Macroeconomic development of earnings and costs since the early 1990s

Corporate profitability is a key indicator in free market economies. The prospect of larger profits is the prime stimulus for the expansion and modernisation of fixed assets and employment opportunities. This article analyses the development of macroeconomic earnings and costs in Germany in the period since German reunification, taking as its basis the data in the national accounts. The analysis reveals that the general economic slowdown in Germany over time and compared with other countries has also had an impact on the aggregate profit indicators. The negative repercussions of this process on the outlook for profits are likely to have increased the longer it lasted. The high and rising number of corporate insolvencies, in particular, is a clear indication that resilience across the whole corporate spectrum has taken a knock. The data on returns derived from the national accounts must therefore also consistently be viewed against a backdrop of the current risk profile. One main factor to which attention should be paid is the extent to which economic and fiscal policy measures can be used to encourage the generation of income and the willingness and ability to incur and withstand corporate risks within Germany.

Difficult issues of delineation

Present value and periodic profitability

Both at a national and an international level, a number of criteria, measurement approaches and indicators have been developed and are in use for the purpose of measuring and evaluating the profitability of economic activity. These vary in terms of the choice of result and reference variables, the degree of aggregation, the underlying empirical data and the length of the review period. Under free market conditions, an ultimately decisive factor is how successful efforts are in effecting a persistent increase in corporate worth. Taking this capital theory approach, profitability in a specific period is the difference between the net value at the start and at the end of that period, taking account of the concurrent net disbursements to capital investors. Irrespective of whether the economic advantage derives from the internal use of productive assets or from the transfer of usage rights to third parties, it can therefore take the form of "distributed" market income or of growth in the net value. This view applies not only to an individual enterprise but also to economic sectors or to a whole economy.

It is admittedly more difficult to measure or assess the earnings component "change in the net value" for "Germany plc" than the (current) earnings over a given period. For earnings in a given period, however, the national accounts, including the financial accounts, provide important indications, at an aggregate level, of development trends and factors relating to earnings and costs in the economy in general and in the corporate sector in particular. This permits conclusions to be drawn about the general investment and financing terms determining economic growth and the pace of technical progress. Furthermore, the results in the national accounts (including the financial accounts) are sufficiently harmonised in the methodology used in the ESA 95 to allow international comparison. Corresponding data from the national accounts are now available for Germany from the beginning of the 1970s.

The national accounts approach

The rules governing the collection, evaluation and periodisation in the national accounts differ in several ways from those of the system of corporate accounting in accordance with German trade and tax law or the internationally recognised accounting standards (US GAAP, IAS) used to compile the consolidated financial statements of listed enterprises.[1] One major difference is the treatment of imputed items and the issue of corporate asset write-downs. Accordingly, the annual results prepared by the Bundesbank in accordance with standard criteria and published in line with the method used in its corporate balance sheet statistics are comparable with national account variables to a limited extent only. Additional empirical and statistical problems associated with a national profit and loss account are often reflected in the residuals and therefore in the profit statement, too. In particular, the high degree of aggregation also needs to be borne in mind. Although the data can thus be presented in a compact, manageable form, they do not pro-

1 However, owing to the different specific application or weighting of the prudence or realisation principle, even the different rules for the calculation of profit at the corporate level result in significant material differences in the calculation and disclosure of net profit or loss.

vide important information about, for example, the profitability spread within economic sectors, by corporate size or by legal form.[2]

The total earnings from commercial activity in an economy in a given period depends, first, on the extent to which the available resources and (primary) factors of production can be included in the labour-related value added process in that period and, second, on the relationship between transformation and transaction costs and productivity profits and gains from trade. The national accounts follow a production-based income approach which is also geared to the current value of net assets and establishes the methodological basis for measuring profitability in a given period in the overall economy and in the corporate sector. In a macroeconomic circular flow model, the production sphere and the process of income generation are thus at the core of the ex post analysis.

