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Cash-Flow-to-Sales Ratio Stagnating in 2018

The Profitability of the Austrian Manufacturing Sector

Cash-Flow-to-Sales Ratio Stagnating in 2018. The Profitability of the Austrian Manufacturing Sector

In 2017, at 10.6 percent, the average cash-flow-to-sales ratio for the Austrian manufacturing industry was again significantly higher than in the previous year (10.2 percent). According to the WIFO estimate it however stagnated in 2018. In 2019, the cash-flow ratio is expected to decline according to the estimate using a dynamic panel econometric model for the manufacturing industries.

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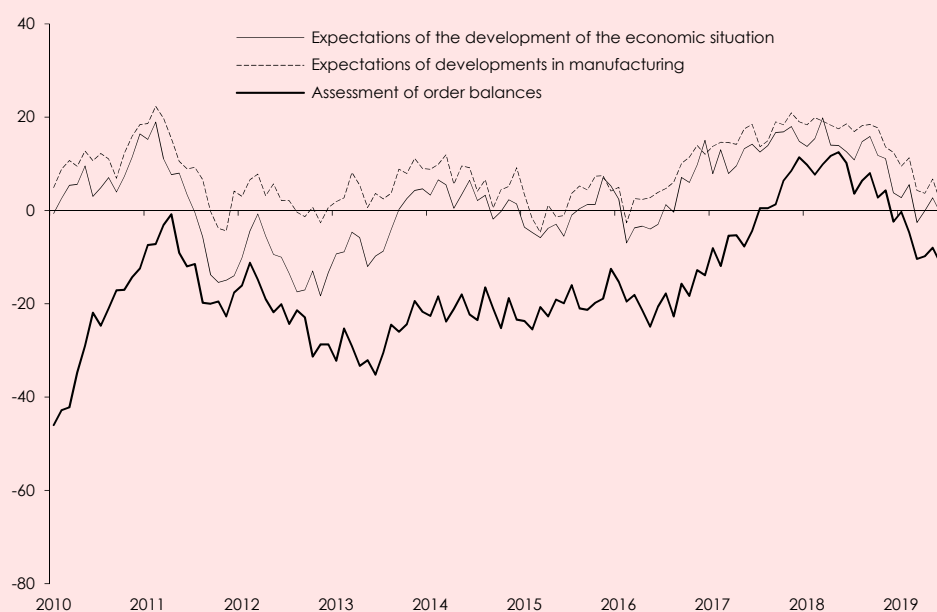
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In 2018, the Austrian economy grew slightly more than in 2017 (+2.6 percent) at real +2.7 percent, although growth peak already reached its highest point in the second half of 2017 and at the start of 2018. Real value added was also noticeably expanded in manufacturing, although the industrial business cycle slowed significantly in parallel with foreign trade¹ (+4.7 percent compared to +4.8 percent in 2017). After lively dynamics in the first two quarters of 2018, the growth rate (trend-cycle data) came close to stagnation in the third and fourth quarters of 2018. Against this background, according to the WIFO-Konjunkturtest (business cycle survey), after the peaks at the end of 2017 and start of 2018, firms' confidence gradually declined, but remained largely positive (Bilek-Steindl et al., 2019).

The costs relevant to manufacturers of goods developed only partially favourably in 2018 (Table 1). The interest rate on corporate loans again dropped slightly from its already very low level in 2017 to 2.1 percent (2018). In addition, the marked increase in industrial raw material prices (+19.1 percent in 2017) slowed significantly to +0.7 percent in 2018. At the same time, in 2018 unit labour costs rose for the first time after the 2016 and 2015 declines. In 2018, the real-effective exchange rate index picked up again even more strongly than in the previous year (+0.8 percent in 2017, +1.7 percent in 2018), and the exchange rate development thus continued to depress the price competitiveness of Austrian export goods. These contrasts in the framework conditions – the cushioning of the cost of loans along with the rise in unit labour costs and exchange rates – also influenced the 2018 return rate, pointing towards a possible stagnation of the cash-flow ratio in 2018.

