Explanatory notes

Introduction

This publication presents results from financial statements of enterprises domiciled in Germany which were extrapolated using the ratio estimation procedure. The extrapolation provides an insight into the net assets, financial position and results of operations of almost all German non-financial enterprises[1] because differences in size, legal form and economic sector between the available data and the reporting population of enterprises have been largely eliminated.

The tables present data for the period from 1997 to 2022 in accordance with the 2008 edition of the Classification of Economic Activities, with the reporting population covering around 92% of the sales in the non-financial corporation sector. The tables supplement the annual studies on German enterprises' profitability and financing published in the Bundesbank's Monthly Reports.

Non-extrapolated data broken down by size category and legal form, which are best suited for comparing the ratios of individual firms at the sector level, can be obtained from Statistical series – Financial statement statistics (ratios).

Source of financial statements

The extrapolation results are based on the Bundesbank's Financial Statements Data Pool, which collates balance sheet and income statement data on legally independent German non-financial enterprises from various sources. These include anonymised data provided by credit institutions and credit insurers as well as data obtained from the Bundesbank's refinancing operations and from public sources. Duplicate financial statements, which make up just over one-third of the total data, are identified and eliminated by comparing selected items while ensuring anonymity. At regular intervals, the Bundesbank provides the partners in the data pool with enterprise-related ratios which are broken down as much as possible.

Scope and form of the analysis

The data pool currently contains about 130,000 single-entity financial statements of non-financial enterprises annually. However, not all of the financial statements held in the pool are suitable for extrapolation purposes. Around 10% of the financial statements are filtered out for a variety of reasons, e.g. information has not been differentiated sufficiently, no sales were generated or certain ratios contained extreme values that might distort the extrapolation results. Approximately one-quarter of the financial statements fall under economic activities that cannot be included in the extrapolation procedure (e.g. real estate activities and activities of head offices).[2]

Statistical preparation

In order to ensure that the structure of the data, which is determined by the source of the financial statements, is smoothed out as far as possible and to enable the creation of time series despite changes in the reporting population, the figures obtained from the underlying data for individual balance sheet and income statement items are extrapolated separately by turnover size category, economic sector and legal form and then condensed to form overall aggregates for all of the enterprises in the dataset.

The extrapolation factor is the ratio of sales recorded by the enterprises in the dataset to the sales figures recorded in the Federal Statistical Office's business register. The extrapolation can help to largely offset the overrepresentation of larger enterprises in the data. Owing to the lack of information from other sources, however, this is done on the assumption that the ratio of sales to the individual items in the balance sheets and income statements of the enterprises covered by this analysis is, on average, the same as that of firms not included in the analysis.

A distinction is made between corporations and non-corporations when breaking down enterprises by legal form. Corporations include public limited companies, partnerships limited by shares, private limited companies, cooperative societies and public-law institutions, foundations, etc. Non-corporations include partnerships which take the form of limited partnerships, including partnerships designated Kapitalgesellschaft & Co, general partnerships and civil-law associations as well as sole proprietorships which take the form of registered traders, craftsmen, self-employed persons, etc.

1 Excluding agriculture, forestry and fishing, real estate activities, activities of head offices and non-business services.
2 Statistical series – Financial statement statistics (ratios) provides information on the vast majority of these enterprises.

The extrapolation's reporting population comprises the following economic sectors: manufacturing, mining and quarrying, energy and water supply, disposal, construction, trade, transportation and storage, accommodation and food service activities, information and communication, and business services. This last economic sector includes professional, scientific and technical activities (excluding activities of head offices) and administrative and support service activities.

Capital turnover, i.e. the ratio of sales to the balance sheet total, is used to exclude extreme values. Only financial statements that exceed a predetermined minimum sector-specific value are included in the extrapolation. The aim of this filter is to prevent relatively large enterprises with comparatively low sales from being assigned to an unusually low size category and thereby distorting the results through a large extrapolation factor.

