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Cash-Flow-to-Sales Ratio 2016 Remains Stable at a High Level

Profitability of Austrian Manufacturing Sector

Cash-Flow-to-Sales Ratio 2016 Remains Stable at a High Level. Profitability of Austrian Manufacturing Sector

In 2015, the cash-flow-to-sales ratio of the Austrian manufacturing sector reached an estimated 9.2 percent, exceeding the previous year's ratio of 8.4 percent. The ratio is likely to have remained at that level in 2016. This increase in manufacturing profitability is due to the sector's sound economic growth performance. The sector's value added growth rate amounted to 1.7 percent in 2016 and 1.8 percent in 2015. According to further estimates of a dynamic, panel-econometric model at industry level, the cash-flow-to-sales ratio in manufacturing will continue its upward movement in 2017.

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The overall economic situation, which was subdued for a long period after the recovery in 2010 and 2011, has become significantly more robust in recent years. In 2016 gross domestic product grew by 1.5 percent in terms of real value added (2015 +1 percent). This was also evident at the industry level: cyclical activity was positive in 2016 (+1.7 percent value added in 2016, +1.8 percent in 2015), and the business outlook of companies improved continuously over the year according to the WIFO-Konjunkturtest. For the first time since 2007 the construction industry increased its value added (+1.0 percent). Positive growth was also found in most service industries: loan and insurance activities expanded by 3.2 percent, similarly to trade (+2.1 percent), accommodation and food and beverage activities (+2.3 percent) as well as property and housing (+2.0 percent). Likewise, the industries information and communications, other business services, public administration and other services contributed positively to growth. At the same time, overall value added was dampened by a decline in energy and water supply, as well as transport. This is reflected in the demand for investment: in 2016 which also picked up considerably. This was particularly reflected in increased investments in equipment such as machines and vehicles. After subdued performance in recent years, construction activity also accelerated in 2016, with construction investments expanding for the first time since 2012. Overall, capital investments rose by 2.9 percent compared to the previous year. This growth took place despite relatively weak dynamics in Austrian foreign trade. Above all, demand from the USA and the CEEC 5 developed haltingly. However, the decline in trade with the USA is also a counter-effect of the pre-

vious year's high results, as the depreciation of the euro had a very expansive effect *(Bilek-Steindl et al., 2017)*.

Figure 1: Assessment of the economic situation of companies in manufacturing

Balance of positive and negative assessments as a percentage of total responses

Assessments of the development of the economic situation
Expectations of developments in manufacturing
Assessment of order balances
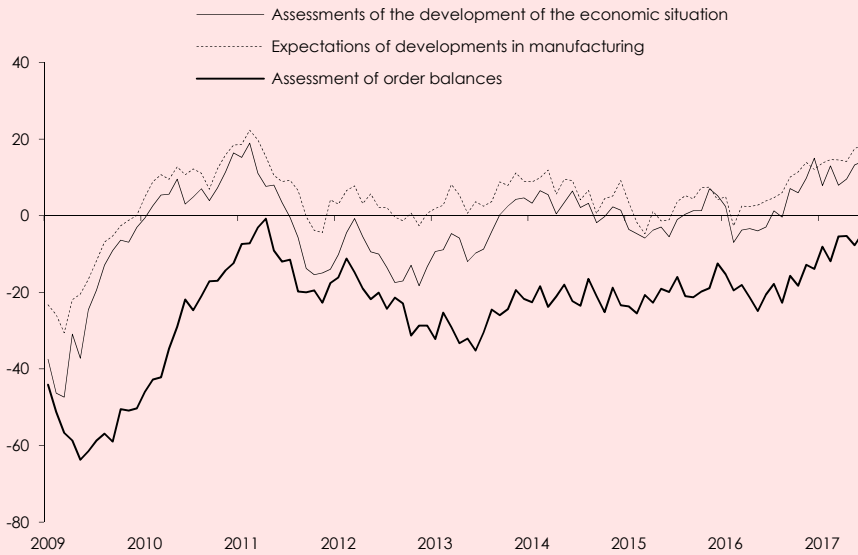
Source: WIFO-Konjunkturtest.