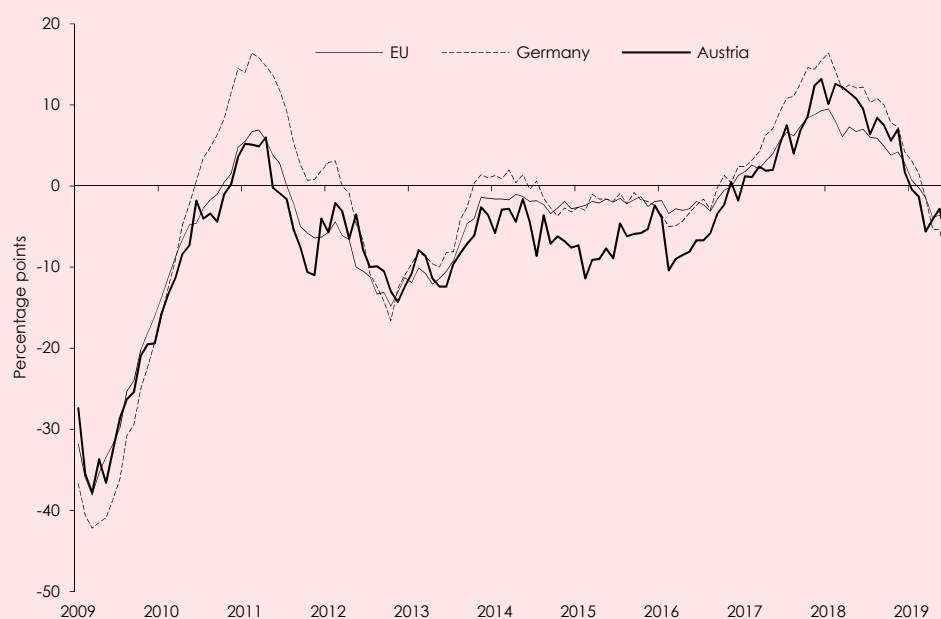
¹ Austria's foreign trade developed favourably on the whole in 2018, though it lost momentum towards the end of the year.

Figure 1: Assessment of the economic situation of companies in manufacturing
Balance of positive and negative assessments as a percentage of total responses



Source: WIFO-Konjunkturtest.

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



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

There are no leading indicators for the development of the earnings position in manufacturing; cyclical data are only available with a delay. The cash-flow ratio for 2018 is therefore "projected" below and compared to indicators based on provisional data. The estimate is based on the balance sheet database of Austrian Institute for SME Research, which is very well suited to the evaluation of cyclical data of Austrian companies. Based on the preliminary and estimated data for 2018, a further estimate for 2019 is carried out.

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	97.3	- 1.4	3.8	97.5	- 1.2
2006	92.9	+ 31.06	93.6	- 3.8	4.1	96.8	- 0.7
2007	96.8	+ 5.93	91.4	- 2.3	4.9	97.3	+ 0.5
2008	88.4	- 2.49	94.6	+ 3.5	5.4	97.5	+ 0.2
2009	68.2	- 21.46	107.3	+ 13.4	4.2	97.9	+ 0.5
2010	99.9	+ 53.54	100.0	- 6.8	3.6	95.0	- 3.1
2011	108.7	+ 8.72	98.3	- 1.7	3.8	95.5	+ 0.6
2012	99.1	- 8.89	101.6	+ 3.3	3.3	94.0	- 1.5
2013	93.3	- 5.77	103.7	+ 2.1	3.1	95.9	+ 2.0
2014	88.7	- 4.95	103.8	+ 0.2	2.8	97.6	+ 1.7
2015	83.6	- 5.80	104.6	+ 0.8	2.3	95.1	- 2.5
2016	81.7	- 2.24	104.3	- 0.3	2.2	96.4	+ 1.4
2017	97.3	+ 19.12	103.1	- 1.2	2.2	97.2	+ 0.8

