

## German enterprises' profitability and financing in 2015

*The underlying trend in non-financial corporations' profitability remained virtually unchanged from 2014 to 2015. With economic conditions still favourable, firms enjoyed solid sales growth, and lower purchase prices largely offset cost pressure generated by labour. The renewed relatively sharp increase in staff costs was caused by further payroll growth and higher wages. In their individual financial statements prepared according to German accounting rules, enterprises with pension commitments or other long-term liabilities additionally had to augment their provisions considerably owing to the reduction in the relevant discount rate. Lastly, one-off effects among individual large firms also dampened aggregate profitability.*

*The increase in long-term provisions was a decisive reason why the external funds of the non-financial corporations sector rose in lockstep with equity in 2015. Apart from that, the trend towards strengthening the capital base continued, with the equity ratio of enterprises without provisions for pensions continuing to rise considerably, and the equity ratio of enterprises with provisions for pensions falling only because such provisioning meant that debt outpaced equity. All other things being equal, the incremental adjustment of provisions to the low-interest-rate setting mandated by the provisions of German commercial law will continue to reduce earnings and increase debt for some years to come. The current year is an exception, as the extension of the reference period for calculating the discount rate is causing movements in the other direction. Given that profitability is solid overall and balance sheet structures have stabilised, the corporate sector as a whole will probably have little problem absorbing the expenses it faces, though firms with high pension commitments might be hit hard. At the end of 2015, pension provisions on group balance sheets prepared according to international accounting standards undercut the previous year's valuation levels as market rates had previously risen briefly.*

*The scope for internal financing did not increase during the reporting period, with far fewer profits retained than in 2014. Nonetheless, there was no reduction in cash flow since the drop in retained profits was due, in part, to increased provisioning. External funds appear to have been used increasingly to fund the renewed very strong growth in equity investment, in particular. On the other hand, tangible fixed assets as a percentage of total assets fell somewhat. Given the steady growth in long-term equity holdings, the strategy of employing financial resources as efficiently as possible within corporate groups appears to have been gaining traction.*

## ■ Underlying trends

*No improvement in profitability in 2015 despite favourable setting*

The German economy continued its robust recovery in 2015. Driven by vibrant domestic demand and boosted by strong external stimuli, particularly in the first half of the year, real gross domestic product (GDP) was up by 1.7% on the year, once again perceptibly outpacing potential output. However, the business-friendly economic environment was characterised not only by the overall favourable developments in sales markets. Purchase prices for intermediate inputs fell again, with the prices of imported commodities and semi-finished products dropping even more sharply in 2015 than a year earlier. By contrast, firms saw labour become more expensive. This was not only due to another perceptible increase in staff costs but was also the result of the need, in the light of lower interest rates, to increase provisioning for pension obligations to current and former employees. These additional expenses meant that the profitability of the non-financial corporations sector failed to improve despite the favourable business and price environment. However, the circumstance that extrapolated results<sup>1</sup> show the pre-tax return on sales in 2015 failing to match that of 2014, in fact actually falling slightly to just over 4%, is attributable, in part, to a major one-off effect: irregularities in emissions tests on diesel car engines at Volkswagen necessitated the formation of considerable provisions.

*No further increase in equity ratio, ...*

The increase in long-term provisions necessitated by the reduction in the discount rate left the greatest mark on the aggregate balance sheet of the non-financial corporations sector. This effect, which is related to provisioning not only to meet future pension obligations but also to meet other long-term liabilities (such as in energy), caused debt to rise more sharply in 2015 than it had in years. Seen in a balance sheet context, this meant that equity did not grow further as a percentage of total assets this time, although – in absolute terms – it rose sharply again. Excluding the effect of provisions, the aggregate equity ratio would have

continued its rise. This supposition is borne out, first, by the fact that this actually happened among firms without provisions for pensions. Second, the decline in the equity ratio among firms with provisions for pensions was the arithmetical consequence of total assets rising faster than equity.

Since the discount rate will continue to fall as it is calculated by smoothing the interest rate over a period of years, the provisioning effect will continue to impact on firms in the years to come – though not as much as in 2015. The current year is an exception, however; the discount rate has risen because the period used to calculate the average discount rate was extended from seven to ten years.<sup>2</sup> Falling technical interest rates dent the profitability of firms with provisions for pensions; this effect can be quite severe if the sums involved are high. At least among the firms most severely affected, the equity ratio is highly likely to continue its decline in the years to come. The equity base of firms with provisions for pensions is, on average, just as good as that of firms without provisions for pensions. There is thus no reason to expect that this effect will, in many cases, push down the equity ratio to such a low level that this, in itself, would pose a threat to creditworthiness.

The affected firms could be keen to gradually make up the proportional reduction in equity

*... yet this was due mainly to an increase in provisions as a result of changes to the discount rate*

<sup>1</sup> The analysis for 2015 is based on some 28,000 financial statements, which were roughly extrapolated based on the evaluation of aggregate sales data from the company register. For details on the current procedure, see Deutsche Bundesbank, Financial statements statistics with broader sectoral coverage and a new basis of extrapolation, Monthly Report, December 2011, pp 32-33.

<sup>2</sup> It has to be noted when judging the effect of provisions that, for pension provisions reported under German accounting practices, there are currently high off-balance-sheet hidden losses. The extension of the calculation period means that they will be transferred to disclosed losses more slowly. For more information on the reporting of provisions for pensions in financial statements prepared pursuant to German GAAP and what it means for financial stability, see Statement by the Deutsche Bundesbank of 18 August 2015 on the Bundestag's decision regarding the German Commercial Code's discount rate for pension provisions (BT Drucksache 18/5256). Available in German at [http://www.bundesbank.de/Redaktion/DE/Kurzmeldungen/Stellungnahmen/2015\\_12\\_15\\_hgb\\_rechnungszins.pdf?\\_\\_blob=publicationFile](http://www.bundesbank.de/Redaktion/DE/Kurzmeldungen/Stellungnahmen/2015_12_15_hgb_rechnungszins.pdf?__blob=publicationFile)

**Selected financial statement items listed separately for enterprises with and without provisions for pensions\***

Item	Enterprises with provisions for pensions			Enterprises without provisions for pensions		
	2014	2015	Year-on-year change	2014	2015	Year-on-year change
			2015			2015
Income statement	As a percentage of sales			As a percentage of sales		
Personnel expenditure	12.7	13.1	0.4	11.5	11.8	0.3
Interest and similar expenses	1.3	1.9	0.5	0.7	0.7	0.0
Annual result before taxes on income	3.6	3.0	-0.6	2.8	3.2	0.3
Balance sheet	As a percentage of total assets			As a percentage of total assets		
Equity	32.3	31.7	-0.6	29.0	30.2	1.1
Liabilities	48.2	48.6	0.4	59.0	57.5	-1.5
Provisions	18.8	18.9	0.2	11.2	11.6	0.3
of which Provisions for pensions	6.7	7.0	0.3	-	-	.

\* Data based on a peer group of enterprises for which annual financial statements are available for both 2014 and 2015 (a total of 27,550 enterprises (excluding Volkswagen): 7,670 with provisions for pensions and 19,880 without provisions for pensions). They are not extrapolated and directly reflect the data available in the Deutsche Bundesbank's Financial Statement Data Pool, which contains a disproportionately large number of large firms' annual financial statements, whereas medium-sized and, in particular, small firms are considerably less well represented. Financial accounts make up 97% of the evaluation, with the other 3% based on tax accounts. 99.96% of provisions for pensions are attributable to firms for which financial accounts are available, thus virtually ruling out a distortion of the effects presented above by differences in tax rules.

Deutsche Bundesbank

*Retained earnings could go up in the years to come*

by increasingly retaining earnings in the years to come. This would increase the scope for internal financing because funds would be directly protected from distribution by the formation of provisions, and there would also – later on – be a systematic reduction in distributions. Assuming no change in external financing, this would involve the acquisition of assets, which would be reported on the income side of the national accounts as an increase in saving. Simulations show that the growth in pension provisions as a result of changes to the discount rate has probably had an impact on the observed increase in saving by non-financial corporations. However, this is not the dominant factor behind the strong rise in savings between 2012 and 2015 as reported in the national accounts (see also the box on pages 60 to 63).

