WIFO BULLETIN

No. 11/2018
August 2018

Klaus S. Friesenbichler, Werner Hölzl, Susanne Bärenthaler-Sieber (WIFO), Kerstin Hölzl (Austrian Institute for SME Research)

Cash-Flow-to-Sales Ratio Increased in 2017

Profitability of the Austrian Manufacturing Sector

Cash-Flow-to-Sales Ratio Increased in 2017. Profitability of the Austrian Manufacturing Sector

In 2016, the cash-flow-to-sales ratio of the Austrian manufacturing sector reached an estimated 10.0 percent, a value higher than the previous year's ratio of 9.4 percent. The ratio should have further increased to 11.0 percent in 2017. The rising profitability ratio of manufacturing corresponds with sound economic growth performance of the sector. Its real value-added growth rate amounted to 1.3 percent in 2016 and 6.7 percent in 2017, respectively. According to additional estimates of a dynamic panel-econometric model at the industry level, the cash-flow-to-sales ratio in manufacturing will continue its upward trend in 2018.

Contact:

Klaus S. Friesenbichler: WIFO, 1030 Vienna, Arsenal, Objekt 20, klaus.friesenbichler@wifo.ac.at

Werner Hölzl: WIFO, 1030 Vienna, Arsenal, Objekt 20, werner.hoelzl@wifo.ac.at

Susanne Bärenthaler-Sieber: WIFO, 1030 Vienna, Arsenal, Objekt 20, susanne.baerenthaler-sieber@wifo.ac.at

Kerstin Hölzl: Austrian Institute for SME Research, 1040 Vienna, Gußhausstraße 8, K.Hoelzl@kmuforschung.ac.at

JEL-Codes: L22, L25, M21 • **Keywords:** Cash flow, Profitability, Equity, Austria

The authors thank Gerhard Fiam (OeNB) and Arash Robubi (Austrian Institute for SME Research) for their support.

Referee(s): Michael Peneder (WIFO), Peter Voithofer (Austrian Institute for SME Research) • **Data processing:** Alexandros Charos (WIFO, alexandros.charos@wifo.ac.at), Stefan Weingärtner (WIFO, stefan.weingaertner@wifo.ac.at)

ISSN 1605-4709 • © Austrian Institute of Economic Research 2018
Impressum: Herausgeber: Christoph Badelt • Chefredakteur: Michael Böheim (michael.boeheim@wifo.ac.at) • Redaktionsteam: Tamara Fellinger, Ilse Schulz, Tatjana Weber • Medieninhaber (Verleger) und Redaktion: Österreichisches Institut für Wirtschaftsforschung • 1030 Wien, Arsenal, Objekt 20 • Tel. (+43 1) 798 26 01-0 • Fax (+43 1) 798 93 86 • http://bulletin.wifo.ac.at • Verlags- und Herstellungsort: Wien

A broad cyclical upturn accelerated Austria's growth in 2017, causing the real gross domestic product to increase at the highest rate in six years (2017 +3 percent, 2016 +1.5 percent). Manufacturing benefitted from brisk international and domestic demand for Austrian goods. Here, the dynamics intensified steadily over the course of the year. Overall, at +6.7 percent, the growth of real value added reached its highest point in six years in 2017, following +1.3 percent in 2016 (*Bilek-Steindl et al.,* 2018). According to the WIFO-Konjunkturtest (business cycle survey), the business outlook also steadily improved, with the business surveys yielding long-term highs; throughout the year, the positive assessments outweighed the negative for both the current situation and expectations of future production. The surveys also indicate a high utilisation of production capacities. At 85.5 percent, capacity utilisation in the manufacture of material goods was 3.3 percentage points above the median of the last 15 years by the end of 2017 (*Bilek-Steindl et al.,* 2018).