Breakdown and classification of items in the balance sheet and income statement

The prerequisite for a financial statement to be included in the data pool is that the differentiation in the methods used to record balance sheet and income statement satisfies minimum criteria, which are essentially based on the reporting requirements for large corporations laid down in Sections 266 and 275 of the German Commercial Code (*Handelsgesetzbuch*, or HGB). The financial statements, which are from various sources and, if necessary, reported in a special item classification format, are correspondingly converted into a standardised item classification format. The definitions used in the calculation are given in the table below.

Notes on individual items in the balance sheet and income statement

Income statement

Around 1% of the income statements available have been drawn up using the cost-of-sales accounting method. These are transformed into a total cost format, taking into account supplementary information.

Reductions in earnings in the form of price discounts (e.g. customer discounts, rebates) and refunds (e.g. credits owing to defects) are deducted from sales. Due to changes in the context of the German Accounting Directive Implementation Act (Bilanzrichtlinie-Umsetzungsgesetz), excise duties are, as of the 2016 reporting year, no longer recorded under sales but rather under operating taxes. By contrast, reclassification in connection with the Accounting Directive Implementation Act has resulted in parts of what was previously other operating income being recorded under sales.

Changes in finished goods comprise the increase or decrease in the stocks of internally produced finished goods and work in progress. These include changes in the stock of orders still being processed. The item also includes other own work capitalised, notably internally produced plant and major repairs carried out in-house.

Total output (comparable with gross output in the national accounts) corresponds to sales plus changes in stocks of own products and in other own work capitalised.

Other income includes income from participating interests, from the release of both provisions and the special items with equity portion and from disposals and write-ups of fixed assets. The reclassification of parts of other operating income as sales in connection with the Accounting Directive Implementation Act has resulted in other income becoming a smaller reporting item as of the 2016 reporting year.

Income from profit transfers and expenditure on losses borne by the parent company as well as profit and loss transfers associated with subsidiaries are not included in the items "other income" and "other costs". In this way, the effects of intra-group netting, which would impair the analysis, are eliminated when calculating the annual result.

The cost of materials comprises the cost of raw materials, consumables and supplies, purchased merchandise and services, and energy. In the case of trading companies, the cost of goods (including incidental procurement costs) takes the place of cost of materials.

Personnel expenses include not only wages and salaries but also the statutory social security contributions, voluntary social security expenditure and transfers to provisions for pensions, with interest expenditure generally also containing a corresponding interest portion. Expenses for temporary agency work can be recorded under personnel expenses, cost of materials as well as other operating expenses.

Depreciation of tangible fixed assets includes amortisation and depreciation of intangible fixed assets, tax-privileged special write-downs and accelerated deductions as well as impairments.

Operating taxes comprise all taxes other than taxes on income or incidental procurement cost (e.g. tax on land and buildings or motor vehicle tax). Excise duties such as mineral oil tax, tax on spirits, beer tax and tobacco tax are recorded by those enterprises which pay these levies to the tax office. This item is no longer recorded as of the 2016 financial year as sales are recorded in net terms. In the case of those enterprises which use, for example, consumables (such as heating oil or petrol) that are subject to excise duties, this outlay is included under the cost of materials.

Other expenses comprise all other expenses not listed above. In connection with the German Accounting Directive Implementation Act, however, there were, as of 2016, changes in reporting at the expense of other operating expenses and in favour of the cost of materials, which mirrored the changes in other operating income and in sales. As mentioned above, this item does not contain costs arising from loss transfers or profit transfers.

Expenditure is shown prior to the deduction of taxes on income; consequently the difference between total income and total expenditure represents the annual result before taxes on income (excluding income and expenditure arising from intra-group netting). This variable is best suited to assessing profitability in the enterprise groups shown.

It is advisable to look at pre-tax profit because taxes on income is levied at different levels depending on the legal form of the enterprise in question. For example, corporations record corporate income tax as a tax expense. By contrast, the income tax of partners and sole proprietors does not appear as an expense in the income statements of their businesses. Corporation tax and trade tax are the main taxes on income and earnings.

