Income, saving and capital formation in the nineties: results of the new ESA '95

The systematic and periodic representation of the flows of goods and income in the economy through the system of national accounts constitutes an indispensable source of data for empirical economic research. The main reason for adjusting the national accounts systems to the rules of the new ESA '95, which are binding on all EU member states, was to improve the comparability of macroeconomic data within the EU. The associated conceptual and terminological changes, together with an expanded data base, gave rise to one of the most extensive revisions of the German system of national accounts ever undertaken.[1] A similar radical revision is being made of the Bundesbank's system of financial accounts which, constituting as it does an integral part of the overall national flow and stock statistics, complements the "traditional core" of the national accounts. It is envisaged that the new financial accounts will be available for the first time in September 2000. The following article gives an overview of major developments in the German economy as reflected in the new methodology and system of classification and in the revised figures for parts of the primary statistics for the nineties – the only period so far for which the national accounts data have been recalculated.

1 See Deutsche Bundesbank, Monthly Report, February 1999, page 57, and May 1999, page 36.

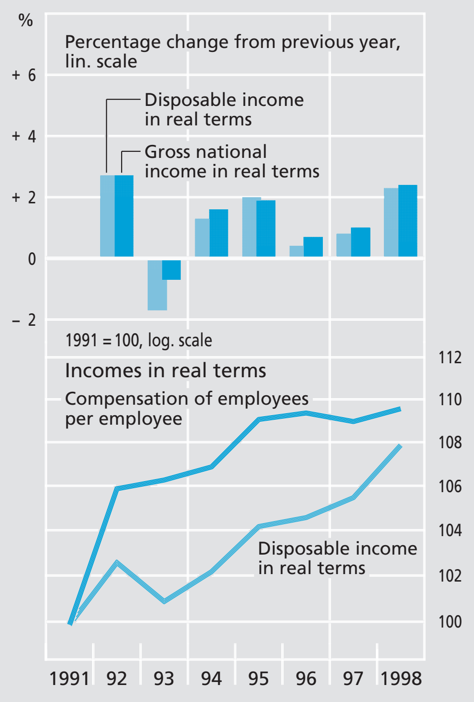
Trends in national income

The primary task of the national accounts is to provide a clear overview of the basic components and interrelationships of the complex economic process for the purpose of economic analysis. The financial accounts supplement this picture with an overview of financial transactions, which occur either in connection with goods and income flows or independently of them – i.e. exclusively in the financial sphere. The new national accounts continue to focus on determining the amount of goods and services produced by the economy over a given period and the incomes generated in connection with that production. They also provide a breakdown of income distribution and redistribution and the use of factor and transfer incomes at the further stages of the economic process.

Gross national income

The sum-total of the incomes generated by all residents, which in ESA '95 is termed gross national income,[2] rose by 27 % between 1991 and 1998, or by 3.5 % per year. However, this income figure, which totalled around DM 3,750 billion at the end of the period under review, is stated in gross terms, i.e. before deductions to allow for production-related wear and tear and economic ageing of production plant. In the national accounts this consumption of fixed capital is taken into consideration – in line with the principle of the preservation of real assets – through depreciation charges at replacement cost. Net national income (previously net national product at market prices), which measures national primary income and is a key concept in the newly defined national accounts, amounted to DM 3,190 billion in 1998; this was 25.5 % more than in 1991, compared with 28.4 % if measured under the old system of national accounts.

Growth of national income



Disposable income

From the perspective of income distribution in an open economy, however, the net current transfers to the rest of the world also have to be taken into account; in Germany's case these principally comprise payments to the EU budget. The disposable income of the domestic sectors measured in this way increased by just under 3.5 % per year between 1991 and 1998. Hence the different measures of national income show a similar gen-

2 This differs from the previous concept of "gross national product" only in that it includes subsidies received from the rest of the world less the taxes on production and imports paid to the rest of the world.

eral trend, although considerable differences emerge in individual years and in the absolute amounts.