Despite the broad cyclical upturn, growth in the individual industrial sectors was very heterogeneous. Production value increased the most in metal production and metal processing (+17.9 percent), in the manufacture of computer, electronic and optical products (+12.6 percent), in the manufacture of electrical equipment (+10.9 percent) and in the manufacture of other transport equipment (+10.2 percent) and in the manufacture of basic pharmaceutical products and pharmaceutical preparations (+9.1 percent). The manufacture of textiles (+6.3 percent), manufacture of machinery and equipment (+6.1 percent) and food products (+5.1 percent) achieved growth of more than 5 percent. Despite the good cyclical situation, both domestically and

abroad, industries suffered production losses, such as in the manufacture of wearing apparel (–11.2 percent), printing and reproduction of recorded media (–1.2 percent) and the manufacture of chemicals and chemical products (–0.8 percent; *Bilek-Steindl et al.,* 2018).

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 – Eidenberger,* 2011).

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. 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 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.

The costs relevant for manufacturing again developed favourably in 2017 (Table 1). After an increase across two years, the decline in unit labour costs in 2017 (–2.2 per-

cent) improved the competitiveness of manufacturing. The interest rate on corporate loans remained at a very low level (2017: 2.2 percent). However, industrial raw material prices rose noticeably in 2017 (+19.1 percent compared to the previous year) after having consistently declined during the five preceding years. The real effective exchange rate index rose by 0.8 percent in 2017 compared to the previous year (2016 +1.4 percent).

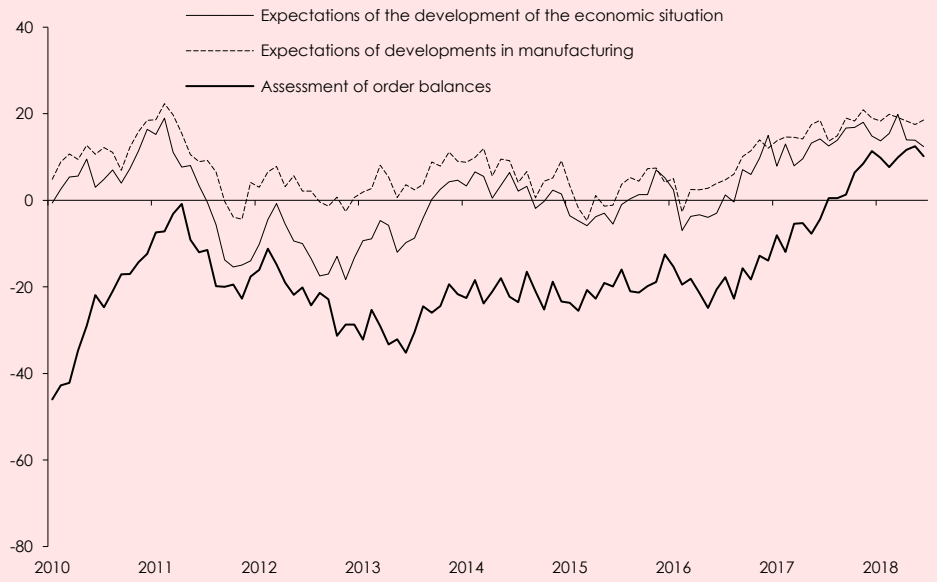
Table 1: Development of cost in manufacturing

	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	94.9	– 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	103.5	– 0.1	2.8	97.6	+ 1.7
2015	83.6	– 5.80	105.0	+ 1.4	2.3	95.3	– 2.4
2016	81.7	– 2.24	107.5	+ 2.3	2.2	96.6	+ 1.4
2017	97.3	+ 19.12	105.0	– 2.2	2.2	97.3	+ 0.8