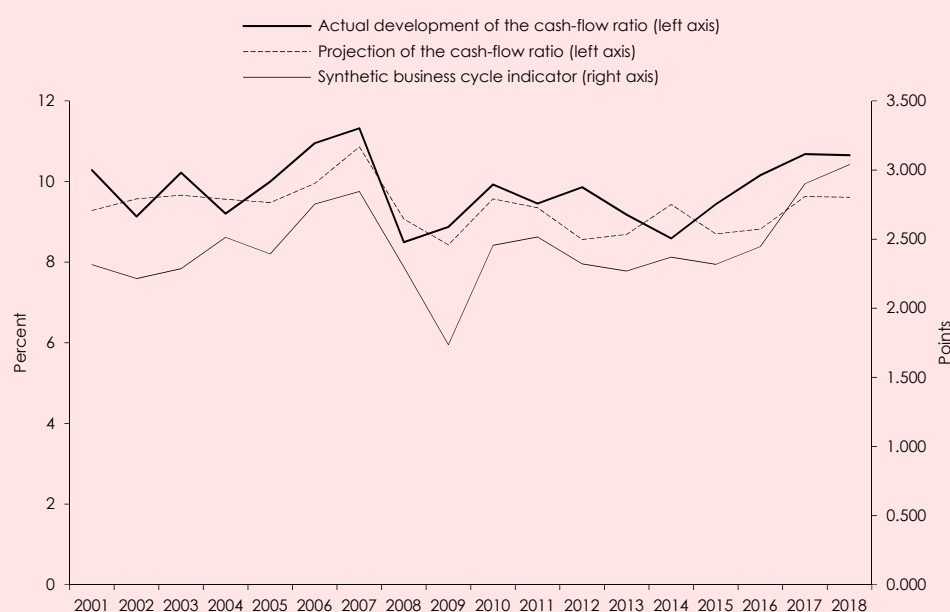
Source: WDS – WIFO Data System, Macrobond; OeNB.

1. Projection of the cash-flow-to-sales ratio at 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 contributions in the WIFO-Monatsberichte (monthly reports) before 2014 is therefore not possible (Hölzl – Friesenbichler – Hölzl, 2014). Due to the transition 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 only available from 2000 onwards. In the dataset, the figures for the tobacco processing (NACE 12), coke, plant and mineral oil processing (NACE 19) and other vehicle construction (NACE 30) industries are not available, so that only 21 of the 24 sectors could be considered for econometric estimates. The econometric estimate for the year 2018 is based on data for the period 2000 to 2017.

Estimates for the year 2018 show a stagnation of the average cash-flow-to-sales ratio in Austrian manufacturing. In 2017, the ratio had already reached its highest level within the past ten years at 10.7 percent

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: 2018 preliminary values.

The WIFO projection and the cyclical data differ with respect to turnover weights. The WIFO estimate uses industry-level turnover from Statistics Austria's performance and structural survey. The weighting of the sample is based on the turnover as shown in the balance sheets. Therefore, the level is only approximately comparable across years, which is why the rates of change were applied to the most recently observed realised value for the forecast (Figure 3).

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 important 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 risky financial operations.

The *cash flow* corresponds to the surplus of revenues over expenditure generated within a period through its own business operations. In contrast to *external financing* (via equity, loans 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

- + 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 present report relies on the balance sheet database of the Austrian Institute for SME Research, which consists of a pool of over 100,000 annual financial statements of Austrian firms. The industry classification mainly follows ÖNACE 2008. This statistical classification offers the advantages of a high level of detail and the possibility of international comparison. Through the analysis of balance (asset and capital structure) and return-and-loss-sheets (performance, costs and results structure), it is possible to compute a number of performance indicators (Voithofer – Hölzl, 2018).