The recalculated figures based on the new system still show clearly that the job losses sustained in the course of the nineties have substantially slowed the expansion of income. Whereas in the initial period following German unification the adjustment of the east German economy to efficient, market-based structures of production and organisation notably had a positive impact, negative employment effects subsequently made themselves felt – not least as a result of the overly rapid adjustment of east German wages to the west German level. In addition, the general trend towards substituting factor capital for factor labour likewise had consequences for income growth. The result was that far fewer persons than before were involved in the creation of added value. In relation to the number of persons employed, disposable income increased between 1991 and 1998 at an average rate of 4.1%, which was almost ¾ percentage point per year faster than the corresponding national aggregate figure. Given the persisting trend towards part-time working, the ratio is higher still when translated into equivalent full-time jobs.

Disposable income in real terms

The growth in nominal incomes is only of limited use as an indicator of performance or welfare, however, especially as German unification was accompanied by significant inflationary impulses and it took some time to regain price level stability. Disposable income in real terms is therefore a more meaningful indicator; put simply, it is calculated by taking into account the increase in the price of domestic value added and the change in the terms of trade.[3] In the seven years between 1991 and 1998 this indicator rose by 8%, or little more than 1% per year. This was only half as much as during the eighties, albeit with marked differences in individual periods. Whereas the year 1992 had been influenced by the after-effects of the unification-related growth and income boom, 1993 was marked by recession-induced income losses. The interruption of growth that was produced in the course of 1995 by the coincidence of higher pay settlements and a sharp appreciation of the Deutsche Mark limited the increase in disposable income in real terms in the following year to less than 0.5%. A weak rate of expansion is also likely for 1999.

Scope for real income distribution

The calculations of disposable income in real terms, which – following the transition to ESA '95 – have become an integral part of the Federal Statistical Office's quarterly publication programme, too, are of special importance for analytical purposes because with their aid it is possible quickly to draw up a rough guide for a wages policy that has a neutral effect on employment.[4] As already mentioned, the scope for real income distribution – measured as disposable income in real terms – increased by only 8% between 1991 and 1998, whereas real income per employee (deflated by the consumer price index) went up over the same period at the higher

3 Current transfers from/to the rest of the world are deflated using the price index for final expenditure on goods and services by residents.
4 See also Deutsche Bundesbank, The trend in agreed pay rates and actual earnings since the mid-eighties, Monthly Report, August 1994, pages 29 to 44.

rate of 9.7 %. This discrepancy is due primarily to the excessive wage settlements in the early nineties. By contrast, moderate pay settlements were agreed for 1997 and 1998, although they have been called into question in 1999. If wage policy makers wish to create scope for a sharp upturn in growth and employment, however, what is required is not a one-time effort or a stop-and-go policy on their part but, instead, dependable wage moderation over several years – as is demonstrated both by west German experience during the eighties and by examples in other countries.

Growing capital intensity

The (albeit comparatively small) increase in disposable income in real terms during the nineties was significantly bolstered by the initially rapid growth in capital intensity. Thus the ratio of the real capital stock (at 1995 prices) to the number of persons employed increased by an average of almost 5 % in 1992 and 1993. This was much faster than the rate at which capital intensity had increased in the old Länder (i.e. western Germany) in the eighties. This increase in the capital-labour ratio, which at first sight appears surprisingly large, probably reflected, above all, the rapid creation of a modern capital stock in the new Länder (i.e. eastern Germany) although – in contrast to the situation in western Germany during the eighties – it was accompanied by a sharp reduction in employment as result of the changeover to a capitalist economic system and large pay increases. Yet after the cyclical trough in 1993 had been overcome, investment in Germany remained subdued, also when measured by the new, expanded system of accounts, and the initial surge in capital intensity abated. Between 1993 and 1998 real gross fixed capital formation increased by only 4.1% in all; industrial and public-sector construction declined, in particular. One bright spot in the capital formation account, however, is machinery and equipment, especially the new category of other machinery and equipment. In 1998, on a price-adjusted basis, these capital goods exceeded their low point of 1993 by 17 %. Nevertheless, there was little scope for pronounced increases in income and welfare, especially as overall capital intensity rose in 1998 (and probably in 1999 as well) by a fairly small degree only, and at any rate far more slowly than on average during the eighties.

