



KfW Research

## »»» KfW SME Panel 2018

No sign of letting up: SMEs are on a path of growth in Germany and abroad

# Annual analysis of the structure and development of SMEs in Germany

## Imprint

### **Publisher**

KfW Group  
Economics Department  
Palmengartenstrasse 5-9  
60325 Frankfurt/Main  
Phone +49 69 7431-0, Fax +49 69 7431-2944  
[www.kfw.de](http://www.kfw.de)

### **Editor**

KfW Group  
Economics Department  
[research@kfw.de](mailto:research@kfw.de)

Dr Michael Schwartz  
Phone +49 69 7431-8695

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# No sign of letting up: SMEs are on a path of growth in Germany and abroad

## Abstract

Germany's SMEs continue to grow at a fast pace. Small and medium-sized enterprises have become even more important as employers. They have achieved a new employment record and have set their sights on the next one. Turnovers have grown at a rate not seen in years. Consistently high optimism gives reason to hope for continuing high growth momentum in the SME sector. There is no sign of fatigue.

The KfW SME Panel 2018 has revealed that robust domestic growth has combined with rising international sales. International business is growing and turnover outside Europe in particular is up sharply, making a major contribution to growth. This growth is being sustained almost entirely by large manufacturing SMEs. Business with Europe, by contrast, has not continued its upward trend and is unable to provide impetus.

Turnovers are doing very well but obviously not well enough. Profitability has not improved despite growth and profit margins have slipped slightly. Productivity has not benefited from higher turnovers either, dipping slightly. Reserves are building up nevertheless, with equity ratios breaking the next record and exceeding the 31 per cent mark.

The investment upturn is continuing and new investment has grown yet again. This is particularly pronounced among small businesses whose capacity expansions remain on a high level. But the higher investment expenditure is spread out over fewer investing businesses. The result is a heavier concentration of investment spending and investment projects with higher volumes are more common than before.

Credit financing of investments has grown in absolute and relative terms despite falling demand and fewer negotiations. But negotiations have been highly successful, judging by the credit volume. SMEs are also rejecting fewer loan offers. Long-term bank loans were particularly sought-after, especially

by smaller SMEs. But large SMEs' appetite is waning. They are making greater use of their financial buffers and using more of their own funds.

The very good situation in the SME sector will continue in 2018 as well. Momentum for domestic growth will continue, as well as for international business. Businesses will presumably increase their headcount again. Companies are clearly upbeat about the future, which is also an indicator for renewed growth in investment. Borrowing conditions will remain favourable for expansions. Even as the financing climate becomes tougher, SMEs are in the best possible position thanks to record equity levels.

## Jobs in the SME sector have broken through the next barrier

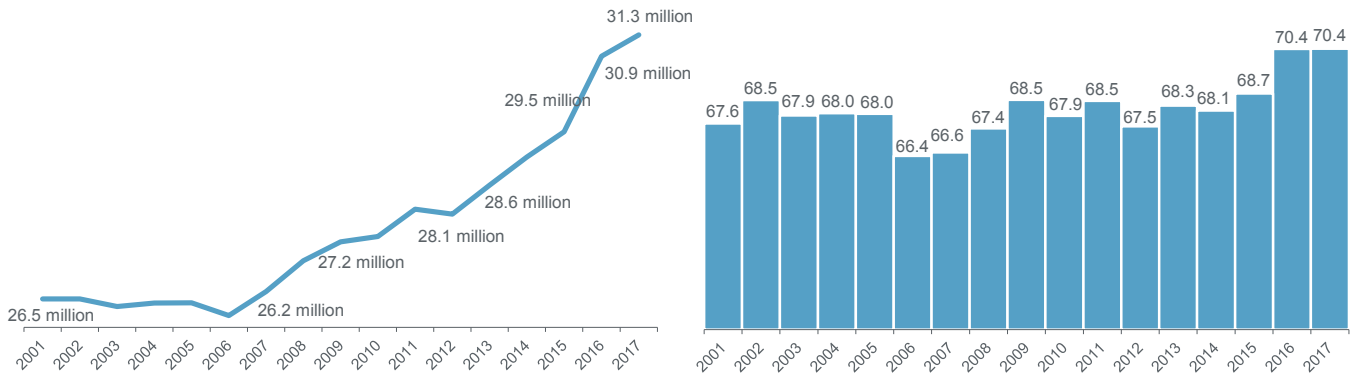
At the moment, employment growth in Germany appears to know no bounds. Employee numbers are growing across the economy as a whole and in the SME sector. The importance of SMEs as employers increased yet again last year. At the end of 2017, 31.3 million people were employed by SMEs in Germany. That was an increase of 418,000 workers or 1.3% on the previous year (Figure 1).

In the aggregate economy, the workforce has now been growing for the past eleven years. At the end of 2017 a total of 44.5 million people were gainfully employed in Germany (also +1.3%).<sup>1</sup> At the heart of this employment growth of past years were small and medium-sized enterprises, which recorded 5 million more employees since 2006. Their share in aggregate employment has grown gradually since then and is now at a high 70.4%, as in the year before.

SMEs accounted for around 71% of the growth of the aggregate workforce by some 590,000 people in 2017. This roughly reflects its relative importance for the labour market overall. Large enterprises and the public sector also recorded the same strong employment growth in 2017 (+1.3% or +170,000 persons).

**Figure 1: Employment in SMEs on a record high**

Persons employed in the SME sector (left) / share of SME sector in aggregate employment in Germany in per cent (right)



Source: KfW SME Panel 2002–2018.

The development of full-time employment has also been continuously positive. The number of full-time jobs grew strongly again last year and maintained the momentum of the previous year. Full-time equivalent employment<sup>2</sup> grew again at an average rate of 2.7%. In 2017 it was particularly other manufacturing SMEs that exhibited a growth surge, while knowledge-intensive service enterprises<sup>3</sup> and R&D-intensive manufacturers stayed on the high level they have maintained for years (Figure 2).

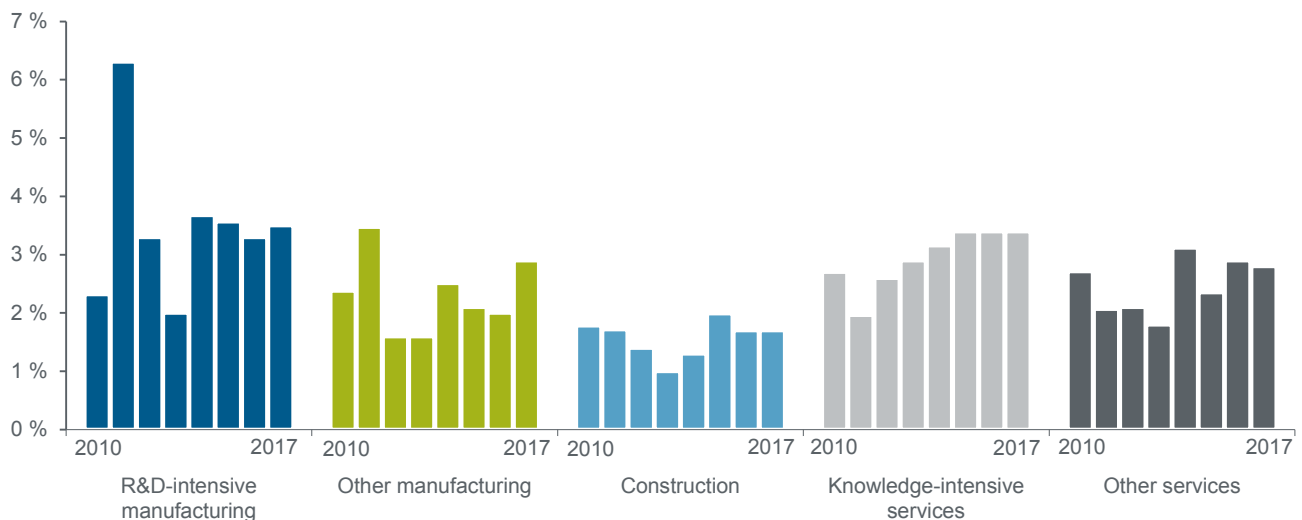
Part-time employment experienced stronger growth in 2017. This has been observable repeatedly in the past years. It grew by 6% year-on-year (after already increasing by 5% in 2015). Full-time employment lost half a percent last year. In a more long-term perspec-

tive it is clearly visible that part-time employment has gained in importance in general. This development is an expression of a general trend in Germany. The number of hours worked is on the decline although employment is growing. This is mainly due to the rising significance of flexible working time models, which SMEs are also embracing.

**SME sector remains the cornerstone of the strong labour market in 2018**

At the end of July 2018, some 44.7 million people in Germany were gainfully employed.<sup>4</sup> That is an increase of 1.3% on the previous year. If the economy can maintain the pace, around 45 million economically active people can be expected by the end of 2018.

**Figure 2: Annual employment growth in SMEs by sector since 2010**



Source: KfW SME Panel 2011–2018.

**Figure 3: Annual employment growth and turnover growth**



Source: KfW SME Panel 2006–2018.

SMEs will continue to make a significant contribution to the upturn. Employment expectations reported by SMEs for 2018 indicate this, as 15% of them want to increase their workforce in the current year. That is a high rate, if slightly below last year’s expectations (2017: 16%; 2016: 17%). This may reflect the level already achieved, making further increases more difficult. Around 10% of SMEs are currently planning to reduce their workforce (identical share in the previous years). On balance, therefore, employment can be expected to grow. SMEs will probably not (yet) break the barrier of 32 million workers but this appears achievable in the medium term.

**Strong domestic demand is showing results: significant growth impetus**

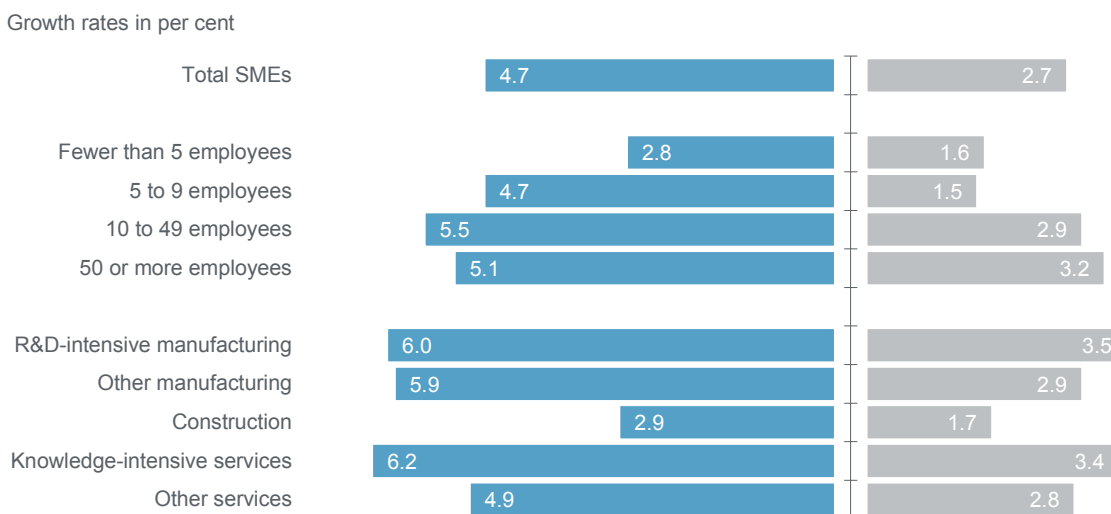
As in employment figures, there is no sign of turnover growth abating either. Germany’s current economic development is being driven primarily by strong domestic demand. For example, private consumption expenditure in 2017 rose by +3.6%, the highest growth rate since 1994.<sup>5</sup> That benefited primarily the more domestically oriented SME sector, which is clearly reflected in the growth momentum of SMEs for 2017.