*Strong growth in cash flow*

In 2015, cash flow grew significantly more strongly than in the two preceding years, which had already seen high growth rates. However,

because of a marked reduction in retained profits compared to 2014, there was no net increase in the scope for internal financing during the period under review. External financing more than doubled in 2015 compared with the very depressed level of 2013 and 2014, with loan financing picking up distinctly more quickly than equity financing.

Once again, a relatively large portion of the additional funds were used to purchase long-term equity investments in 2015. In this, the reporting year was no different from the preceding years – with the exception of 2013, in which long-term equity investment showed weak growth. The value of long-term equity investments rose by nearly one-third from 2011 to 2015, representing an increase in the balance sheet weight by 2 percentage points to 17%. The fixed asset ratio was down somewhat in 2015 from the two previous years, and the ratio of cash resources to total assets remained all but unchanged. Securities purchases

*Large number of new long-term equity investments acquired, yet fixed asset ratio lower*

## Potential effects of the increase in pension provisions as a result of changes to the discount rate on non-financial corporations' savings

Falling interest rates are forcing companies that have made a commitment to pay current and former employees an occupational pension under defined benefit pension plans to raise their pension provisions. In corporate balance sheets prepared according to the provisions of the German Commercial Code (*Handelsgesetzbuch*), pension provisions must equal the present value of expected payments discounted using an interest rate which is calculated as the moving average of the market interest rates of the past years. The increase in pension provisions is denting companies' earnings, in some cases considerably. If, however, profit distributions are reduced because higher provisions mean lower earnings, additional funds remain within the companies. Assuming unchanged external financing, they will be used to acquire assets; see Savings I in the chart below.<sup>1</sup> In the balance sheet, the percentage of debt will also rise. If companies wish to return to the funding structure they had before the rise in pension provisions, they will increasingly retain earnings in the ensuing period. On the asset

side, this corresponds to an acquisition of wealth; see Savings II in the chart below.

The Bundesbank's Financial Statement Data Pool allows a simulation of the impact of the increase in pension provisions as a result of changes to the discount rate on the savings of non-financial corporations. This can be used to answer the question of the extent to which this circumstance contributed to an increase, according to the national accounts, in the savings of non-financial corporations from just over €62 billion in 2012 to €110 billion in 2015. It further allows the effects it will have in the current and subsequent years to be estimated. The analysis focuses on the burden that the rising pension costs will place on enterprises in the years 2013 to 2020. In order to obtain a representative picture of the non-financial corporations sector, the simulation results of around 14,600 non-financial corporations that make pension provisions

<sup>1</sup> The additional funds could conceivably also be used to repay liabilities.

### Schematic illustration of how savings are accumulated

Starting position		Increase in pension provisions and subsequent distribution		Adjustment of equity	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Assets	Equity 1/3	Assets	Equity < 1/3	Assets	Equity 1/3
	Debt 2/3		Debt > 2/3		Retained earnings
		Savings I	Pension costs	Savings I	Debt 2/3
				Savings II	

and, on average, reported positive after-tax profit<sup>2</sup> in the years 2010 to 2012 are weighted with the extrapolation factors customary in the corporate financial statement statistics.

The simulations are based on an assumption about companies' profit distribution behaviour that is derived from the model of partial adjustment of actual equity  $E_t$  to a target value  $E_t^*$ . In a simplification, it is assumed that after the increase in pension provisions companies will, all other things being equal, wish to gradually return to the funding structure of the 2012 financial year.<sup>3</sup> The assumption is that companies will, from the year 2013 onwards, recognise pension costs  $x_t$  that increase debt and, by reducing net earnings, also weigh on equity. The ratios of earnings to costs remain unchanged – with the exception of pension costs – throughout the simulation horizon. Specifically, average sales and after-tax profit for the years 2010 to 2012 are extrapolated across the observation period (steady state).<sup>4</sup>

The adjustment equation for profit distribution can be written as follows:

$$a_t = (1 - \lambda)(\bar{g} - \phi x_t) + \lambda[E_{t-1} + (\bar{g} - x_t) - E_t^*],$$

where  $\bar{g}$  is after-tax profit in the steady state. The parameter for partial adjustment  $\lambda \in [0; 1]$  steers the speed of the adjustment to the target capital ratio. For instance, a small  $\lambda$  causes a stabilisation of profit distribution and thus slower adjustment. A differentiation is further made between the cases  $\phi = 0$  and  $\phi = 1$ : for  $\phi = 1$ , the profit distribution is based on accounts-based after-tax profit. This results in a short adjustment period even if  $\lambda$  is small. The reason for this is that the deviation from the target capital ratio that the increase in the

pension provisions after profit distribution immediately triggers is relatively small. For  $\phi = 0$ , companies base their payout on after-tax profit in the steady state, ie without taking into account the extraordinary burden imposed by pension costs.

Looking at the annual savings effects, from 2014 onwards, the direct contributions of reduced distributions as a result of increased pension costs in recent years vie with the indirect contributions from the subsequent strengthening of equity through retained earnings. At the beginning of this year, the period on which the calculation of the average discount rate is based was extended by law from seven to ten years for the financial years after 2015.<sup>5</sup> This has resulted in a "reverse" adjustment in 2016, as provisions are smaller than in 2015 and there is, therefore, a surplus. However, paying out the

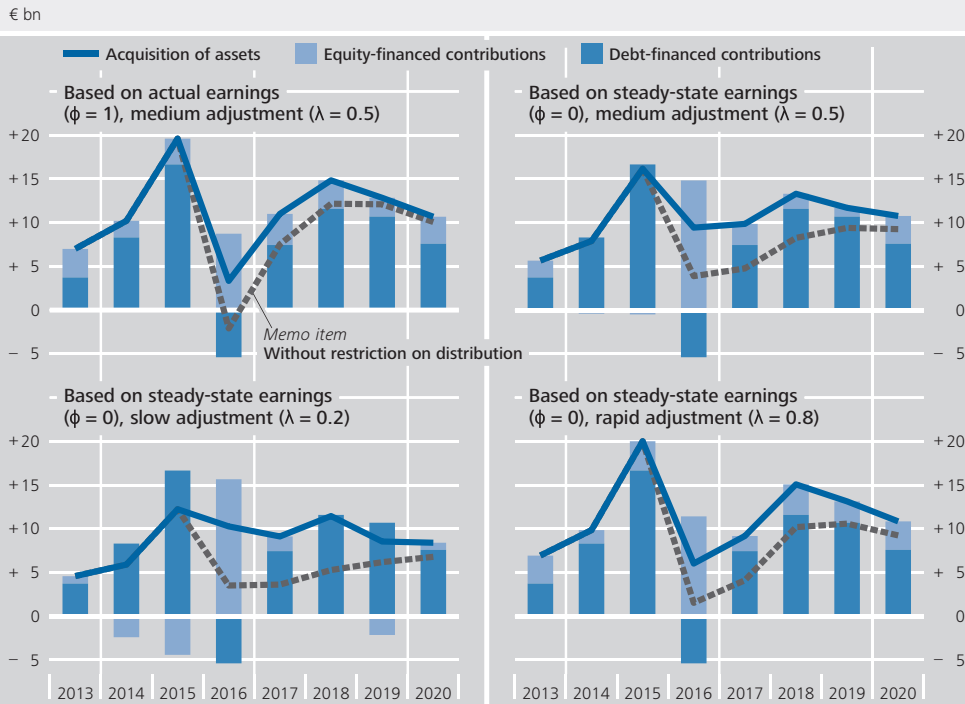
**2** The enterprises excluded from the analysis as a result of losses represent 15.8%, in numerical terms, of the sample in the reference year 2012 and, after extrapolation, make up 20.0% of total assets and 21.2% of the sales of the companies that make pension provisions. Looking at the universe of the non-financial corporations sector, the excluded companies represent 11.0% of sales and 10.2% of total assets. Extrapolating losses would create problems in terms of the simulation. Nonetheless, the fact that loss-making enterprises are not included in the analysis is unlikely to distort the results significantly, as these companies make only small savings anyway, given their lack of earnings.