Further decline in capital productivity

What makes this finding all the more serious is that – as far as one can tell – the productivity of the factor capital concurrently declined further at the macroeconomic level. Thus the output-capital ratio, measured as real GDP per unit of real gross fixed capital formation, fell by almost 9 % between 1991 and 1998 (1.3 % per year). It is true that this decrease was due partly to the recession in 1993. In that year the level of capital productivity fell by no less than 4 % owing to lower capacity utilisation – and did not recover in the ensuing years. On the contrary, the productivity of the factor capital, in statistical terms, continued to fall up to the end of the period under review. One reason for this may be that the composition of real gross fixed capital formation changed radically in the wake of German unification. Whereas in western Germany in the second half of the eighties just over 57 ½ % of real gross fixed capital formation had been accounted for by buildings, this share expanded to an average of 61% for Germany as a whole during the period 1991–1998, a development which was due not least to the substantial pent-up need for public-sector investment in the infrastructure in eastern Germany. Such investment is doubtless a crucial component of a modern capital stock; but in the traditional analysis of value added, a shift from investment in machinery and equipment towards investment in buildings tends to have a dampening effect on overall capital productivity owing to the longer capital tie-up period of such projects or, conversely, owing to a smaller utility yield per unit of time.[5]

Primary income by sector

Primary income of enterprises

Just over one-half of net national income in Germany in 1998 was generated by the (non-financial) enterprise sector, which under ESA '95 is more narrowly defined.[6] After deducting compensation paid to employees and other net production charges, the enterprise sector posted an operating surplus of DM 436 billion in 1998. Net of the balance of property income payable and receivable, this left corporate profits totalling DM 389 billion. Compared with 1991 non-financial corporations (including quasi-corporations) expanded their operating surplus (before taxes) by 41%, or 5% per year. In the recessionary year 1993, however, their cost-income ratio contracted markedly. Thus corporate profits in 1993, as now shown in the national accounts, were around one-fifth lower than those in 1991. The economic slowdown in 1995 likewise had an impact on corporate earnings with a lag of one year.

Only a small part of net income was retained by enterprises for internal financing. On an average of the years 1991 to 1998 the dividends paid by corporations and the withdrawals of quasi-corporations amounted to nine-tenths of earnings. This explains the sum of DM 40 billion, which is fairly small when considered in macroeconomic terms, retained by non-financial corporations in 1998, as shown in the allocation of primary income account.

Primary income of households

The bulk – nearly nine-tenths – of the primary income of residents accrued to the sector households, according to the expanded concept under ESA '95, which includes enterprises without independent legal status (such as self-employed persons and sole proprietors). Between 1991 and 1998 the primary incomes of households (including non-profit institutions serving households) increased by around one-quarter, or 3.3% per year, which was in line with the rise in net national income. In particular, mixed income (including operating surpluses) increased at an above-average rate of 4.7% per year; it accounted

5 Not to mention the fact that excessive tax incentives have resulted in many new buildings remaining vacant, which has a similar effect.

6 This sector comprises corporations and quasi-corporations other than financial institutions. These include public limited companies *(AGs),* private limited companies *(GmbHs)* and companies with extensive decision-making autonomy such as general partnerships *(OHGs)* and limited partnerships *(KGs)* as well as derivative legal forms. By contrast, sole proprietors, members of the free professions and other self-employed persons are allocated to the household sector – both as investors and as consumers. The housing sector, which in the past was shown separately in the German national accounts, has been reapportioned between various other sectors.

Entrepreneurial income, dividends and withdrawals of non-financial corporations

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for over one-sixth of primary income in 1998.[7] This was basically due to the sharp increase in rent income (including owner-occupation). But dividends received and withdrawals from income of corporations and quasi-corporations also made a disproportionately large contribution to the increase in property income, despite the downswings in 1992 and 1996.[8]

Compensation of employees

The income received by households in the form of employee compensation, which under the new system of national accounts comprises not only gross wages and salaries but also employers' social contributions, went up during the period under review at an average annual rate of 2.8 %, which was ½ percentage point per year less than the rate of growth of primary incomes. At 71 %, the share of compensation of employees in primary income was consequently 3 ¼ percentage points lower in 1998 than it had been seven years earlier. This relatively subdued trend in labour income was attributable primarily to the negative labour market situation in the nineties, which was reflected in a decline in the number of employees by more than two million from 34.22 million in 1991 to 31.94 million in 1998. In relation to the number of employed persons, however, the compensation of employees rose by 3.8 %

7 It should be pointed out, however, that this figure is subject to major uncertainty as it is not an original statistic but, instead, is calculated by means of fixed ratios from the sectoral account. See Statistisches Bundesamt (Federal Statistical Office), *Revision der Volkswirtschaftlichen Gesamtrechnungen 1999 – Anlaß, Konzeptänderungen und neue Begriffe, in: Wirtschaft und Statistik, Heft 4, 1999,* pages 257 to 281.
8 In contrast to the previous system of national accounts, withdrawals are now also booked as property income.

per year and hence at a more robust rate than primary income.