SME turnovers grew by an average 4.7% year-on-year – the strongest rise in the past six years and a much higher rate than the growth of the aggregate economy (nominal GDP growth in 2017<sup>6</sup>: 3.7%). All segments of the SME sector have benefited from the growth in domestic demand of the past years (see Volume of tables for detailed results<sup>7</sup>). SMEs’ aggregate domestic turnovers are currently at around EUR 4,150 billion, roughly EUR 190 billion above the previous year’s level. The rather more muted growth phases of the post-crisis years, especially between 2012 and 2015, appear to have been overcome.

**Services generate nearly three quarters of turnover**

SMEs from service sectors appear to be benefiting more than average from the current cyclical upturn. Knowledge-intensive service providers in particular are growing. They expanded by 6.2% in 2017, the fastest pace of the past ten years. This has a positive effect on the overall development of the SME sector as 38% of all SMEs, or around 1.4 million businesses, belong to this segment.

**Figure 4: SME turnover (left) and employment growth (right) by segment**



Source: KfW SME Panel 2018.

From a sector perspective, services generally have high economic weight, and it is growing continuously as sectoral transformation progresses. A range of factors is responsible for the steady shift of economic activity towards services. One factor that plays a role is businesses' outsourcing or contracting of previously internal services to third-party companies (for example, IT maintenance, data storage, personnel recruitment, legal affairs and taxation). These decisions are mainly based on considerations surrounding cost-effectiveness, specialisation and division of tasks. Second, other structural developments have created an increased demand for services for some time now (driven by factors such as demographic change and the growing share of smaller households, for example).

Thus, the relative importance of services in the SME sector increased again slightly in 2017. The heavily domestically-oriented service enterprises contribute some 73 % to the overall turnover of all SMEs of some EUR 4,700 billion (+1 percentage point) – with 92 % of this turnover generated within Germany. Manufacturing SMEs are more internationally oriented. They contribute 21 % to total turnover, 69% of which in Germany.

**The future is looking bright, with no end in sight for record-breaking growth**

SMEs can be expected to continue growing at a high and possibly even higher rate in the medium term as the enduring optimism of the past years remains

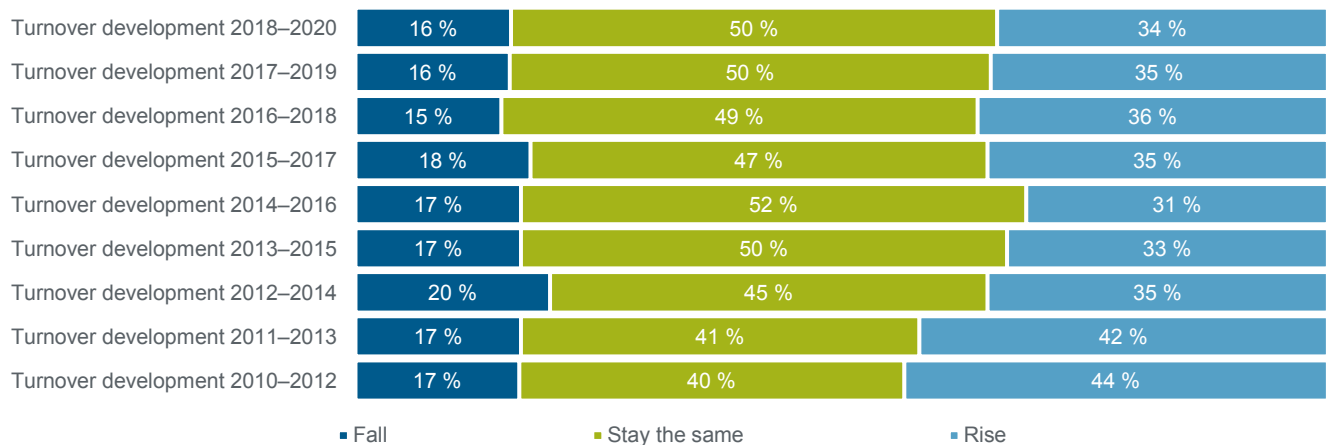
steady. SMEs' expectations up to the year 2020 illustrate this (Figure 5), indicating a stable and positive outlook on future business. Significantly more SMEs expect their turnover to rise (34 %) than to fall (16 %). Further early indicators of the development of SMEs' turnover corroborate the expectation that turnover will continue growing as the year progresses.<sup>8</sup>

**Vigorous increase in international business in 2017**

After two relatively restrained years, SMEs' international business was again a strong pillar of business success in 2017. International turnover grew to EUR 577 billion, up by EUR 30 billion on the previous year. It fell short of the almost EUR 600 billion achieved in the years 2011/2012. But there are strong signals that internationalisation has emerged from its trough (around EUR 547 billion in 2015 and 2016).

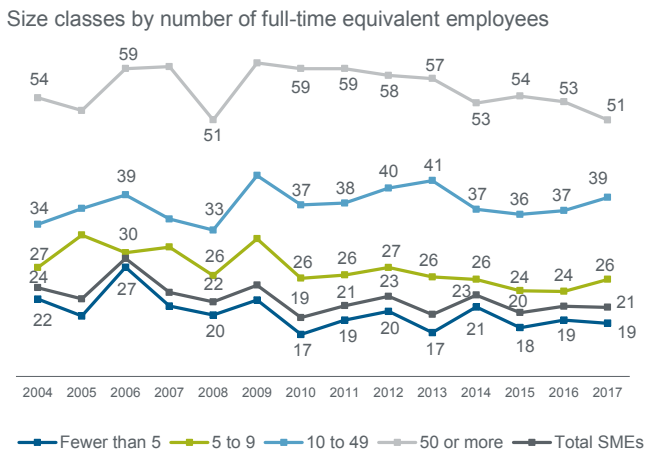
Overall, 21% of SMEs again generated turnover outside Germany. That was some 780,000 enterprises, an increase by around 80,000 enterprises on the previous year. The share of international business in total turnover also grew noticeably by 1.2 percentage points. On average, the share of international business in SMEs with foreign operations amounted to 28.6 % of their total turnover (Figure 7). This indicator also suggests that internationalisation activities are recovering further and well on their way back to their former record highs: In the years 2011/2012, for example, they generated nearly 30 % of their turnover outside Germany.

**Figure 5: Turnover expectations in the SME sector**



Source: KfW SME Panel 2010–2018.

**Figure 6: Share of enterprises with international business**



Source: KfW SME Panel 2005–2018.

**SME sector grew slightly below average but their international business continues to grow**

Despite the relatively strong growth in international turnover of 5.2 %, SMEs could not quite keep up with the growth of total German exports in 2017 either. Aggregate exports grew by 6.3 % to EUR 1,279 billion in 2017 (2016: EUR 1,203 billion).<sup>9</sup>

SMEs accounted for around 41 % (EUR 30 billion) of this additional EUR 76 billion in export turnover last year. That is a good share by SME standards. Nevertheless, the share of SMEs in aggregate exports still remains a ‘meagre’ 45 % (after more than 53 % five years ago). Irrespective of the strong year, SMEs again failed to gain more ground – nor are they falling behind, however. The same can be said of the international share in SMEs’ total turnover. It has hardly changed

and remains at a relatively low 12 %.

SMEs’ international business can be expected to continue growing this year, albeit at a more muted pace. Roughly half of this year’s growth appears realistic, as indicated by data on Germany’s total exports. Through June 2018 the value of exported goods increased by some 4 % compared with the same period last year.<sup>10</sup> The growth rate achieved by the same time last year was 8 %.<sup>11</sup> SMEs should be able to grow their international business by some EUR 10 billion to EUR 15 billion. The conditions for this are still good.

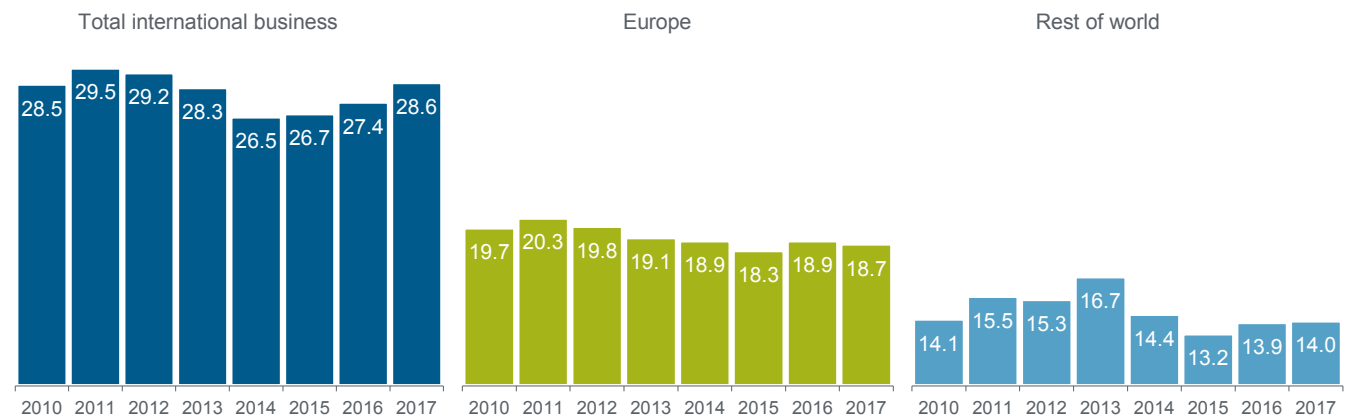
**Large and manufacturing SMEs have picked up**

The current growth of turnover achieved outside Germany is being sustained almost entirely by two groups of enterprises: large and manufacturing SMEs. With their relatively high presence in international markets, these segments generally shape the SME sector’s international business. They traditionally have a strong foothold in international markets. The share of large SMEs with 50 and more employees that conduct international business is 51 % and that of manufacturers is 39 %.

In terms of size class, large SMEs account for less than 2 % of the SME sector. Nevertheless, in 2017 this group of enterprises accounted for the lion’s share of all international turnover, with EUR 364 billion. competitiveness of SMEs and the German business sector overall. Most recently, these SMEs’ turnover grew by EUR 17 billion. Despite the high turnover it is striking that the share of firms with international business among large SMEs has dropped again slightly.

**Figure 7: Share of foreign turnover in overall turnover (total and by region)**

In per cent; enterprises with international business only



Note: The values shown refer exclusively to those enterprises that generated international turnover in the corresponding regions. The individual figures for ‘Europe’ and ‘Rest of world’ therefore do not add up to ‘Total international business’.