**3** It is implicitly assumed that the enterprises achieved their target capital ratio in 2012. Prior to 2012, the interest rate in question was not very volatile. If, alternatively, the target capital ratio is calculated, for instance, as the average of several years, it deviates, in many cases very sharply, from the value realised in the reference year 2012. The adjustment dynamics in the first years would then be driven by this deviation and not by the pension provisions.

**4** The assumption of a stationary sales process implies that the operating business does not give rise to a need to accumulate further assets. As a result, total assets would, without the discount rate-driven adjustments to pension provisions, remain constant throughout the simulation period. This would, in turn, mean that no inflows of new external funds would be needed nor would earnings have to be retained. After taxes, earnings would therefore be distributed in full, and losses would have to be borne in full by shareholders.

**5** Enterprises may apply this calculation for the 2015 annual accounts on a voluntary basis.

### How non-financial corporations acquire assets in various adjustment models in the simulation period



Deutsche Bundesbank

balance sheet difference as a result of the different capital values achieved with interest rate smoothing over seven years versus interest rate smoothing over ten years is forbidden (restriction on distribution). Payouts are generally not capped by the current annual profit after tax. The sum of current after-tax profit and distributable reserves does, however, impose a restriction. The ban on distributions outlined above means that, from 2016 onwards, the maximum possible payout volume is reduced by the amount of the difference resulting from the change in the way the discount rate is calculated.<sup>6</sup>

All model versions have in common that the savings as a result of the discount rate-related increase in pension provisions may have peaked in 2015. The longer smoothing period is likely to lead to lower savings in 2016 and 2017, before another possible peak in 2018.<sup>7</sup> If companies focus on actual

accounting earnings and adjust rapidly, the time profile for savings is very pronounced, whereas the contributions to savings will be distributed more evenly across the years if companies adjust to the target capital ratio slowly. The restriction on distribution means that companies will, from 2016, retain a significantly higher percentage of their earnings. This is evident from the fact that savings would be perceptibly lower in the hypothetical case of there being no restriction on distribution. The ban on distribu-

<sup>6</sup> Additional income as a result of the change in the discount rate in 2016 would have to be transferred in full, with no restriction on distribution, in the case of profit or loss transfer agreements.

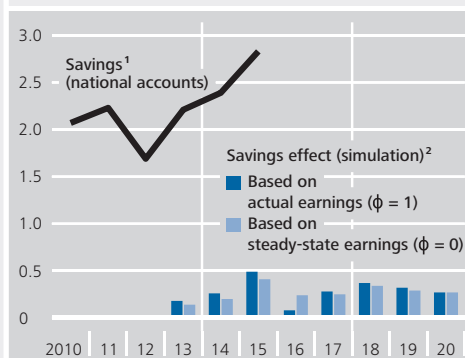
<sup>7</sup> The fact that the peak in 2015 will be followed by another in 2018 is connected to the change in the way in which pension provisions are calculated. The extension by three years of the period on which the discount rate is based means that enterprises will feel the effects of the drop in market rates, which, under the old accounting rules, led to fairly major adjustments to pension provisions in 2015, again in 2018, albeit in a less pronounced form. By contrast, they will experience relief in the two intervening years.

tions is more restrictive the more enterprises are interested in stabilising their distributions.

Asset acquisition is made up of a debt and an equity contribution. Debt changes in line with the annually reported pension costs (or pension income in 2016). This means that important features shared by all model versions are closely correlated over the period in which assets are acquired (such as the peaks in 2015 and 2018 and the relief in the intervening years). The capital effects are the result of the reduction in earnings in the year in which the pension costs are recognised and, in the subsequent years, of retained earnings as a result of the partial adjustment process assumed.<sup>8</sup> This gives rise to the differences in the time profile of the accumulation. A rapid adjustment to the target capital ratio curtails distributions extremely sharply – even based on steady-state earnings. Where the focus is on actual earnings, equity-financed acquisition of assets is positive throughout, even for medium adjustment. For slow adjustment and a steady-state focus, enterprises, on balance, allow the reductions in earnings as a result of the provisions to pass through to equity in the short term.

The comparison of the simulated overall effects with the saving of non-financial corporations, as reported in the national accounts in the statistically covered period up until 2015, gives an impression of the quantitative significance of saving as a result of pension provisions. There is a difference between the level of the extrapolated sales of non-financial corporations and the output of the relevant national accounts economic sector, which is due, in particular, to their definition. The simulated contributions to savings as a result of the increase in pension provisions to reflect higher discount rates are therefore compared with non-financial

### How non-financial corporations accumulate savings



<sup>1</sup> As a percentage of output. <sup>2</sup> As a percentage of sales, in each case medium adjustment ( $\lambda = 0.5$ ).  
 Deutsche Bundesbank

corporations' sales. Saving as a percentage of output at current prices as derived from the national accounts is used as a benchmark. According to the results of the simulation, the increase in pension provisions as a result of higher discount rates was a factor in non-financial corporations' increased saving. However, the very sharp growth in saving by non-financial corporations between 2013 and 2015 is, to a large extent, attributable to other factors.

<sup>8</sup> This breakdown is not identical to the division into Savings I and II in the illustration on page 60. Technically, Savings I are calculated as pension costs minus the reduction in equity.



picked up somewhat in the period under review. In a low-interest-rate setting, however, there appears to be a marked propensity towards intra-group lending, even for the short term. By contrast, the available data do not provide any evidence to confirm the assertion that firms, looking at low opportunity costs, are granting more generous credit terms or monitoring credit terms less strictly as part of their working capital management practices.

*Corporate insolvencies in Germany down further*

In 2015, the incidence of corporate insolvencies once again showed a marked decline, hitting its lowest level since insolvency legislation was reformed in 1999. The main reasons are likely to lie in the continued favourable economic environment and the very beneficial setting for potential debt restructuring. Though the number of insolvencies fell for the sixth consecutive year, the decrease during the reporting period was no longer quite as pronounced as in earlier years. All major sectors of the economy saw a drop-off in corporate insolvencies in 2015, with the reduction particularly pronounced in retail trade, transportation and storage and the construction sector. This decrease was not as strong in the manufacturing industry, however.

## ■ Sales and income

*Continuation of moderate sales growth ...*

Non-financial corporations' sales rose by just over 2% year-on-year in 2015. This represented a continuation of the moderate growth since 2012, which was interrupted only by the soft patch in 2013. Higher sales revenues were based mainly on volume effects since firms made concessions on prices in many sales markets. Thus, in 2015, domestic prices of industrial products were down by 1.8% as compared to 2014, which had already seen a 1.0% reduction in prices. By contrast, export prices rose only moderately in the reporting year, by 0.9%, following -0.3% in 2014.

*... in both manufacturing and services*

This time around, there was no major difference in sales growth between the manufacturing sector and the services sectors reported

here. What becomes evident at a more deeply disaggregated level is that, within the industrial sector, vehicle manufacture picked up particularly strongly again; sales were up by 11½% in 2015, after 8½% in 2014. This was due in particular measure to brisk domestic demand for fleet and commercial vehicles. Motor vehicle trade likewise benefited, with sales picking up by nearly 9% in 2015, following 3½% in 2014. Construction firms and retailers, which are primarily oriented to the domestic markets, showed, on the whole, better sales growth than the heavily export-oriented manufacturing sector. Earnings in wholesale trade, which is likewise more active in foreign markets than average, took a slight hit, whereas transport and logistics firms achieved higher sales growth than in 2014. The information and communication sector was one of the fastest-growing sectors in 2015, whereas business service providers were unable to match their exceptionally rapid pace of growth of 2014 in the reporting year.