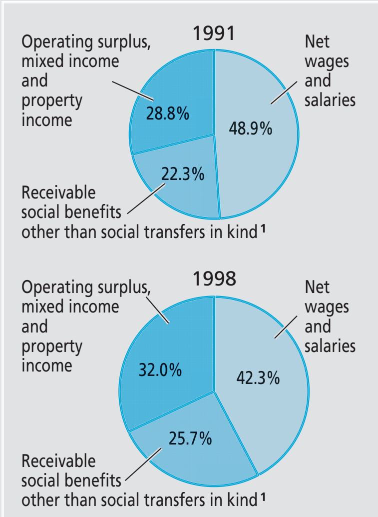
Net earnings

In 1998 only 51% of the compensation of employees remained for households as disposable income after deducting employers' and employees' contributions to the social security funds and wage tax. In 1991 net earnings had amounted to almost 57 % of gross pay. This means that the divergence between the gross compensation of employees and net wages and salaries has widened further during the nineties. This increase in the burden of taxes and levies is attributable both to the rise in the contribution rates to the social security funds, which jumped by nearly 7 percentage points since the start of 1991 to reach 42 % in 1998, and to the increase in wage tax payments (including the solidarity surcharge), which, despite the introduction of various tax breaks (such as the basic subsistence allowance), expanded disproportionately owing to the system of tax progression.[9] Nevertheless, net earnings rose substantially in 1992 and 1993 on account of the large pay settlements in western Germany in those two years and the rapid adjustment of east German pay rates to the west German level. In the ensuing five years, however, net labour income showed no rise, resulting in an average annual increase of 1.2 % over the period under review.

Transfer income

In addition, monetary social benefits amounting to DM 620 billion net accrued to households in 1998. This was 45 % more than in 1991, or equivalent to an annual rate of increase of 5.5 %. Firstly, this reflects the sharp rise in aggregate pension payments, reflecting both the higher number of pension recipients and the dramatic improvement in the pension level in eastern Germany in the first post-unification years. On top of this, the monetary benefits paid through unemployment assistance quadrupled between 1991 and 1998 in the wake of the worsening situ-

Breakdown of households' disposable income *



* Including the adjustment for the change in net equity of households in pension funds reserves.— 1 Net and after deducting the balance of other current transfers payable and receivable.

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9 The increase in wage tax as shown in the national accounts is also influenced by two special factors. Firstly, the disclosed amounts of wage tax were artificially boosted from 1996 by the abolition of the children's tax allowance (and simultaneous rise in child benefit) in the wake of the restructuring of the family allowance system introduced by the 1996 Annual Tax Act. This tendency was reinforced by the change in the way government incentives are granted to home buyers, which likewise came into force in 1996. Unlike the previous special tax allowance, which had largely reduced the beneficiary's wage tax liability, the home buyer's grant which has been awarded in its place since the year 1996 is classified as a capital transfer in the national accounts. In the transitional period up to 2004, in which both systems will coexist, this will therefore result in shifts between wage tax and capital transfers.

ation on the labour market during this period.

Disposable income

Households' total disposal income in 1998, including the increase in the net equity of households in pension funds reserves, amounted to approximately DM 2,420 billion. This was 26 % more than in 1991. The annual rate of increase of 3.4 % was on a par with the pace of acceleration of primary income; for 1999 a rise of not quite 2 % seems likely, however. The overall change masks clear structural shifts. Thus an ever-smaller part of net income was generated in the form of direct remuneration from employment. On the other hand, households received an increasing share of their overall budget in the form of (monetary) social welfare benefits. The weight of post-tax mixed income has likewise increased in the course of the nineties, partly as a result of the growing number of self-employed persons.