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

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

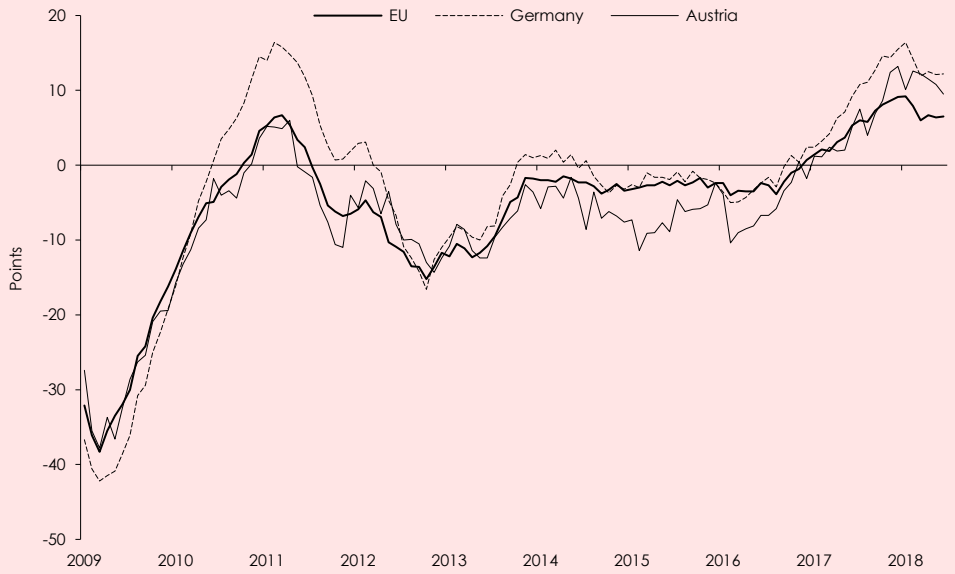
Balance of positive and negative assessments as a percentage of total responses



Source: WIFO-Konjunkturtest.

There are no leading indicators for the development of the earnings position of manufacturing; data are only available with a delay. The cash-flow ratio for 2017 is therefore "projected" and compared to 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 2017, an estimate for 2018 is also calculated.

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



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

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

Estimates for the year 2017 show an increase in the average cash-flow-to-sales ratio of Austrian manufacturers to around 11.0 percent. In 2016, the ratio was already high at 10.0 percent.

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 articles in the WIFO-Monatsberichte (monthly reports) before 2014 is therefore not possible (*Hölzl – Friesenbichler – Hölzl,* 2014).

Due to the change of the industry classification from NACE Rev 1.1 to NACE Rev. 2, the projection is 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), the manufacture of coke and refined petroleum 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 econometric estimates. The econometric estimate for the year 2017 is based on data of the period from 2000 to 2016.

The industries with the highest earnings on average across all companies in 2017 were the manufacture of paper and paper products (NACE 17), the manufacture of basic pharmaceutical products and pharmaceutical preparations (NACE 21) and the manufacture of computer, electronic and optical products (NACE 26). The lowest cash-flow-to-sales ratio was observed in the manufacture of wearing apparel (NACE 14) and the manufacture of furniture (NACE 31).

The 2017 cash-flow ratio was significantly higher than the 2008-2016 average in the manufacture of textiles (NACE 13), the manufacture of paper and paper products (NACE 17) and the manufacture of motor vehicles, trailers and semi-trailers (NACE 29). The cash-flow-to-sales ratio was slightly lower than the long-term average in the manufacture of chemicals and chemical products (NACE 20), manufacture of basic pharmaceutical products and pharmaceutical preparations (NACE 21) and the manufacture of leather and related products (NACE 15).

The different development of returns of the individual sectors is included in the estimate of the synthetic economic indicator based on the information provided by the companies. The heterogeneous effects of changes in the framework conditions can be depicted to a limited extent. The estimated results for the individual sectors should therefore be interpreted with greater caution than the turnover-weighted, aggregated estimate (Figure 3).