Figure 2: Industrial confidence indicator for the EU, Germany and Austria

Balance of positive and negative assessments as a percentage of total responses

EU   Germany   Austria
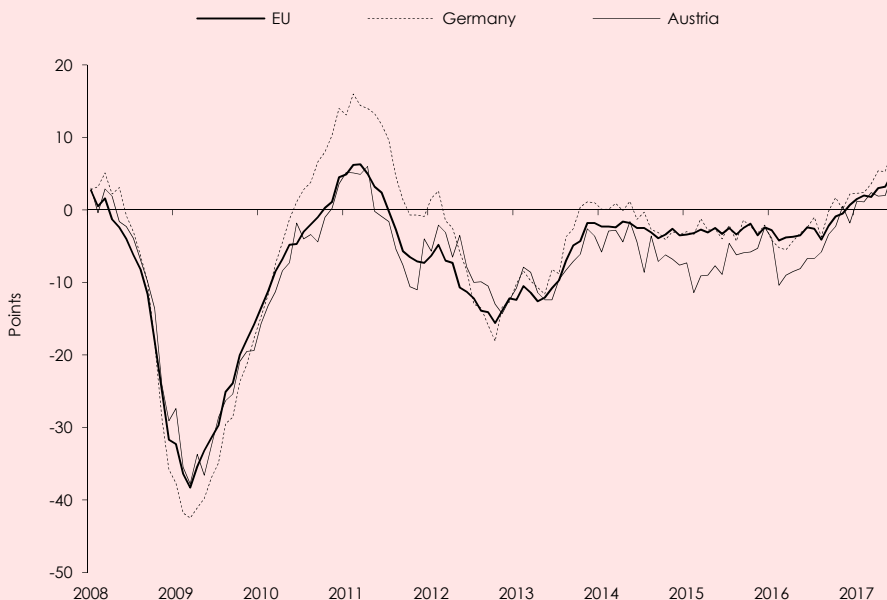
Source: Joint Harmonised EU Programme of Business and Consumer Surveys.

In the individual manufacturing industries, production value developed quite differently against this background. Machinery and equipment, by far the largest industry in Austria, achieved relatively low growth in 2016 (+1.1 percent). The greatest increase in production value at around +10 percent was seen in the manufacture of

electrical equipment (+9.8 percent), the manufacture of other transport equipment (+9.5 percent) and the manufacture of computer, electronic and optical products (+9.4 percent). In addition, the production of beverages (+5.1 percent), the manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (+4.9 percent), motor vehicles, trailers and semi-trailers (+4.5 percent) and basic pharmaceutical products and pharmaceutical preparations (+4.2 percent) expanded strongly. At the same time, the production value of the industry "Other Manufacturing" (–12.6 percent), the manufacture of leather and related products (–7.8 percent), as well as that of the manufacture of basic metals (–6.4 percent) remained well below last year's level.

Data and definitions

The cash-flow ratio is an indicator of a company's capacity to *finance investment, pay off debt and taxes or distribute profits* out of its sales revenue. It mirrors the *self-financing capacity* of a company. Equity capitalisation is of importance beyond the pure liability element, above all with a view to its effect on confidence with clients and suppliers regarding a company's future liquidity, as well as its autonomy in carrying out high-risk financial operations.

The *cash flow* of a company corresponds to the surplus of revenues over expenditure generated within a period through its own business operations. In contrast to *external financing* (via equity capital, debt capital or subsidies) or financing via asset transformation (asset sales, depletion of inventories, etc.), it is another form of internal financing. *Self-financing* in the broader sense consists of three components: retained earnings (self-financing in the narrow sense), the "earned" counter value of *depreciation and of financial reserves* for potential liabilities vis-à-vis third parties (*Schäfer*, 2006, *Gabler Wirtschaftslexikon*, 2013).

The cash-flow-to-sales ratio (cash-flow ratio) is measured by the share of cash flow in sales revenues. For this purpose, cash flow is defined as follows:

Result from ordinary business operations

+   normal depreciation of fixed assets

+   depreciation of financial assets and securities of current assets

[±   allocation to or liquidation of reserves]

[±   allocation to or liquidation of social capital]

=   cash flow

The balance sheet database of the Austrian Institute for SME Research

The data basis is the balance sheet database of Austrian Institute for SME Research Austria, which consists of a pool of over 100,000 annual financial statements of Austrian firms.

Business partnerships and individual enterprises do not enter a deductible salary for the participation of the entrepreneur as an expenditure. Incorporated companies, however, register corresponding amounts as expenses.