The corporate sector as defined in the ESA 95 does not include all production activities of an economy but only those of corporations and quasi-corporations. These include public limited companies, private limited companies and partnerships with extensive decision-making autonomy, such as general partnerships and limited partnerships and derivative legal forms of business organisation. However, both as investors and as consumers, sole proprietors, members of the professions and other self-employed persons are classified under households. If one considers that some 87% of all enterprises employ fewer than ten persons and that there are around two million sole proprietorships, defining the corporate sector in this way creates major problems for an analysis of the German economy.

Some stylised facts on factor income

Favourable starting position...

The 1990s had got off to a very promising start for Germany. German reunification, for example, was broadly expected to produce a second "economic miracle". Furthermore, Germany hoped to benefit from the integration of central and eastern Europe into the international labour force, not least because of its geographical proximity to the countries in that area. The swiftly advancing economic integration within the EU, aimed at introducing a single currency and a single monetary policy as well as at eliminating exchange rate risk for important export markets, should also be mentioned in this context. In particular, the rapid spread of new technologies in the latter part of the 1990s fed expectations in Germany of persistently higher productivity and profit growth.

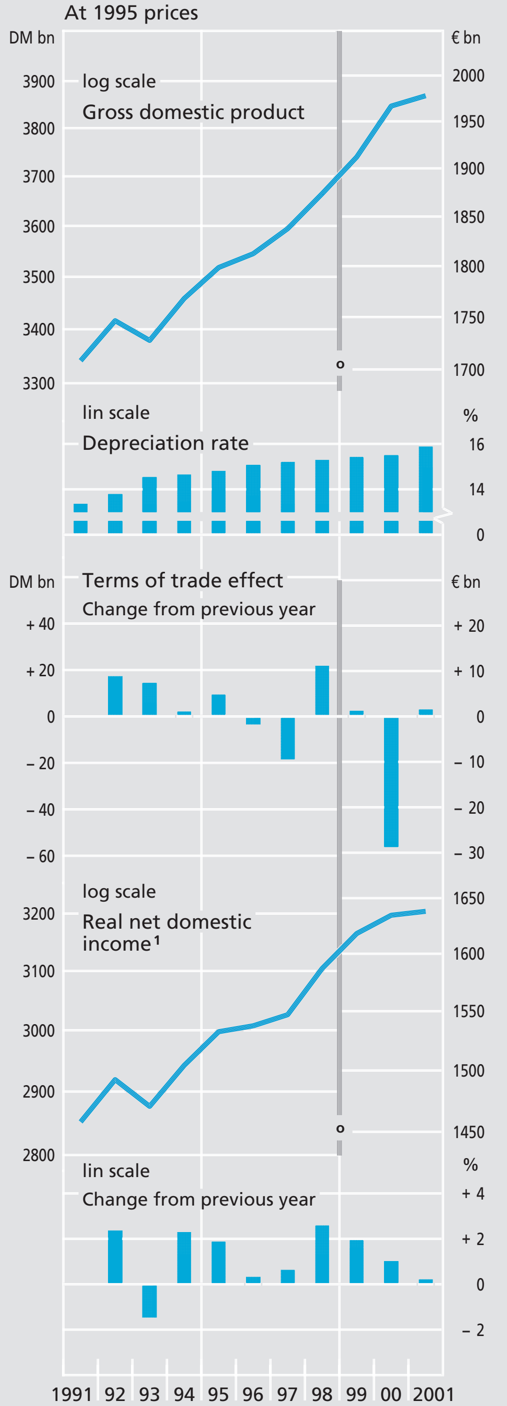
... but disappointing outcome

In retrospect, however, those hopes were clearly short-lived – apart from the favourable market developments in central and eastern Europe. In the 1990s income in Germany generally grew far less than had been anticipated at the start of the previous decade. This is immediately apparent from an analysis of gross domestic product (GDP), which encompasses all the income generated within Germany and

2 On this subject, see also Deutsche Bundesbank, German enterprises' earning and financing patterns by form of business organisation, *Monthly Report,* December 2001, p 45-77.