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 central explanatory variable is a synthetic business cycle indicator at the industry level (I_{it}, I_{it-1}) on the basis of companies' subjective assessment of business conditions, as provided by the WIFO-Konjunkturtest (business cycle survey). 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):

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

whereby the individual indicators are included as percentages in the calculation. 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:

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

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

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_{it}^2, 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 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 2017 and 2018 using the value of the year 2016.

The estimation results for the period from 2000 to 2016 are presented in Table 2. All explanatory variables, with the exception of the WIFO Business Cycle Indicator, but including fixed industry effects, are significant. The significant parameter of the one-period-lagged cash-flow ratio implies that exogeneous 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.

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

	$\log \pi_{it-1}$	I_{it}	I_{it}^2	$\log SD(\pi_{it-1})$
Coefficient	0.33***	0.19	– 0.02	0.14***
z-value	5.74	0.81	– 0.55	2.84

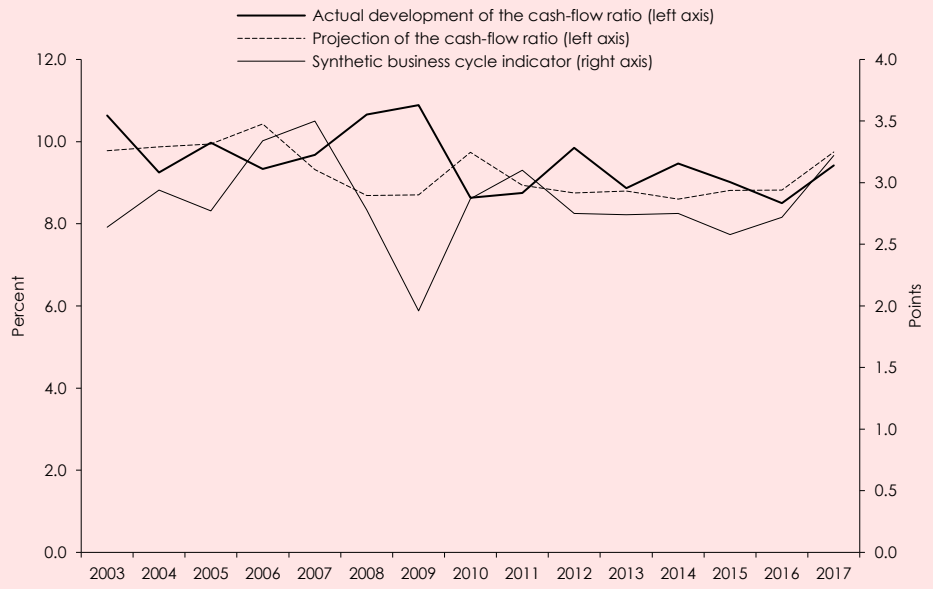
Source: WIFO calculations. Number of observations: 312. π . . . cash-flow ratio, I . . . economic indicator, SD . . . standard deviation within the industry, i . . . industry, t . . . period, *** . . . significant at a 1 percent level.