Adjusted cash flow

The definition of earning power used in the following is the "adjusted cash flow", which is a measure of operational effectiveness. The cash flow is calculated as the sum of the results of ordinary operations and depreciations. Size is "corrected" by taking into account an imputed entrepreneur's remuneration, which should make the key figure comparable between companies of different legal forms: in contrast to incorporated companies, business partnerships and individual enterprises do not report 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.

¹ Due to the 2014 Accounting Amendment Act, extraordinary income and expenses are no longer reported separately in the balance sheet data, starting with the 2016 financial year. These are allocated to other income and other expenses in the balance sheet database of the Austrian Institute for SME Research. To allow year-to-year comparisons, this change is applied to the entire dataset – that is, also to previous reporting years. Comparability with earlier results is therefore impaired.

A panel-econometric model for now- and forecasting cash-flow ratios

The different earnings developments of the individual sectors are taken into account through the statements of companies used in the estimation of the synthetic business cycle indicator. The heterogeneous effects of the change 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 turnover-weighted aggregated estimate (Table 3). 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). Since industries in manufacturing are characterised by entry barriers and sunk investments, the equalisation of earning power across industries will be slow (Hölzl – Friesenbichler – Hölzl, 2014). 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 includes the cash-flow ratio lagged by one period in order to account for the partial adjustment to external shocks.

The indicator is derived from the annual averages of balances from optimistic and pessimistic statements (in relation to all responses) to assess current order backlogs (*AB*), the business situation over the next six months (*GL*), and production trends over the next three months (*PR*) calculated according to the following formula (based on Oppenländer, 1995):

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

whereby the individual indicators are included as percentages in the calculation of the business cycle indicator. The balance series correlate with the development of the cash-flow-to-sales ratio and the rate of change in the production of goods. At the same time, they represent unobservable structural changes.

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

$$\log \pi_{i,t} = \beta_1 \log \pi_{i,t-1} + \beta_2 I_{i,t} + \beta_3 I_{i,t-1} + \beta_4 \log SD(\pi_{i,t-1}) + \gamma S_{i,t} + \mu_t + \varepsilon_{i,t}$$

$$\varepsilon_{i,t} \sim N(0, \sigma^2).$$

In addition to the lagged cash-flow-to-sales ratio $\pi_{i,t-1}$, the synthetic business cycle indicator $I_{i,t}$ and its lagged term $I_{i,t-1}$, the lagged by one period logarithmic standard deviation of the cash-flow-to-sales ratio $\log SD(\pi_{i,t-1})$ is included in the forecasting model. The term $S_{i,t}$ considers individual statistical distortions of the cash-flow ratio and μ_t time effects. The error term is depicted by $\varepsilon_{i,t}$.

The estimate of the dynamic panel model relies on 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 2018 and 2019 using the value of the year 2017. The data basis for this is the performance and structure survey of Statistics Austria.

The estimation results for the period from 2000 to 2017 are presented in Table 2. The explanatory variables 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 a sufficient explanatory power (Figure 3), but should, however, not be over-interpreted, as it is largely determined by fixed sector effects.

This dynamic model is used in spite of the statistically insignificant coefficients for the estimation of earning power, because a dynamic model is conceptually better suited for estimations over time than static models. As a robustness check, an estimation model with fixed industry effects is additionally implemented. The coefficients estimated here are statistically significant. Alternative projections for the years 2018 and 2019 based on estimates using the fixed effects model yield results comparable to those of the dynamic model.

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

	$\log \pi_{i,t-1}$	$I_{i,t}$	$I_{i,t-1}$	$\log SD(\pi_{i,t-1})$
Coefficient	0.20***	0.05	-0.03	0.09
z-value	3.44	0.08	-0.05	0.13

Source: WIFO calculations. Number of observations: 329. π . . . cash-flow ratio, I . . . economic indicator, SD . . . standard deviation within the industry, i . . . industry, t . . . period, *** . . . significant at a 1 percent level.