Source: KfW SME Panel 2011–2018.

That means large SMEs combined currently account for a share of 63 % of SMEs' total international turnover. They are therefore key to the international A sectoral breakdown also reveals similar dominance. In 2017, manufacturing firms were responsible for EUR 297 billion, or 51 %, of SMEs' total international turnover. Both subsegments – R&D-intensive manufacturing<sup>12</sup> and other manufacturing – equally contributed to international growth, adding around EUR 10 billion each.

**Surprising turnover growth outside Europe**

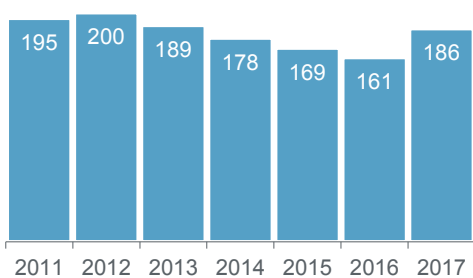
The increase in international business is attributable to a trend reversal in SME turnovers in sales markets outside Europe (Figure 8). Last year SMEs generated 16 % more turnover outside Europe. The volume was EUR 186 billion, a EUR 25 billion increase.<sup>13</sup> Turnovers in markets outside Europe had previously fallen for four consecutive years.

The year-on-year growth is almost exclusively the result of turnover increases achieved by larger SMEs and manufacturing SMEs. Roughly 8 % of all SMEs achieve turnover in markets outside Europe. The average share of international turnover in total turnover in these enterprises is 14 % (Figure 7).

This development could not necessarily be expected because conditions for international trade were becoming more difficult in some places (without a doubt, mainly the increasingly protectionist strategy of the US administration). This suggests that so far small and medium-sized enterprises are neither concerned by the transatlantic (US-European) nor the transpacific (Sino-American) trade conflicts. The risks these pose for SMEs currently appear to be rather minor. Furthermore, the trade conflicts are more likely to create disadvantages for large enterprises by disrupting their value chains. Small and medium-sized enterprises could even gain market share from the mutual blockade between the US and China.

**Figure 8: Sales outside Europe**

Turnover outside Europe in EUR bn



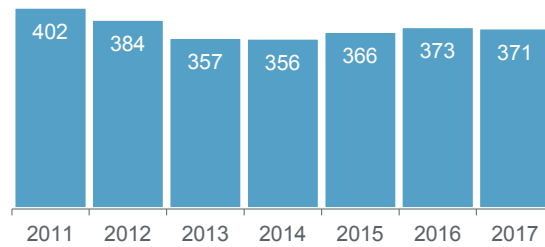
Source: KfW SME Panel 2012–2018.

**Recovery in Europe is taking a (short) breather**

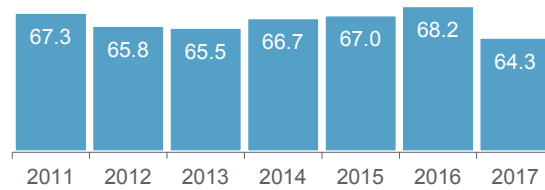
By contrast, SMEs were unable to maintain the upward trend of the past years in their European business (Figure 9). SMEs' turnovers in European markets fell slightly by EUR 2 billion (-0.5 %) to EUR 371 billion. Some 19 % of SMEs were active in European markets, generating an average turnover share from this business of 18.7 % (2016: 18.9 %).

**Figure 9: Importance of European turnover in the SME sector**

Turnover in Europe in EUR bn



Turnover in Europe in total foreign turnover in per cent



Source: KfW SME Panel 2012–2018.

Impetus from Europe was stable at best for SMEs. But the variations are marginal. At the same time, business in 'the rest of the world' improved significantly. The importance of Europe for enterprises' overall international business has fallen on balance as a result of the current sideways movement. The European share in international turnover fell from 68 to 64 %.

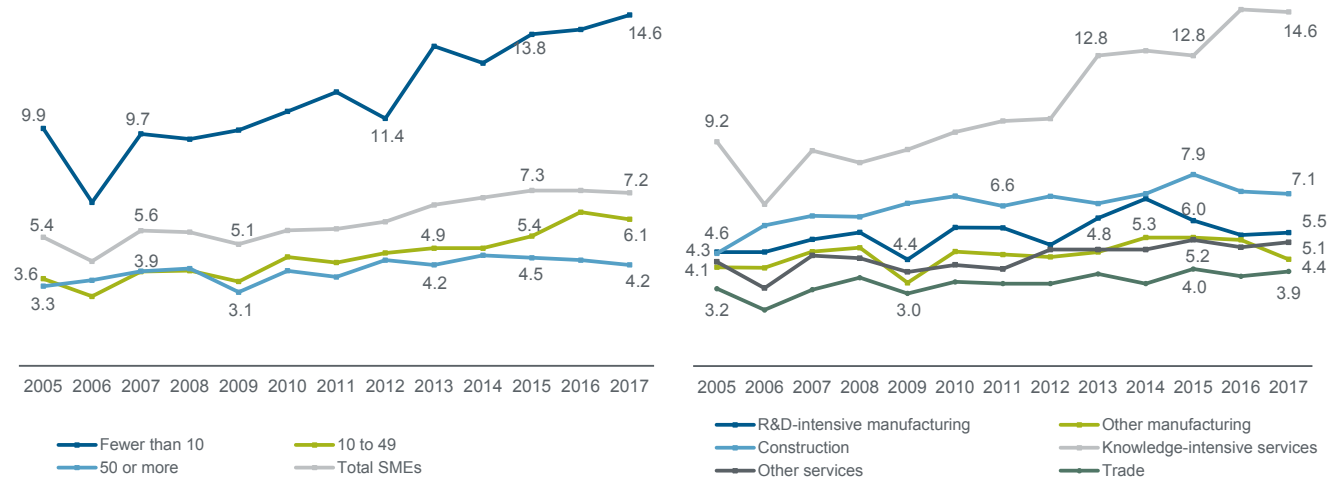
**Despite growth on a broad front, profitability has stagnated**

SMEs' profitability fell slightly in 2017 (Figure 10). Their average profit margin<sup>14</sup> dropped for the first time in eight years. The strong turnover growth did nothing to change this either. The moderate 0.1 percentage point decline in profit margin to now 7.2 %, however, is not (yet) a cause for concern. Companies did not succeed in increasing their profit margin in the previous year either, which means profitability has been nearly constant since 2015. But it continues on a sound level overall, having increased by around one third in the past 12 years (+1.8 percentage points).



**Figure 10: SME profit margins by size class (left) and industry (right)**

Size class by number of full-time equivalent employees, figures in per cent



Source: KfW SME Panel 2006–2018.

And at 60%, more SMEs reported relatively high profitability (in excess of 10%) than in the previous year (+1 percentage point), whereas in 2006 it was a low 43%. At the same time, the share of SMEs generating negative profit margins dropped year-on-year by one percentage point to 9%. In 2009 the proportion of SMEs with negative profit margins was still 16%.

### Large SMEs have an ongoing problem with profit margins

Large SMEs' profits again failed to keep up with their good turnover growth rates in 2017. SMEs with 50 and more employees experienced falling average profit margins for the third consecutive year. This segment has lost a cumulative 0.4 percentage points in average profits since 2014. Medium-sized enterprises with 10 to 49 employees also recorded decreases. They were able to maintain a very high level, however. In a sector comparison, this trend also applies to manufacturers and knowledge-intensive service providers.

One factor that may play a role in this development is that firms in these segments in particular increased their headcount at an above-average rate in the past year (see Volume of tables). That may have involved a disproportionately high increase in human resources expenditure. Also conceivable are increased costs of materials (consumables, machines, etc.) or an inadequate price development.

Small businesses saw an opposing development. Their average profit margin grew to 14.6%. As a result, the gap in profit margin between small businesses and

larger SMEs widened to more than 10 percentage points for the first time since the KfW SME Panel was first surveyed. Small businesses are currently around 3.5 times more profitable than large SMEs. But this is also a necessity because small businesses cannot benefit from economies of scale. Many of them are niche players that sell rather small batch sizes.

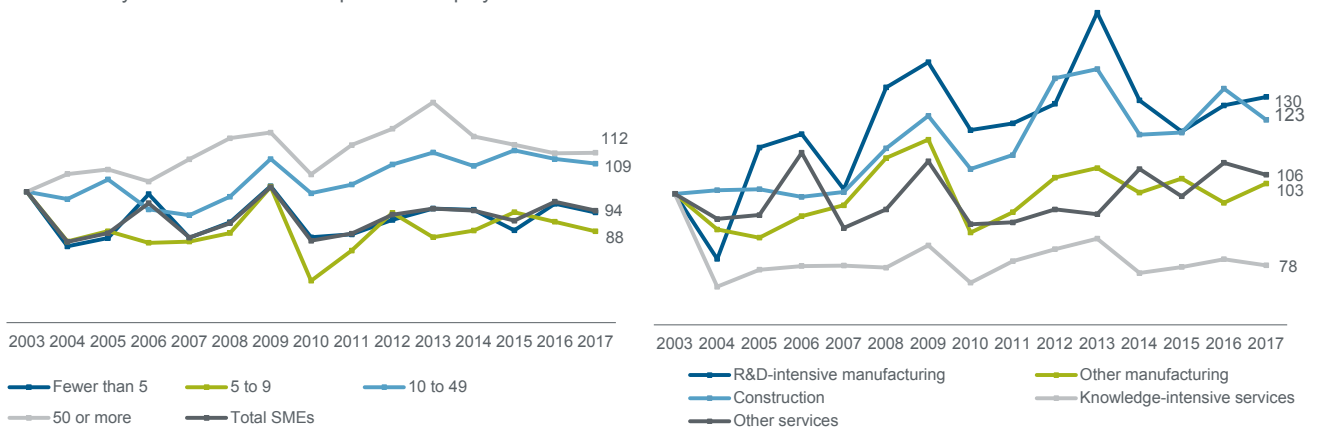
### Productivity continues on a zigzag course

Just as with profitability, SMEs' labour productivity<sup>15</sup> has lately failed to benefit from the achieved turnover growth. Turnover per full-time equivalent employee fell by around 3% in 2017. This equals a decline of around EUR 3,000 to EUR 124,000 in average turnover per FTE employee (long-term average since 2003: EUR 120,000). The labour productivity rollercoaster thus continues. What would be required instead would be continuous productivity growth across a longer period of time in order to maintain business growth and competitiveness on a permanently high level. So far, this continuity has been lacking.

KfW Research has demonstrated that the causes lie in the shift in sector structure and lack of intra-sector productivity growth.<sup>16</sup> The latter, in particular, requires economic-policy stimulus, namely in the form of an investment-friendly environment as well as suitable and adequate financing offers. The accumulation of ICT capital and digitalisation should be a focal area. Technological progress and efficiency enhancements should be promoted through product and process innovations, especially in the service sector.

**Figure 11: SME productivity by size class (left) and sector (right)**

Size classes by number of full-time equivalent employees



Notes: The figure shows indexed values (2003=100) of labour productivity (turnover per full-time equivalent employee), missing data on turnover and employees were imputed.