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

	2012	2013	2014	2015	2016	2017[1]	2017[2]	Ø 2008-2016
	Cash flow as a percentage of sales							
Manufacture of food products	5.9	5.7	5.9	5.6	6.9	6.9	7.1	6.2
Manufacture of beverages	10.2	7.7	8.3	9.8	11.0	12.4	11.0	10.5
Manufacture of textiles	5.2	4.2	6.6	2.6	9.5	5.3	8.2	5.0
Manufacture of wearing apparel	5.0	3.7	5.4	4.5	6.0	2.8	6.0	5.6
Manufacture of leather and related products	9.0	8.6	9.7	10.7	10.5	.	9.9	10.3
Manufacture of wood, weaving, basket and cork products (without furniture)	4.7	6.0	6.4	7.8	8.4	7.2	7.5	6.3
Manufacture of paper and paper products	9.2	8.3	11.1	12.7	12.8	13.5	13.1	10.7
Printing and reproduction of recorded media	7.9	8.2	8.8	9.8	9.5	11.2	10.0	8.8
Manufacture of chemicals and chemical products	11.0	11.1	11.8	12.8	5.0	8.2	10.2	10.8
Manufacture of pharmaceuticals	24.8	16.9	15.9	13.7	12.5	5.7	12.6	13.4
Manufacture of rubber and plastics products	7.7	7.8	8.1	8.3	8.2	12.1	8.8	8.4
Manufacture of other non-metallic mineral products	10.3	9.3	7.9	9.4	10.6	5.8	11.1	9.5
Manufacture of basic metals	8.7	8.6	7.2	8.5	8.6	11.0	9.7	9.0
Manufacture of fabricated metal products	8.9	10.0	8.9	8.9	10.8	9.7	10.9	9.9
Manufacture of computer, electronic and optical products	9.5	9.9	12.2	13.1	10.9	11.7	11.4	10.3
Manufacture of electrical equipment	8.9	9.7	10.6	9.8	9.3	7.0	9.5	9.4
Manufacture of machinery	9.3	10.0	9.5	10.0	9.5	11.8	10.4	9.9
Manufacture of motor vehicles, trailers and semi-trailers	9.8	8.8	8.5	2.8	10.0	7.9	9.6	7.3
Manufacture of furniture	5.7	5.6	4.8	4.9	7.2	8.4	6.8	5.6
Other manufacturing	8.9	9.6	9.2	10.1	10.7	10.3	11.1	9.2
Repair and installation of machinery and equipment	7.2	6.8	6.9	5.8	5.6	5.9	7.1	7.0
Industries considered in the projection, average	8.9	8.4	8.8	8.6	9.2	8.7	9.6	8.7
Manufacture of goods total, volume weighted average	9.5	9.0	8.5	9.4	10.0	10.9	11.0	8.6

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

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: 2016 preliminary values.

In 2017, the average cash-flow ratio was 0.4 percent higher than in the previous year at 9.6 percent, according to the panel-econometric estimates (see the box "A panel-

econometric model for now- and forecasting cash-flow ratios"). This value lies above the average of the years 2008 to 2016, which amounted to 8.7 percent (Table 3).

The turnover-weighted aggregated results of the econometric estimates for 2017 indicate a strong increase in the cash-flow-to-sales ratio; the WIFO forecast for 2017 shows a value of 11.0 percent (+1 percentage point compared to 2016). The preliminary data show an increase in the ratio to 10.9 percent, confirming the WIFO estimate. The overall picture therefore reliably indicates a rise in the ratio in 2017.

The WIFO forecast and the balance sheet data differ in the turnover weighting: the WIFO estimate uses industry-level sales from Statistics Austria's Structural Business Statistics. The weighting of the sample is based on sales as reported in the balance sheets. Therefore, the level is only roughly comparable over the years, which is why in the projection the change rates were applied to the most recently observed realised value (Figure 3).

In addition, two further estimation models were implemented to enable an outlook (forecast) for the year 2018. The first estimation model uses the provisional data for the year 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 2017. The ratio was estimated using a model that extrapolates the standard deviation at the industry level as well as the turnover weighting.

Due to the positive development of the business confidence indicators, these results point towards a persistently above-average, high cash-flow ratio. While the first model projects a stagnation of the ratio in 2018, the second model forecasts a slight increase. However, these estimates should be interpreted with great caution because they are based on provisional values as well as estimates of the industries for 2017 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 2018. As above, the company's assessment of the earnings performance of the individual industries is included in the estimate via 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 varies more within the service industries than within manufacturing. These divergences may be due to differences in economies of scale and intensity of competition.

The cash-flow ratio estimated for select service industries (Table 4)[1] differs from that of manufacturing. For many firms in the service sector, 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).