The turnover-weighted aggregate results of the panel-econometric estimates (see box "A panel-econometric model for now- and forecasting cash-flow ratios") for the year 2018 indicate a stagnation of the cash-flow-to-sales ratio. The WIFO forecast

shows a value of 10.6 percent for 2018. According to provisional data from the Austrian Institute for SME Research, the ratio is also slightly below that of 2017; this confirms the WIFO estimate. The overall picture thus reliably indicates that the ratio will stagnate in 2018 (Figure 3). However, the rate of 10.7 percent in 2017 already reached the highest level of the last 10 years, coming close to the pre-crisis level of 2007 (11.3 percent).

The estimation and the provisional data for 2018 again show a value significantly above the average of the years 2008-2018 (Table 3) at 9.6 percent.

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

	2012	2013	2014	2015	2016	2017	2018 ¹	2018 ²	Ø 2008-2018
Cash flow as a percentage of sales									
Manufacture of food products	5.9	5.9	5.8	5.6	6.7	6.3	6.4	6.4	6.2
Manufacture of beverages	10.3	6.8	8.3	9.6	11.5	12.6	12.7	11.5	10.7
Manufacture of textiles	5.9	4.4	7.1	0.6	9.1	5.7	5.4	7.2	5.3
Manufacture of wearing apparel	4.9	3.5	5.4	4.2	6.0	3.7	4.7	5.2	5.4
Manufacture of leather and related products	9.3	8.9	9.4	10.8	10.5	11.1	.	10.1	10.9
Manufacture of wood, weaving, basket and cork products (without furniture)	3.6	6.2	6.4	7.6	8.5	9.0	7.4	7.4	6.6
Manufacture of paper and paper products	8.8	8.5	11.3	12.6	12.6	11.3	7.9	11.9	10.9
Printing and reproduction of recorded media	8.1	8.7	9.3	10.1	9.5	9.0	12.1	9.5	9.0
Manufacture of chemicals and chemical products	11.5	11.2	11.8	12.9	5.4	14.8	7.9	12.6	11.3
Manufacture of pharmaceuticals	34.1	16.9	15.9	13.6	12.4	15.1	.	14.5	14.3
Manufacture of rubber and plastics products	7.7	7.4	8.2	8.2	8.4	9.5	12.3	9.0	8.6
Manufacture of other non-metallic mineral products	10.0	9.0	7.2	10.0	10.8	11.6	10.4	10.4	9.6
Manufacture of basic metals	8.9	9.0	7.3	8.7	8.6	8.9	10.5	9.3	9.2
Manufacture of fabricated metal products	8.7	10.5	9.2	10.2	11.6	10.3	9.6	10.1	10.3
Manufacture of computer, electronic and optical products	9.9	10.0	12.5	13.5	11.5	12.1	9.9	11.8	10.7
Manufacture of electrical equipment	9.1	9.6	10.6	9.6	9.3	9.3	5.4	8.8	9.3
Manufacture of machinery	9.4	10.1	9.6	9.8	9.7	8.9	9.9	9.9	9.9
Manufacture of motor vehicles, trailers and semi-trailers	10.9	8.7	8.9	2.8	10.0	11.1	10.1	9.4	7.8
Manufacture of furniture	6.0	5.9	5.0	5.0	7.3	8.5	7.6	6.7	6.1
Other manufacturing	8.7	10.0	9.9	10.4	11.5	9.4	9.0	10.7	9.7
Repair and installation of machinery and equipment	7.4	7.1	7.4	5.6	5.9	7.0	6.0	7.1	7.1
Industries considered in the projection, average	9.5	8.5	8.9	8.7	9.4	9.8	8.7	9.5	9.0
Manufacture of goods total, volume weighted average	9.9	9.2	8.6	9.4	10.2	10.7	10.7	10.6	9.6

Source: Austrian Institute for SME Research, WIFO calculations. – ¹ Preliminary data. – ² Projection.