Source: KfW SME Panel 2004–2018.

The current development means the following for the year 2017, expressed in index points (Figure 11): against the base year 2003 (= 100 index points), SMEs achieved 94 index points on average. It is mainly the more productive manufacturing enterprises that have prevented the index from dropping even further. Both manufacturing sub-sectors gained three index points.

Even so, large SMEs with 50 and more employees maintained a steady productivity level. After three consecutive years with sometimes significant declines, halting this trend is a positive sign.

All other segments observed had lower productivity year-on-year. This includes micro-businesses which dominate the SME sector in absolute numbers. Their labour productivity fell by two index points (to 94). The consequence was that the structural productivity gap<sup>17</sup> between large and small SMEs widened slightly to 31%. In other words, in 2017 micro-businesses' labour productivity was 69% of that of large SMEs.

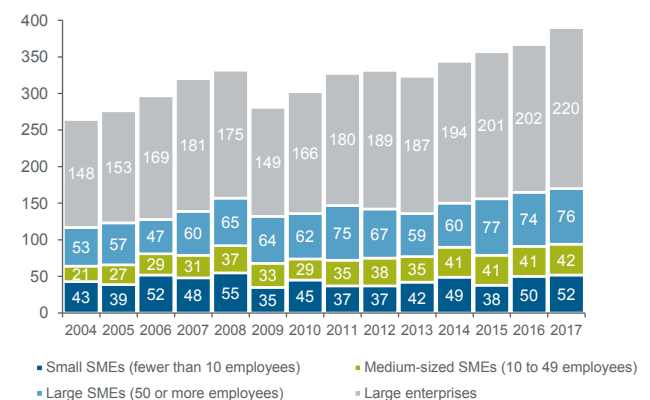
**The trend is consolidating: new investment is growing and enterprises are expanding capacities**  
SMEs' investments gained momentum again in the year 2017 (Figure 12). With the fourth consecutive rise, investment in **new** plant, equipment and buildings (gross fixed capital formation or new investment) reached a volume of EUR 176 billion. That was EUR 7 billion or 4% more than in the previous year and the highest value reported by SMEs since 2004. Investment in **second-hand** goods remained on the

previous year's level, at EUR 35 billion. **Aggregate investment volume** thus increased by the growth in new investment in 2017, amounting to a nominal EUR 211 billion (+EUR 7 billion or +3.4%).

As in the previous year, investment growth in the SME sector was probably the result of the continuing high share of expansion investment (Figure 13). This continues at an historically high rate of 57%.

**Figure 12: New investment in the corporate sector in Germany**

EUR in billions; size class by number of full-time equivalent employees

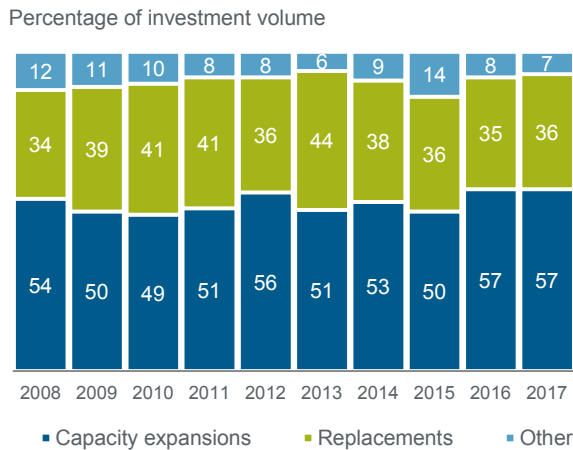


Note: The extrapolation by employment size class of SMEs does not include companies from other sectors. Consequently, the individual data on new investment undertaken by the SME size classes do not add up to the total sum of new investment (gross fixed capital formation) shown in the text.

Sources: KfW SME Panel 2005–2018; national accounts.

From past analyses we know that capacity expansion means two and a half to three times higher aggregate investment than in the case of replacement investment only (Figure 14). This lever can be seen accordingly in the rates of the year 2017. The high share of replacement investment generally reflects enterprises' continuing strong faith in a good cyclical situation along with positive sales expectations.

**Figure 13: Types of investment in the SME sector**



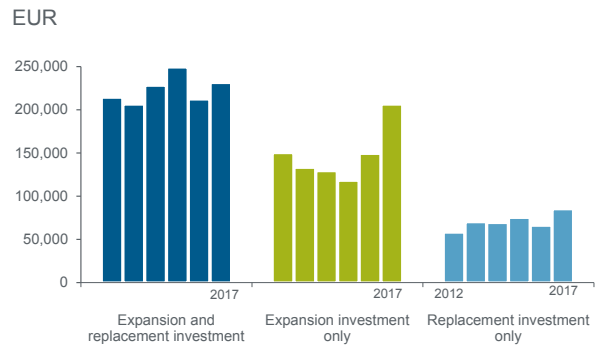
Note: The category 'Other' comprises, inter alia, innovation, rationalisation, renovation, restructuring and repairs.

Source: KfW SME Panel 2009–2018.

One result of the segment analysis stands out. In the past year, micro-businesses with fewer than five employees in particular significantly expanded their new investment volume by one fourth (+EUR 8 billion to EUR 42 billion). Investment intensity (investment

volume per FTE employee) in this segment thus rose by 11 % to a high EUR 9,150. Across the SME sector as a whole, the average is EUR 8,200.

**Figure 14: Average investment volume by type of investment**



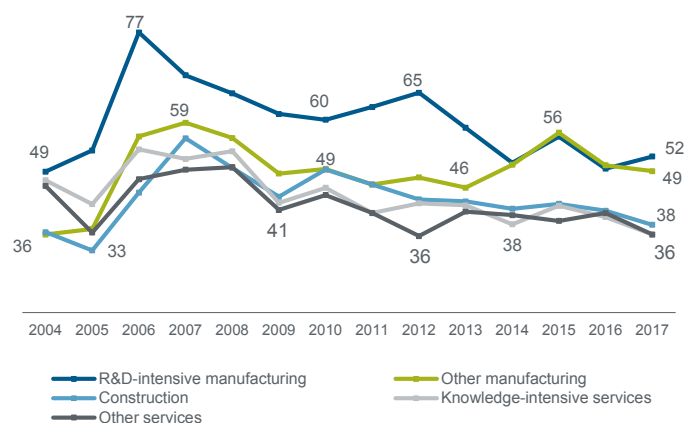
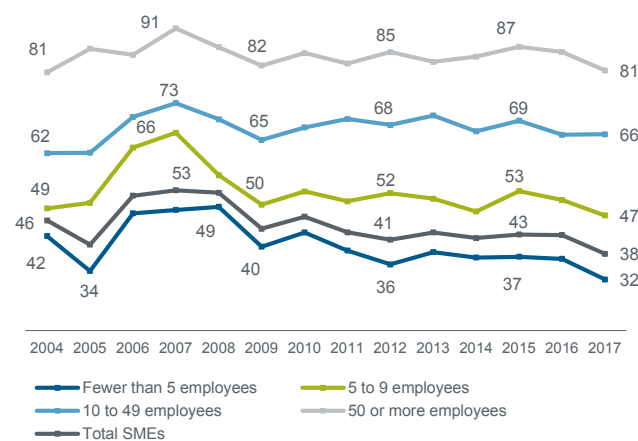
Source: KfW SME Panel 2013–2018.

**Growing investment volume is spread out across fewer investors, with more large-scale projects**

Unlike investment expenditure, the number of investors has not risen. On the contrary: the higher investment expenditure is spread out across significantly fewer enterprises than before (Figure 15). The investment appetite – i.e. the share of SMEs with investment projects – dropped in nearly all SME segments in a year-on-year comparison. The share of SME investors overall fell by four percentage points to 38 % in 2017. This means just over 1.4 million SMEs invested – around 100,000 enterprises fewer than in the previous years. Even the generally more investment-prone large SMEs were more restrained, with the share of investors decreasing by four percentage points to 81 %.

**Figure 15: Share of SMEs with investments by size class (left) and industry (right)**

Size classes by number of full-time equivalent employees



Source: KfW SME Panel 2005–2018.

Investment efforts in the SME sector were thus concentrated on a smaller pool of enterprises. This also means that the remaining investors used higher volumes of funds. The average amount invested by SMEs has grown. Enterprises (with completed investment project) invested EUR 150,000 on average. That was 14 % or EUR 18,000 more than in the previous year. The median value has also increased, as half the investment projects in 2017 had a volume of under EUR 30,000 (+EUR 5,000). This shows that although SMEs' investment projects usually had a rather measurable volume, SMEs recently initiated an above-average number of large-scale projects. Outlook for 2018: Domestic demand and the boom phase continue to stimulate investment – digitalisation is becoming a driving force

SMEs are likely to continue investing more in 2018 as well. KfW Research currently expects aggregate business investment to continue growing at a very positive rate. A plus of around 4 % appears within reach. This, in turn, gives reason to hope that new SME investment will grow by around EUR 7 billion.

The positive outlook is being further bolstered by the results of the annual representative additional survey to the KfW SME Panel 2018 (see explanatory notes at the end of the report). It has revealed that 20 % of SMEs

will invest more this year than the previous year. By contrast, only 15 % of SMEs expect to invest less. The overwhelming majority of SMEs (64 %) expects a more or less stable investment volume. The balance between those that plan to increase and reduce investment thus remains slightly positive (+5 %), as it did in the past years.

It is again the continuing strong domestic demand that is stimulating investment (Figure 16). Of those SMEs that plan to invest more in 2018, 56 % are motivated by growing turnovers. Expanding their sales region within Germany is a driver for roughly one in five enterprises (19%), slightly less than in the previous year but still a high percentage. This is supported by SMEs' exceedingly optimistic view of the business cycle, with 29 % of SMEs investing more because they expect positive aggregate economic growth. That share has nearly doubled within a year.

The fact that digitalisation holds investment potential for SMEs is illustrated by the high rate of 39 % of SMEs planning to increase investment in 2018 by expanding their digitalisation activities. As digitalisation is very important for growth, productivity and competitiveness, it can be expected to continue playing a growing role overall in SMEs' investment behaviour.

**Figure 16: Main reasons for increasing investment in 2018**

In per cent; only enterprises with expansion plans compared to the previous year



Note: Multiple answers were possible. Selection of three main reasons given by the enterprise. \*Category 'expand digitalisation' was added in the survey year 2018.

Source: KfW SME Panel 2018 (additional survey September 2018).

What is noteworthy is the renewed increase in the share of SMEs investing more because they require replacements (52%). This can be regarded as a strong indication that the investments put off during the rather more restrained years will now (have to) be undertaken.

### Net investment is growing

Strong growth in new investment, as well as a slightly lower loss in the value of capital stock (depreciation volume EUR 119 billion), is also leading to an increase in net investment. This was EUR 57 billion higher in the SME sector in 2017.<sup>18</sup> The ratio of new investment volume to depreciation is on a very healthy level of 148%.

Large-scale enterprises also changed their recently more cautious investment behaviour and invested more in 2017. Their new investment increased by EUR 8 billion or 4% to now EUR 219 billion. Large enterprises' net investment, however, is still in negative territory, at EUR 18 billion (see Volume of Tables (German only) for details on this thematic complex).