In addition to the annual result, the profit for the financial year is also given, which can be used to identify intragroup netting.

It should also be noted that, in corporations, all management costs appear under labour costs whereas, in the case of partnerships and sole proprietors that are managed by the partners or proprietors themselves, these management costs are not entered as an expense in the annual result but, instead, as entrepreneurial remuneration.

The cash flow consists of the annual result, write-downs and the year-on-year changes in the provisions, the special items with equity portion and the deferred income balance.

Balance sheet

The classification of receivables and liabilities as short-term or long-term is based primarily on their economic character or their designation. Trade receivables and trade payables, bills and payments received on account of orders are regarded as short-term. Other receivables and liabilities, the maturities of which are shown in the financial statements, are classified in the statistics according to their residual maturity – in line with the provisions of the Commercial Code for classifying the financial statements of corporations. Receivables and liabilities with a maturity of up to one year are deemed to be short-term.

Receivables from affiliated companies and receivables from other long-term investees and investors are also reported as short-term receivables unless they are recognisably long-term.

In financial statements structured in accordance with the Commercial Code, long-term receivables are the loans reported under long-term financial assets. In other financial statements, they include loans granted, mortgages, the surrender values of insurance policies and other receivables.

Securities comprise short-term securities (if the party drawing up the balance sheet does not intend to hold them long-term) and long-term securities. Fixed-income securities (debentures, Pfandbriefe, bonds) and shares are classified as securities unless they are recorded under other long-term equity investments.

Other long-term equity investments are shares in other enterprises intended to serve the enterprise’s own business by establishing a permanent link with those enterprises, regardless of whether the shares are securitised. In cases of doubt, shares in a corporation whose aggregate nominal amounts exceed one-fifth of the nominal capital of that enterprise are deemed to be other long-term equity investments.

Equity comprises the share capital of public and private limited companies and the amount paid up (*Geschäftsguthaben*) on the shares of cooperative societies. In the case of enterprises with other legal forms, the capital accounts of all proprietors or partners and the loans of general partners to the partnership are shown as equity. Equity further comprises the reserves, including the retained profits brought forward as well as the profit share earmarked for distribution. As they are equity equivalents, liabilities to partners with a subordinate claim are likewise deemed to be equity. Adjustments to equity are deducted from this item.

The asset-side deduction of payments received on account of orders on the face of the balance sheet is reversed. Payments received on account of orders deduced from inventories on the face of the balance sheet are shown as short-term liabilities. The inventories are correspondingly higher. This reclassification is the result of the gross concept that enables consistency in the statistical analysis.

As in the case of the receivables, the liabilities to affiliated companies also include liabilities to other long-term investees and investors as well as liabilities to shareholders. The liabilities reported as long-term are adjusted for liabilities to shareholders with a subordinate claim.

Provisions include provisions for taxes and for pensions.

Selected ratios

The tables provide not only extrapolated absolute values for each economic sector listed but also the corresponding ratios. These ratios were calculated from the extrapolated absolute results and can be interpreted as weighted sector averages for which the discrepancies arising from differences in size and legal form between the available data and the reporting population have been largely eliminated. Given that these ratios represent the entire spectrum of enterprises of any given sector, they are less suitable for enterprise-related comparisons with ratios relating to a single enterprise. As mentioned above, the data broken down by size and legal form given in Statistical series – Financial statement statistics (Ratios) should be used for analyses of this kind.

As the expenses items are related not only to sales but also to unsold products, gross revenue has been chosen as the basis for the ratios in the income statement. The annual result is based on sales because it is not affected by either the changes in stocks of finished goods or other own work capitalised, which are additionally included in gross revenue.

Sources and uses of funds

The purpose of the data in the table on sources and uses of funds is to show the origin of any additional funds available to enterprises in a given year, whether these were generated internally (internal funds), or whether they were obtained externally by way of equity or debt financing. The bulk of the data is derived from year-on-year changes in the extrapolated items. The results are subject to greater uncertainty than the extrapolated items in the balance sheet and the income statement and are therefore only published for the entirety of all extrapolated economic sectors.

