.5	45.7	*5.1*
Real estate activities	8.5	8.8	9.2	19.3	*3.2*
Business services	5.1	6.2	22.7	18.9	*12.1*
Energy and water (1)	–14.5	13.2	24.4	–12.0	*4.2*
Construction	2.7	5.9	11.9	15.3	*6.2*

Source: NBB.

(1) In 2003 and 2004, the changes in the value added and net operating result of this branch were due mainly to the electricity sector: pursuant to the law of 11 April 2003, Electrabel and SPE transferred to Synatom the management of the provisions formed for dismantling nuclear power stations. Since Synatom comes under manufacturing industry and therefore does not belong to the energy and water branch, the changes in value added and operating result arising from that transfer were not directly offset within the branch. Having caused a reduction in value added and an increase in the operating result in 2003, the operation produced movements in the opposite direction in 2004.

3. Movement in the financial situation of firms

The financial analysis which follows is based on the theory of interpretation of the annual accounts, from which a number of ratios, in particular, are borrowed. (1)

The financial ratios are presented in both global form and as a median. The globalised ratios are obtained by taking the sum of the numerators for all firms and dividing it by the sum of their denominators. The median is the central value in an ordered distribution: for a given ratio, 50 p.c. of firms have a ratio above the median and – hence – 50 p.c. of firms have a lower ratio. The two measures are complementary as they are used for different purposes. Since it takes account of each firm according to its real weight in the numerator and the denominator, the globalised ratio primarily reflects the situation of the largest firms. In contrast, by indicating the situation of the central firm, the median reflects the movement in the population in general, as the median is influenced equally by each of the firms examined, regardless of size. (2)

3.1 Profitability

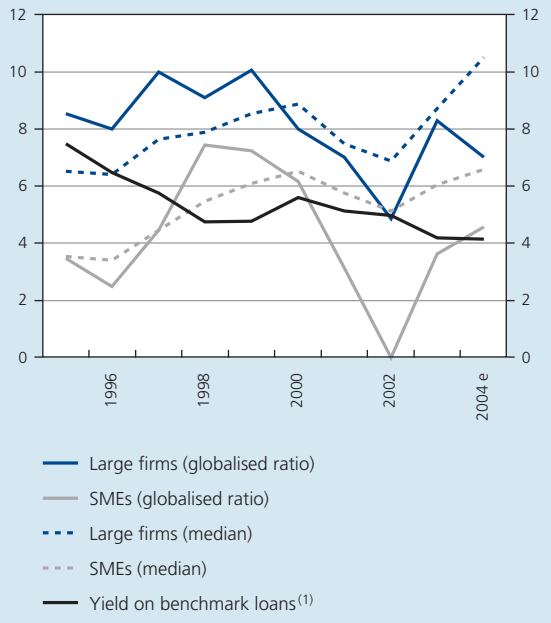
Profitability concerns the firms' ability to generate profits. It can be assessed, in particular, on the basis of the average net return on a firm's own capital. Also known as the return on equity (ROE), this figure expresses the net profit after tax as a percentage of the equity capital. The ratio therefore indicates the return received by the shareholders after deduction of all expenses and taxes. Over a sufficiently long period, the return on equity has to exceed the return on a risk-free investment in order to provide shareholders with a premium to compensate for the higher risk incurred (risk premium).

In 2004, the globalised return on equity came to 7.0 p.c. for large firms and 4.7 p.c. for SMEs (chart 3). In contrast to earlier years, the two categories of firms saw their profitability move in different directions. Following the marked surge in the previous year, the profitability of large firms declined in 2004, despite the strong growth of their operating result (and to a lesser extent their financial result). The reason for this decline lies in the substantial contraction in the exceptional result, mentioned above, attributable mainly to a handful of very large firms. Furthermore, it is possible to verify that the median ratio of large firms, which is by definition rather insensitive to individual fluctuations, continued to rise in 2004. Decidedly less affected by movements in the operating result, the profitability of SMEs maintained the recovery which had begun in 2003 following several years of erosion. This new increase was brought about by the combined improvement in the operating result, the financial result and the exceptional result.

The globalised profitability of large firms can be compared with the yield available on government bonds. In 2002, for the first time since 1994, the profitability of large firms had fallen below the benchmark bond yield, which has itself been declining throughout the past decade. In 2003, the profits recovery combined with a further fall in the yield on government bonds once again provided shareholders with a substantial risk premium. In 2004, as a result of the decline in profitability, this risk premium was eroded slightly, making an equity investment significantly less attractive to the investor. This comparison must, of course, be treated with caution as for one thing, equities and government bonds are different financial instruments; also, many large firms are not listed on the stock market.

CHART 3 RETURN ON EQUITY AND YIELD ON BENCHMARK LOANS

(percentages)



Source: NBB.
(1) Average yield on 10-year bonds.

(1) Since the concepts addressed cannot be explained in detail in this article, the reader is requested, if necessary, to consult the reference works on the subject.

(2) As a microeconomic measure, the median was preferred to the simple mean. In the analysis of non-financial corporations, the median in fact has the advantage of being more robust than the mean, as it is practically unaffected by incidental fluctuations in a small number of observations.