Earnings from financial investment and non-core activities showed exceptionally strong growth in 2015, causing non-financial corporations' total earnings to appreciably outpace sales, at 3% year-on-year. One factor here was that, in 2015, earnings from long-term equity investments exceeded their 2012 to 2014 average by two-fifths.<sup>3</sup> Another was that the Volkswagen diesel scandal appears to have also impacted on earnings items that are not related to operational business.<sup>4</sup>

*Earnings from non-operating business particularly sizeable this time around*

Although lower procurement prices did not cause the cost of materials to shrink throughout the non-financial corporations world in 2015, it did rise considerably more weakly than

<sup>3</sup> Interest income was up considerably on the year in 2015, though not by as much as investment income. This was largely due, however, to an increase in interest-bearing assets, as the average interest rate has remained at an all-time low level in the past three years.

<sup>4</sup> The extraordinarily large growth of other operating income as well as investment income indicates that Volkswagen exploited all options in order to reduce the loss for the financial year caused by very considerable provisioning.



*Increased cost of materials despite significantly lower procurement prices*

sales – as in the previous year. Input expenditure in the industrial sector rose more strongly in 2015 than in 2014. Given that, in the reporting year, both imported commodities and semi-finished goods and domestically produced intermediates were considerably cheaper than a year earlier and that sales growth was unchanged, this increase in expenditure is probably related to the fact that the industrial production process nowadays involves numerous services which are procured externally and which are likely to have become more expensive as a result of rising labour costs.<sup>5</sup> Only industrial sectors with a cost structure dominated by the consumption of basic inputs, such as chemicals and pharmaceuticals as well as food production, benefited so greatly from the, in some cases dramatically, lower prices for internationally traded commodities that their cost of materials went down, even in absolute terms.

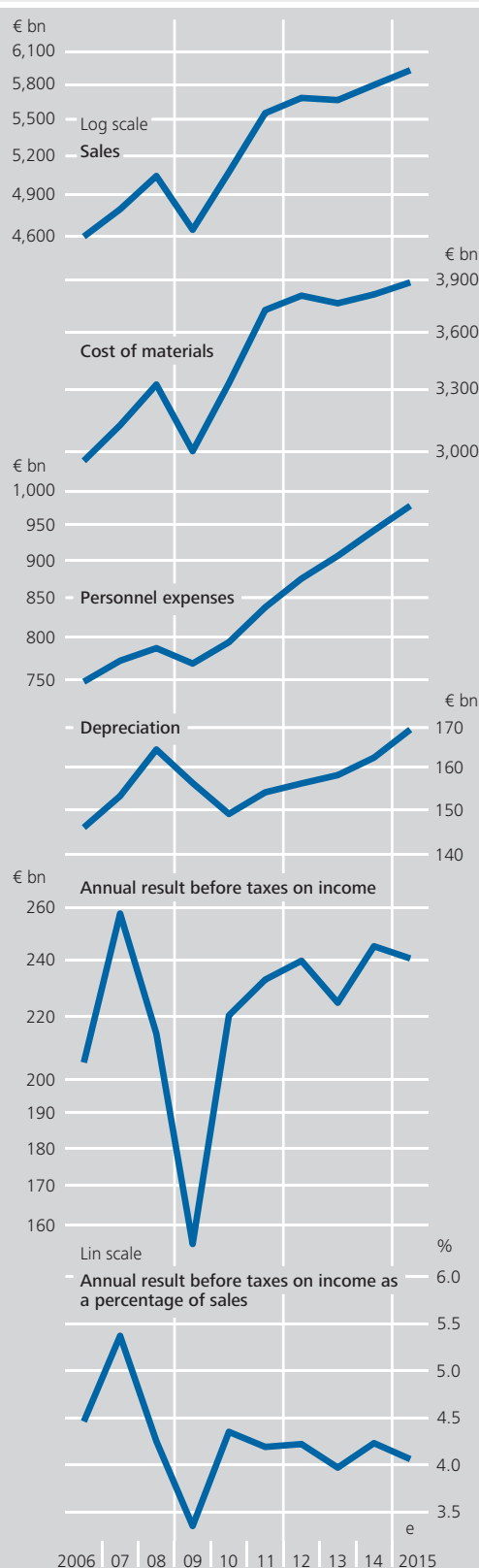
*Rising personnel expenses are having an ever more noticeable impact on the current business cycle*

Firms' personnel expenses continued to rise strongly in 2015, by just under 4%. It is becoming increasingly clear that rising spending on personnel is a key characteristic of the current business cycle, with personnel expenses in 2015 one-quarter higher than at the end of the last upswing in 2008, whereas all other expenditure items were up on their pre-crisis level by only just under one-sixth in total.<sup>6</sup> Non-financial corporations employed around 6% more workers in 2015 than in 2008. This represented the smaller contribution to the uptick in personnel expenses; a greater impact, though, was exerted by wage growth, with negotiated rates of pay and actual earnings in 2015 surpassing their pre-crisis levels by one-sixth. The introduction of a general minimum wage is unlikely to have had any perceptible impact in most sectors of the non-financial corporations sector. However, the legal minimum wage, in effect since last year, could be partly responsible for particularly strong year-on-year growth in personnel expenditure in the accommoda-

<sup>5</sup> Spending on services rendered by other firms is booked under the item "cost of materials".

<sup>6</sup> The share of personnel spending in total expenditure rose from 15¼% in 2008 to 16¼% in 2015.

### Selected indicators from German enterprises' income statement\*



\* Extrapolated results from corporate financial statements statistics.

### Enterprises' income statement\*

Item	2013	2014	2015 <sup>e</sup>	Year-on-year change	
				2014	2015 <sup>e</sup>
<b>Income</b>	€ billion			%	
Sales	5,663.6	5,795.7	5,928	2.3	2.5
Change in finished goods <sup>1</sup>	27.4	23.1	28.5	- 15.6	22.5
Gross revenue	5,690.9	5,818.8	5,956.5	2.2	2.5
Interest and similar income	16.4	16.7	18	2.2	7.5
Other income <sup>2</sup>	248.1	252.8	297	1.9	17.5
of which from long-term equity investments	36.1	32.1	46.5	- 11.0	44.5
Total income	5,955.4	6,088.4	6,271.5	2.2	3
<b>Expenses</b>					
Cost of materials	3,763.6	3,814.7	3,885.5	1.4	2
Personnel expenses	905.9	941.9	978	4.0	4
Depreciation	158.1	162.4	169.5	2.7	4.5
of tangible fixed assets <sup>3</sup>	145.6	151.2	152.5	3.9	1
Other <sup>4</sup>	12.5	11.2	17	- 10.8	50.5
Interest and similar expenses	62.7	64.8	79.5	3.2	22.5
Operating taxes	65.6	66.3	70	1.1	5.5
of which					
Excise duties	61.1	61.7	65.5	0.9	6
Other expenses <sup>5</sup>	774.7	793.2	848.5	2.4	7
Total expenses before taxes on income	5,730.6	5,843.3	6,031	2.0	3
Annual result before taxes on income	224.8	245.0	240.5	9.0	- 2
Taxes on income <sup>6</sup>	46.7	51.9	50	11.2	- 3.5
Annual result	178.1	193.1	190.5	8.4	- 1.5
<i>Memo item</i>					
Cash flow <sup>7</sup>	356.9	379.9	420	6.5	10.5
Net interest paid	46.4	48.0	61.5	3.6	28
	As a percentage of sales			Percentage points	
Gross income <sup>8</sup>	34.0	34.6	34.9	0.5	0.4
Annual result	3.1	3.3	3.2	0.2	- 0.1
Annual result before taxes on income	4.0	4.2	4.1	0.3	- 0.2
Net interest paid	0.8	0.8	1.0	0.0	0.2

\* Extrapolated results; differences in the figures due to rounding. **1** Including other own work capitalised. **2** Excluding income from profit transfers (parent company) and loss transfers (subsidiary). **3** Including write-downs of intangible fixed assets. **4** Predominantly write-downs of receivables, securities and other long-term equity investments. **5** Excluding cost of loss transfers (parent company) and profit transfers (subsidiary). **6** In the case of partnerships and sole proprietorships, trade earnings tax only. **7** Annual result, depreciation, and changes in provisions, in the special tax-allowable reserve and in prepaid expenses and deferred income. **8** Gross revenue less cost of materials.