Contributions to the capital of non-corporations (predominantly partnerships and sole proprietorships), which are not recorded separately in the statistics, are calculated together with the retained earnings of enterprises of all legal forms as a residual and allocated to internal funds.

The increase in the capital of corporations comprises the increase in nominal capital for public and private limited companies through the issue of shares as well as all additional capital contributions from externals in excess of the increase in the nominal amount adjusted for changes in the deficit which is not covered by equity. In addition, the item contains transfers to capital reserves.

The increase in tangible fixed assets further comprises the year-on-year changes in intangible fixed assets (excluding goodwill).

The year-on-year changes in the financial asset items excluding cash were calculated gross, i.e. before depreciation.

Definitions of items

Item	Calculation
Income statement	
Sales	Sales
Change in finished goods	Increase or decrease in finished goods inventories and work in progress Other own work capitalised
Gross revenue	Sum of sales and changes in stocks of finished goods
Interest and similar income	Interest and similar income (for example, from securities and long-term loans)
Other income[1]	
Income from long-term equity investments	Income from long-term equity investments
Other income	Other operating income Extraordinary income
Total income	Sum of income items
Cost of materials	Cost of raw materials, consumables and supplies, and of purchased merchandise
Personnel expenses	Wages and salaries as well as social security, post-employment and other
Depreciation	
of tangible fixed assets	Amortisation and write-downs of intangible fixed assets, depreciation and write- downs of tangible fixed assets and amortisation of capitalised business start-up expansion expenses
Other depreciation	Write-downs of current assets to the extent that they exceed the write-downs that usual for the corporation Write-downs of long-term financial assets and securities classified as current
Interest and similar expenses	Interest and similar expenses
Operating taxes	
Excise duties[2]	Excise duties
Other taxes	Other taxes
Other expenses[3]	Other operating expenses Extraordinary expenses
Total expenses before taxes on income	Sum of expense items
Annual result before taxes on income	Total income ./. total expenses before taxes on income
Taxes on income	Corporate income tax Trade earnings tax Other income taxes
Annual result	Annual result before taxes on income ./. taxes on income
Profit and loss transfers (parent company)	Income from profit transfers (parent company) ./. costs arising from loss transfers (parent company)
Profit and loss transfers (subsidiary)	Costs arising from profit transfers (subsidiary) ./. income from loss transfers (subsidiary)
Profit for the year	Annual result plus profit and loss transfers (parent company) ./. profit and loss transfers (subsidiary)
Cash Flow	Annual result Depreciation Changes from previous year: Provisions for pensions Other provisions Special tax-allowable reserve Deferred income less prepaid expenses

1 Excluding income from profit transfers (parent company) and loss transfers (subsidiary). **2** Only for accounting years that began before 1st Jaunary 2016.
3 Excluding costs arising from loss transfers (parent company) and profit transfers (subsidiary).

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Definitions of items (cont'd)

Item	Calculation
Balance sheet	
Assets	
Intangible fixed assets	Concessions, industrial and similar rights and assets, and licences in such rights
	Prepayments (intangible fixed assets)
	Other intangible fixed assets
Tangible fixed assets	
Land and buildings	Land, land rights and buildings, including buildings on third-party land
Other fixed assets	Technical equipment and machinery
	Other equipment, operating and office equipment
	Prepayments and assets under construction
Inventories	
Raw materials, consumables and supplies	Raw materials, consumables and supplies
Work in progress	Work in progress
Finished goods and merchandise	Finished goods and merchandise
Prepayments (inventories)	Prepayments (inventories)
Non-financial assets	Sum of intangible fixed assets, tangible fixed assets and inventories
Cash	Cash-in-hand, central bank balances, bank balances and cheques
Receivables	
Short-term receivables	
Trade receivables	Trade receivables
Receivables from affiliated companies	Receivables from affiliated companies
	Receivables from other long-term investees and investors
	Receivables from shareholders
	Call obligations of general and limited partners arising from share of loss not covered by capital contributions
Other receivables and other assets	Other receivables and other assets
Long-term receivables	
Loans to affiliated companies	Loans to shareholders
	Loans to affiliated companies
	Loans to other long-term investees and investors
Other loans and long-term financial assets	Other loans and long-term financial assets
Securities	Short-term securities (less treasury shares)
	Long-term securities
Other long-term equity investments	Other long-term equity investments
	Shares in affiliated companies
	Goodwill
	Excess of plan assets over pension liability
Prepaid expenses	Prepaid expenses
Financial assets	Sum of cash, receivables, securities, other long-term equity investments and prepaid expenses
Balance sheet total (adjusted)	Total assets