The return rates also differ sharply among industries (Table 4). In 2016 (the most recent available data), the turnover-weighted cash-flow ratio was particularly high in rental and leasing activities (NACE 77), telecommunications (NACE 61) and in legal and accounting activities (NACE 69). The lowest rate of return estimated by turnover weighting in 2016 can be found in trade in the wholesale and retail trade and repair of motor vehicles and motorcycles (NACE 45), employment activities (NACE 78), wholesales trade, except of motor vehicles and motorcycles (NACE 46) and in retail trade, except of motor vehicles and motorcycles (NACE 47).

A comparison of the weighted and unweighted sample indicates 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 provide a higher rate of return, 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

[1] The selection of industries and periods is oriented towards the availability and plausibillity of the data.

and the pressure of competition if reduced (*Gabler Wirtschaftslexikon,* 2013). Higher return rates for smaller companies can be particularly observed for 2016 in the energy supply industry (NACE 35), and here the unweighted cash-flow-to-sales ratio is more than twice as high as the turnover-weighted value. By contrast, advantages in terms of size appear to exist in telecommunications (NACE 61) and other professional, scientific and technical activities (NACE 74; Table 4).

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

	Turnover-weighted					Unweighted				
	2016	Ø 2000-2017		Ø 2000-2007	Ø 2008-2017	2016	Ø 2000-2017		Ø 2000-2007	Ø 2008-2017
	Cash flow as a percentage of sales		υ	Cash flow as a percentage of sales		Cash flow as a percentage of sales		υ	Cash flow as a percentage of sales	
Electricity, gas, steam and air conditioning supply	12.5	17.3	23	20.4	14.8	31.5	23.4	30	24.8	22.2
Waste collection, treatment and disposal activities	11.3	10.8	12	10.4	11.1	13.0	13.2	10	13.2	13.1
Construction of buildings	5.8	4.9	15	4.6	5.2	6.8	6.2	10	5.8	6.5
Civil engineering	5.9	4.6	16	4.0	5.1	9.3	8.4	16	7.7	8.9
Specialised construction activities	6.5	6.5	7	6.3	6.7	7.8	7.5	7	7.2	7.7
Wholesale and retail trade and repair of motor vehicles and motorcycles	3.1	2.9	13	2.8	2.9	5.8	4.9	17	4.3	5.3
Wholesale trade, except of motor vehicles and motorcycles	4.8	4.4	10	4.5	4.3	7.4	6.6	12	6.0	7.0
Retail trade, except of motor vehicles	5.5	4.9	12	4.9	4.9	6.9	6.1	10	5.8	6.4
Accommodation	17.1	14.4	15	13.9	14.8	18.0	15.1	13	14.9	15.3
Food and beverage service activities	9.9	9.1	12	8.2	9.8	10.3	9.4	9	9.5	9.3
Publishing activities	8.6	8.0	68	4.0	11.1	10.3	9.7	25	7.8	11.2
Motion picture, video and television programme production, sound recording and music publishing activities	11.6	12.5	33	11.2	13.5	15.1	15.2	12	14.4	15.8
Telecommunications	25.5	20.7	29	19.1	21.9	18.3	17.3	13	18.5	16.4
Computer programming, consultancy and related activities	12.2	9.1	21	8.1	10.0	15.1	14.0	15	12.2	15.5
Information service activities	9.9	12.1	25	12.0	12.1	12.9	14.8	16	13.7	15.7
Legal and accounting activities	23.3	18.4	24	15.0	21.1	22.6	21.0	14	18.6	23.0
Activities of head offices, management consultancy activities	14.8	12.6	23	10.9	13.9	22.9	20.6	14	18.3	22.5
Architectural and engineering activities, technical testing and analysis	13.2	12.0	14	11.5	12.5	17.1	15.9	13	14.8	16.8
Scientific research and development	13.6	10.2	35	9.0	11.3	11.8	12.7	20	12.3	12.9
Advertising and market research	10.5	8.9	13	8.9	8.9	12.1	11.4	14	10.4	12.2
Other professional, scientific and technical activities	20.9	14.4	31	12.5	15.9	15.3	15.4	14	14.5	16.1
Rental and leasing activities	26.3	27.8	12	30.4	25.7	28.6	26.9	6	26.8	26.9
Employment activities	3.5	3.0	32	2.8	3.2	6.9	5.7	19	5.4	6.0

Source: Austrian Institute for SME Research, WIFO calculations. 2017: preliminary estimates. υ . . . Variation coefficient in percent.