Deutsche Bundesbank

tion and food service activities sector (+7½%) and in the transportation and storage sector (+6%) in 2015.

*Increase in pension provisions as a result of changes to the discount rate: another cost component attributable to labour*

Economically speaking, the cost of labour as a factor of production also includes spending incurred due to an increase in the present value of occupational pension commitments as a result of changes to the actuarial interest rate. This increase in provisions for pensions shows up in the profit and loss accounts pursuant to German GAAP as interest expenses,<sup>7</sup> which were up by just over one-fifth. Among firms with provisions for pensions, interest expenses under this definition rose even more strongly,

whereas among firms without provisions for pensions they contracted, as one would expect in an environment where there are still plenty of very favourable (re)financing options.<sup>8</sup>

In 2015, depreciation was up fairly significantly on the year, by 4½%. However, this was not due to a marked increase in depreciations of tangible fixed assets, which, following two

*Depreciation considerably higher, in part due to one-off effects*

<sup>7</sup> See also Deutsche Bundesbank, German enterprises' profitability and financing in 2014, Monthly Report, December 2015, especially pp 34-35.

<sup>8</sup> A sign of a relief effect in loan financing is that the interest expenses of firms without provisions for pensions were down in 2015 by 4% on the year.

years of somewhat elevated growth rates, were up only moderately during the year under review. The main reason was that write-downs on financial assets rose considerably at some large firms.

*Return on sales in the non-financial corporations sector down somewhat*

The cost factors associated with labour input in the broader sense, in conjunction with charges particularly in vehicle manufacture, lowered non-financial corporations' pre-tax profits, although the gross income base<sup>9</sup> continued to improve distinctly. The annual pre-tax result averaged just over 4% of sales in 2015. This put profitability at the level of 2013, during which a dip in economic activity caused sales to stagnate temporarily. The other years following the Great Recession, by contrast, saw returns on sales of 4¼%.

*Profitability of manufacturing industry holding steady at above-average levels excluding Volkswagen effect*

The severe hit to Volkswagen's result had a particularly strong impact on aggregate earnings in the manufacturing sector. Adjusted for this one-off effect, the profitability of the manufacturing sector remained constant on the year at an above-average level as compared to other sectors. Within the industrial sector, profit trends in 2015 varied considerably. Favourable procurement prices lifted the return on sales of the chemicals and pharmaceuticals industry to a peak of 12%. Sales fell in food production, and a marked increase in personnel expenses more than offset the reduced cost of materials, bringing down profitability. In the major capital goods-producing sectors, costs drove down profitability; only the manufacture of machinery and equipment bucked this trend. Profitability fell in the electrical engineering industry, as it did for vehicle manufacture – even adjusted for the one-off events at Volkswagen.

*Higher yields in construction and wholesale and retail trade*

Energy producers' annual results suffered considerably as a result of expenses in connection with the adjustment to the way in which probable long-term future expenditures are discounted. Yields were no higher than in 2011, in which the phasing-out of nuclear energy weighed heavily on many energy producers'

earnings. In a continuing favourable sector environment and amidst relatively moderate cost trends, construction again increased its return on sales to what is now a high level. Wholesale and retail trade, especially the automotive sector, also saw their profitability go up. Transportation and storage firms likewise became considerably more profitable; on the other hand, the profitability of the information and communication sector continued to decline. This contrasted with an increase in the earnings power of business service providers, as in the previous years.

## ■ Sources and uses of funds

Firms in 2015 once again raised considerably more funds than in the previous year. The acquisition of new long-term equity investments required a considerable increase in external financing, whereas internal financing remained unchanged at the historically high level of the previous year. During the reporting period, firms built up extraordinarily large volumes of provisions in order to fund probable future expenditures. In purely arithmetic terms, this roughly made up for the decline in retained profits, which in 2014 had risen sharply owing to one-off effects at individual firms. Injections of funds from external sources originated primarily from increased intra-group borrowing. There was likewise new short-term borrowing from credit institutions and issuance of short-term bonds, whereas firms generally stayed away from additional long-term borrowing. Capital injections from external sources picked up slightly on the year during the reporting period.

*Large increase in incoming funds owing to rise in external financing*

During the reporting period, firms used roughly half of their available funds to invest in tangible fixed assets. As a result, the net increase in tangible fixed assets stood at 20% of write-downs, and thus markedly above its average of the

*Above-average accumulation of tangible fixed assets in the information and communication sector*

<sup>9</sup> Gross income is calculated as gross revenue less the cost of materials.

## Enterprises' sources and uses of funds\*

€ billion

Item	2013	2014	2015 <sup>e</sup>	Year-on-year change	
				2014	2015 <sup>e</sup>
<b>Sources of funds</b>					
Capital increase from profits and contributions to the capital of non-corporations <sup>1</sup>	31.1	71.8	30	40.7	- 42
Depreciation (total)	158.1	162.4	169.5	4.3	7
Increase in provisions <sup>2</sup>	20.7	25.2	59.5	4.6	34
Internal funds	209.9	259.5	259	49.6	- 0.5
Increase in capital of corporations <sup>3</sup>	24.3	21.1	26.5	- 3.2	5.5
Change in liabilities	16.0	19.2	74	3.2	55
Short-term	- 6.3	28.9	66.5	35.2	37.5
Long-term	22.3	- 9.6	7.5	- 32.0	17.5
External funds	40.4	40.3	100.5	0.0	60
Total	250.2	299.8	359.5	49.5	59.5
<b>Uses of funds</b>					
Increase in tangible fixed assets (gross) <sup>4</sup>	188.7	175.4	182.5	- 13.3	7
<i>Memo item</i>					
Increase in tangible fixed assets (net)	43.2	24.2	30	- 18.9	5.5
Depreciation of tangible fixed assets	145.6	151.2	152.5	5.6	1.5
Change in inventories	- 3.3	18.7	24	21.9	5.5
Non-financial asset formation (gross investments)	185.5	194.1	206.5	8.6	12.5
Change in cash	12.6	5.1	14	- 7.4	9
Change in receivables <sup>5</sup>	39.4	36.7	64.5	- 2.6	28
Short-term	34.0	26.6	71	- 7.4	44.5
Long-term	5.4	10.1	- 6	4.8	- 16.5
Acquisition of securities	- 0.8	3.5	6	4.3	2.5
Acquisition of other long-term equity investments	13.6	60.3	68.5	46.7	8
Financial asset formation	64.8	105.7	153	40.9	47.5
Total	250.2	299.8	359.5	49.5	59.5
<i>Memo item</i>					
Internal funds as a percentage of gross investments	113.2	133.7	125.5	.	.

\* Extrapolated results; differences in the figures due to rounding. **1** Including "GmbH und Co KG" and similar legal forms. **2** Including change in the balance of prepaid expenses and deferred income. **3** Increase in nominal capital through the issue of shares and transfers to capital reserves. **4** Change in tangible fixed assets (including intangible assets) plus depreciation. **5** Including unusual write-downs of current assets.

Deutsche Bundesbank

past two decades. Information and communication services providers, whose fixed investment outpaced write-downs by nearly one-half, headed the table. Broadband network expansion could have been a factor in this. Wholesale and retail traders likewise accumulated an above-average amount of tangible fixed assets. By contrast, the net increase in the tangible fixed assets of energy providers, for whom the growth of renewable energies had triggered an investment boom in the preceding four years, came down considerably. Investment in the manufacturing sector was led once again by the manufacture of vehicles. There was also very dynamic growth in tangible fixed

assets among German manufacturers of machinery and equipment and in the German electrical engineering industry.

Non-financial corporations' acquisition of other long-term equity investments reached a new high in 2015, spread broadly across several economic sectors and often externally funded. As had already been the case in the preceding years, German vehicle manufacturers' expansionary strategy was particularly pronounced; they have nearly doubled their equity exposures in the period since 2008. The chemicals and pharmaceuticals industry, as well as energy and water supply firms, increased their hold-

*Considerable increase in acquisition of other long-term equity investments*

ings of long-term equity investments comparatively significantly. The electrical engineering industry likewise upped its spending on the acquisition of other firms.