TABLE 5 RETURN ON EQUITY AFTER TAX, BY BRANCH OF ACTIVITY

(Percentages)

	Large firms[1]			SMEs[1]		
	2002	2003	2004 e	2002	2003	2004 e
Manufacturing industry	**6.5**	**10.1**	**11.1**	**2.4**	**4.8**	**5.2**
of which:						
Agricultural and food industries	12.6	11.8	13.3	4.3	6.4	7.6
Textiles, clothing and footwear	12.0	–0.9	–1.5	0.0	0.1	–1.8
Timber	2.4	–7.3	58.3	1.9	–4.4	–5.1
Paper, publishing and printing	5.4	24.5	–18.2	–0.5	6.7	7.3
Chemicals	8.4	10.0	7.7	1.8	13.1	7.5
Metallurgy and metalworking	–7.6	–2.1	17.0	5.6	6.5	6.9
Metal manufactures	–6.4	7.8	13.1	–1.5	3.0	4.6
Non-manufacturing industry	**4.5**	**7.8**	**6.0**	**–0.3**	**3.5**	**4.5**
of which:						
Retail trade	5.0	5.0	8.2	5.2	6.8	8.7
Wholesale trade	0.4	6.2	9.2	6.9	6.5	7.7
Horeca	–4.2	–2.9	–17.6	–3.5	–4.0	16.7
Transport	–10.7	–2.1	3.6	3.6	12.0	8.7
Post and telecommunications[2]	12.8	51.7	15.5	–73.3	6.3	–3.2
Real estate activities	6.5	10.8	16.0	1.6	2.9	4.6
Business services	3.7	4.1	4.0	–2.6	0.1	0.2
Energy and water	15.2	15.8	8.7	7.7	8.4	13.2
Construction	6.0	9.5	11.0	5.7	8.2	9.2

Source: NBB.

(1) Globalised ratio.

(2) In 2003, the exceptional profitability of large firms in this branch was due to substantial capital gains on the realisation of fixed assets by a telecommunications company, already mentioned under points 2.1 and 2.2.

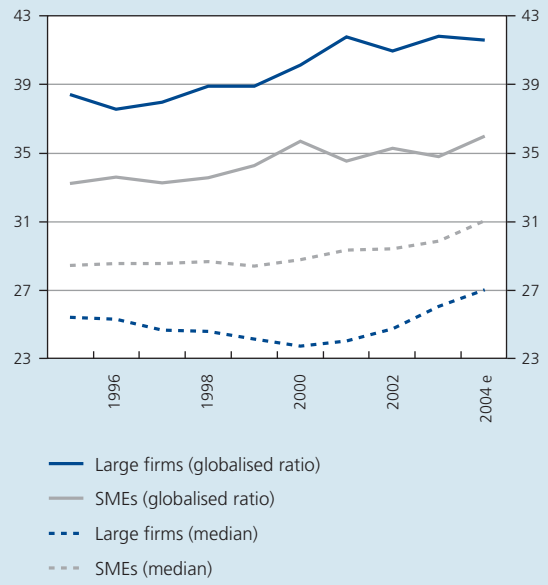
Table 5 shows details of the movement in profitability by branch of activity. It reveals that the decline in the profitability of large firms in 2004 was attributable to the non-manufacturing branches, and – more specifically – to the telecommunications branch whose profitability had been swollen by the exceptional result in 2003. The table also indicates that, overall, during the last three years, manufacturing industry has been more profitable than the non-manufacturing branches, for both large firms and SMEs. Finally, in the case of large firms, the most profitable branches of the Belgian economy in 2004 were metallurgy, real estate, telecommunications, the agriculture and food industry and metal manufactures.

3.2 Solvency

Solvency concerns the ability of firms to honour all their short-term and long-term commitments. This article examines it via three concepts: the degree of financial independence, the degree to which borrowings are covered by the cash flow, and the interest charges on financial liabilities.

The degree of financial independence is equal to the ratio between equity capital and total liabilities. If the ratio is high, the firm is independent of borrowings. This has two beneficial effects: first, financial expenses are low and therefore do little to depress profits; also, if necessary, new debts can be easily contracted on favourable terms. The degree of financial independence can also be interpreted as a measure of the firm's financial risk, since the remuneration of third parties is fixed, unlike the firm's results which fluctuate over time.

CHART 4 DEGREE OF FINANCIAL INDEPENDENCE
(percentages)



Source : NBB.

In 2004, globalised financial independence came to 41.6 p.c. for large firms and 36 p.c. for SMEs, for which it is traditionally lower (chart 4). In both categories of firms, the ratio has followed an upward trend during the last decade, leading to an improvement of around three points. This trend also affected the majority of firms, as is evident from the increase in the median ratios in recent years. Although chart 4 presents a sound and stable picture of corporate solvency, it must be pointed out that almost 16 p.c. of firms have negative financial independence, which means that their losses carried forward exceed the capital invested by shareholders.