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Definitions of items (cont'd)

Item	Calculation
Balance sheet (cont'd)	
Capital	
Equity (adjusted)	Subscribed capital/capital shares
	Capital reserves
	Revenue reserves
	Retained profits/accumulated losses brought forward
	Net income/net loss for the financial year
	Net retained profits/net accumulated losses
	Minority interests
	Proportionate special tax-allowable reserve
	Other special reserves
	Other equity items
	Equity-equivalent partner loans or partner loans with a subordinate claim
	Equity-equivalent profit participation capital
	Equity-equivalent contributions by silent partners
	Reserves (partnerships)
	Adjustments
	./. Deficit not covered by equity in the case of corporations, excess
	./. Outstanding contributions to subscribed capital
	./. Treasury shares
	./. Deferred tax assets
	./. Business start-up and expansion expenses
	./. Discount
	./. Self created industrial and similar rights and assets
	./. Other adjustments
Liabilities	
Short-term liabilities	
Liabilities to banks	Liabilities to banks
Trade payables	Trade payables
	Liabilities on bills accepted and drawn
Liabilities to affiliated companies	Liabilities to affiliated companies
	Liabilities to other long-term investees and investors
	Liabilities to shareholders
Other liabilities	Payments received on account of orders including payments on account of inventories deducted from inventories on the face of the balance sheet
	Bonds
	Other liabilities
Long-term liabilities	
Liabilities to banks	Liabilities to banks
Liabilities to affiliated companies	Liabilities to affiliated companies
	Liabilities to other long-term investees and investors
	Liabilities to shareholders
Other liabilities	Bonds
	Other liabilities
Provisions	
Provisions for pensions	Provisions for pensions and similar obligations
Other provisions	Provisions for taxes
	Other provisions
	Proportionate special tax-allowable reserve
Deferred income	Deferred income
Liabilities and provisions	Sum of liabilities, provisions and deferred income
Balance sheet total (adjusted)	Total capital

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Definitions of items (cont'd)

Item	Calculation
Selected ratios	
Fixed assets	Intangible fixed assets Tangible fixed assets Other long-term equity investments (including shares in affiliated companies) Long-term receivables Long-term securities
Long-term equity and liabilities	Equity (adjusted) Provisions for pensions Proportionate special tax-allowable reserve Long-term liabilities
Cash resources	Cash Short-term securities (less treasury shares)
Sources and uses of funds	
Capital increase from profits and contributions to the capital of non-corporations	Change from previous year: Equity (adjusted) ./. Increase in capital of corporations
Increase in provisions	Change from previous year: Provisions Deferred income less prepaid expenses
Increase in capital of corporations	Change from previous year: Subscribed capital/Capital shares Capital reserves Other equity items ./. Outstanding contributions to subscribed capital ./. Treasury shares
Increase in tangible fixed assets (net)	Change from previous year: Intangible fixed assets (without goodwill) Tangible fixed assets
Change in short-term receivables	Year-on-year change in short-term receivables Write-downs of current assets to the extent that they exceed the write-downs that are usual for the corporation
Acquisition of securities	Year-on-year change in securities
Acquisition of other long-term equity	Change from previous year: Other long-term equity investments Goodwill Write-downs of long-term financial assets and securities classified as current

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