*Strong growth in claims on and liabilities to affiliated companies*

The acquisition of new long-term equity investments often correlates with an increase in liabilities to affiliated companies, since the funds needed to acquire the equity stake are sometimes obtained through special-purpose financing subsidiaries. Moreover, owing to existing equity holdings, there was a significant increase in both claims on and also liabilities to affiliated companies. Groups in particular took advantage of the benefits of cash pooling in order to distribute internal liquidity in an optimum manner. Intra-group trade payables and receivables, which reflect the degree of intra-company trading, are also reported under these items. During the reporting period, inbound and outbound payments enshrined in profit and loss transfer agreements but not directly realised also played a major role. As a direct result of the high degree of interconnectedness between firms, the significance of claims on and liabilities to affiliated companies is thus set to continue to trend upwards in the years to come.

## ■ Balance sheet developments

*Considerable net increase in total assets, ...*

Non-financial corporations' total assets were up by 5% in 2015, representing somewhat stronger growth than the average of the four preceding years. On the asset side, the long-term trend increase in financial assets relative to total assets persisted. One reason for this was the renewed massive increase in equity capital. Another was considerable growth in short-term receivables from affiliated companies, in particular. Whereas, among corporations, the distinct net growth of tangible fixed assets did not quite match that of total assets, non-corporations saw tangible fixed assets stagnate at the same book value for the third year in succession. The fixed asset ratio for both legal forms contracted.

The liability side was characterised by a relatively strong rise in external funds, which kept pace with equity for the first time since 2008. This was due in large part to firms' extensive build-up of provisions, whereas new borrowing was not exceptionally high. Consequently, liabilities – with the exception of intra-group loans – were once again on the decline as a percentage of total assets. As regards provisions, the persistent low-interest-rate period was reflected in a discount effect for long-term provisioning via the discount rate. Long-term provisions – apart from provisions for pensions, which are spread broadly across economic sectors – are particularly important for energy supply firms and in mining, in order, for instance, to cover the costs of disposing of nuclear waste or of rehabilitating land formerly used for mining. Moreover, Volkswagen needed to make considerable *ad hoc* additions to its provisions for probable future expenditure in connection with service measures and recalls, vehicle repurchases and legal risks.

*... high provisioning on liability side*

In the last two decades, non-financial corporations' equity ratio has risen considerably from what, by international standards, was a comparatively low level.<sup>10</sup> A special study covering the 2011 to 2014 period<sup>11</sup> shows that, in particular, firms with stronger cash flow accumulated more equity. However, there is no evidence to support the further-reaching assertion that firms that were able to raise net income in the past few years largely thanks to lower spending on raw materials were the main ones to build up equity. In fact, spikes in income seem to have been used in general – where seen by firms as transitory – to augment their equity ratio and not for higher dividend payments to shareholders. For instance, joint stock companies (*Aktiengesellschaften*) have a clear preference for smoothing dividend payments.

*Improved equity ratio, particularly among firms with high cash flow*

<sup>10</sup> See Deutsche Bundesbank, Capital base of non-financial enterprises in Germany sustainably strengthened, Monthly Report, December 2013, pp 44-46.

<sup>11</sup> These findings are confirmed by a similar analysis for the 2011 to 2015 period. However, a considerably reduced number of firms in the sample means that the statistical analysis yields less selective findings.

## Enterprises' balance sheet\*

Item	2013	2014	2015 <sup>e</sup>	Year-on-year change	
				2014	2015 <sup>e</sup>
<b>Assets</b>	€ billion			%	
Intangible fixed assets	81.8	76.7	81	- 6.2	5.5
Tangible fixed assets	904.4	933.7	959	3.2	2.5
Inventories	612.0	630.6	654.5	3.0	4
Non-financial assets	1,598.1	1,641.0	1,695	2.7	3.5
Cash	264.2	269.4	283.5	1.9	5
Receivables	1,222.9	1,255.9	1,317	2.7	5
<i>of which</i>					
Trade receivables	394.0	394.7	396	0.2	0.5
Receivables from affiliated companies	671.8	702.8	760.5	4.6	8
Securities	78.1	81.6	87.5	4.5	7.5
Other long-term equity investments <sup>1</sup>	587.1	640.0	695	9.0	8.5
Prepaid expenses	19.1	19.7	20.5	3.3	3.5
Financial assets	2,171.5	2,266.6	2,403.5	4.4	6
Total assets <sup>2</sup>	3,769.6	3,907.6	4,098.5	3.7	5
<b>Capital</b>					
Equity <sup>2, 3</sup>	1,074.8	1,167.7	1,224	8.6	5
Liabilities	2,057.9	2,077.1	2,151	0.9	3.5
<i>of which</i>					
to banks	463.4	467.6	472.5	0.9	1
Trade payables	303.1	304.5	308.5	0.5	1.5
to affiliated companies	807.4	799.5	850.5	- 1.0	6.5
Payments received on account of orders	213.4	220.0	226.5	3.1	3
Provisions <sup>3</sup>	609.4	634.1	692	4.1	9
<i>of which</i>					
Provisions for pensions	202.1	209.8	232	3.8	10.5
Deferred income	27.6	28.7	31	4.2	8
Liabilities and provisions	2,694.8	2,739.9	2,874	1.7	5
Total capital <sup>2</sup>	3,769.6	3,907.6	4,098.5	3.7	5
<i>Memo item</i>					
Sales	5,663.6	5,795.7	5,928	2.3	2.5
Sales as a percentage of total assets	150.2	148.3	144.5	.	.

\* Extrapolated results; differences in the figures due to rounding. 1 Including shares in affiliated companies. 2 Less adjustments to equity. 3 Including half of the special tax-allowable reserve.

Deutsche Bundesbank

## Change in the equity ratio for various subcategories of firms, 2011 to 2014\*

Criterion for forming subcategories	Firms in the ...	Change in the equity ratio, 2014 compared with 2011 (percentage points)		Test for equality of unweighted means (p-value) <sup>3</sup>
		Weighted mean	Unweighted mean	
Simplified cash flow <sup>1,2</sup>	... upper half of the distribution	1.5	5.2	0.00
	... lower half of the distribution	0.1	1.6	
Spending on raw materials and consumables <sup>2</sup>	... upper half of the distribution	1.3	2.6	0.48
	... lower half of the distribution	- 0.1	3.2	

\* Calculated on the basis of a peer group of around 34,000 firms for which annual financial statements are available for both 2011 and 2014. 1 Annual result before taxes including write-downs. 2 Normalised to sales. 3 Gives the probability that a t-test will not reject the null hypothesis (ie equality of unweighted means).

Deutsche Bundesbank



Whereas the size of the payout ratio varies considerably from one financial year to the next, joint stock companies maintained relatively stable dividends. On the one hand, this meant that virtually all of the profit for the year was paid out following the dramatic earnings slump in 2008; on the other hand, leeway created by the favourable earnings situation in subsequent years was used to bolster the capital base.

*No further increase in equity ratio in 2015*

In 2015, by contrast, despite stable growth of equity, non-financial corporations' aggregate equity ratio failed to increase any further on balance owing to the fast-paced growth of external funds. Broken down by firm size, small and medium-sized enterprises (SMEs) increased their equity to total assets ratio across all major economic sectors markedly again, by 1 percentage point to 27½%. On the other hand, large firms, which account for the vast majority of provisions for pensions, saw their ratio drop by the same amount – 1 percentage point – to 30½%. There were considerable decreases in individual sectors such as vehicle manufacture, the chemicals and pharmaceuticals sector and information and communication service providers owing to one-off events at individual firms.