Saving and the acquisition of assets

Declining national saving ratio

The disposable income of all domestic sectors, i.e. including financial corporations and general government, came to DM 3,153 billion in 1998. This was 26 % more than in 1991, which works out at an average annual increase of 3.4 %. Domestic consumption expenditure grew faster than national disposable income, especially during the unification-induced boom, whereas after 1993 it, too, slowed distinctly as income growth flattened out. Over the whole of the period under review households and general government raised the amount they spent on consumption by around 30 %, or 3.8 % per year. This led to a marked decline in the overall saving ratio. Within the space of two years (1991 to 1993) it fell abruptly from 11% to 8½ % and thereafter barely maintained that level. In absolute terms, too, the total amount saved in 1998 (just under DM 260 billion) was lower than the corresponding figures in the early nineties.

Households' lower propensity to save

The chief factor behind this decrease was the lower level of saving by households, which hitherto had been the mainstay of domestic saving. Around DM 240 billion accumulated from households' saving in 1998. This was the equivalent of 10 % of their disposable income, compared with a share of 13 % in 1991. Since the beginning of the nineties the previously cyclical pattern of saving has shown a persistent downward tendency, although initially this represented a return to normal from the high level reached in 1990 in the wake of the 1986/88/90 tax reform. Subsequently both cyclical and structural factors tended to reduce the propensity to save.

Determinants of household saving

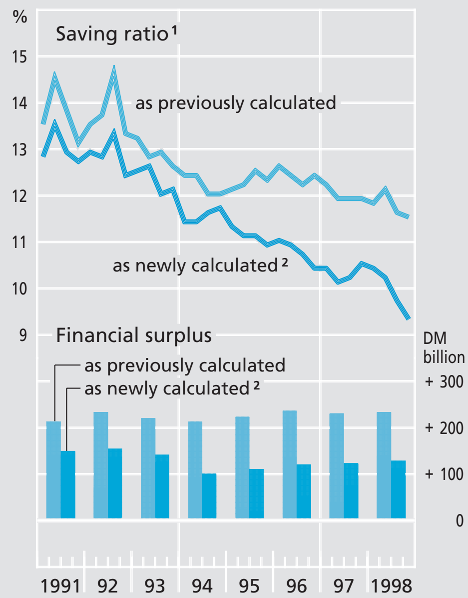
The importance of employee compensation as a source of household saving has declined continuously, mainly because of the income losses resulting from the sharp drop in employment. Wage substitutes were naturally unable fully to offset this. Another drawback was that property income lost much of its buoyancy following the steep decline in interest rates from the autumn of 1990. Consequently, it did not bolster saving, through being reinvested, as much as it had done previously. The growing preference for the acquisition of financial assets with capital gains potential had a similar effect in statistical terms.[10] On balance, the negative influences stemming from labour and property income were offset less and less by the comparatively large volume of saving from the mixed income of self-employed persons, particularly as the burden of taxes and social security contributions likewise grew perceptibly heavier. This was compounded by a rising burden of indirect taxes.

Besides the halting pace of general economic growth, the falling level of reinvestment of property income and the greater fiscal burdens, saving was also depressed in the longer run by the changing structure of the household sector as a result of which households with a lower saving ratio gained a greater weight. This relates principally to one-person households; for quite some time the number of these in Germany has been growing roughly twice as fast as that of the household sector a whole. This mirrors not only the ageing of the German population but also changing lifestyles, the combined effect of which has been to foster a higher propensity to consume.

Lower corporate earnings

Overall saving was hampered, for a time, not only by a declining contribution from households but also by negative earnings of enterprises[11] and, in particular, by the deficits of the general government sector. Thus in the wake of the recession of 1993 many west German firms, faced with tougher international competition, recorded losses. In addition, most of the former publicly owned enterprises in eastern Germany struggled to survive. The situation was exacerbated, as the

Saving ratio and financial surplus of households



1 Saving as % of disposable income. — 2 According to ESA 1995.

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construction boom petered out, by a prolonged and profound crisis in the building industry. The upshot of all this was that the operating surplus of many enterprises no longer sufficed to cover the cost of capital service and of preserving the stock of real assets. Corporate earnings improved noticeably with the gradual economic recovery and the progressive restructuring successes in eastern Germany, although in general it could not be said that corporate earnings have reached an adequate level of profitability on a sustained basis. By contrast, general government, which bore the brunt of the financial burdens

10 According to the usual methodological definitions used in the national accounts, capital gains on non-financial or financial assets are reflected neither in incomes nor in savings.
11 Defined in ESA '95 as non-financial corporations and quasi-corporations. For simplicity, these are referred to in the following as enterprises.

ensuing from German unification, did not begin appreciably to narrow its budgetary gap until 1997 – partly in response to the obligation to meet the fiscal criteria laid down by the Maastricht Treaty.