Adjusted cash flow

The definition of earning power used in the following is the "adjusted cash flow", which is placed in relation to operational effectiveness. The cash flow is calculated as the sum of the results of ordinary operations and depreciations. The figure is "adjusted" by taking into account a "calculatory entrepreneurial salary", which makes it possible to compare figures across legal forms. In contrast to incorporated companies, business partnerships and individual enterprises do not enter a deductible salary for the participation of the entrepreneur as an expenditure. For business partnerships and individual enterprises, the minimum salary of managers exercising comparable functions is used as proxy for a calculatory entrepreneurial salary.

For the calculation of the median, the arithmetic mean and the standard deviation, the weighted and unweighted cash-flow ratios are used.

The overall stable development is also confirmed by the confidence indicators of the WIFO-Konjunkturtest: the business outlook of companies improved steadily in the course of the year and from August onward the assessments of the current business outlook were more positive than negative. Similarly, expectations of future production continued to rise (Figure 1). Capacity utilisation also increased, but remained below the median of the last 15 years until mid-2016. The confidence indicator for Austria rose sharply from mid-2016, similarly to that of Germany and the EU as a whole (Figure 2).

The costs relevant for the manufacture of material goods also developed favourably in 2016 (Table 1). The prices of industrial commodities again dropped sharply

(–2.3 percent in 2016), and thereby fell for the fifth year in a row. Current data on unit labour costs are not yet available. The interest rate on corporate loans remained at a very low level (2016: 2.2 percent, 2015: 2.3 percent). The real-effective exchange rate index rose by 1.3 percent in 2016 compared to the previous year (–2.7 percent in 2015).

There are no leading indicators for the development of the earning position of manufacturing; cyclical data are only available with a delay. The cash-flow ratio for 2016 is therefore "projected" and compared with indicators based on provisional data. The estimate is based on the balance sheet database of the Austrian Institute for SME Research, which is very well suited to the evaluation of cyclical data of Austrian companies. Based on the preliminary data for 2016, an estimate for the year 2017 is also calculated.

Table 1: Development of cost in manufacturing

	Industrial commodity prices, euro basis		Unit labour costs		Interest rate for company loans	Real-effective exchange rate index	
	2010 = 100	Percentage changes from previous year	2010 = 100	Percentage changes from previous year	Percent	First quarter 1999 = 100	Percentage changes from previous year
2005	69.5	+ 14.47	97.6	− 1.1	3.8	97.5	− 1.2
2006	92.9	+ 31.06	94.1	− 3.5	4.1	96.8	− 0.7
2007	96.8	+ 5.93	92.5	− 1.7	4.9	97.3	+ 0.5
2008	88.4	− 2.49	96.9	+ 4.8	5.4	97.5	+ 0.2
2009	68.2	− 21.46	107.5	+ 11.0	4.2	97.9	+ 0.5
2010	99.9	+ 53.54	100.0	− 7.0	3.6	95.1	− 2.9
2011	108.7	+ 8.72	98.8	− 1.2	3.8	95.8	+ 0.7
2012	99.1	− 8.89	101.5	+ 2.7	3.3	94.3	− 1.5
2013	93.3	− 5.77	103.7	+ 2.3	3.1	96.2	+ 2.1
2014	88.7	− 4.95	104.7	+ 0.9	2.8	97.7	+ 1.5
2015	83.6	− 5.80	105.9	+ 1.2	2.3	95.1	− 2.7
2016	81.7	− 2.24			2.2	96.3	+ 1.3

Source: WDS – WIFO Data System, Macrobond; OeNB.

1. The projection of the cash-flow-to-sales ratio at the industry level

Since 2014, WIFO's annual reporting on the profitability of manufacturing has used indicators from the balance sheet database of the Austrian Institute for SME Research. A comparison of the results with the reports before 2014 is therefore not possible (*Hölzl – Friesenbichler – Hölzl*, 2014).

Due to the conversion from NACE Rev. 1.1 to NACE Rev. 2, the forecast is also based on relatively short time series, since the accounting data used are not available until 2000. In the data set, the figures for the manufacture of tobacco products (NACE 12), chemicals and chemical products (NACE 19) as well as the manufacture of other transport equipment (NACE 30) are not available, so that only 21 out of the 24 sectors could be considered for the econometric estimates. The econometric estimate for 2016 is based on data from the 2000 to 2015 period.

Estimates for 2016 show a slight increase in the average cash-flow-to-sales ratio of Austrian manufacturers to 9.3 percent. In 2015 the ratio was already relatively high at 9.2 percent.