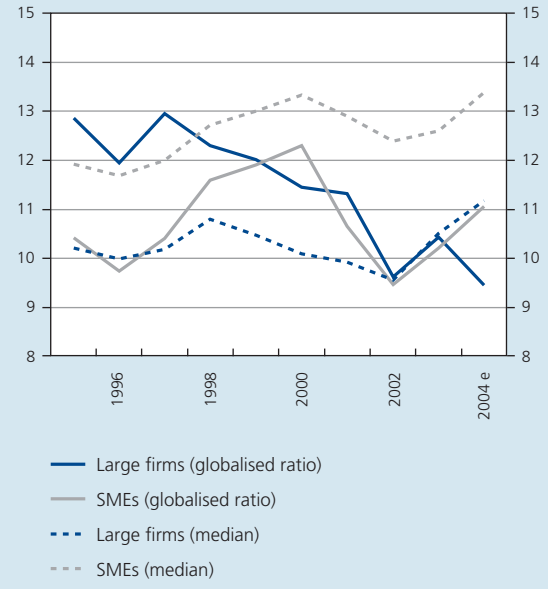
The degree of financial independence, and its converse, the degree of indebtedness, provide a picture of the general balance sheet equilibrium. Although this picture is necessary in order to diagnose solvency, it is not sufficient in itself, since it does not permit assessment of the firm's ability to repay its debts, nor of the level of charges which the debts entail. These two concepts are addressed below.

(1) The English term "cash flow" is commonly used nowadays to mean the net flow of cash generated by the firm, i.e. the difference between incoming revenue and outgoing expenditure. The cash flow, which thus represents the firm's self-financing capability, is of fundamental importance for the firm's development : in particular, the firm can use its cash flow to distribute dividends, repay its debts or finance new investments.

By measuring the percentage of the debts that the firm could repay by allocating the whole of the year's cash flow to that purpose, the degree to which borrowings are covered by cash flow indicates the firm's repayment capability.(1) The converse of the ratio indicates the number of years which it would take to repay all the debts at a constant cash flow. The information supplied by that ratio supplements that offered by the financial independence ratio, as a high level of indebtedness can be mitigated by a substantial repayment capability, and vice versa.

In 2004, large firms and SMEs recorded divergent trends in the degree to which their borrowings were covered by cash flow (chart 5). Having improved in 2003, the large firms' ratio declined in 2004, falling to 9.5 p.c. (its lowest level for ten years), owing to the combined effects of a small reduction in the cash flow and an increase in debts. This was in line with the trend for the past decade, during which the ratio has been eroded by more than three points. This erosion of the ability of large firms to repay their debts, originating in both industry and services, qualifies the gains achieved over the same period in terms of financial independence. However, it must be stressed that, having risen once again, the median ratio reached a 10-year high in 2004. On the one hand, this indicates that the coverage of borrowings improved in the majority of large firms ; it also reveals the influence which a minority

CHART 5 DEGREE TO WHICH BORROWINGS ARE COVERED BY CASH FLOW
(percentages)



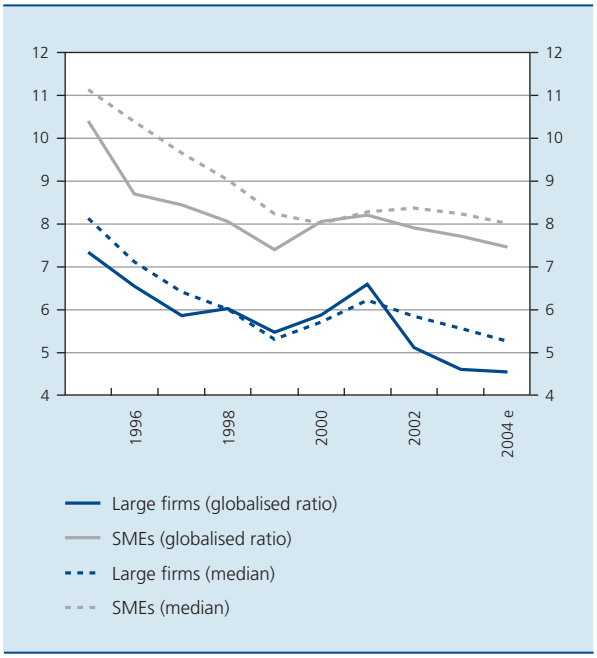
Source : NBB.

of firms can exert on the globalised ratio. In contrast to that of large firms, the globalised ratio of SMEs continued the recovery which had begun in 2003, rising to 11.1 p.c. At the same time, the median ratio of SMEs, like that of large firms, reached its highest level since the mid 1990s.

The average interest charges on the financial debts can be used to assess the cost of recourse to borrowing. In 2004, those charges came to 4.5 p.c. for large firms and 7.5 p.c. for SMEs, in globalised terms (chart 6). For both categories of firms, 2004 brought a further small reduction as market interest rates were maintained at a historically low level. Taking a long-term view, debts have become significantly less expensive for firms: since the beginning of the 1990s, average interest charges have fallen by around four points. Furthermore, the interest charges paid by large firms are structurally lower than those for SMEs. In fact, for the same method of financing, SMEs generally have to pay a risk premium because lenders consider their financial profile to be less sound. In addition, SMEs make more use of cash advances, which are a more expensive form of credit. Over the past decade, the difference between the two categories of firms has fluctuated between 1.6 and 3.1 points; in 2004, it stood at 3 points.