Real domestic product and real domestic income

At 1995 prices



Sources: Federal Statistical Office and Bundesbank calculations. — 1 Real net domestic product, adjusted for the terms of trade effect. — o From 1999, in euro.

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consumed by private and public households, used for the purpose of maintaining or expanding tangible assets in Germany, transferred abroad in the form of income and assets or invested outside Germany with a view to generating revenue. The annual average increase of 1.5% in real GDP in the period from 1991 to 2001 was well below the figures for the 1970s and 1980s, when annual growth rates of 2.8% and 2.3% respectively were recorded.

Preserving the real value of fixed assets and net domestic product

In order to determine market income, write-downs first have to be deducted from GDP as, in the system of national accounts, they represent an advance distribution benefiting the real value of the stock of fixed assets. In the past decade investment shifts in favour of short-term capital goods and the relative ageing of fixed assets in the wake of a decline in the accumulation of capital meant that more and more value added had to be used. Since 1991 the real net domestic product has therefore risen by only 1.2% per annum.

Real net domestic income

The real income generated in Germany, which can be taken as a benchmark for real disposable income, can also be affected by changes in the real trading relationships with other countries. For example, a relative improvement in export prices over import prices generates additional purchasing power for consumption or investment purposes in Germany as, at a given output, more goods can be imported without worsening the external trade position. Although the average gains or losses in purchasing power brought about by changes in the terms of trade over the past ten years have largely cancelled each other out, with the real net domestic income therefore also rising by 1.2% per annum, some years nonetheless experienced a notable terms of trade effect. This was particularly so in 2000, when, despite the largest economic growth since German reunification, the 60% increase in the dollar price of crude oil and the depreciation of the euro, in particular vis-à-vis the US dollar, resulted in a decidedly modest increase of 1.0% in the real income generated within Germany (including net production costs). All in all, although output was extremely high in 2000, relatively little was earned.

Factor income generated in Germany

In order to obtain the factor income generated in Germany, account needs to be taken of the net taxes on production paid over to the state.[3] Owing to the increase in various indirect taxes and the introduction of the ecology tax, these taxes on production, which in 1991 amounted to roughly 11% of the marked-to-market domestic product, rose far more sharply in the course of the 1990s – by 4¼% – than the domestic product. Overall, the nominal average 3% annual growth in factor income generated in Germany lagged somewhat behind the increase in the domestic product.

Labour costs and labour productivity

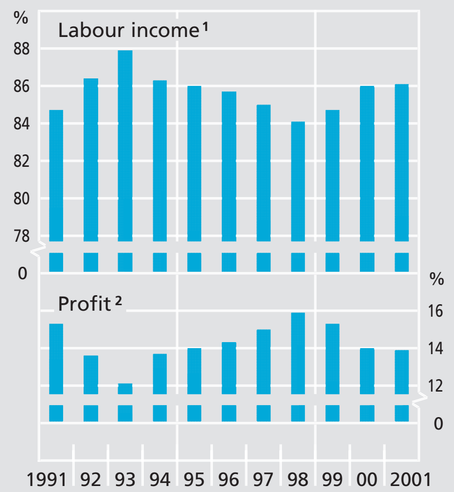
In 1991 almost three-quarters of this factor income was accounted for by employee compensation, which includes employers' social contributions as well as gross wages and salaries. Calculated on an hourly basis, employee compensation rose by just over 3½% per annum between 1991 and 2001. One contributory factor was that the state noticeably increased the contribution rates for social security funds, thereby expanding the tax wedge for the production factor "labour".[4] The annual increase in hourly labour costs during that period thus exceeded the rise in factor income generated in Germany by more than ½ percentage point. The effective wage trend, which, calculated on an hourly basis, lagged well behind the increase in the agreed rates of pay (negative wage drift), thus acted as a certain corrective. The remaining pressure on costs led to an intensification of corporate rationalisation endeavours. Rising capital intensity, for instance, was used to increase productivity. In order to maintain job competitiveness, between 1991 and 2001 (the period under review) capitalisation per employee (excluding new housing) was increased by more than 2% per annum from €118,000 to €145,000.