## ■ Trends for 2016

*Continued favourable cyclical position and moderate negotiated pay increases but-tressed earnings base in 2016, whereas relief afforded by lower cost of materials is subsiding*

Given the continued favourable underlying cyclical trend, non-financial corporations are likely to have further expanded their business activity in 2016. The prices paid for the procurement of raw materials and intermediates from abroad are not likely to have fallen as sharply during the current year as in the two previous years, with global market prices for crude oil, industrial raw materials and food products having trended upwards after bottoming out around the turn of 2015-16. The reductions in the cost of materials attributable to lower procurement prices are thus likely to be smaller than in the preceding years. Looking towards firms' profitability, this effect is countered by the fact that cost pressure caused by

### Enterprises' balance sheet ratios\*

Item	2013	2014	2015 <sup>e</sup>
	As a percentage of total assets <sup>1</sup>		
Intangible fixed assets	2.2	2.0	2
Tangible fixed assets	24.0	23.9	23.5
Inventories	16.2	16.1	16
Short-term receivables	30.1	29.6	30
Long-term equity and liabilities <sup>2</sup>	49.3	49.9	49.5
of which			
Equity <sup>1</sup>	28.5	29.9	30
Long-term liabilities	15.3	14.5	14
Short-term liabilities	39.3	38.7	38.5
	As a percentage of tangible fixed assets <sup>3</sup>		
Equity <sup>1</sup>	109.0	115.6	117.5
Long-term equity and liabilities <sup>2</sup>	188.5	192.9	195.5
	As a percentage of fixed assets <sup>4</sup>		
Long-term equity and liabilities <sup>2</sup>	108.9	108.5	108.5
	As a percentage of short-term liabilities		
Cash resources <sup>5</sup> and short-term receivables	96.6	96.7	98
	As a percentage of liabilities and provisions <sup>6</sup>		
Cash flow <sup>7</sup>	14.7	15.4	16

\* Extrapolated results; differences in the figures due to rounding.

<sup>1</sup> Less adjustments to equity. <sup>2</sup> Equity, provisions for pensions, long-term liabilities and the special tax-allowable reserve. <sup>3</sup> Including intangible fixed assets. <sup>4</sup> Tangible fixed assets, intangible fixed assets, other long-term equity investments, long-term receivables and long-term securities. <sup>5</sup> Cash and short-term securities. <sup>6</sup> Liabilities, provisions, deferred income and half of the special tax-allowable reserve less cash. <sup>7</sup> Annual result, depreciation, and changes in provisions, in the special tax-allowable reserve and in prepaid expenses and deferred income.

Deutsche Bundesbank

labour as a factor of production fell off in 2016 compared with the previous years. Although personnel expenditure rose further due to an increase in payroll employment, negotiated wage growth was relatively restrained this year. In addition, the Volkswagen diesel scandal and one-off events in the energy sector are set to have a distinct impact on the aggregate results for 2016.

Groups' return on sales declined markedly in 2015, with one-off effects at two major groups playing a pivotal role. (For more on trends in German non-financial groups' net assets, financial position and results of operations in 2015,

*Groups seeing marked improvement in profitability in 2016 compared with previous year*

## Net assets, financial position and results of operations of listed German non-financial groups in 2015

In November 2015, the Deutsche Börse relaxed the requirement for Prime Standard-listed groups to produce a quarterly report. Comprehensive financial reports must now only be presented every six months.<sup>1</sup> In this vein, the Bundesbank's consolidated financial statement statistics will now appear every six months, rather than on a quarterly basis. To ensure that results are comparable over time, a back-calculation is performed on the basis of a stable set of groups. The groups now observed no longer include the

set of all listed groups which report quarterly,<sup>2</sup> but rather the groups listed in the Prime Standard segment. As a consequence, the number of groups observed in 2015 is slightly reduced,<sup>3</sup> pushing down aggregate sales by around 2½% overall.

The aggregate sales of the groups included in the statistics experienced sharp growth of 7%<sup>4</sup> in 2015 to around €1.6 billion, which was a substantial improvement on 2014. In addition to strong domestic sales, the groups also profited from positive cyclical developments in the industrial countries. This stimulatory effect more than compensated for slackening growth in important emerging market economies. The depreciation in the euro exchange rate during the reporting period likewise had a favourable impact on group turnover, as positive currency translation effects became apparent among subsidiaries reporting in foreign currency.<sup>5</sup> On the other hand, decreasing commodity prices had a dampening effect on sales as groups processing raw materials seem to have quickly factored the lower procurement costs into their selling prices.<sup>6</sup> Nevertheless, developments overall

Sales, income and return on sales of German non-financial groups\*



\* The reporting group covers around 230 non-financial groups listed in the Prime Standard segment in Germany. <sup>1</sup> GDP of selected industrial nations and emerging market economies, which, together, represent four-fifths of global economic output. Calculated on the basis of purchasing power parities. Deutsche Bundesbank

<sup>1</sup> This decision is related to the German act implementing the directive amending the Transparency Directive of 20 November 2015 and associated adjustments to the German Securities Trading Act.

<sup>2</sup> This reporting group also included groups which produced quarterly reports on a voluntary basis.

<sup>3</sup> The revised consolidated financial statement statistics cover 228 listed German non-financial groups as at the end of 2015.

<sup>4</sup> In these explanatory notes, the rates of change for sales, EBITDA, EBIT and return on sales are published with reporting and consolidation basis adjustments.

<sup>5</sup> Aside from the short-term effect of this foreign currency translation on the consolidated financial statements, depreciation is also boosting the international competitiveness of groups which primarily export overseas from Europe, which should likewise tend to push up sales volumes.

<sup>6</sup> Price elasticity in this area seems to be relatively low, at least in the short term.

were attributable in equal measure to groups in the production sector and the services sector.

The performance of the groups was very heterogeneous in 2015. While the vast majority of groups were able to record a fairly positive result,<sup>7</sup> some large groups had to cope with the greatest pressure on earnings they had experienced since the Great Recession of 2008-09, which had a major impact on the overall aggregate. Operating profit before depreciation and amortisation (earnings before interest, taxes, depreciation and amortisation – EBITDA) decreased by 1% on the previous year to €196 billion. The decline is largely attributable to the costs associated with Volkswagen's legal disputes in the fourth quarter of 2015. Aside from this, the operating profit (earnings before interest and taxes – EBIT)<sup>8</sup> of certain large groups was burdened with substantial goodwill write-downs and impairment associated with decreasing crude oil prices, among other factors. On balance, this resulted in a year-on-year decline in the EBIT of €18 billion (-16%) to just under €91 billion. The weighted return on sales dropped by 1½ percentage points to 5½%, having consistently stood at over 6% since 2010. The decline in the production sector was particularly marked, with profitability decreasing significantly by 1¾ percentage points. However, service providers' return on sales also fell by just over ½ percentage point.

In 2015, the groups' total assets experienced above-average growth of 7%.<sup>9</sup> On the assets side, long-term assets recorded the strongest growth at 8%. The share of total assets of the two largest sub-items (intangible fixed assets and tangible fixed assets) increased during the reporting period, following on from a number of years in which intangible fixed assets moved

broadly higher and tangible fixed assets declined as a share of total assets. At 8½%, growth in the groups' intangible fixed assets exceeded growth in tangible fixed assets by just over ½ percentage point. This can be attributed, in particular, to the corporate acquisition-linked<sup>10</sup> purchase of intangible fixed assets such as patents and trademark rights.<sup>11</sup> As a result of an unusually large goodwill write-down for E.ON totalling €5.3 billion, last year's goodwill development lagged behind total asset growth with a below-average increase of 5¾%. Nevertheless, goodwill has become significantly more important since its amortisation ceased to be permitted in 2005 and has grown faster than most other assets since then. In relation to total assets, an increase of around 3¼ percentage points to 12% over the entire period can be observed.

On the liabilities side, financial liabilities increased by 8%. At 8½% last year, short-term financial liabilities returned to a rate of growth that was not far off the strong average growth trend of 9¾% per year recorded since 2010. Despite the increased volume of financial liabilities in the consolidated balance sheets, total debt capital rose by a mere 5¾%. This was primarily due to pension costs, which were valued at 11½% (€20 billion<sup>12</sup>) less than at the end of 2014.<sup>13</sup> The resultant exchange of liabilities

<sup>7</sup> Over 60% of groups achieved a higher EBIT during the reporting period than in 2014.