CHART 6 AVERAGE INTEREST CHARGES ON FINANCIAL DEBTS

(percentages)



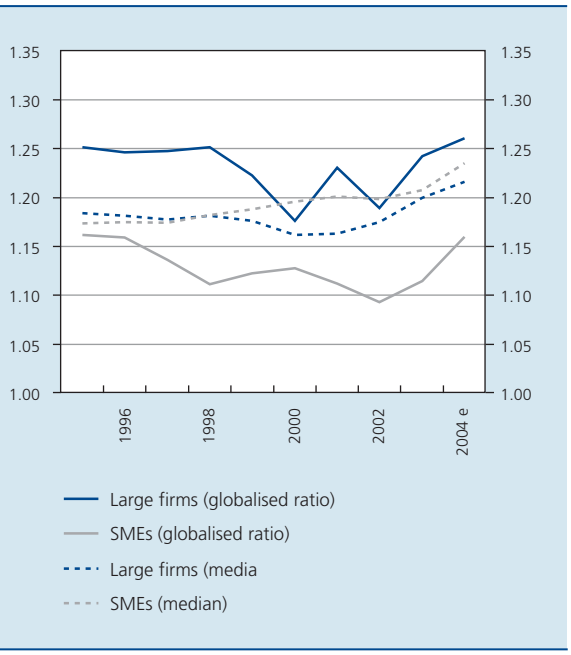
Source: NBB.

3.3 Liquidity

Liquidity indicates the capacity of firms to mobilise the cash resources needed to meet their short-term commitments. It is traditionally assessed by means of the liquidity ratio in the broad sense. This ratio, derived from the concept of net working capital, compares the total assets realisable and available (stocks, claims at up to one year, cash investments, liquid resources and accruals) with the short-term liabilities (debts at up to one year and deferrals). The higher the liquidity in the broad sense, the more capable the firm of meeting its short-term commitments. In particular, when the ratio is higher than 1, the net working capital is positive.

In 2004, the globalised ratio was 1.26 for large firms and 1.16 for SMEs (chart 7). In both categories of firms, liquidity continued the improvement which had begun in 2003, reaching its highest level since 1995, indicating that the balance sheet maturities were more evenly balanced. The median ratio has been edging upwards for several years. As in the case of solvency, the calm picture presented by the globalised ratio and the median conceals the disparities between firms. For example, almost 40 p.c. of firms have liquidity which, in the broad sense, is less than 1, i.e. negative net working capital.

CHART 7 LIQUIDITY IN THE BROAD SENSE



Source: NBB.

The situation of firms with precarious liquidity can be ascertained from an examination of overdue debts to the tax authority and the NSSO, mentioned in the annex to the annual accounts. Delayed payments to these two preferential creditors are in fact frequently synonymous with an acute cash flow crisis for a firm; they also serve as "warning lights" for the commercial court investigators in their work of detecting firms in difficulty. Overdue debts to the tax authority and the NSSO are also one of the central elements of the business failure prediction model presented later on in this article.

In 2004, just over 15,200 firms, the vast majority being SMEs, reported overdue debts to the tax authority and the NSSO, amounting to a total of € 1.2 billion (chart 8). The branches most affected were construction, the timber industry, hotels and restaurants, trade and transport, while chemicals, energy, real estate and business services were relatively unscathed. For several years now, these debts have followed contrasting trends. On the one hand, the number of firms affected fell by 6,000 units between 1999 and 2004, mainly as a result of the preventive measures implemented by the commercial courts. On the other hand, the total volume of these debts has increased sharply in the past 4 years, especially in the services branch. This upward trend continued in 2004, for both SMEs and large firms.

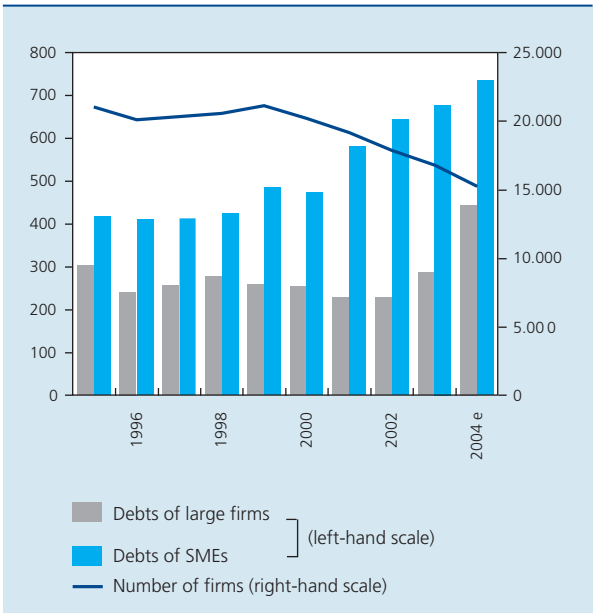
3.4 Investment

The amount which firms devote to investment can be assessed by the rate of investment, which is the ratio between acquisitions of tangible fixed assets and the value added for the year, and therefore indicates the degree to which the wealth created by firms is allocated to investment. In 2004, the globalised ratio was 21.6 p.c. for large firms and 33.9 p.c. for SMEs (chart 9); this corresponds to an imperceptible increase compared to 2003, when the investment rate had reached its lowest level since the second half of the 1990s. While the ratio fell in industry for the fourth consecutive year, mainly as a result of stagnating investment, it showed a modest increase in the non-manufacturing branches, as in 2003. Moreover, the persistently low levels maintained by the median ratios reveal that the downward trend in investment is affecting Belgian firms in general.