Table 2: Estimated coefficients for the projection of the cash-flow-to-sales ratio

	$\log \pi_{it-1}$	I_{it}	I_{it}^2	$\log SD\left(\pi_{it-1}\right)$
Coefficient	0.29***	0.74**	− 0.11**	0.43***
z-value	4.57	2.53	− 2.12	4.59

Source: WIFO calculations. Number of observations: 273. π . . . cash-flow ratio, I . . . economic indicator, SD . . . standard deviation within the industry, i . . . industry, t . . . period, *** . . . significant at a 1 percent level.

The manufacture of basic pharmaceutical products and pharmaceutical preparations (NACE 21), chemicals and chemical products (NACE 20) and beverages

(NACE 11) were particularly profitable in terms of the average return rate for the years 2008 to 2016. The cash-flow-to-sales ratio was relatively low in the manufacture of furniture (NACE 31), textiles (NACE 13) and wearing apparel (NACE 14).

The cash-flow ratio of 2016 was above the average for 2008-2015 in the manufacture of chemicals and chemical products (NACE 20), of paper and paper products (NACE 17) and the manufacture of motor vehicles, trailers and semi-trailers (NACE 29). In particular, the rate of return for leather and related products (NACE 15), beverages (NACE 11) and the manufacture of fabricated metal products (NACE 25) lay below the multi-year average.

A panel-econometric model for cash flow projection

A panel-econometric approach is used for the projection of the cash-flow ratio at the industry level. Despite rather short time series, the pooling of sectoral data allows a reliable econometric estimate to be made for the cash-flow ratio. The estimated specification is based on the industrial economics literature and assumes that the cash profitability, and thereby also the self-financing power of companies, exhibit differences which are persistent over time (*Mueller – Cubbin,* 2005, *Aiginger – Pfaffermayr,* 1997). As industries in manufacturing are also characterised by entry barriers and sunk investments, the equalisation of earning power across industries will be slow. Unfortunately, industry-specific structural data that explain the cash-flow ratio are not available. The characteristics of industry structure are taken into account by considering fixed industry effects. The econometric model also includes the cash-flow ratio lagged by one period in order to account for the partial adjustment to external shocks.

The central explanatory variable is a synthetic business cycle indicator at the industry level $\left(I_{it}, I_{it-1} \right)$ on the basis of companies' subjective assessment of business conditions, as provided by the WIFO-Konjunkturtest, whereby *i* denotes the industry. The synthetic cyclical indicator is derived from the annual averages of the balance between optimistic and pessimistic responses (as a percentage of all responses) with regard to current order books (*AB*), the business outlook for the next six months (*GL*) and the development of prices (*PR*) using the following formula (*Oppenländer,* 1995):

$$I = \left[(AB + 2)(GL + 2)(PR + 2) \right]^{1/3} - 2 ,$$

whereby the individual indicators are included as percentages in the calculation and the industry index *i* is omitted for the purpose of clarity. The balance sheet series show a strong correlation with the development of the cash-flow-to-sales ratio, as well as with the rate of change of manufacturing. However, they also mirror unobserved structural differences and different developments in production costs between industries. For projection purposes, this indicator should exhibit a sufficient lead time. The correction of values by 2 ensures that the value of the term in square brackets is always positive.

In algebraic terms, the econometric forecasting model is specified as follows:

$$\log \pi_{it} = \beta_1 \log \pi_{it-1} + \beta_2 I_{it} + \beta_3 I_{it}^2 + \beta_4 SD(\pi_{it-1}) + \beta_0 + \sum_{j=1}^{21} \gamma_j S_j + \varepsilon_{it} ,$$

$$\varepsilon_{it} \sim N \left(0, \sigma^2 \right).$$

In addition to the lagged cash-flow-to-sales ratio π_{it-1}, the synthetic business cycle indicator I_{it} and its squared term I^2_{it}, the lagged standard deviation of the cash-flow-to-sales ratio lagged $SD(\pi_{it-1})$ and fixed industry effects S_j are included in the forecasting model.

The estimate of the dynamic panel model uses an approach that corrects for possible distortions resulting from small sample size (*Kiviet,* 1995, *Bun – Kiviet,* 2003, *Bruno,* 2005). The projection of the average cash-flow ratio for the entire manufacturing sector is obtained as the weighted average of the industry-specific projections, with the turnover shares of the individual industries used as weights. The turnover weights are assumed to be deterministic and continued for the years 2015 and 2016 using the value of the year 2014.