Operating surplus and ...

This left well over one-quarter of total earnings as the operating surplus including the income of self-employed persons. In the period from 1991 to 2001 it went up by an annual average of 3¼%. As, in the system of national accounts, the overall operating surplus still includes the total income of self-employed persons, it is of only limited value as an indicator of the operating profit in the economy as a whole. At least the imputed entrepreneurs' income needs to be deducted as it basically represents compensation for labour and, strictly speaking, may not be taken as profit.

3 Taxes on production and imports less subsidies.
4 See also Deutsche Bundesbank, Determinants and macroeconomic significance of product wage and consumption wage, *Monthly Report,* July 2000, p 15-27.

Factor income distribution *



Sources: Federal Statistical Office and Bundesbank calculations. — * Domestic concept. — 1 Employee compensation plus imputed entrepreneurs' compensation as a percentage of factor income. — 2 Operating surplus/self-employed persons' income, adjusted for the imputed entrepreneurs' compensation, as a percentage of factor income.

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... imputed entrepreneurs' income

The technical assumption normally employed to this end is that the average compensation for labour of self-employed persons (including members of the family who work in the business) was just as high as employee compensation. This assumption draws implicitly on the view that the proportion of a self-employed persons' earnings which is above the average compensation of a dependent employee represents compensation for the effort and risks involved in being self-employed. Owing to the lack of relevant data, no account is taken of the possible differences in qualification levels between self-employed persons and employees. However, in order to take account of the different length of time worked by self-employed persons and employees, with regard both to volume and to its development, it is better to base the calculation on the hourly rate of pay rather than the monthly compensation. Self-employed persons worked an average of 2,200 hours in 1991, almost 50% more than the mean working hours of employees. The average working hours of employees declined more abruptly (by 7% overall) between 1991 and 2001 than the working hours of self-employed persons (-2½%), reflecting the increase in part-time work among employees and the sharp rise in low-paid part-time jobs. As an average of the total period under review, the imputed entrepreneurs' compensation, as calculated here, accounted for 12½% of the factor income generated in Germany. Adding this variable to labour's share in domestic income produces the overall employee compensation rate (on an hourly basis), which accounts for roughly six-sevenths of all factor income.

Macroeconomic profit ratio

Macroeconomic profit ratio: stability and endogeneity

The adjusted profit ratio, which describes, as a rough indicator, the share of profits (including the costs of equity capital) in the macroeconomic income and thus the relative income position of capital, was 14¼% on average in the period from 1991 to 2001.[5] Over

5 The macroeconomic profit is derived by adding the balance of investment income received from and disbursed to the rest of the world. In the case of households, however, only the interest paid and received in the context of operations is to be included. Owing to the difficulty of making an appropriate distinction between these operationally determined flows of interest and households' other net interest inflows, no attempt is made to determine this variable. The balance of the total income invested abroad worsened distinctly in the period under review. Although a surplus of €16 billion was recorded in 1991, a deficit of €9 billion was recorded in 2001. This development reflects the decline in Germany's net investment income position vis-à-vis other countries.