Taken together, aggregate gross fixed capital formation<sup>19</sup> of enterprises in Germany grew from approximately EUR 380 billion to EUR 395 billion. The share of SMEs is thus 44.5%. The aggregate capital stock of the enterprise sector in Germany is in positive territory, at EUR 39 billion.<sup>20</sup>

### Has SMEs' credit demand passed the zenith?

SMEs' demand for credit for investment has decreased. In 2017 the volume of debt capital initially planned by SMEs was around EUR 124 billion (Figure 17). This represents a contraction in the volume of demand by EUR 10 billion or around 7% year-on-year. SMEs' credit demand fell for the last time in 2011. Since then the volume has increased steadily. Lately, however, the momentum has begun to flatten out. But in a longer-term comparison the current level remains above average (mean volume since 2005: EUR 121 billion).

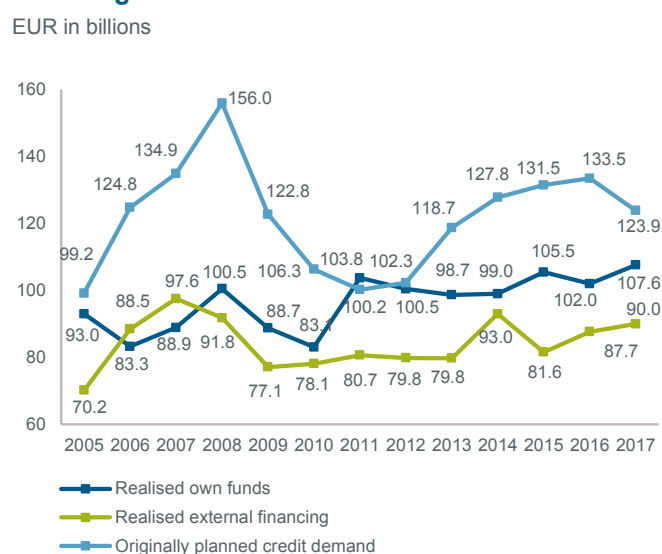
The decline in absolute credit demand is also an expression of a subdued willingness to negotiate loans. Overall, some 480,000 SMEs conducted negotiations with banks and savings banks on investment loans in 2017. That was around 13% of all SMEs (-1 percentage points, or roughly 40,000 enterprises), marking the lowest number in absolute terms since 2013.

### Average volume has also fallen

The ticket size has decreased slightly as well. The average loan amount requested in 2017 was about 4%

lower than in the previous year, dipping to around EUR 288,000 (2016: EUR 301,000). This amount, however, is still very high. Demand for medium-sized volumes between EUR 100,000 and EUR 250,000 in particular decreased (Figure 18). In contrast, 5% more SMEs requested loan volumes between EUR 50,000 and EUR 100,000. Very small loan volumes (up to EUR 20,000) also dropped further, with 18% of all SMEs requesting loans applying for funds in this order of magnitude. In 2010 that share was nearly three times as high. Half of all SMEs requiring credit apply for not more than EUR 60,000 (median value).

**Figure 17: Initial borrowing demand and realised financing volume**



Note: Volumes extrapolated from the number of employees. Extrapolations include other sectors. It must be taken into account that the initially planned borrowing requirements are almost never fully realised. Plan revisions due to changed business strategies must be taken into account above all. SMEs' actual demand for credit is therefore lower. Details of the analytical treatment in the context of the KfW SME Panel can be found in Reize (2011).

Source: KfW SME Panel 2006–2018.

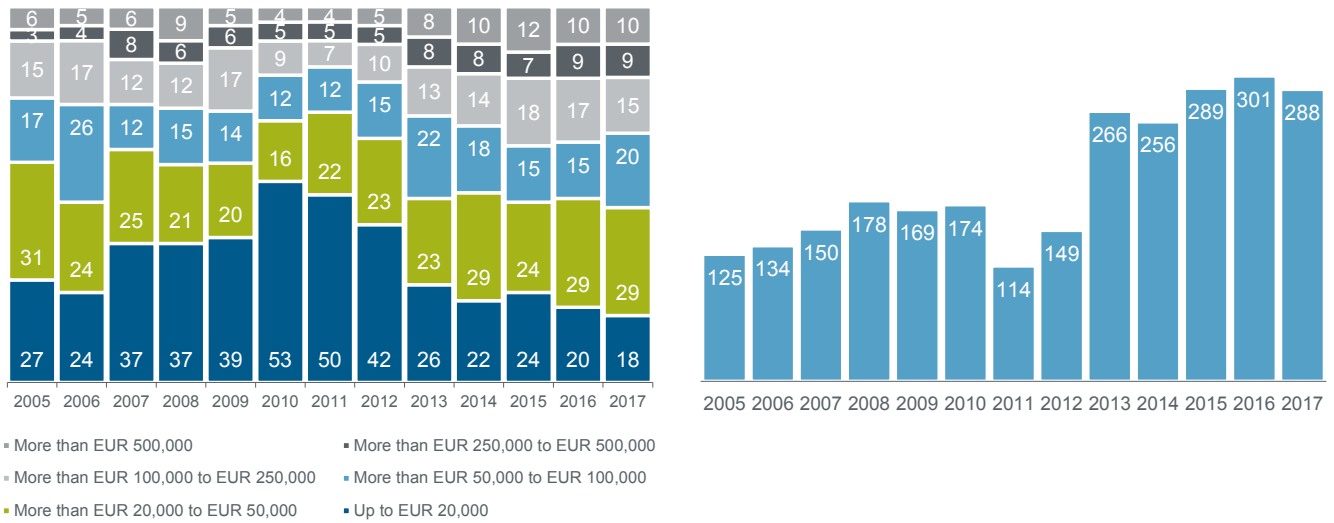
### Large SMEs' appetite for loans is decreasing – fewer applicants and lower volumes

The development of credit demand in 2017 was shaped by the fact that, with the exception of micro-businesses with fewer than five employees, SMEs of all size classes applied for less credit. In the past years, large SMEs in particular took advantage of the favourable financing environment and contributed to the growth of SME credit demand. That trend has now been broken.

The incentive to finance investment with credit thus appears to have increased only among micro-enterprises last year. For example, the share of enterprises that negotiated loans in this size class increased by three percentage points to 33%. At the same time,

**Figure 18: SMEs' borrowing demand**

Links: SMEs with relevant credit demand in per cent; right: average credit demand in EUR thousands



Source: KfW SME Panel 2006–2018.

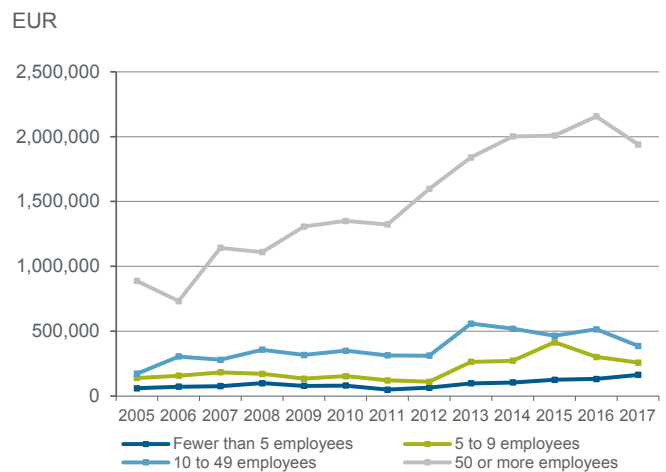
large SMEs with 50 and more employees conducted five percentage points fewer loan negotiations (35%). That means enterprises that demand higher credit volumes tended to stay away from loan negotiations. Businesses that tend to request lower average loan amounts, on the other hand, were more likely to approach lenders. That reduced aggregate demand.

In addition to this rather structural shift that occurred in the course of the year, there was a second effect that reduced demand for credit in 2017. The average ticket size requested grew only among micro-businesses (Figure 19). SMEs of all other size classes, by contrast, scaled back their volumes considerably.

Declines become visible particularly in enterprises with 10 or more employees. SMEs in these segments request EUR 200,000 less debt capital on average for investment projects. That represents a decline by 25 or 10%. In other words, large SMEs did not just apply for fewer loans. On average, they also requested lower amounts.

This trend can also be identified in very large-volume loans of at least EUR 1 million. Some EUR 68 billion was made available in loans of this size in the year 2017. That was EUR 9 billion less than in the previous year. The share of large-volume loans in SMEs' total credit demand was three percentage points lower (55%). In large-volume loans, the average amount applied for also fell (-EUR 400,000 to EUR 2.3 million).

**Figure 19: Average credit demand by size class**



Source: KfW SME Panel 2006–2018.

However, it must be taken into account in general that SMEs ultimately never fully realise their initial plans to apply for credit or debt capital. This is primarily due to the fact that they modify their investment and financing plans in the course of the year. The loan negotiations often reveal that they need to borrow less than they initially estimated. The amount of credit or debt capital ultimately needed for investment projects is therefore always lower than planned.

**Investment finance: SMEs secure long-term bank loans**

The volume of borrowed funds which SMEs ultimately used to finance investments was EUR 90 billion (Figure 17). Of this volume, promotional funds accounted for around EUR 25 billion (12% of the investment volume). The lion's share came from investment loans from banks and savings banks.

Specifically in the past year, SMEs shouldered a large portion of the additional investment volume by borrowing more, for which the conditions were favourable. The volume of bank loans used by SMEs to finance investments rose to EUR 65 billion (+EUR 4 billion, or +7%). The share of loans in the financing volume increased to 31 %.

In the past year, that growth was generated exclusively by **long-term** bank loans with maturities in excess of five years. This indicates that a number of SMEs want to benefit from favourable borrowing conditions while they last. Enterprises may be expecting rising interest rates to make borrowing more costly in the future. This development comes as no surprise, as estimates by KfW Research indicate that new lending by German banks to domestic enterprises and self-employed persons grew by the same rate in 2017 (+5%).<sup>21</sup> New loans in particular with maturities exceeding five years were in much greater demand than before, increasing by 11 % on 2016. This is also reflected in the SME sector.

In the past, SMEs' credit financing was usually made up of short-term and long-term bank loans in roughly equal portions. This ratio shifted moderately last year. Short-term bank loans remained close to their long-term average. Their share in investment volume was steady at 14 %, or EUR 29 billion. Long-term loans, however, rose to the highest level since 2007. Their share in aggregate investment volume grew by +2 percentage points to 17 % and is now at EUR 36 billion. SMEs of smaller size classes in particular are applying for long-term bank loans. The shares of long-term bank loans in financing volume rose by one to six percentage points, depending on the size class. Firms with 5 to 9 employees exhibited the highest share (23 %).

Large SMEs with 50 or more employees, in turn, limited their debt financing. This is consistent with the decrease in credit demand in this segment. The share of bank loans in financing volume fell by four percentage points (Figure 20). Long-term bank loans in particular fell by three percentage points (from 18 to 15 % year-on-year).