<sup>8</sup> EBIT reflects the results of their operating activity.

<sup>9</sup> Average total asset growth stood at 5% in the years following the Great Recession.

<sup>10</sup> The increase in investments was also reflected in the individual financial statement statistics.

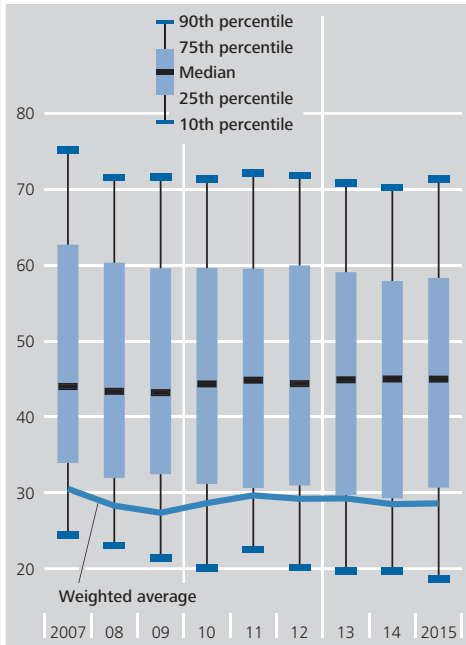
<sup>11</sup> In the case of a corporate acquisition, previously unrecognised assets are reported in conjunction with the purchase price allocation.

<sup>12</sup> Data extrapolated for the Prime Standard as a whole.

<sup>13</sup> In previous years, by contrast, the consistent decline in the discount rate had led to significant increases in pension provisions.

### Distribution parameters of the equity ratios of non-financial groups\*

% of total assets; end-of-year figures



\* The reporting group covers around 230 non-financial groups listed in the Prime Standard segment in Germany.  
 Deutsche Bundesbank

strengthened the groups' equity capital. Moreover, hedging expenses were outweighed by profits from currency translation differences to the tune of around €6 billion, which, in addition to retained earnings, resulted in an increased capital base. At just under 8¾%, or €46 billion, the resulting overall rise in equity capital was significantly sharper than the average for the previous years.<sup>14</sup>

As a result, the weighted aggregate equity capital ratio increased by ½ percentage point to 28½% during 2015, following a sharp decline of around 2 percentage points in the previous year. If pension costs, which represent the strongest individual factor influencing the groups' financial structure, had stagnated, all other things being equal, the weighted equity capital ratio would have decreased by around ½ percentage point due to the dynamic growth of debt capital.

Although the earnings of some major German groups came under serious pressure in 2015, the net assets, financial position and results of operations of German groups are still to be regarded as stable overall due to their global, and, for the most part, even cross-sectoral diversification.

<sup>14</sup> Average equity capital growth from 2010 to 2014 stood at 5½%.

see the box on pages 72 to 74.) The average return on sales of the 35 largest groups over the first three quarters of the current year, which is recorded in the consolidated financial statement statistics, not only exceeded, by a considerable margin, the depressed previous year's level, but also surpassed its average for the 2011 to 2014 period. However the size of this discrepancy corresponds more or less to the arithmetical effect of the fact that the negative earnings contribution of the Uniper group, which was spun off from the E.ON group in September, is not contained in the groups' pre-tax return on sales.<sup>12</sup>

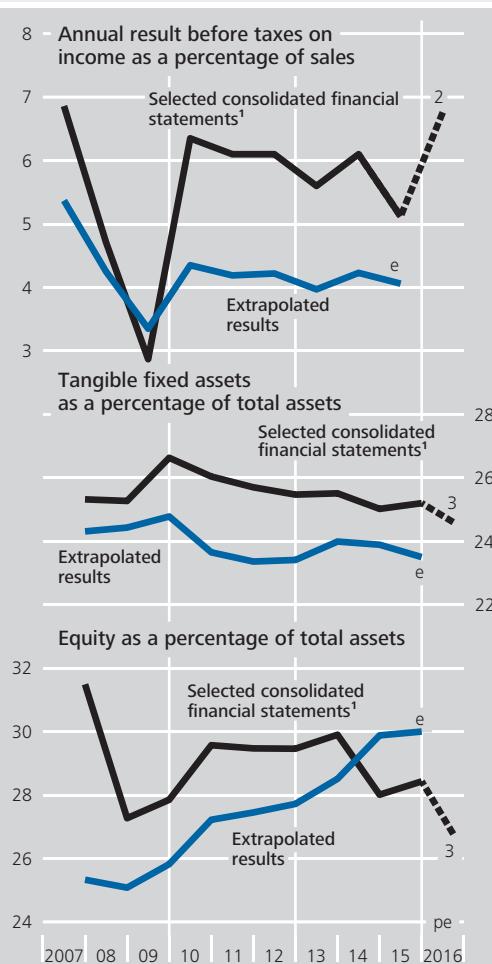
*Valuation gains in provisions for pensions with an impact on income caused by change in German Commercial Code, ...*

Valuation gains caused by changes to the rules for calculating the discount rate on long-term provisions in 2016 have to be recognised in profit or loss in the individual entities' income statements. The effect is estimated to amount to just under €20 billion for non-financial corporations' provisions for pensions alone. However, paying out the balance sheet difference as a result of the different capital values achieved with interest rate smoothing over seven years versus interest rate smoothing over ten years is forbidden by law, unless additional unencumbered reserves are available for this purpose. The amount for which payout is forbidden will decline as from 2018 and, if interest rate levels remain the same or increase, will have virtually vanished by 2022 as the discount rates under the old and new laws converge.

*... yet highly volatile valuations in group financial statements*

In group accounts prepared according to international accounting standards, unlike individual financial statements prepared under the German Commercial Code (HGB), volatility in market interest rates around a low level is reflected in substantial (intra-year) changes in the valuation of provisions for pensions.<sup>13</sup> Following a pick-up in interest rates in the second half of the previous year, the 35 largest listed groups posted provisions for pensions totalling €137 billion at the end of 2015. The marked reduction in the benchmark capital market interest rate in the first nine months of this year led to a €46 billion increase, though this will probably

### Selected ratios from consolidated and individual financial statements



<sup>1</sup> The reporting population comprises approximately 230 Prime Standard listed groups of non-financial corporations. <sup>2</sup> Seasonally adjusted average for the 2016 Q1 to Q3 period. <sup>3</sup> Reporting date: 30 September 2016.  
 Deutsche Bundesbank

have been modified significantly by the end-of-year balance sheet cut-off date by the perceptible increase in interest rates in the last quarter of the year. The pronounced volatility in provisions for pensions is also impacting on the capital base via the statement of comprehensive income. Valuation changes in provisions for pensions are therefore a significant reason why

<sup>12</sup> This shortfall, which amounted to over €10 billion in the first three quarters, is reported in E.ON's P/L account as "earnings from discontinued operations" directly above group net loss.

<sup>13</sup> In a low-interest-rate setting, interest rate volatility has a disproportionately severe impact on the calculated present values owing to the non-linear relationship between interest rates and capital value.

groups' equity ratio at the end of September 2016 was down by a little over 1½ percentage points compared to 2015. A further negative impact on reported equity was caused in connection with the Uniper spin-off. On the other hand, the contributions made to other comprehensive income by currency translation and hedges led, on balance, to capital relief for groups.

*Decline in groups' equity ratio not a sign of similar developments at non-financial corporations*

Given, in particular, that the valuation of long-term provisions in firms' individual financial statements for 2016 has to be adjusted differently than in group financial statements, and that the effects are quite perceptible in the

aggregate, the continued decline in groups' equity ratio is not an indication that this metric is also falling in the non-financial corporations sector as a whole. On the contrary, firms whose debt ratio has gone up in recent years due to the increase in long-term provisions as a result of changes to the discount rate may be expected to retain more profits going forward; for the valuation gains incurred in 2016 this will be imposed from without, in a sense, owing to the legal restriction on distribution. As for firms without provisions for pensions, there is, moreover, nothing to suggest that the long-term trend towards strengthening equity has ended.