In manufacturing industry, the investment rate can be compared to the capacity utilisation rate, which is in fact one of the fundamental determinants of investment. Chart 10, which shows how the two variables have moved in parallel since 1995, demonstrates the positive link between them. After reaching a peak in 2000, they both underwent a sharp correction, and in 2003 they fell to their lowest level since the mid 1990s. In 2004, despite

CHART 8 OVERDUE DEBTS TO THE TAX AUTHORITY AND THE NSSO

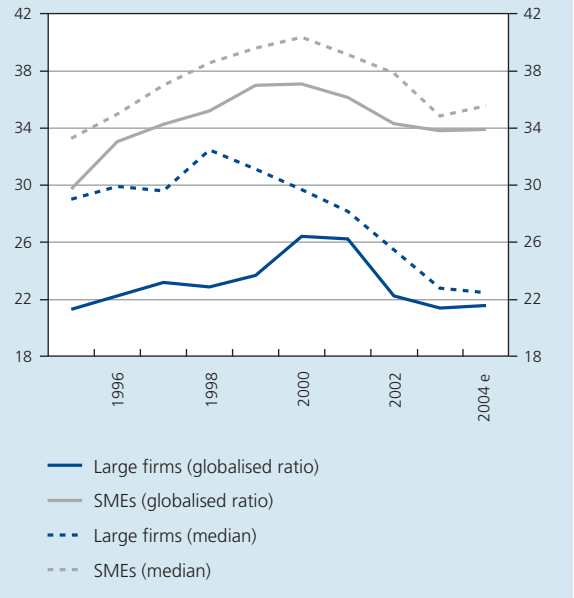
(€ millions, unless otherwise stated)



Source: BNB.

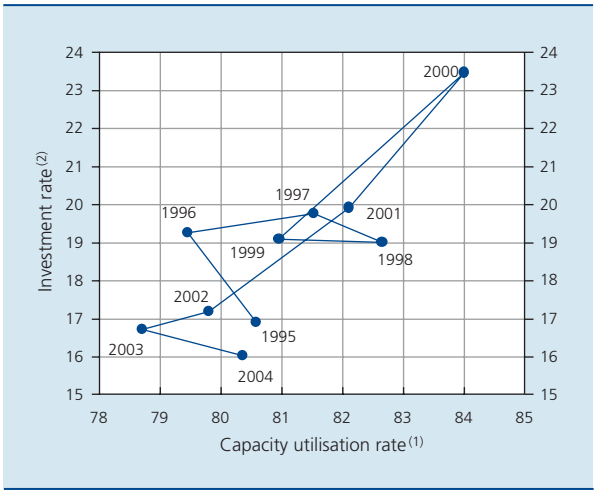
CHART 9 TAUX D'INVESTISSEMENT

(percentages)



Source: NBB.

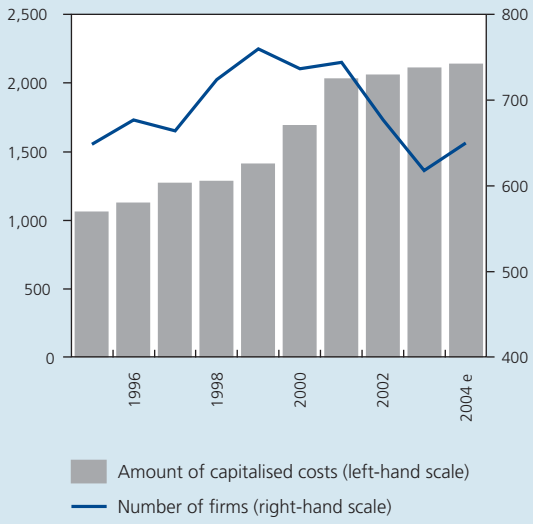
CHART 10 INVESTMENT RATE AND CAPACITY UTILISATION RATE IN MANUFACTURING INDUSTRY



Source : NBB.
(1) Annual average.
(2) Globalised for manufacturing firms in general.

CHART 11 CAPITALISED RESEARCH AND DEVELOPMENT COSTS (1)

(€ millions, unless otherwise stated)



Source : NBB.
(1) Acquisitions for the year, including capitalised production costs.

the upturn in economic activity and the marked recovery in capacity utilisation, the investment rate slipped a little further in the manufacturing branches. It was metallurgy and metal manufactures which had the most influence on these divergent trends, mainly because of the high level of uncertainty about their growth prospects and the redirection of some of their investments towards new geographical regions.

Firms invest in intangible fixed assets as well as tangible assets. In this regard, the annex to the accounts permits appraisal of the firms' involvement in research and development. (1) Such an appraisal is quite important : it is commonly acknowledged that research and development activities boost the growth potential of firms, and hence of the economy as a whole.

In 2004, around 650 non-financial corporations spent money on research and development, representing a total of just over € 2.1 billion ; the pharmaceutical industry, and to a lesser extent the technological industries, accounted for most of that figure (chart 11). Research expenditure was also concentrated on a small number of firms : the ten companies investing most heavily in R&D represent three-quarters of that figure. Having almost doubled between the mid 1990s and 2001, under the impetus of the branches mentioned above, research and development expenditure then lost its momentum, with a growth rate well below the increase in value added. This trend continued in 2004, though the year was notable for a rise in the number of firms involved in innovation, after two years of decline.