Investible funds

The picture of the national savings trend and its components remains largely the same even after the diverse capital transfers between the individual sectors are taken into account. The general government sector is normally a donor in this respect, owing to the many measures to promote economic growth and investment. By contrast, enterprises and households are recipients.[12] This boosts the investible funds of the two sectors (arising from savings and net capital transfers received) – in some cases substantially; in the case of enterprises these additional financial resources averaged approximately 1% of all disposable income between 1991 and 1998. The investment grants and other capital transfers widened the general government sector's deficit by a corresponding amount.

Acquisition of non-financial assets ...

Despite the falling level of savings, a comparatively favourable and easy financing climate has prevailed in Germany since the early nineties and has been maintained even during the various dramatic turbulences in the international financial markets. A key factor in this was that overall investment, which had surged in the wake of German unification, contracted towards the aggregate amount of domestic financial resources available once the underlying dynamism of the economy had abated. The overall acquisition of fixed assets and inventories (less the consumption of fixed capital) dropped appreciably following the recession of 1993 and did not subsequently return to its former level. Its net nominal total of DM 265 billion in 1998 was more than one-tenth smaller than the comparable figure in 1991, which admittedly had been rather high. In relation to the disposable income of all sectors, the acquisition of non-financial assets has consequently fallen by almost one-third since German unification from just over 12 % to 8½ %.

... by households ...

Domestic investment was supported more and more by households. One of the key innovations of the system of national accounts is precisely to seek to take due account of their role as investors, which – besides the commercial capital formation of self-employed persons – is focused primarily on the acquisition of residential property. The housing shortage due to the mass immigration at the beginning of the nineties and the resulting increase in the level of rents gave a powerful spur to investment in housing construction. The sustained easing of mortgage terms and the manifold government promotional measures, which favoured debt financing and channelled capital into eastern Germany on a very large scale, have strengthened this tendency. The housing construction boom peaked in western Germany in 1994 and in eastern Germany two years later. Market saturation subsequently curbed, above all, the incentive to purchase flats as an investment vehicle. By contrast, the ongoing desire for owner-occupied dwellings had a stabilising effect, especially in western Germany. If the resources invested by the self-

12 Investment grants and bonuses aimed at encouraging private asset acquisition.

National saving, acquisition of assets and financial balances

DM billion

Item	1991	1992	1993	1994	1995	1996 p	1997 p	1998 p
Saving								
Households	250.1	265.4	263.3	253.4	252.1	249.3	244.6	241.9
Non-financial enterprises	– 7.0	– 18.4	– 38.5	– 22.0	25.1	33.0	24.9	4.4
Financial institutions	40.7	35.4	39.8	39.2	36.2	30.5	40.9	42.0
General government	– 10.7	– 4.2	– 36.3	– 26.5	– 62.2	– 81.9	– 64.6	– 29.3
All sectors	273.0	278.2	228.3	244.1	251.1	230.9	245.7	258.9
Capital transfers (net)								
Households	10.1	12.5	11.9	7.4	11.6	14.6	19.1	25.8
Non-financial enterprises 1	36.2	28.9	29.3	22.1	258.4	19.9	19.6	23.1
Financial institutions	– 1.7	– 1.7	– 3.6	0.1	– 4.7	– 7.3	– 9.5	– 10.2
General government 1	– 49.0	– 41.4	– 39.4	– 32.1	–269.3	– 30.4	– 29.0	– 37.3
All sectors	– 4.4	– 1.8	– 1.8	– 2.5	– 4.0	– 3.2	0.2	1.3
Saving including capital transfers								
Households	260.2	277.8	275.2	260.8	263.7	263.8	263.7	267.7
Non-financial enterprises 1	29.1	10.5	– 9.2	0.0	283.5	53.0	44.4	27.5
Financial institutions	39.0	33.7	36.2	39.3	31.4	23.2	31.5	31.8
General government 1	– 59.7	– 45.6	– 75.7	– 58.5	–331.5	–112.3	– 93.7	– 66.6
All sectors	268.6	276.4	226.5	241.7	247.1	227.7	245.9	260.2
Acquisition of non-financial assets 2								
Households 3	110.7	123.3	133.5	159.4	152.7	143.1	140.8	138.4
Non-financial enterprises	157.7	133.2	74.0	92.2	101.9	81.5	94.2	121.6
of which								
Fixed assets	144.0	137.5	93.6	89.6	94.1	87.1	89.1	96.7
Financial institutions	8.1	11.0	10.1	8.1	9.3	7.7	7.8	7.4
General government	25.8	33.0	27.8	25.0	13.6	8.9	2.8	– 2.1
All sectors	302.3	300.4	245.4	284.7	277.5	241.3	245.7	265.3
Financial balances								
Households	149.5	154.5	141.7	101.4	111.1	120.7	122.9	129.3
Non-financial enterprises 1	–128.5	–122.6	– 83.2	– 92.2	181.5	– 28.6	– 49.8	– 94.1
Financial institutions	30.9	22.7	26.1	31.2	22.2	15.4	23.6	24.4
General government 1	– 85.6	– 78.6	–103.4	– 83.5	–345.1	–121.2	– 96.5	– 64.5
All sectors 4	– 33.7	– 24.0	– 18.8	– 43.1	– 30.4	– 13.6	0.2	– 5.0