The extent of variation in the return rate within the industries also differs greatly over time. This can be partly 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) is highest in publishing (NACE 58) and in scientific research and development (NACE 72), and lowest in Specialised construction activities (NACE 43; Table 4).

3. Appendix: the equity ratio in international comparison

Another indicator of financial wealth is a firm's equity. 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 and business risk. In addition, the non-neutrality of different financing forms plays a role in international comparison. If corporate 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 companies.

The analysis of the equity capital ratio is based on the BACH database (Bank for Accounts of Companies Harmonized). This has been published 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 11 countries: Austria, Belgium, Czech Republic, Germany, Denmark, Spain, France, Italy, 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 €).

In 2015, the average equity capital ratio of large Austrian manufacturers (latest available data) was 40.4 percent, slightly below the average of the countries of comparison of 40.6 percent (2016). The ratio decreased with operational size: for small and medium-sized manufacturers it reached 37.0 percent in 2015, remaining well below the current international average of 44.3 percent (2016). 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 deviations in accounting standards, balance sheets, sample sizes and data sources, as well as due to breaks in the time series[2].

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

	Large enterprises		Small and medium-sized enterprises					
			Total		Medium-sized enterprises		Small enterprises	
	Ø 2000-2016	2016	Ø 2000-2016	2016	Ø 2000-2016	2016	Ø 2000-2016	2016
	As a percentage of absolute balance sheet							
Average values								
Austria[1]	38.8	.	34.7	.	36.7	.	29.6	.
Belgium	43.6	.	46.0	.	44.8	.	46.8	.
Czech Republic[1]	51.0	.	49.5	.	50.3	.	48.1	.
Germany	30.8	32.0	34.6	41.9	35.7	42.4	30.6	39.2
Denmark	47.6	.	42.3	.	41.3	.	43.1	.
Spain	39.5	40.4	43.7	49.4	46.2	50.7	42.0	48.6
France	34.9	35.5	39.6	45.0	39.0	44.9	40.4	45.1
Italy	33.4	43.0	28.7	35.2	31.9	39.5	25.4	30.8
Poland	50.4	51.0	50.7	54.4	51.4	55.2	49.5	52.9
Portugal	44.3	41.9	36.8	39.8	41.6	46.9	33.1	35.3
Slovakia[1]	51.7	.	37.0	.	42.7	.	31.6	.
Average	42.4	40.6	40.3	44.3	42.0	46.6	38.2	42.0
Median values								
Austria[1]	37.1	.	26.2	.	31.7	.	24.6	.
Belgium	36.2	.	36.2	.	38.4	.	36.0	.
Germany	31.3	37.9	28.1	38.5	31.2	40.3	25.5	36.6
Denmark	40.4	.	34.0	.	35.0	.	33.9	.
Spain	43.0	45.5	29.6	38.2	43.0	48.2	29.1	37.7
France	35.3	40.5	37.6	44.8	36.2	42.3	37.9	45.3
Italy	29.7	37.0	18.9	22.8	27.3	33.9	17.8	21.6
Poland	50.9	50.9	51.8	55.8	49.2	53.5	52.5	56.4
Portugal	42.4	45.0	29.3	30.4	38.5	43.2	28.8	30.0
Slovakia[1]	37.1	.	25.0	.	40.7	.	24.2	.
Average	38.3	42.8	31.7	38.4	37.1	43.5	31.0	37.9

Source: BACH database (Banque de France), WIFO calculations. – [1] Values until 2015.

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