The most profitable industries on average across all companies in 2018 were the manufacture of pharmaceuticals (NACE 21), the manufacture of chemicals (NACE 20) and the manufacture of paper and paper products (NACE 17). The lowest cash-flow-to-sales ratio was observed in the manufacture of wearing apparel (NACE 14), food products (NACE 10) and the manufacture of furniture (NACE 31).

The cash-flow ratio for 2018 was significantly above the 2008-2018 average in the manufacture of textiles (NACE 13), the manufacture of motor vehicles and motor vehicle parts (NACE 29) and the manufacture of chemicals and chemical products (NACE 20). It particularly remained under the long-term average in leather and related products and footwear (NACE 15), electrical equipment (NACE 27) and wearing apparel (NACE 14).

The different earnings developments of the individual sectors are taken into account through the statements of companies used in the estimation of the synthetic business cycle indicator. The heterogeneous effects of the change 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 turnover-weighted aggregated estimation (Table 3).

In addition to the above-described model for the WIFO forecast of the 2018 cash-flow-to-sales ratio, two additional estimation models have been implemented to provide an outlook for 2019. The preliminary estimates for the year 2018 are included in the first estimation model. The second model is based on the estimated figures for 2018. The ratio is estimated using a model that updates the turnover weighting and standard deviation at the industry level.

The subdued development of the business cycle indicators in the first half of 2019 indicates a decline in the cash-flow ratio in 2019. This decline is forecast by both models. However, the estimates should be regarded with great caution because they are based on interim values and estimations of the industry-specific figures for 2018 and are therefore subject to the usual uncertainty of projections. In addition, the underlying business cycle indicator has so far only been available for the first half of 2019. As above, the companies' assessments regarding the earnings performance, production and order backlogs of the individual sectors is included in the estimate via the synthetic business cycle indicator. Here again, the heterogeneous effects of changes in the framework conditions can only be shown to a limited extent.

2. The return rate for select service industries

The cash-flow ratio estimated for select service industries (Table 4)² 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 manufacturing. For example, sales and capital turnover are high in trade, and cash surpluses are less determined by capital allocation than by willingness to pay and by intensity of competition or market concentration (Friesenbichler, 2009).

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

	Turnover-weighted					Unweighted				
	2017	Ø 2000-2017	<i>v</i>	Ø 2000-2007	Ø 2008-2017	2017	Ø 2000-2017	<i>v</i>	Ø 2000-2007	Ø 2008-2017
	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	15.7	16.4	25	20.1	13.5	31.2	25.5	36	28.6	23.0
Waste collection, treatment and disposal activities	11.8	10.8	15	10.6	11.0	14.1	13.6	15	13.9	13.4
Construction of buildings	4.7	5.0	17	4.7	5.2	7.0	6.5	13	6.1	6.9
Civil engineering	5.3	4.6	21	4.0	5.2	9.2	8.8	17	8.2	9.3
Specialised construction activities	7.1	6.6	7	6.4	6.8	8.3	7.7	7	7.5	7.9
Wholesale and retail trade and repair of motor vehicles and motorcycles	3.0	3.0	15	3.0	3.0	6.0	5.1	15	4.7	5.4
Wholesale trade, except of motor vehicles and motorcycles	5.5	4.5	12	4.6	4.5	7.3	6.8	11	6.3	7.1
Retail trade, except of motor vehicles	5.5	4.8	13	4.9	4.8	6.7	6.5	9	6.3	6.6
Accommodation	16.4	14.4	15	14.3	14.5	17.9	15.4	15	15.8	15.1
Food and beverage service activities	10.7	9.3	11	8.7	9.9	10.2	9.9	8	10.4	9.5
Publishing activities	9.7	6.0	154	0.4	10.5	10.7	9.3	31	7.2	10.9
Motion picture, video and television programme production, sound recording and music publishing activities	14.4	12.6	33	12.4	12.8	16.0	15.7	13	15.1	16.1
Telecommunications	26.2	21.8	24	20.6	22.7	24.6	18.8	19	20.0	17.9
Computer programming, consultancy and related activities	11.4	9.1	21	8.3	9.6	13.3	14.1	15	12.6	15.3
Information service activities	9.9	11.4	16	11.9	11.0	13.0	15.3	15	13.8	16.4
Legal and accounting activities	23.3	17.6	24	14.3	20.2	22.8	20.3	14	18.1	22.1
Activities of head offices, management consultancy activities	14.3	12.7	25	11.1	14.1	22.4	20.7	15	18.3	22.6
Architectural and engineering activities, technical testing and analysis	13.3	12.3	18	12.1	12.5	17.2	16.1	13	15.1	16.8
Scientific research and development	15.0	10.6	39	9.0	11.8	12.7	13.7	23	14.0	13.6
Advertising and market research	9.2	8.9	13	8.9	8.9	12.1	11.6	15	10.4	12.4
Other professional, scientific and technical activities	18.7	15.1	33	13.1	16.6	12.4	15.7	20	15.4	15.9
Rental and leasing activities	25.2	27.8	11	30.2	26.0	27.1	27.8	7	28.2	27.5
Employment activities	3.6	3.2	42	2.7	3.5	6.7	5.8	22	5.4	6.1