Source: National accounts and Bundesbank estimates. — **1** In 1991 including partial remission of the Federal Railways' debt by the Federal German Government amounting to DM 12.6 billion and in 1995 including the assumption of the Treuhand agency's debt and part of the old debt of east German housing enterprises by the Redemption Fund for Inherited Liabilities amounting to around DM 205 billion and DM 30 billion, respectively. — **2** Net acquisition of tangible fixed assets and stocks. — **3** Mainly expenditure on new residential buildings including maintenance and purchases of old buildings; excluding associated real estate transactions. — **4** Corresponds to net lending to the rest of the world.

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employed and sole proprietors in new tangible fixed assets and inventories are included, the volume of non-financial assets acquired by households in 1998 totalled nearly DM 140 billion. Although this was less than the amount invested at the peak of the housing construction boom, it was still significantly more than in 1991. In the upshot households at least maintained their investment ratio of 4½% – in relation to total disposable income and throughout the period under review – and their macroeconomic weight increased as a result.

... by enterprises ...

The pattern of capital formation of the enterprise and general government sectors contrasted with that of households. Non-financial enterprises reduced their net acquisition of tangible fixed assets and inventories by more than one-half in the wake of the general weakening of demand at the beginning of the nineties, thereby exacerbating the existing recessionary tendencies. Such a strategy appears to have been pursued by west German firms, in particular; spurred by the unification boom, they had created ample capacity through new machinery and equipment, which then turned out to be excessive under the changed market conditions. They continued to show restraint in the acquisition of new machinery and equipment in the following years up to 1997 as long as the stimuli imparted by external demand failed to have any major knock-on effect on the level of domestic capital formation. In assessing the investment behaviour of enterprises, however, it should be remembered that the innovations in the field of data and communications technology has not only reinforced the trend towards the miniaturisation of machinery and equipment in recent years but in many cases has also led to price decreases, as a result of which the deployment of such productive capital has required a smaller financial outlay than before.

In contrast to investment in machinery and equipment, capital spending on industrial and commercial buildings initially rose steadily in the context of the restructuring process in eastern Germany. This trend was gradually reversed in 1996 – in connection with the expiry of government concessions and benefits and the completion of the first large-scale projects in eastern Germany. Enterprises invested a nominal total of around DM 120 billion in the acquisition of non-financial assets in 1998, which was almost one-quarter less than in the first year after unification. In terms of the disposable income of all sectors, this amounted to an investment ratio of just under 4%, compared with a share of 6½% immediately following unification. It should be borne in mind, however, that a fairly high degree of capital formation had been realised at that time. Not since the early seventies had west German firms achieved such a high investment ratio in relation to the economy as a whole.