(1) The information is available only for firms filing full-format accounts. Research and development costs should be understood as the cost of research, manufacture and development of prototypes, products, inventions and know-how useful in the firm's future activities (Royal Decree of 30 January 2001 implementing the Companies Code, Article 15).

(2) A summary of the model methodology was published in Coppens F., A. Hermesse and D. Vivet (2004), "The ICT sector in Belgium", Economic Review I-2004, National Bank of Belgium, Brussels.

3.5 Financial risks

3.5.1 Development of a business failure prediction model

In order to assess the financial risks incurred by firms, the National Bank has developed an internal business failure prediction model, which was presented in the Economic Review for the 3rd quarter of 2004. (2) For the record, the explanatory variables and the associated ratios are set out in table 6. The main attraction of the model is that it summarises all aspects of a firm's financial position in a single figure : the risk score L. On that basis, four risk classes were defined, corresponding to intervals in the score L. They group the firms into risk classes with similar percentages of failing firms :

– class 1 : L < –0.84 : healthy firms with practically zero risk of failure within three years ;

TABLE 6 BUSINESS FAILURE PREDICTION MODEL

	Coefficients	Variables	Standardised coefficients
L =	–1.3		
	+27.1	Overdue debts to the tax authority and the NSSO / total assets	(+1.24)
	–2.9	Cash-flow / borrowings	(–0.66)
	–3.4	Gross profit before tax and debt servicing / total assets	(–0.60)
	+2.3	Debts to credit institutions / debts at up to one year	(+0.47)
	+17.1	Debt servicing / total assets	(+0.34)
	+0.5	Time taken to file annual accounts (number of days)	(+0.20)
	–0.2	Current liquid assets / short-term borrowed capital	(–0.19)
	–0.4	Equity capital / total assets	(–0.17)

Source: NBB.

– class 2: $-0.84 \leq L < 0.21$: neutral firms, where the probability of failure within three years is comparable to the average;
– class 3: $0.21 \leq L < 1.10$: firms in difficulty, where the probability of failure within three years is 3 to 4 times higher than average;
– class 4: $1.10 \leq L$: firms in great difficulty, where the probability of failure within three years is more than 10 times higher than average.

This classification of the firms has to be used with caution. For one thing, only a tiny proportion (between 1.5 and 2 p.c. depending on the year) of the firms examined will actually go bankrupt or apply for judicial composition. The classification should therefore be viewed as an indication of financial health rather than a true prediction of failure: firms in classes 3 and 4 are not necessarily destined for bankruptcy, but they are prone to serious financial problems. Bankruptcy aside, those problems are liable to lead to delay in repaying debts or paying suppliers, redundancies, restructuring or cessation of activity. Another important point is that a number of Belgian firms in difficulty are members of multinational groups which are prepared to provide financial support, at least temporarily. Moreover, the classification is an incomplete assessment of the firms' economic situation, as it is based only on analysis of the annual accounts. Other important aspects, such as management quality, the competitive environment, the economic situation and development prospects, are therefore disregarded.[1] Thus, the classification must be viewed as a strictly financial assessment of the firms at a particular moment.

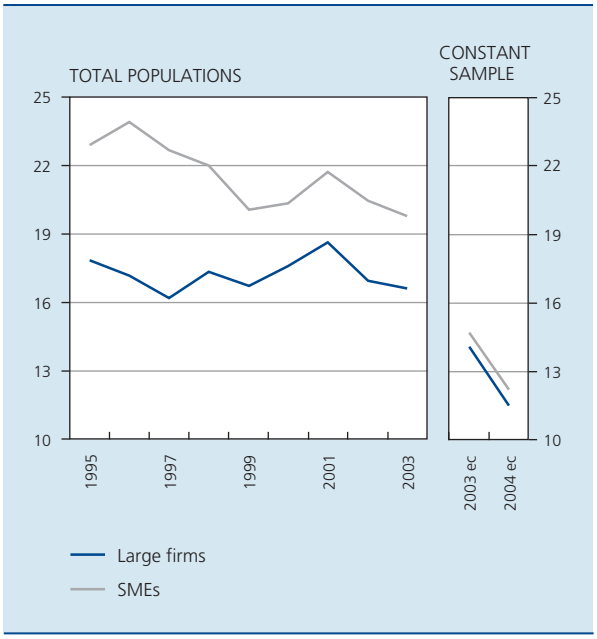
(1) It is hard to see how such qualitative variables could be taken into account in a statistical study covering several thousand firms.

3.5.2 Trend in financial risks

As pointed out in the first section of this article, the annual accounts filed late come from firms whose financial profile is less favourable overall. These filing delays are particularly significant in the case of firms in classes 3 and 4, which are therefore decidedly under-represented in the annual accounts currently available for the 2004 financial year. Tests conducted on previous years show that the trend in the risks observed in the constant sample is not systematically representative of the real trends, particularly in the case of SMEs. That is why there will be no comments here on the level of risk beyond 2003. In order to provide an initial impression of the latest tendencies, the trends apparent in the constant sample are also presented, but separately. These estimation difficulties should be viewed in perspective: as the model estimates the risks of failure in the next three years, the 2003 situation covers the period 2004-2006.