Source: Austrian Institute for SME Research, WIFO calculations. *v* . . . Variation coefficient in percent.

The return rates also differ sharply between industries (Table 4). In 2017 (the most recent available data), the turnover-weighted cash-flow ratio in telecommunications (NACE 61), the rental of movable property (NACE 77) and in legal and accounting consultancy activities (NACE 69) was particularly high (as in the previous year). The

² The selection of industries and period are based on the availability and plausability of the data.

lowest return rate estimated by turnover weighting in 2017 can be found in trade in motor vehicles, maintenance and repair of motor vehicles (NACE 45), the placement of workers (NACE 78) and construction of buildings (NACE 41).

A comparison of the weighted and unweighted sample points towards different structures within the industries based on size class. In most of the service industries shown in Table 4, the unweighted cash-flow-to-sales ratio is higher than the turnover-weighted ratio, so smaller companies tend to be more profitable than large ones. This is usually determined by the competitive situation. Thus, niche strategies can enable a higher rate of return, as companies adapt their service offers 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. Higher return rates for smaller companies continued to be observed in the energy supply industry (NACE 35) in 2017, and the unweighted cash-flow-to-sales ratio was almost twice as high as the turnover-weighted value. By contrast, advantages in terms of size appear to exist in other professional, scientific and technical activities (NACE 74), research and development (NACE 72) and telecommunications (NACE 61) (Table 4).

The extent of variation in the rate of return within the industries also differs greatly over time. In part, this can be explained by the high share of sunk costs (*Hölzl – Friesenbichler – Hölzl*, 2014). The coefficient of variation (share of the standard deviation in the mean of the turnover-weighted cash-flow ratio between 2000 and 2017) was by far the highest in publishing (NACE 58) and the lowest in demolition and site preparation, complete construction and parts thereof (NACE 43) (Table 4).

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

3. Appendix: The equity ratio in international comparison

One determinant of earning power is the equipping of companies with equity. The equity capital ratio is – to a greater extent than the cash-flow ratio – a structural indicator. It is determined by company-specific and industry-specific capital intensity and business risk. In addition, the non-neutrality of forms of financing plays a role in international comparison. If corporate financing via bank loans is cheaper for companies than the build-up of equity due to the deductibility of interest payments, this will have an impact on the financial structure of companies.

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 countries³.

In 2016 (the most recent available data), the average equity capital ratio of large Austrian manufacturers was, at 41.8 percent, roughly equivalent to the average of 41.9 percent in the countries of comparison (Table 5). The ratio decreased with the size of the company: for small and medium-sized manufacturers it remained below the international average of 44.4 percent in 2016 at 37.9 percent.