... and by general government

The investment behaviour of general government resembled that of the enterprise sector. In order to put in place the infrastructure needed for the challenge of *Aufbau Ost* – the task of reconstructing eastern Germany – the general government sector first had to step up its investment activity. But the constraints of empty public coffers soon necessitated

National saving, acquisition of assets and financial balances

as % of the disposable income of all sectors

Item	1991	1992	1993	1994	1995	1996 p	1997 p	1998 p
Saving								
Households	10.0	9.9	9.6	8.9	8.5	8.3	8.0	7.7
Non-financial enterprises	– 0.3	– 0.7	– 1.4	– 0.8	0.9	1.1	0.8	0.1
Financial institutions	1.6	1.3	1.5	1.4	1.2	1.0	1.3	1.3
General government	– 0.4	– 0.2	– 1.3	– 0.9	– 2.1	– 2.7	– 2.1	– 0.9
All sectors	10.9	10.4	8.4	8.6	8.5	7.7	8.0	8.2
Acquisition of non-financial assets 1								
Households 2	4.4	4.6	4.9	5.6	5.2	4.8	4.6	4.4
Non-financial enterprises	6.3	5.0	2.7	3.2	3.5	2.7	3.1	3.9
of which								
Fixed assets	5.8	5.1	3.4	3.2	3.2	2.9	2.9	3.1
Financial institutions	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2
General government	1.0	1.2	1.0	0.9	0.5	0.3	0.1	– 0.1
All sectors	12.1	11.2	9.0	10.0	9.4	8.0	8.0	8.4
Financial balances								
Households	6.0	5.7	5.2	3.6	3.8	4.0	4.0	4.1
Non-financial enterprises 3	– 5.1	– 4.6	– 3.0	– 3.2	6.2	– 1.0	– 1.6	– 3.0
Financial institutions	1.2	0.8	1.0	1.1	0.8	0.5	0.8	0.8
General government 3	– 3.4	– 2.9	– 3.8	– 2.9	– 11.7	– 4.0	– 3.1	– 2.0
All sectors 4	– 1.3	– 0.9	– 0.7	– 1.5	– 1.0	– 0.5	0.0	– 0.2

Source: National accounts and Bundesbank estimates. — **1** Net acquisition of tangible fixed assets and stocks. — **2** Mainly expenditure on new residential buildings including maintenance and purchases of old buildings; excluding associated real estate transactions. — **3** In 1991 including partial remission of the Federal Railways' debt by the Federal German Government amounting to DM 12.6 billion and in 1995 including the assumption of the Treuhand agency's debt and part of the old debt of east German housing enterprises by the Redemption Fund for Inherited Liabilities amounting to around DM 205 billion and DM 30 billion, respectively. — **4** Corresponds to net lending to the rest of the world.

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spending cuts, which in the first place affected investment budgets. The level of acquisition of non-financial assets was successively pruned so sharply that in 1998 it actually fell below the value of tangible assets consumed by wear and tear.

Financial balances of the sectors

A comparison of saving (including capital transfers) and the acquisition of non-financial assets indicates which sectors of the economy generated a financial surplus on balance and which sectors required additional resources to finance their capital formation or other expenditure. Households remain the principal providers of capital to other sectors through their savings. Yet – as the results of the new national accounts show – they required a relatively large amount of resources to finance their own acquisitions of non-financial assets, which since 1991 had absorbed more than one-half of household savings (and net capital transfers received). In 1998 households generated surplus financial resources amounting to just under DM 130 billion on which the other sectors were able to draw; this means that the contribution of the household sector to financing national economic requirements had declined markedly since 1991. Amounting to about 4 % of the disposable income of all sectors, it was only two-thirds as high as it had been at the time of German unification.

The declining contribution of the household sector towards financing national economic needs was partly offset by the fact that enterprises kept their external financing requirements within narrow bounds through their rather defensive and cautious approach to new capital formation. This was supported by the gradual efforts made towards the consolidation of public finance, through which the government deficit ratio had been halved compared with 1996. This reduced the overall recourse to foreign capital or external sources of financing in the wake of German unification. However, this occurred primarily at the expense of investment and the jobs that such investment would have created, instead of being focused on cutting consumption-related expenditure. Hence restructuring the way national income is distributed remains a task for the future. Another key requirement is to lift the earnings level of enterprises in order to compensate for the continuing decline of household saving.