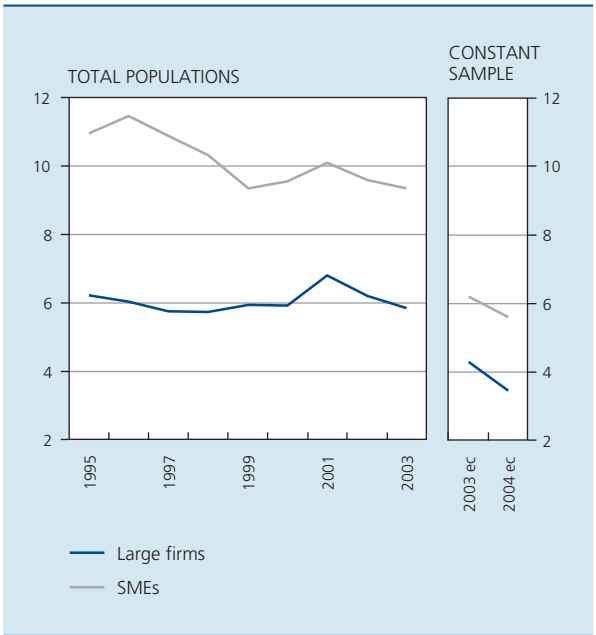
In 2003, the percentage of firms in classes 3 and 4 came to 16.6 p.c. for large firms and 19.8 p.c. for SMEs (chart 12). Almost one in five Belgian firms therefore faces serious financial problems. Those firms employ a total of 215,000 workers, including 78,000 in class 4. Following a marked rise in 2000 and 2001, due mainly to the adverse economic environment, the risks subsided during the ensuing two years, so that today's level is comparable to that of 1999. The downward trend also continued in 2004 for companies in the constant sample. In the long term, the two categories of firms followed slightly divergent trends: while the vulnerability of SMEs has shown a marked fall since 1995, that of large firms has remained fairly stable.

CHART 12 PERCENTAGE OF FIRMS IN CLASSES 3 AND 4



Source : NBB.

CHART 13 PERCENTAGE OF FIRMS IN CLASS 4



Source : NBB.

In line with the bankruptcy statistics, the proportion of vulnerable firms is structurally higher for SMEs than for large firms. Moreover, as may be seen from chart 13, this difference is due almost exclusively to the proportion of firms in great difficulty (class 4). In 2003, while 5.9 p.c. of large firms were in great difficulty, the figure was 9.3 p.c. for SMEs.

Overall, the financial risk of the non-manufacturing branches is structurally higher than that of manufacturing industry, in terms of both the percentage of firms in classes 3 and 4 and the percentage of jobs concerned (table 7). However, the difference between the two groups has narrowed considerably since 2001, as the risks have declined to a greater extent in services than in industry. It is true that service companies had faced a particularly tough time in 2000 and 2001, e.g. because of the weakness of domestic demand and the widespread collapse of enthusiasm for the new technologies.

In the manufacturing branches, the past two years have brought an overall decline in the risks, with chemicals and the agriculture and food industries as the driving force. Contrary to this trend, the number of firms in difficulty increased in metallurgy, and especially in metal manufactures : this mainly concerned SMEs involved in processing, which were hit by difficult conditions on the commodity markets, namely rising prices and some supply problems. Finally, the textile sector is by far the most vulnerable branch, with over 28 p.c. of firms in difficulty. The high level of risks in this sector is due mainly to the fierce international competition, especially from the low cost countries.

In the majority of the non-manufacturing branches, the vulnerability of firms has declined in the past two years. That trend has been most noticeable in trade, telecommunications and business services. The last two branches have benefited in particular from the stronger financial position of firms active in the new technologies. The hotel and restaurant trade is by far the most exposed branch, with almost 30 p.c. of firms and 21 p.c. of jobs in classes 3 and 4. Moreover, this is the Belgian branch where bankruptcies are most frequent. Conversely, energy and water, and post and telecommunications are fairly secure, especially where jobs are concerned.

TABLE 7 FINANCIAL RISKS BY BRANCH OF ACTIVITY

	Percentage of firms in classes 3 and 4			Percentage of jobs concerned		
	2001	2002	2003	2001	2002	2003
Manufacturing industry	**19.5**	**19.0**	**18.8**	**13.7**	**13.0**	**13.1**
of which:						
Agricultural and food industries	20.7	18.5	17.8	20.9	12.2	13.7
Textiles, clothing and footwear	27.3	27.1	28.1	23.3	18.7	21.0
Timber	24.7	22.1	21.4	25.5	22.0	21.1
Paper, publishing and printing	18.6	16.0	16.4	14.5	10.0	9.7
Chemicals	18.5	15.6	15.4	8.9	7.6	7.4
Metallurgy and metalworking	14.2	16.4	15.6	10.8	14.2	16.0
Metal manufactures	18.6	19.4	21.2	10.1	13.4	11.1
Non-manufacturing industry	**21.6**	**20.1**	**19.3**	**17.4**	**14.8**	**14.4**
of which:						
Retail trade	24.7	22.9	22.4	23.4	15.1	12.5
Wholesale trade	25.9	23.0	21.7	21.1	17.8	17.5
Horeca	29.2	28.3	29.7	19.1	19.3	20.7
Transport	12.8	11.4	11.6	9.1	6.7	15.9
Post and telecommunications	30.0	27.4	17.7	4.2	2.3	1.4
Real estate activities	23.1	24.2	21.0	22.0	23.6	24.2
Business services	21.0	20.1	18.6	23.2	22.7	18.5
Energy and water	11.6	2.2	12.2	2.4	0.2	1.2
Construction	17.9	17.0	16.4	13.8	13.1	12.7

Source: NBB.