The estimation results for the period from 2000 to 2014 are presented in Table 2. All explanatory variables, with the exception of the squared WIFO Business Cycle Indicator, but including fixed industry effects, are significant. The significant parameter of the one-period-lagged cash-flow ratio implies that exogenous effects on the development of returns have a lagged effect over several periods, even though the persistence of the cash-flow ratio is relatively small. In general, the estimated model displays sufficient quality (Figure 3), but should, however, not be overvalued, as it is largely determined by fixed sector effects.

The different earnings developments of the individual industries are taken into account through the statements of companies used in the estimation of the synthetic business cycle indicator. The heterogeneous effects of changes in the framework conditions can only be depicted to a limited extent. Thus, the estimation results for

the individual industries should be interpreted with greater caution than the turn-over-weighted aggregated estimate (Table 3).

Table 3: The cash-flow ratio in Austria by industry

	2011	2012	2013	2014	2015	2016[1]	2016[2]	Ø 2008-2015
	Cash flow as a percentage of sales							
Manufacture of food products	5.2	5.9	5.4	5.8	5.7	5.0	5.5	6.0
Manufacture of beverages	11.4	10.1	8.7	8.3	9.7	10.7	10.2	10.6
Manufacture of textiles	5.4	4.6	4.2	5.3	5.6	5.7	5.2	4.4
Manufacture of wearing apparel	5.3	4.7	4.1	5.4	3.6	3.3	5.0	5.4
Manufacture of leather and related products	10.0	8.6	8.1	9.9	10.1	.	8.6	9.5
Manufacture of wood, weaving, basket and cork products (without furniture)	6.0	5.9	6.0	6.2	8.1	6.5	6.8	6.0
Manufacture of paper and paper products	10.2	9.6	8.2	10.9	11.5	9.6	12.3	10.3
Printing and reproduction of recorded media	8.5	7.7	7.8	7.9	8.2	9.1	7.7	8.3
Manufacture of chemicals and chemical products	11.9	10.5	11.0	11.9	12.9	7.2	12.8	11.6
Manufacture of pharmaceuticals	12.3	17.2	17.7	17.4	14.2	8.0	13.3	13.1
Manufacture of rubber and plastics products	9.5	7.6	8.2	7.9	7.2	9.9	7.9	8.2
Manufacture of other non-metallic mineral products	10.3	10.5	9.6	8.7	9.0	6.0	10.1	9.7
Manufacture of basic metals	8.8	8.5	8.2	7.4	8.2	10.3	8.7	8.9
Manufacture of fabricated metal products	9.5	9.1	9.5	8.7	7.8	8.4	8.4	9.4
Manufacture of computer, electronic and optical products	9.9	10.4	8.9	9.8	10.6	12.2	10.2	9.6
Manufacture of electrical equipment	7.7	8.8	9.2	10.4	9.5	7.9	8.6	9.3
Manufacture of machinery	9.9	9.0	9.6	9.5	9.3	10.1	9.5	9.7
Manufacture of motor vehicles, trailers and semi-trailers	9.5	8.8	8.7	7.6	8.5	7.4	9.4	7.8
Manufacture of furniture	5.1	5.2	5.3	4.6	5.4	8.3	6.4	5.4
Other manufacturing	9.0	9.1	9.5	9.4	8.8	5.8	10.1	8.7
Repair and installation of machinery and equipment	6.4	7.0	6.8	6.6	5.7	4.6	5.9	7.0
Industries considered in the projection, average	8.7	8.5	8.3	8.6	8.6	.	8.7	8.5
Manufacture of goods total, volume weighted average	8.7	9.1	8.8	8.4	9.2	9.3	9.0	8.9

Source: Austrian Institute for SME Research, WIFO calculations. – [1] 2016: estimated values. – [2] Forecast.