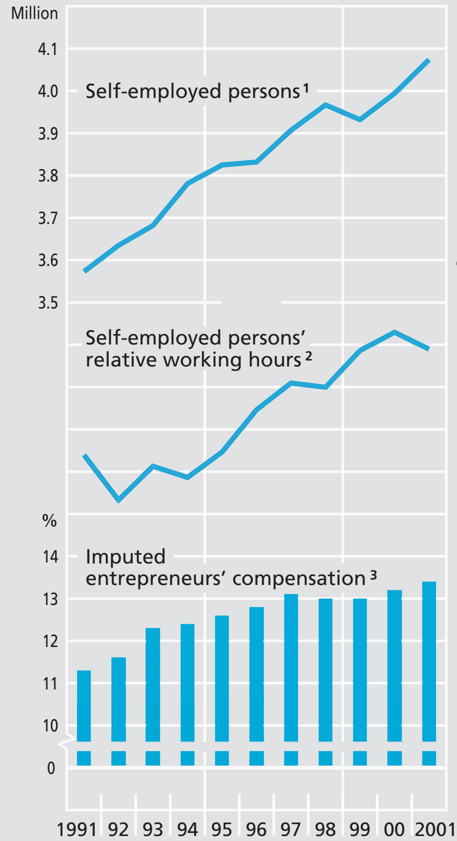
the longer term, the profit ratio can be said to be very stable. However, shocks can cause deviations from the "norm", which it can take years to correct. An expansionary wage policy, entailing initially small rises in unemployment, for instance, can have, over time, an impact on the functional distribution of income in favour of labour. Over the longer run, however, that kind of wage policy, by weakening development investment and increasing capital intensity, leads to a worsening of the employment situation and the distribution of income is finally adjusted back in favour of capital.[6] That kind of pattern of response was observable in Germany in the 1970s, for example.

Profit is thus an endogenous variable – and not solely in accounting terms. At the corporate level there are a number of adjustment parameters which are geared to restoring an appropriate return. Closures, the relocation and outsourcing of parts of the value added chain, the exploitation of leverage effects and rationalisation investment all help to ensure that the "norm" will be restored over the longer run. However, the basic macroeconomic problem is no longer to be found among ex post returns but in the negative circumstances accompanying the stabilisation of returns.

Profits under pressure at the start of the 1990s...

Especially in the first half of the last decade the profit ratio followed a pattern that was very similar to that seen in the 1970s. Marked increases in the negotiated rates of pay in western Germany together with the swift harmonisation of agreed compensation rates in eastern Germany with corresponding

Self-employed persons, working hours and imputed entrepreneurs' compensation



Sources: Federal Statistical Office and Bundesbank calculations. — **1** Including family members working in the business. — **2** Average working hours of a self-employed person in relation to the average working hours of an employee. — **3** Imputed entrepreneurs' compensation as a percentage of factor income.

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standards in western Germany, largely discounting the sectoral and regional differences in productivity, put profits under strong pressure against the backdrop of a clear overall economy slowdown. The profit ratio thus declined by more than 3 percentage points from 15¼% in 1991 to 12% in 1993.

6 See Deutsche Bundesbank, Factor prices, employment and capital stock in Germany: results of a simulation study, *Monthly Report,* July 2001, p 49-61.

... followed by recovery until 1998

Rationalisation investment and the elimination of low-profitability companies served to adjust labour productivity to the higher wage costs by means of staffing cuts, which continued into 1997. As the economy picked up again, the profit ratio improved; it reached 16% in 1998, exceeding its level at the start of the 1990s by just over ½ percentage point. Enterprises also benefited from the fact that, all in all, the social partners pursued a moderate wage policy during that period, with the exception of 1995.

Since 1999, however, a further decline in the profit ratio

The profit ratio declined again in the following years, however, and was just under 14% in 2001, nearly ½ percentage point down on its average level of the previous ten years. At first glance, the considerable decline in the profit ratio in 2000, in particular, may come as a surprise, since the economy was expanding fairly strongly. That profits nonetheless declined not only in relation to factor income but also in absolute figures is due primarily to the massive worsening in the terms of trade at that time, as has already been mentioned. This led to an income transfer out of Germany and thus to a reduction in domestic earnings and purchasing power by a good 1½% of the net domestic product. Although all residents had to cope with real income losses arising mainly from the dramatic rise in energy prices, factor income relating to capital bore a disproportionate burden.