At the same time, service providers above all increased their debt financing share. The debt financing share increased by three percentage points in both sub-segments. Service providers are traditionally more focused on debt financing. Bank liabilities typically represent around two thirds of all their liabilities.<sup>22</sup> Other funding sources (e.g. private equity or mezzanine capital) accounted for a share of 6 %.

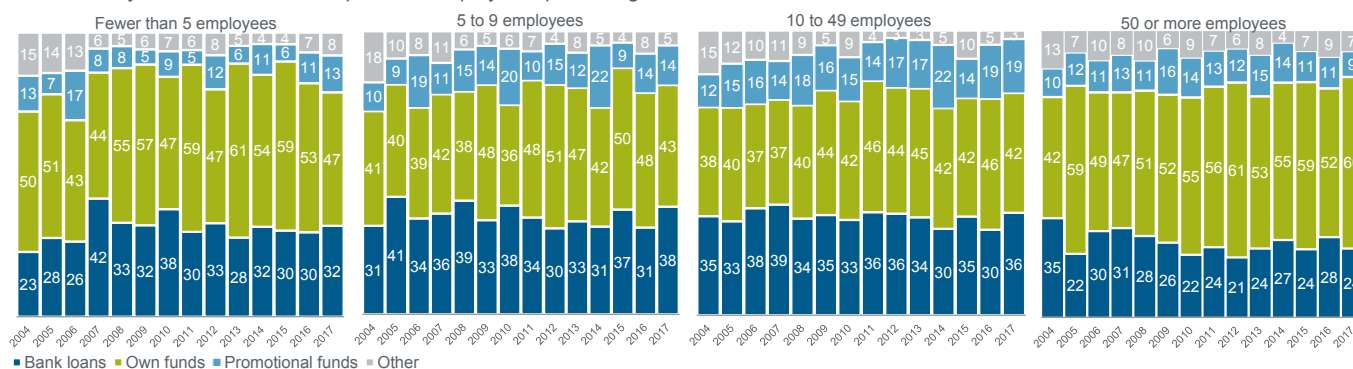
### More successful negotiations paved the way to more bank loans

With relatively affordable borrowing costs and open access to credit, the overall credit environment for investments remained very favourable for SMEs. The share of enterprises for which all negotiations on investment loans end in success grew by another two percentage points to 62 %.

The generally favourable environment is driving investment. Moreover, enterprises have become more successful in their negotiations. And there is a third element that explains the growth of debt financing: Particularly in the credit negotiations that were successful, the loan volumes under negotiation were higher than before. Whereas on average around EUR 52 billion was successfully negotiated as debt capital in the years 2010 to 2016, it was EUR 56 billion in 2017 (with similar shares of successful loan negotiations). This has generally become noticeable.

**Figure 20: SME investment finance**

Size classes by number of full-time equivalent employees, percentage of investment volume

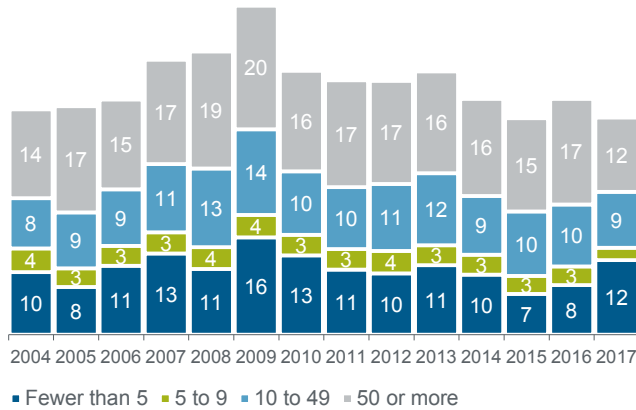


Notes: The category 'Other' comprises, among others, mezzanine capital and private equity.

Source: KfW SME Panel 2004–2018.

**Figure 21: Interest expenditures of SMEs**

Size classes by number of full-time equivalent employees;  
EUR in billions



Source: KfW SME Panel 2005–2018.

Another factor is that SMEs' rejections of loan offers submitted have decreased (-5 percentage points to 19%). In 2017 banks gave SMEs much fewer loan offers that they did not find acceptable. What is more, in cases where they rejected such offers, enterprises were still able to realise half the loan volume under negotiation through alternative negotiations with other credit institutions. That was around 10 percentage points above the long-term average. SMEs obviously had more choices in 2017, and **one** failed negotiation evidently had a lesser impact on the loan volume achieved.

Micro-businesses in particular rejected much fewer loans they were offered (see Volume of tables). This is very encouraging because very small businesses in particular are often affected by difficulties in accessing debt capital. The asymmetrical distribution of information means that lenders often have great

difficulty or incur very high expenses in accessing the overall creditworthiness or the chances of success of the projects to be financed. Small as well as young enterprises often do not have a credit history or established relationship with the lender. That leaves them with fewer options of providing credible assurances that they represent a low risk. As these enterprises usually request small amounts, the cost of eliminating these information deficits is too high for lenders (see Figure 19). As a result, they may add risk premiums to the interest rate and require more collateral or documentation, or they generally offer lower amounts or charge higher costs. This appears to have been less common last year as SMEs have rejected fewer offers.

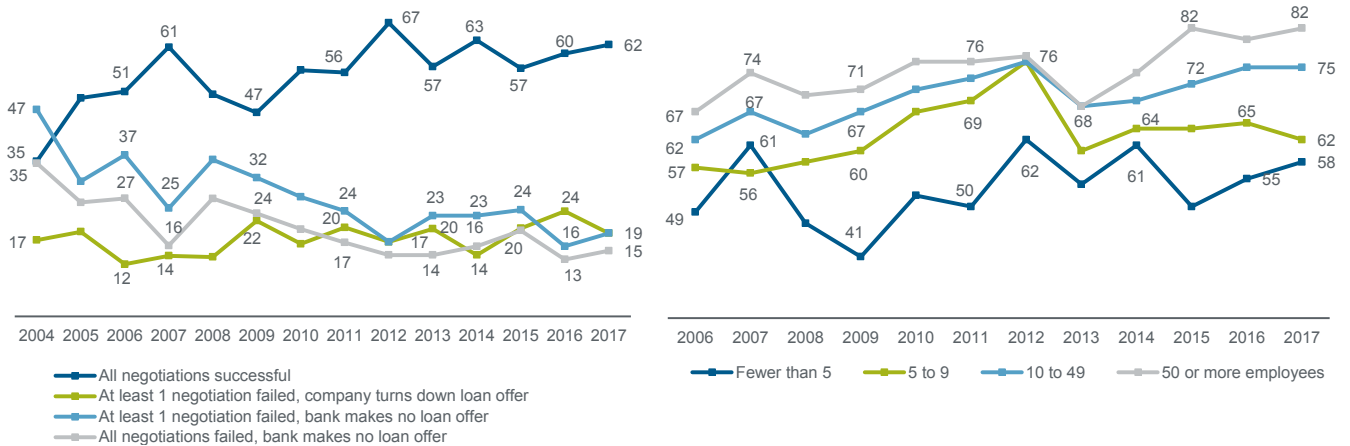
**Large SMEs have opened their coffers, employing more own resources**

Whereas investments funded from enterprises' own resources dropped slightly in 2016, an opposing trend followed in 2017 (Figure 17). SMEs raised just over half the additional investment volume last year by using more resources of their own. The total volume of own funds employed by SMEs grew by EUR 6 billion or +6% to EUR 108 billion. It is worth noting that small and medium-sized enterprises in Germany have never before employed such a high volume of own resources to finance their investment projects.

They are hardly going easy on their reserves. Enterprises' use of own resources is far above the typical normal level (long-term average volume of own funds between 2004 and 2016: EUR 94.4 billion). The share of own funds in total funding is around 51%.

**Figure 22: Outcome of loan negotiations and successful loan negotiations by size class**

Right: All negotiations successful (in per cent); size classes by full-time equivalent employees

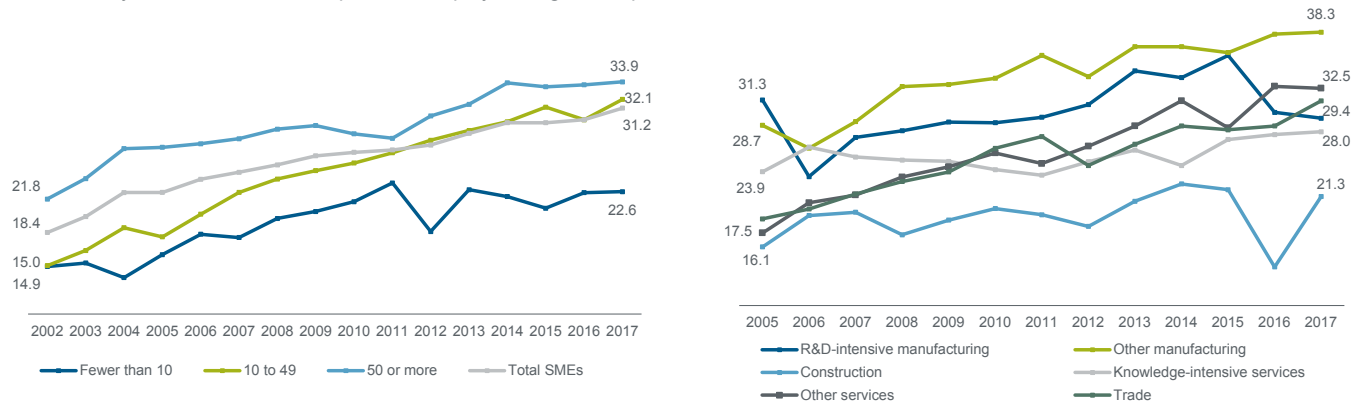


Source: KfW SME Panel 2005–2018.



**Figure 23: SMEs' equity ratios by size class (left) and sector (right)**

Size class by number of full-time equivalent employees; figures in per cent



Source: KfW SME Panel 2003–2018.

**Equity cushion reaches next record high**

However, the growth in funding from own resources is accounted for exclusively by large SMEs (Figure 20). By contrast, funding from own resources has been reduced precisely by those SME segments that have expanded their share of credit at an above-average rate: small firms and SMEs from service sectors.

SMEs' self-financing capacity has climbed to a new record (Figure 23). Their average equity ratio<sup>23</sup> was 31.2% in 2017, more than one percentage point higher than in the previous year (2016: 30%). After achieving relatively stable equity ratios of around 30% between 2014 and 2016, this clear increase is a further step to creating a comfortable financial cushion.