Figure 3: Projection and actual development of the cash-flow ratio in manufacturing
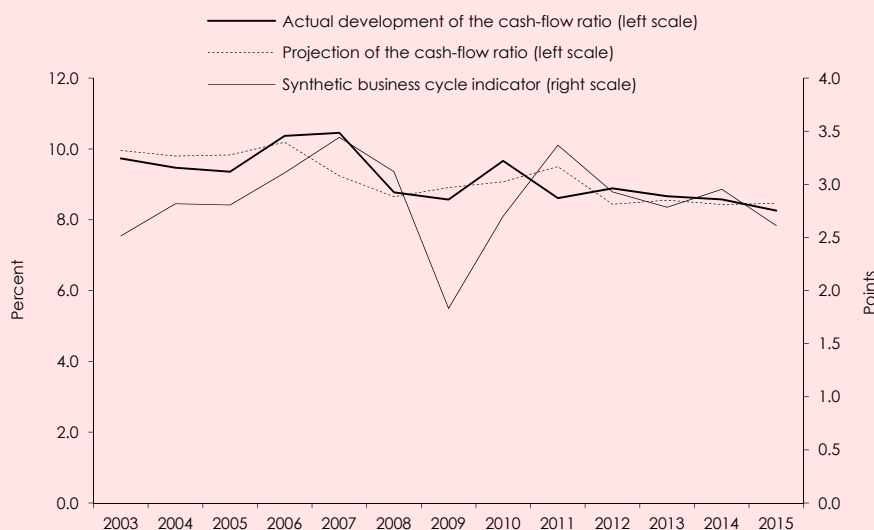
Source: WIFO-Konjunkturtest, Austrian Institute for SME Research, WIFO calculations. Actual cash-flow ratio: 2015 preliminary values.

The aggregated cash-flow ratio was 0.1 percentage point higher than in the previous year at 8.7 percent, according to the panel-econometric estimates (see the box "A panel-econometric model for cash flow projection") and 0.2 percentage point higher than the average of the years 2008 to 2015 (8.5 percent, Table 3).

The turnover-weighted aggregated results of the econometric estimates for the year 2016 suggest a sideways shift in the cash-flow-to-sales ratio. The WIFO forecast for 2016 shows a value of 9.0 percent (–0.2 percentage points compared to the previous year). However, the preliminary data show a slight increase in the ratio to 9.3 percent. This suggests persistence at a high level. The ratio was estimated using a model that extrapolates the standard deviation at the industry level as well as the turnover weighting.

The first estimation model uses the provisional data for 2016 to calculate a projection for 2017. Since no figures are available for the manufacture of leather and related products (NACE 15), only 20 sectors have been taken into consideration here. The second model uses the previously estimated figures for 2016 instead of the provisional ones. Driven by a strong positive trend in the business cycle indicators, these results point towards a further increase in the cash-flow ratio.

However, the estimation results of the rate of return (first model 8.6 percent, second model 9.2 percent) must be interpreted with great caution because they are based on provisional values as well as estimates of the industries for 2016, and are subject to the usual uncertainty of forecasts. In addition, the underlying business cycle indicator and its squared value are currently only available for the first half of 2017. As above, the company's assessment of the earnings performance of the individual industries is included in the estimate of the synthetic business cycle indicator. Thus, the heterogeneous effects of changes in the framework conditions can only be shown to a limited extent.

2. The return rate of select service industries

The cash-flow ratio estimated for select service industries (Table 4)[1] differs from that of manufacturing. For many service companies, due to their business model, self-financing power has a different status than it does in the manufacturing sector. Thus, sales and capital turnover are high in trade, and the cash surpluses are less determined by capital allocation than by willingness to pay and intensity of competition or market concentration (*Friesenbichler,* 2009).

The cash-flow ratio varies more within the service sector than within manufacturing. These divergences may be due to differences in economies of scale and intensity of competition.

The return rates also differ sharply among industries (Table 4). Electricity, gas, steam and air conditioning supply (NACE 35), legal and accounting activities (NACE 69), telecommunications (NACE 61), as well as other professional, scientific and technical activities (NACE 74) and rental and leasing activities (NACE 77) showed especially high variance. The lowest rate of return is found in the construction of buildings (NACE 41), wholesale and retail trade and repair of motor vehicles and motorcycles (NACE 45) and civil engineering (NACE 42).

A comparison of the weighted and unweighted samples indicates different structures within the industries based on size class. If the turnover-weighted cash-flow-to-sales ratio is lower than the unweighted ratio, smaller firms tend to be more profitable than larger businesses. This is usually determined by the competitive situation. Thus, niche strategies can provide a higher return rate, as companies adapt their service offer to the specific needs of potential buyers in a market niche. As a result, the market niche is more intensively exploited and the pressure of competition is reduced (*Gabler Wirtschaftslexikon,* 2013).