These international comparisons offer rough indications and should be interpreted with caution. Distortions are possible due to deviations in accounting standards, balance sheets, sample sizes and data sources, as well as due to breaks in the time series⁴.

³ Currently, aggregated annual data are available for 13 countries: Austria, Belgium, Czech Republic, Germany, Denmark, Spain, France, Croatia, Italy, Luxembourg, Poland, Portugal and Slovakia. 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 €).

⁴ 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 10 July 2018).

Table 5: International comparison of the equity capital ratio in manufacturing

	Large enterprises			Small and medium-sized enterprises			Medium-sized enterprises			Small enterprises		
	2016	2017	Ø 2000-2016	2016	2017	Ø 2000-2016	2016	2017	Ø 2000-2016	2016	2017	Ø 2000-2016
	As a percentage of absolute balance sheet											
<i>Average values</i>												
Austria ¹	41.8	.	38.8	37.9	.	34.7	39.7	.	36.7	34.5	.	29.6
Belgium	42.4	43.1	43.6	52.4	51.9	46.0	51.7	47.7	44.8	53.2	53.9	46.8
Germany	33.5	32.5	30.8	42.3	42.4	34.6	42.7	42.8	35.7	40.6	40.4	30.6
Denmark ¹	47.5	.	47.6	45.3	.	42.3	47.4	.	41.3	42.9	.	43.1
Spain	40.4	41.4	39.5	49.4	50.0	43.7	50.7	50.6	46.2	48.6	49.5	42.0
France	35.4	38.1	34.9	45.0	44.5	39.6	44.9	44.2	39.0	45.1	45.1	40.4
Italy	43.0	41.9	33.4	35.2	35.9	28.7	39.6	40.0	31.9	30.8	31.7	25.4
Poland	51.0	52.4	50.4	54.4	54.0	50.7	55.2	54.0	51.4	52.9	53.9	49.5
Portugal	41.7	42.5	44.3	37.6	38.9	36.8	46.7	47.7	41.6	31.9	33.3	33.1
Average	41.9	41.7	40.4	44.4	45.4	39.7	46.5	46.7	41.0	42.3	44.0	37.8
<i>Median values</i>												
Austria ¹	40.0	.	37.1	30.6	.	26.2	35.4	.	31.7	29.2	.	24.6
Belgium	40.7	43.5	36.2	38.4	38.7	36.2	41.5	41.7	38.4	38.2	38.4	36.0
Germany	38.4	38.1	31.3	39.2	38.7	28.1	41.1	40.8	31.2	37.1	36.2	25.5
Denmark ¹	43.6	.	40.4	40.1	.	34.0	43.8	.	35.0	39.4	.	33.9
Spain	45.5	46.4	43.0	38.2	39.2	29.6	48.2	49.2	43.0	37.7	38.8	29.1
France	40.5	41.0	35.3	44.8	44.9	37.6	42.2	42.2	36.2	45.3	45.5	37.9
Italy	37.0	36.9	29.7	22.8	23.7	18.9	33.9	34.3	27.3	21.6	22.5	17.8
Poland	50.9	51.5	50.9	55.8	54.6	51.8	53.5	52.2	49.2	56.4	55.4	52.5
Portugal	45.1	44.2	42.4	31.1	32.5	29.3	43.0	44.3	38.5	30.6	32.0	28.8
Average	42.4	43.1	38.5	37.9	38.9	32.4	42.5	43.5	36.7	37.3	38.4	31.8

Q: BACH Data (Banque de France), WIFO calculations. Only countries for which data are available from 2016. Enterprise sizes are defined according to their annual turnover. Size classes: large enterprises . . . over 50 million €, small and medium-sized enterprises . . . less than 50 million €, medium-sized enterprises . . . 10 to 50 million €, small enterprises . . . less than 10 million €. – ¹ Values until 2016.

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