Enterprises were also burdened by the fact that an inventory expansion amounting to more than €5 billion was recorded in 2000; this increased the domestic product in the national accounts in line with the production concept and also had a positive effect on the profit shown in the income accounts. However, *de facto,* this was merely warehoused production, which generated no income on the market. In terms of the development of the profit ratio in 2001, although it was helpful that no follow-up wage claims were made, the sluggish economy in 2001 put greater pressure on performance.

Profitability in the corporate sector

Operating surplus of non-financial corporations

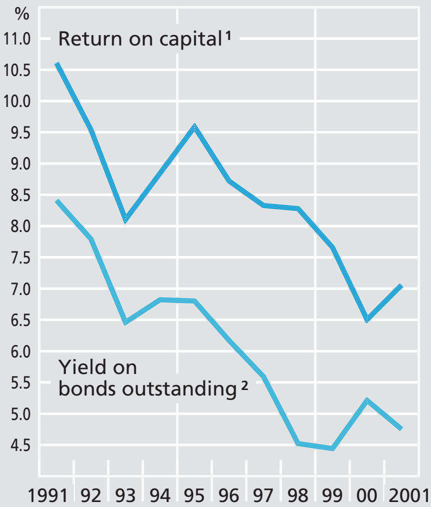
In 2001 more than three-fifths of the factor income generated within Germany came from non-financial corporations (including quasi-corporations). After employee compensation had been deducted, this part of the corporate sector was left with an operating surplus of €237 billion. Compared with 1991, the operating surplus (before tax) went up by 4% per annum. In terms of profitability, performance in the corporate sector was thus above average. A key reason for this is probably that this sector is heavily involved in the export trade. Since the early 1990s, exports grew far more than the domestic economy; this was reflected not least in an expansion of the real balance of net exports, which went up by €43.7 billion overall between 1991 and 2001 and amounted to more than 3% of real GDP by the end of the period under review. The German economy thus improved its position on the world market since the mid-1990s, after a distinct decline in Germany's real global market share in the first half of the last decade. This should also be viewed in connection with reunification as German enterprises focused more on the federal states in eastern Germany.[7]

For the same reason, the turnover of the non-financial corporations in the period from 1997 to 2001, measured as a share in the operating surplus at production value, was 9¾% on average, around 1 percentage point higher than halfway through the period from 1991 to 1996. The sales structure of internationally operating enterprises, which has since become regionally very diversified, is likely to have been a stabilising element in the development of profitability. The clearly poorer economic performance by enterprises in the household sector than that of the corporate sector as defined in the national accounts is likely to be linked not only to the fact that that sector's activities focus mainly on the more difficult area of domestic trade, but also to the fact that smaller enterprises tend to have fewer diversification and adjustment opportunities available to them.

Retained profits and internal financing

However, corporations were only able to draw on a small part of the net corporate profits[8] for internal financing purposes. On average, between 1991 and 2001 the dividends paid by corporations and withdrawals from the quasi-corporations absorbed more than nine-tenths of the earnings. Between 1999 and 2001 dividends and withdrawals even exceeded total profits. The negative figures for retained profits admittedly do not reflect a sudden worsening of the profitability outlook. Instead, fairly large amounts of retained income were released for tax reasons and in order to permit dividends to be paid out.[9] In 2001 only €167 billion was therefore available to enterprises for internal financing purposes, including capital transfers and write-downs. With an overall borrowing requirement of €325 billion, the internal financing rate was scarcely above 50%. This was far less than the average in previous years. Overall, between 1991 and 2001 internal financing resources went up by 19%, ie by 1¾% each year. With regard to the use of funds, enterprises ploughed more into financial capital than into tangible assets. Halfway

Return on capital in the corporate sector and yield on bonds outstanding



1 Operating surplus as a percentage of the total capital of non-financial corporations. — 2 Yield outstanding on listed Federal securities with a residual maturity of more than nine and up to ten years.