Higher return rates for smaller companies can be particularly observed in the activities of head offices and management consultancy activities (NACE 70) and electricity, gas, steam and air conditioning supply (NACE 35). Advantages in terms of size appear to exist in telecommunications (NACE 61) and other professional, scientific and technical activities (NACE 74) (Table 4).

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[1] The selection of industries and periods is orientated towards the availability and plausibility of the data.

Table 4: The cash-flow ratio in selected service industries

	Turnover-weighted					Unweighted				
	2015	Ø 2000-2016	υ	Ø 2000-2007	Ø 2008-2016	2015	Ø 2000-2016	υ	Ø 2000-2007	Ø 2008-2016
	Cash flow as a percentage of sales			Cash flow as a percentage of sales		Cash flow as a percentage of sales			Cash flow as a percentage of sales	
Electricity, gas, steam and air conditioning supply	17.6	18.0	20	20.7	15.7	21.4	20.3	24	20.9	19.8
Waste collection, treatment and disposal activities	8.8	10.4	12	10.2	10.5	12.0	12.5	7	12.4	12.5
Construction of buildings	4.8	4.8	12	4.6	5.0	5.8	5.8	9	5.6	6.0
Civil engineering	3.8	4.5	14	4.1	4.9	9.2	7.8	16	7.1	8.5
Specialised construction activities	6.5	6.3	7	6.2	6.4	7.2	7.2	8	6.9	7.4
Wholesale and retail trade and repair of motor vehicles and motorcycles	2.9	2.7	12	2.7	2.7	5.2	4.5	16	4.0	4.9
Wholesale trade, except of motor vehicles and motorcycles	4.2	4.2	9	4.5	4.1	6.5	6.1	11	5.7	6.6
Retail trade, except of motor vehicles	4.8	4.8	8	4.9	4.8	5.8	5.7	12	5.2	6.1
Accommodation	15.2	14.0	13	13.5	14.4	15.5	14.5	10	14.0	14.9
Food and beverage service activities	9.0	8.6	13	7.7	9.4	8.8	8.5	9	8.5	8.6
Publishing activities	8.1	9.1	29	7.7	10.3	10.7	9.6	17	8.4	10.6
Motion picture, video and television programme production, sound recording and music publishing activities	12.8	11.1	24	10.0	12.0	14.3	14.3	10	13.6	14.8
Telecommunications	29.9	20.2	40	17.6	22.4	18.0	16.6	11	17.0	16.2
Computer programming, consultancy and related activities	9.5	8.7	17	7.9	9.4	15.4	13.5	15	11.8	15.0
Information service activities	11.8	11.7	15	12.1	11.3	16.3	14.8	13	13.5	16.0
Legal and accounting activities	24.0	18.7	22	15.6	21.4	22.9	21.4	14	19.1	23.5
Activities of head offices, management consultancy activities	13.2	12.1	22	10.7	13.4	22.8	20.8	15	18.3	23.0
Architectural and engineering activities, technical testing and analysis	12.5	11.7	16	10.9	12.5	16.8	15.7	14	14.5	16.8
Scientific research and development	3.5	9.2	36	8.9	9.4	11.4	10.8	26	10.7	10.8
Advertising and market research	8.6	8.9	14	8.9	8.8	12.3	11.4	13	10.3	12.4
Other professional, scientific and technical activities	21.4	13.2	32	11.8	14.4	16.2	14.6	15	13.6	15.5
Rental and leasing activities	24.8	28.0	16	30.7	25.7	26.0	25.4	6	25.4	25.5
Employment activities	3.3	2.9	23	2.9	2.9	5.8	5.6	18	5.3	5.8

Source: Institute for SME Research Austria, WIFO calculations. 2016: preliminary estimates. υ . . . Variation coefficient in percent.

The variation in the rate of return over time is also highly disparate in the individual industries. The variation coefficient (the share of the standard deviation in the mean value) is highest in other professional, scientific and technical activities (NACE 74), telecommunications (NACE 61) and water collection, treatment and disposal activities (NACE 36), scientific research and development (NACE 72) and lowest in specialised construction activities (NACE 43) (Table 4).

As a comparison of the period before the financial and economic crisis (2000-2007) with the years thereafter (2008-2016) shows, the return rate only declined in the industries electricity, gas, steam and air conditioning supply (NACE 35) and rental and leasing activities (NACE 77), which can be explained by the high share of sunk costs (*Hölzl – Friesenbichler – Hölzl*, 2014). In many industries, the return rate rose, although value added often declined. A significant increase was recorded in publishing activities (NACE 58), legal and accounting activities (NACE 69) and the activities of head offices, management consultancy activities (NACE 70).