Not only has the equity ratio increased on average. Other indicators round off the exceptionally positive picture of the SME sector's equity base. For example, never before have there been so few SMEs with a relatively low equity base (Figure 24). In 2017 a mere 29% of enterprises had an equity ratio of less

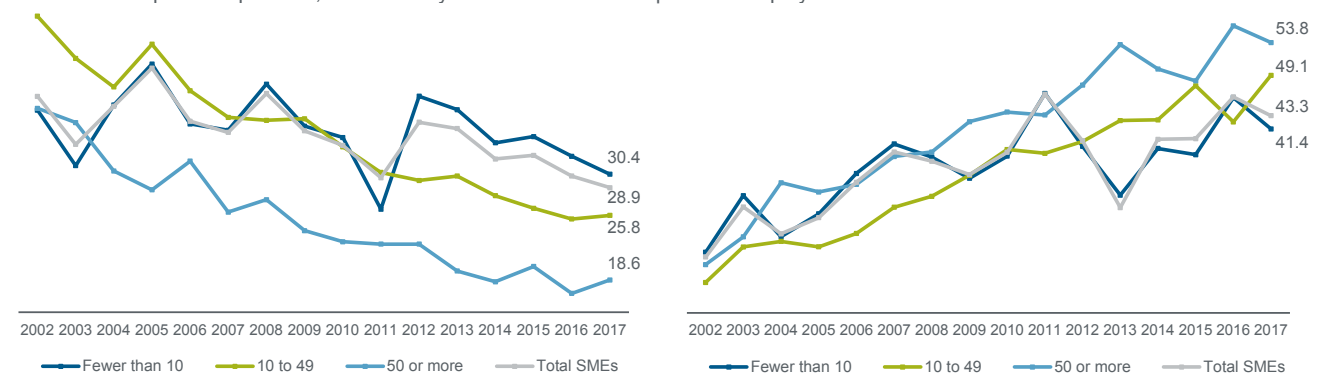
than 10%. That was the fifth consecutive decline of this indicator. At the same time, the share of SMEs with a relatively high equity base of at least 30% has also remained on a high level (43%). In addition, only 8% of SMEs currently have a negative equity ratio (-2 percentage points). The growing (or at least steady) equity base characterised nearly all SME segments in 2017. Large SMEs with 50 and more employees, for example, were able to make gains again and now average just under 34%. The traditionally relatively low equity base of construction SMEs also recovered (21%).

**SMEs are dependent, flexible and resilient but reluctant to invest**

SMEs' equity base is generally excellent. Around the turn of the millennium the equity ratio still averaged 18%. The main trigger for the significant increases achieved since then were changes in banking regulation (Basel II). These changes forced SMEs to take a closer look at their own risks and creditworthiness to avoid jeopardising their access to credit.

**Figure 24: SMEs with a low equity base (left) and a high equity base (right) by company size**

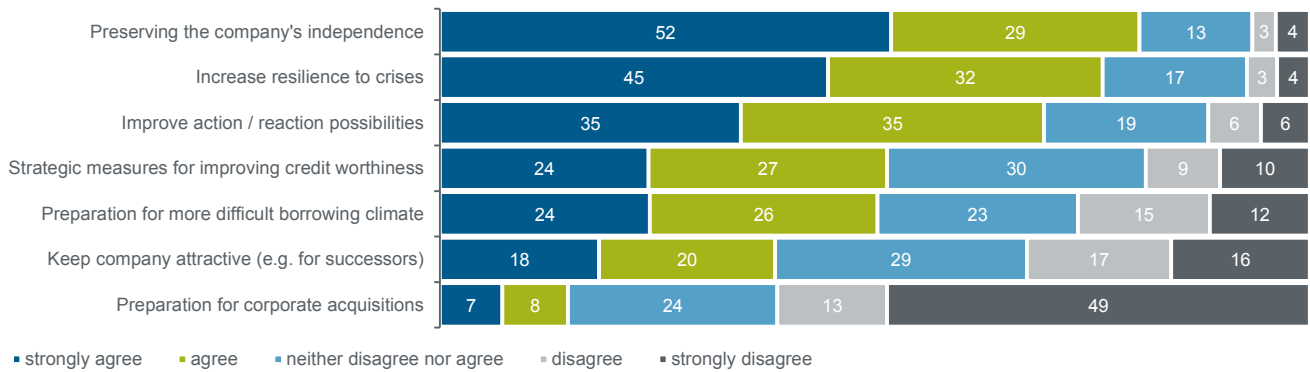
Shares of enterprises in per cent; size class by number of full-time equivalent employees



Source: KfW SME Panel 2003–2018.

**Figure 25: Reasons stated by SMEs for increasing their equity ratio**

Proportions of enterprises in per cent, multiple answers were possible



Source: KfW SME Panel 2017 (additional survey conducted in September 2017)

In this respect, KfW Research recently demonstrated that measures for improving creditworthiness are not the only factors.<sup>24</sup> For many SMEs, the following aspects are also of critical importance (Figure 25): preserving their independence, the desire for greater resilience to crises and staying flexible. Around half

of SMEs have built up funds of their own to prepare themselves for a potentially more difficult borrowing climate. Many enterprises still have vivid memories of credit restrictions during the financial crisis. But the subdued investment activity of the past years has also contributed to increasing the equity ratio. This however, must not be a permanent condition. ■

**The structure of SMEs in 2017**

The SME sector covers all enterprises in Germany with an annual turnover of not more than EUR 500 million. By this definition, there were around 3.76 million SMEs in Germany in the year 2017. The SME sector thus accounts for 99.95 % of all enterprises in Germany.

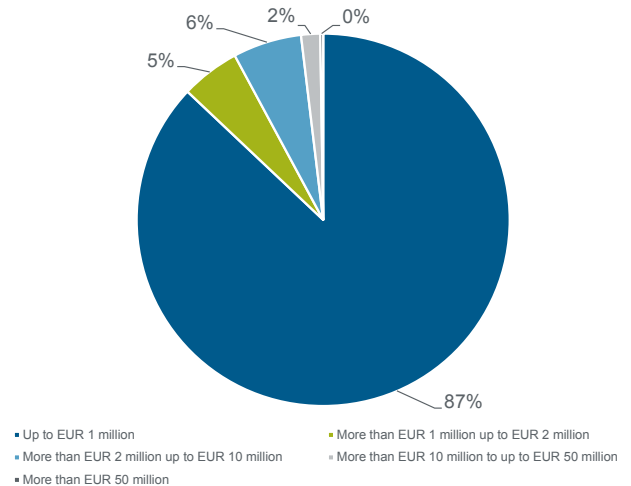
**SMEs are small ...**

The large majority of SMEs in Germany is small (Figure 26). A share of 87 % (3.27 million) generate annual sales turnover of less than EUR 1 million. Fewer than 0.3 % (or just under 9,500) of SMEs generate an annual sales turnover of more than EUR 50 million. The fragmented nature of the SME sector is also reflected in the numbers of employees (Figure 27). Eighty-one per cent of SMEs (3 million) have fewer than five employees. The share of SMEs with 50 and more employees is 1.9 %. The SME sector has become more fragmented in the past years, mostly as a result of increasing tertiarisation.

**... and service-oriented**

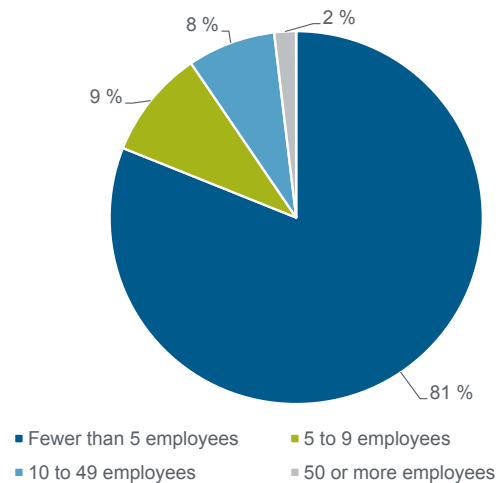
The majority of German SMEs are service providers (Figure 28), with 2.83 million – or 76 % of all SMEs – operating in service industries and 1.44 million of these providing knowledge-intensive services, a trend that is increasing. In 2017 around 1.0 % of all SMEs were R&D-intensive manufacturers (some 43,000 enterprises). Around three million SMEs are domiciled in the western German states (82 %), while 690,000 (18 %) are domiciled in eastern Germany.

**Figure 26: SMEs by annual turnover in 2017**



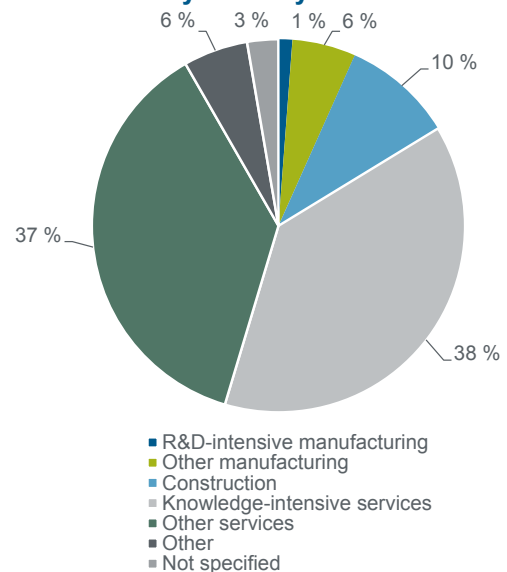
Source: KfW SME Panel 2018.

**Figure 27: SMEs by number of employees in 2017**



Source: KfW SME Panel 2018.

**Figure 28: SMEs by industry in 2017**



Source: KfW SME Panel 2018.

**SMEs at a glance**

In per cent, unless otherwise specified

	2011	2012	2013	2014	2015	2016	2017
<b>Investments</b>							
Total share of investors	43	41	43	42	43	42	38
Share of investors <5 full-time equivalent employees	39	36	39	37	37	37	32
Share of investors ≥ 50 full-time-equivalent employees	83	85	83	84	87	85	88
Total investment volume (EUR in billions)	195	191	190	202	199	204	211
Investment volume <5 FTE employees (EUR in billions)	48	50	44	53	45	46	51
Investment volume ≥50 FTE employees (EUR in billions)	80	75	69	71	84	83	86
Volume of investment in new machinery, equipment and buildings (EUR in billions)	156	145	144	158	161	169	176
<b>Investment finance</b>							
Initially planned credit requirements (EUR in billions)	100	102	119	128	132	134	124
Total debt capital realised (EUR in billions)	81	80	80	92	82	88	90
Credit supply gap (EUR in billions)	8	6	2	5	6	2	4
<b>Net profit ratio<sup>b</sup></b>							
Average return on sales	5.7	6.0	6.7	7.0	7.3	7.3	7.2
Average return on sales <10 FTE employees	11.4	10.3	13.3	12.6	13.8	14.0	14.6
Average return on sales ≥50 FTE employees	3.7	4.4	4.2	4.6	4.5	4.4	4.2
Proportion of SMEs with losses	12	11	11	12	8	10	9
<b>Equity base<sup>c</sup></b>							
Average equity ratio	26.9	27.4	28.6	29.7	29.7	30.0	31.2
Average equity ratio <10 FTE employees	23.5	18.5	22.8	22.1	20.9	22.5	22.6
Average equity ratio ≥50 FTE employees	28.1	30.4	31.6	33.8	33.4	33.6	33.9
Proportion of SMEs with negative equity ratio	6	12	10	10	11	10	8
<b>Employment trends<sup>d</sup></b>							
Total employment growth rate	2.6	2.1	2.0	2.8	2.3	2.7	2.7
FTE growth rate <5 FTE employees	3.2	1.2	2.1	2.6	1.7	2.1	1.6
<b>Development of turnover<sup>d</sup></b>							
Total turnover growth rate	8.1	2.4	1.9	3.3	3.3	3.9	4.7
Turnover growth rate <5 FTE employees	7.0	2.0	2.3	2.3	2.9	3.6	2.8

\* Note: <sup>a</sup> Total debt capital realised means the volume of bank loans and promotional funds actually used for investment finance. <sup>b</sup> Mean values weighted with turnover. <sup>c</sup> Mean values weighted with total assets, projections only for enterprises with accounting obligations and excluding individual enterprises / sole traders. <sup>d</sup> Missing information on FTE employees and turnover was not imputed, calculations not including growth rates below the 1% and above the 99% quantile.