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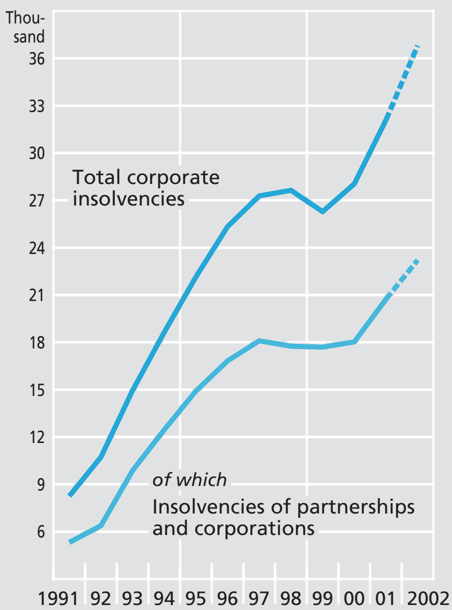
7 See Deutsche Bundesbank, Germany's world market shares, *Monthly Report*, November 2002, p 40.
8 The net corporate profits are derived from the operating surplus plus the balance of investment income received and disbursed, less income tax and wealth tax due to the state.
9 An important factor was the fact that the disbursement of dividends in 2001 made it possible to avoid reducing the 45% corporation tax previously paid on retained profits to 40%, in accordance with the existing statutory ruling.

Corporate insolvencies*



Source: Federal Statistical Office. — * Insolvencies in 2002 estimated from the data for the period January to June.

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through the period under review gross fixed capital formation by the corporations increased by only 1¼% per annum at current prices. In terms of constant prices it was only ½% per annum and thus even less than in the overall economy.

Rate of return on capital

When deciding whether or not to invest in an enterprise, the expected internal rate of return is of ultimate relevance, as is the possibility – compared with the "guaranteed return" of an alternative form of investment – of obtaining an appropriate remuneration for the risks associated with the corporate investment. It is important to consider the returns on investment achieved to date in that an extended period of insufficient returns is likely to dampen profit expectations and thus the propensity to invest. In addition, the income surplus or cash flow is an important source of financing for enterprises with external financing restrictions.

However, owing to the lack of statistical data, no information can be given at present on the development of the return on fixed assets in the corporate sector. In particular, international comparisons of returns also show the lack of appropriate variables on the commercial capital stock to be a key restraining factor. An interim solution, however, may be to draw on results in the national financial accounts. If the ratio of the operating surplus to the total capital is used, a distinctly negative underlying tendency is evident throughout the period under review. What is striking is that the return on capital in 2001, the last year covered by the statistics, was, as a corporate average, still below the figure for 1993, the economic downturn year. This can be taken as evidence that the economy started 2002 from an unsatisfactory profitability situation.

Greater pressure on profitability in 2002

The pressure on profitability has increased further in the current year. Contrary to original expectations, economic growth has been even weaker than in the previous year and the output-capital ratio declined further for cyclical reasons. Although the yield in the financial markets reached a historical low and the monetary framework conditions are conducive to fixed capital formation, it is mainly a general poor underlying sentiment in an environment of marked uncertainty that is currently impeding a rapid recovery of investment. In construction and in the retail trade the already weak capital base is likely to be eroded further. The sharp increase in the number of company closures which is shown in the statistics is a clear sign of this.

Without doubt, a high risk premium is currently blocking the realisation of investment projects; in a phase of increased uncertainty, it is worth the individual investor waiting. This "wait-and-see" option appears to be worth a lot at present and thus raises the usual profitability threshold.[10] As a decision variable, interest rates recede into the background. What is needed, therefore, are stable, calculable framework conditions. Economic policy, and especially fiscal policy, and the social partners are presented with a particular challenge. Greater financing flexibility for enterprises on the basis of longer-term dependable calculation principles are the market-related answer if the corporate risk-return ratio is to be put back on a more even keel.

10 See Deutsche Bundesbank, Uncertainty, freedom of action and investment behaviour – empirical findings for Germany, *Monthly Report,* September 2002, p 71-86.