3. Appendix: the equity ratio in international comparison

One determinant of profitability of firms is their equity base. The equity capital ratio is, to a greater extent than the cash-flow ratio, a structural indicator. It is determined by company and industry-specific capital intensity, as well as business risk. In international comparison, the non-neutrality of financing forms also plays a role. If a company's financing through bank loans is cheaper than the build-up of equity due to the deductibility of interest payments, this will have an impact on the financial structure of the company.

The analysis of the equity capital ratio is based on the BACH database (Bank for Accounts of Companies Harmonized). This has been generated since 1987 by the

European Commission (DG ECFIN) in collaboration with the European Committee of Central Balance Sheet Offices to enable comparisons between EU countries. Currently, aggregated annual data are available for nine countries: Austria, Belgium, Spain, France, Germany, Italy, the Netherlands, Portugal and Poland. In addition, there is a breakdown by 87 industries according to NACE Rev. 2 (2-digit), of which 24 are in manufacturing, as well as a classification into three size groups (companies with an annual turnover of less than 10 million €, 10 to 50 million € and more than 50 million €), while data on the equity capital ratio are available up to 2015.

In 2015, the average equity capital ratio of larger Austrian manufacturers was therefore 41.2 percent and slightly below the average of the countries of comparison of 42.6 percent. The ratio decreased with operational size: for small and medium-sized manufacturers it remained well below the international average of 46.6 percent, dropping to 36.0 percent. The median shows a similar picture, but the distance from the average of the countries of comparison is greater for large companies (Table 5).

These international comparisons offer rough indications and should be interpreted with caution. Distortions are possible due to differences in accounting standards, balance sheets, sample sizes and data sources, as well as due to breaks in the time series[2].

Table 4: International comparison of the equity capital ratio in manufacturing

	Large enterprises		Small and medium-sized enterprises					
			Total		Medium-sized enterprises		Small enterprises	
	Ø 2000-2015	2015	Ø 2000-2015	2015	Ø 2000-2015	2015	Ø 2000-2015	2015
	As a percentage of absolute balance sheet							
Average values								
Austria[1]	38.7	.	34.5	.	36.7	.	29.2	.
Belgium	43.6	46.2	46.0	60.0	44.8	51.8	46.8	64.0
Czech Republic[1]	51.0	.	49.5	.	50.3	.	48.1	.
Germany	30.8	33.0	34.2	41.0	35.3	41.5	30.0	38.8
Spain	39.5	40.1	43.4	48.7	45.9	48.9	41.6	48.6
France	34.8	34.8	39.3	44.0	38.6	43.3	40.1	45.0
Italy	32.8	40.1	28.3	34.1	31.5	38.6	25.0	29.8
Poland	50.3	51.6	50.3	55.1	51.1	56.1	49.2	53.3
Portugal	44.4	46.8	36.7	39.0	41.2	45.6	33.3	34.7
Slovakia[1]	51.7	.	37.0	.	42.7	.	31.6	.
Average	41.8	41.8	39.9	46.0	41.8	46.5	37.5	44.9
Median values								
Austria[1]	36.6	.	26.1	.	31.6	.	24.4	.
Belgium	36.2	45.8	36.2	40.6	38.4	45.9	36.0	40.2
Germany	31.2	36.1	27.1	36.8	30.4	38.9	24.5	34.4
Spain	42.9	45.5	29.3	37.8	43.0	48.4	28.8	37.3
France	35.2	40.0	37.0	44.3	35.7	41.3	37.3	44.9
Italy	28.5	35.9	17.4	21.9	25.3	32.7	16.5	20.8
Poland	50.9	51.4	51.6	56.0	48.9	53.2	52.3	56.6
Portugal	42.2	45.4	28.5	29.4	38.2	41.8	28.0	28.9
Slovakia[1]	37.1	.	25.0	.	40.7	.	24.2	.
Average	37.9	42.9	30.9	38.1	36.9	43.2	30.2	37.6

Source: BACH database (Banque de France), WIFO calculations. – [1] Values until 2014.

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[2] See the BACH User Guide, https://www.banque-france.fr/fileadmin/user_upload/banque_de_france/Economie_et_Statistiques/BACH-Summary-Userguide.pdf, accessed on July 17, 2017.

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