## KfW SME Panel

The KfW SME Panel (KfW-Mittelstandspanel) has been conducted since 2003 as a recurring postal survey of small and medium-sized enterprises in Germany with annual turnover of up to EUR 500 million.

With data based on up to 15,000 companies a year, the KfW SME Panel is the only representative survey of the German SME sector, making it the most important source of data on issues relevant to the SME sector. As it is representative of all SMEs of all sizes and across all industries in Germany, the KfW SME Panel offers the possibility to conduct projections for micro-businesses with fewer than five employees as well. A total of 9,666 SMEs took part in the current wave.

Analyses of long-term structural developments in the SME sector are performed on the basis of the KfW SME Panel. It gives a representative picture of the current situation and the needs and plans of SMEs in Germany. It focuses on annually recurring information on companies' performance, investment activity and financing structure. This tool is the only way of determining quantitative key figures for SMEs such as investment spending, loan demand and equity ratios.

The basic population used for the KfW SME Panel comprises all SMEs in Germany. This includes private-sector companies from all industries with annual turnovers of up to EUR 500 million. The population does not include the public sector, banks or non-profit organisations. Currently there are no official statistics providing adequate information on the number of SMEs or the number of people they employ. In order to determine the population of SMEs for 2017 and the population of employees at SMEs in 2017, the German Company Register (Unternehmensregister) and the official employment statistics (Erwerbstätigenrechnung) were used as a starting point for the 2018 survey.

The KfW SME Panel sample is designed in such a way that it can generate representative, reliable data that are as precise as possible. The sample is split into four groups: type of promotion, branches, firm size as measured by the number of employees, and region. In order to draw conclusions on the basic population based on the sample, the results of the survey are weighted / extrapolated. The four main group characteristics are used to determine the extrapolation factors. These factors set the distribution of the net sample (in accordance with the four group characteristics) in relation to their distribution in the parent population. Two extrapolation factors are determined in total: an unlinked factor for extrapolation of qualitative parameters based on the number of SMEs in Germany, and a linked factor for the extrapolation factors of quantitative parameters based on the number of employees in SMEs in Germany.

The survey is conducted by the Financial Services Division of GfK SE on behalf of KfW Group. The project received expert advice from the Centre for European Economic Research (ZEW) in Mannheim. The main survey of the 16th wave was conducted in the period from 12 February 2018 to 22 June 2018.

A Supplementary Autumn 2018 Survey to the KfW SME Panel was also conducted by GfK SE in the form of an online survey during the period from 11 to 21 September 2018. All enterprises that had already participated in this year's wave of the KfW SME Panel and had provided a valid email address were surveyed. Responses from a total of 2,038 enterprises were evaluated. As the supplementary survey was linked to the main database of the KfW SME Panel, its results also provided a representative picture.

Further information can be obtained at [www.kfw-mittelstandspanel.de](http://www.kfw-mittelstandspanel.de).

<sup>1</sup> Data on persons in employment in Germany from the employment accounts of the Federal Statistical Office.

<sup>2</sup> The employment growth rate shown here is calculated on the basis of full-time equivalent employees (FTEs). As opposed to showing the number of persons in gainful employment, this concept maps actual labour demand. FTE employees are calculated from the number of full-time employees (including business owners) plus the number of part-time employees multiplied by the factor 0.5. Apprentices are not included.

<sup>3</sup> Knowledge-intensive services comprise service sub-sectors with an above-average share of university graduates in total employment, or services with a strong focus on technology. These include, for example, architecture and engineering firms, law firms, tax and management consultancies, data processing and telecommunication services. The definition is based on what is known as the NIW/ISI list of research-intensive industries and services, which in turn follows the Federal Statistical Office's 'Classification of Economic Activities (WZ 2008)'.

<sup>4</sup> Destatis (2018), press release No. 324 of 30 August 2018. ([https://www.destatis.de/EN/PressServices/Press/pr/2018/08/PE18\\_324\\_132.html](https://www.destatis.de/EN/PressServices/Press/pr/2018/08/PE18_324_132.html))

<sup>5</sup> More than half of private households' consumption expenditure was on services. SMEs figure prominently here. [https://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2018/03/PD18\\_094\\_811.html](https://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2018/03/PD18_094_811.html)

<sup>6</sup> [https://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2018/08/PD18\\_299\\_811.html](https://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2018/08/PD18_299_811.html)

<sup>7</sup> The Volume of tables relating to the KfW SME Panel is available at: [www.kfw-mittelstandspanel.de](http://www.kfw-mittelstandspanel.de) (in German only).

<sup>8</sup> Creditreform (2018), *Wirtschaftslage und Finanzierung im Mittelstand: Frühjahr 2018 ('Economic situation and financing in the SME sector: Spring 2018' – our title translation, in German only).*

<sup>9</sup> Destatis (2018), press release No. 039 of 8 February 2018. ([https://www.destatis.de/EN/PressServices/Press/pr/2018/02/PE18\\_039\\_51.html](https://www.destatis.de/EN/PressServices/Press/pr/2018/02/PE18_039_51.html))

<sup>10</sup> Destatis (2018), press release No. 288 dated 7 August 2018

<sup>11</sup> Destatis (2017), press release No. 312 dated 8 September 2017.

<sup>12</sup> Research- and development-intensive (R&D-intensive) manufacturing is defined as those manufacturing sub-sectors whose average research and development intensity (R&D intensity: ratio of R&D expenses to turnover) is higher than 3.5%. The definition is based on what is known as the NIW/ISI list of research-intensive industries and services, which in turn follows the Federal Statistical Office's 'Classification of Economic Activities (WZ 2008)'. Engineering, medical technology, instrumentation and control technology, vehicles, pharmaceuticals and office equipment are of particular quantitative importance.

<sup>13</sup> Differences in calculation methods in extrapolating absolute international turnovers by region do not allow the turnover values outside Europe and within Europe reported in the text to be summed up as SMEs' total international turnover. A minor difference remains due to the methodology applied.

<sup>14</sup> Profit margin is defined as the ratio of pre-tax profit to turnover. The figure shows the mean values of profit margin weighted against turnover.

<sup>15</sup> In general, analyses at enterprise level very often operationalise or approximate labour productivity as turnover in relation to an employment indicator (number of employees, full-time equivalents, working hours, etc.). One reason is that the available microdata usually do not contain any robust information on enterprises' gross value added. However, data from the German Federal Statistical Office suggest that the turnover-based labour productivity measure used here empirically closely approximates the variant with gross value added – which is more convincing from a theoretical perspective. Labour productivity is measured here as indexed values (2003=100) of turnover per full-time equivalent employee. Missing data on turnover and employees were imputed. Adjusted and extrapolated values. For details on productivity development in SMEs see Gerstenberger, J. (2017), *Produktivität des deutschen Mittelstandes tritt auf der Stelle – Zeit zu handeln! ('Productivity of German SMEs has flatlined – time to act' – our title translation, in German only), Focus on Economics No. 172,*

KfW Research – Schwartz, M. (2016), **KfW SME Panel 2016: Businesses are using their financial strength – but not boosting investment,** KfW Research.

<sup>16</sup> Cf. Borger, K. and Gerstenberger, J. (2018), **Weak productivity: different causes require different therapies,** Focus on Economics No. 200, KfW Research. – Gerstenberger, J. (2017), *Produktivität des deutschen Mittelstandes tritt auf der Stelle – Zeit zu handeln! ('Productivity of German SMEs has flatlined – time to act – our title translation, in German only), Focus on Economics No. 172, KfW Research.*

<sup>17</sup> Measured as the difference of absolute labour productivity between large SMEs and small SMEs in relation to the value of large SMEs.

<sup>18</sup> In order to determine the absolute volumes of net investment overall in both the SME and the corporate sector in Germany, KfW SME Panel data were coupled with investment data provided by the Federal Statistical Office on the entire corporate sector. The investment and depreciation volume in the SME sector is surveyed in the context of the KfW SME Panel. Total corporate investment is calculated by adjusting gross fixed capital formation for investment by the state and in residential construction. Depreciation in the corporate sector is calculated in the same way. The underlying data were obtained from Fachserie 18, Reihe 1.4 of the Federal Statistical Office. The investment volume as well as the depreciation volume of large enterprises (with an annual turnover of more than EUR 500 million) are determined by subtracting the volumes calculated for SMEs from the corresponding values for the entire corporate sector.

<sup>19</sup> Gross fixed capital formation in the corporate sector comprises private sector investment in machinery and equipment plus construction (without residential construction).

<sup>20</sup> The major revision of national accounts and the associated modification to the concept of investment has been applied since the 2015 reporting period of the KfW SME Panel. Of particular relevance for enterprises is expenditure on research and development, which is now reclassified as gross fixed capital formation since implementation in 2014 of the European System of National and Regional Accounts of 2010 (ESA 2010). All time series of national accounts that have been revised for conceptual reasons for the period from 1991 are available. This has led to an increase in the volumes of gross fixed capital formation and depreciation across the entire economy in comparison with previously reported figures. For reasons of data collection, the revision cannot be applied to the investment and depreciation volumes of SMEs. The reported volumes thus do not change in comparison with earlier years. Instead the volumes have been modified for the entire corporate sector, the overall economy and, consequently, also for large enterprises. Due to the limitations on the collection of data pertaining to the changed investment concept, the volumes relating to SMEs tend to be underestimated and, accordingly, those of large enterprises overestimated.

<sup>21</sup> Schoenwald, S. (2018), *KfW Credit Market Outlook: March 2018. Upswing and low borrowing costs stimulate corporate lending.* KfW Research.

<sup>22</sup> A current evaluation of company balance sheets of the Creditreform database revealed that liabilities to credit institutions play a much bigger role for service enterprises than for businesses in other sectors. The share of bank liabilities in all liabilities there is 62% compared with 39% in manufacturing and 43% in trade. Cf. Creditreform (2018), *Wirtschaftslage und Finanzierung im Mittelstand: Frühjahr 2018 ('Economic situation and financing in the SME sector: Spring 2018' – our title translation, in German only).*

<sup>23</sup> The equity ratio is defined as the quotient of equity and the balance sheet total. The figure shows the mean values of the equity ratio weighted against the balance sheet total. The calculations apply only to enterprises required to draw up balance sheets.

<sup>24</sup> Gerstenberger, J. (2018), *Hohe Eigenkapitalquoten im Mittelstand: KMU schätzen ihre Unabhängigkeit (High equity ratios: SMEs value their independence – in German only), Focus on Economics No. 206,* KfW Research.