Conclusion

After three successive years of weak expansion in activity in Belgium, GDP growth gained momentum in 2004, rising to 2.6 p.c. In that context, the total value added generated by non-financial corporations increased by 6.3 p.c. in nominal terms, the biggest improvement since 2000. At the same time, while the rate of increase in operating expenses did accelerate, at 2.7 p.c., it was far outpaced by the rise in value added. On the one hand, the increase in staff costs was moderate, reflecting the modest employment growth. Also, despite the marked investment revival in 2004, depreciation declined once again, as it continued to feel the effects of the subdued investment in preceding years. As in 2003, the growth of value added therefore far outstripped the increase in operating expenses. These contrasting trends culminated in a further particularly strong rise in the net operating result, which came to over 24 p.c. Two successive years of such increases were unprecedented in the past two decades, bearing witness to the remarkable performance achieved by firms in their core activities.

While the financial result was once again decidedly positive, the exceptional result was down sharply: having produced a surplus of € 6 billion in 2003, it was close to balance in 2004. After aggregation of all the components of the profit and loss account, non-financial corporations showed a net profit after tax of over € 26 billion, almost equalling the 2003 figure. Thus, although profits therefore stagnated in 2004, it must be remembered that they had more than doubled to a record level in 2003. Another important point is that this stagnation was due to the major correction in the exceptional result, which practically cancelled out the rise in the operating result. Excluding the exceptional result, corporate profits would have increased by 31.3 p.c. in 2004, against 34.8 in 2003.

As for the firms' financial situation, after deteriorating in 2001 and 2002, in 2004 it maintained the recovery triggered by the cyclical upturn of the previous year. Overall, the globalised and median financial ratios showed an improvement. However, where the results are concerned a distinction must be made according to the firm's size.

While the globalised profitability of SMEs continued the recovery which had begun in 2003, that of large firms slipped slightly, mainly because of the substantial correction in the exceptional result. The financial risks subsided once again, reverting to levels comparable to those seen in 1999, before the period of the economic downturn. However, the proportion of vulnerable firms remained considerable, at 16.6 p.c. for large firms and 19.8 p.c. for SMEs. Altogether, these firms in difficulty employ 215,000 workers.

Annex 1

SECTORAL CLASSIFICATION

	NACE-Bel code
Manufacturing industry	**15-37**
of which:	
Agricultural and food industries	15-16
Textiles, clothing and footwear	17-19
Timber	20
Paper, publishing and printing	21-22
Chemicals	24-25
Metallurgy and metalworking	27-28
Metal manufactures	29-35
Non-manufacturing industry	**01-14 and 40-95**
of which:	
Retail trade	50-52
Wholesale trade	51
Horeca	55
Transport	60-63
Post and telecommunications	64
Real estate activities	70
Business services	72-74 (1)
Energy and water	40-41
Construction	45

(1) Except 74151 (management of holding companies).

Annex 2

DEFINITION OF THE FINANCIAL RATIOS

	Item numbers allocated	
	full format[1]	abbreviated format
1. Liquidity in the broad sense		
Numerator (N)	3 + 40/41 + 50/53 + 54/58 + 490/1	3 + 40/41 + 50/53 + 54/58 + 490/1
Denominator (D)	42/48 + 492/3	42/48 + 492/3
Ratio = N/D		
2. Degree of financial independence		
Numerator (N)	10/15	10/15
Denominator (D)	10/49	10/49
Ratio = N/D*100		
3. Degree to which borrowings are covered by cash-flow		
Numerator (N)	70/67 + 67/70 + 630 + 631/4 + 6501 + 635/7 + 651 + 6560 + 6561 + 660 + 661 + 662 – 760 – 761 – 762 + 663 – 9125 – 780 – 680	70/67 + 67/70 + 8079 + 8279 + 631/4 + 635/7 + 656 + 8475 + 8089 + 8289 + 8485 – 9125 – 780 – 680
Denominator (D)	16 + 17/49	16 + 17/49
Ratio = N/D*100		
Condition for calculating the ratio:		
12-month financial year		
4. Average interest charges on financial debts		
Numerator (N)	650	– 65 – 9125 – 9126
Denominator (D)	170/4 + 42 + 43	170/4 + 42 + 43
Ratio = N/D*100		
Condition for calculating the ratio:		
12-month financial year		
5. Return on equity		
Numerator (N)	70/67 + 67/70	70/67 + 67/70
Denominator (D)	10/15	10/15
Ratio = N/D*100		
Conditions for calculating the ratio:		
12-month financial year		
10/15 > 0[2]		
6. Investment rate		
Numerator (N)	8169 + 8229 – 8299	8169 + 8229 – 8299
Denominator (D)	70/74 – 740 – 60 – 61	70/61 + 61/70
Ratio = N/D*100		
Conditions for calculating the ratio:		
70/74 – 740 – 60 – 61 > 0 (full format)[2]		
70/61 + 61/70 > 0 (abbreviated format)[2]		

(1) In which the profit and loss account is presented in list form.
(2) Condition valid for the calculation of the median but not for the globalised ratio.