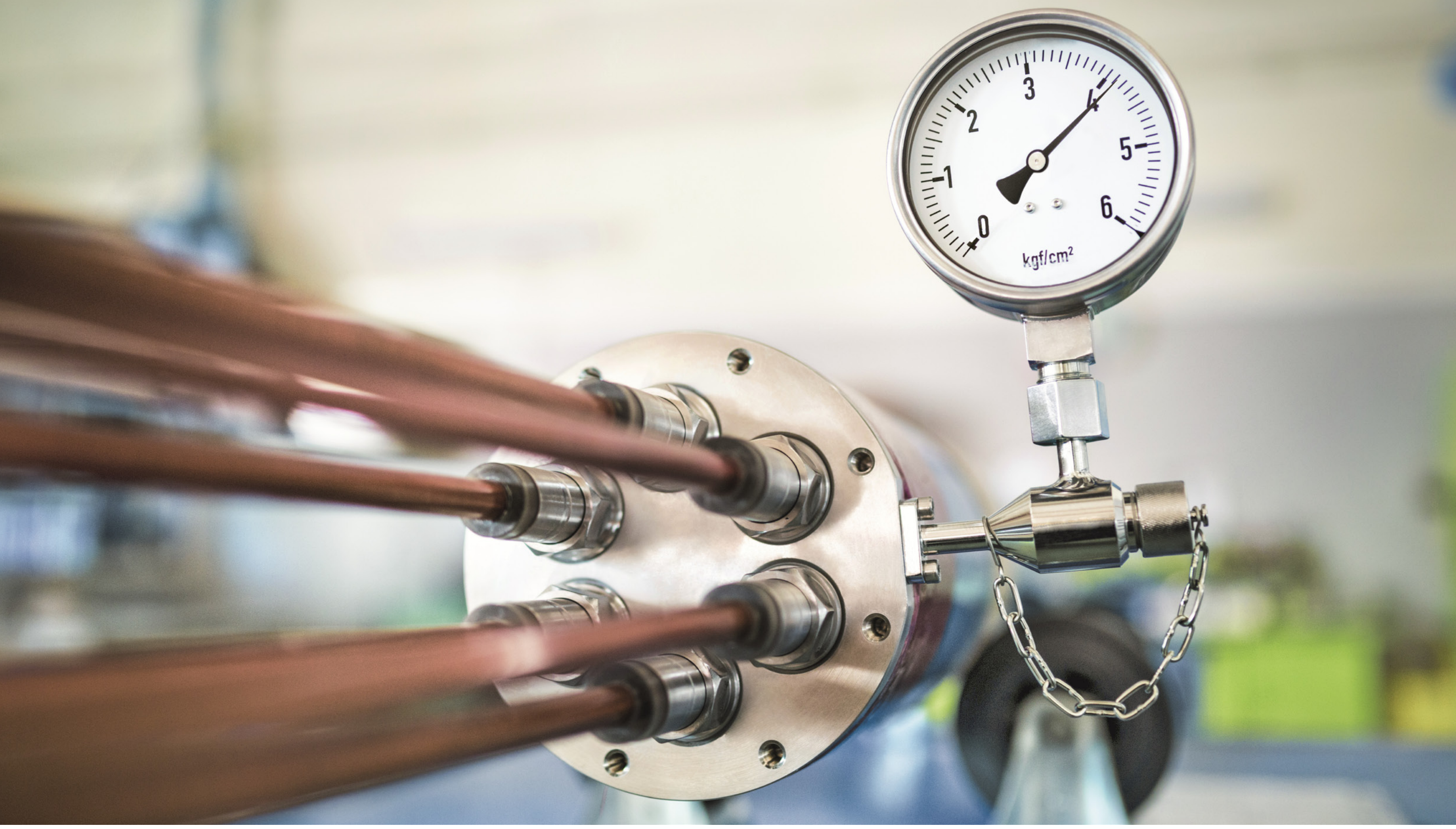


KfW Research

KfW SME Panel 2016

››› SMEs are using their financial buffers – but not boosting investment

Bank aus Verantwortung KFW

Annual analysis of the structure and development of SMEs in Germany

Imprint

Published by
KfW Group
Economics Department
Palmengartenstrasse 5-9
60325 Frankfurt/Main
Phone +49 69 7431-0, Fax +49 69 7431-2944
www.kfw.de

Editor
KfW Group
Economics Department
research@kfw.de

Dr Michael Schwartz
Phone +49 69 7431-8695

Frankfurt am Main, October 2016

SMEs are using their financial buffers – but not boosting investment

Executive summary

In 2015 Germany's small and medium-sized enterprises continued their strong performance of the previous year and presented themselves in excellent shape. SMEs are the mainstay of the strong labour market in Germany, employing more people than ever before, and the trend is still rising. The growth in aggregate employment on the previous year was carried by SMEs alone. These are the findings of the 2016 KfW SME Panel.

However, hopes for a persistently strong increase in investments have not been fulfilled. Investments remain stagnant, also because micro-businesses are exercising restraint. The favourable financing environment failed to provide additional investment incentives. Demand for credit rose again, but less strongly than in the previous years. Large loan amounts characterised demand even more strongly than before.

Despite the higher demand for loans and the further reduction in interest expense, borrowing for investments is on the decline in absolute and relative terms, also because access to credit is becoming more difficult for micro-businesses. The KfW SME Panel 2016 confirmed SMEs' strong self-financing capacity. Enterprises are using the financial buffer they built up in the past and employing more funds of their own than ever before. The equity ratio remains steady at a high level.

Turnovers grew steadily on the previous year's moderate level and helped businesses achieve another minor increase in profitability. Never before were there fewer SMEs with losses. The negative trend in international business was stopped. SMEs benefited from steadily improving conditions in Europe. Larger SMEs in particular exhibited much better international performance. But markets outside Europe were the problem child in 2015.

Demographics are a cause of concern. The ageing of business owners accelerated again and the number of start-ups continued to fall, while the number of imminent successions remained high. The forthcoming generational transition is currently blocking investments more often than before.

Outlook

The German economy is growing in 2016, too, on the back of reliable domestic demand. Business prospects are brightening further, which is indicative of a robust and positive development in the SME sector. We expect the solid pace of growth in turnover and employment to continue. For the first time, SMEs will employ more than 30 million persons. But they will not overcome their investment restraint in 2016 either.

Today, the biggest challenges facing Germany and Europe are political. Refugee migration, Brexit, the tense relationship with Russia and the flashpoints in the Middle East and in south-eastern Europe currently have little influence on economic momentum in Germany and Europe. Germany's economic performance is being sustained by more growth-friendly European policies and very strong domestic demand. The German economy therefore presents itself in good shape. For 2016 we expect 1.8 % growth in Germany and 1.5 % in Europe. Growth rates of well above 2 % would require significantly faster productivity growth. A good portion of the economic policy challenges facing Germany and Europe therefore reside in the structural area.

Private consumption and the strong boost to residential construction have given the mainly domestically oriented SMEs further tailwind in 2015, allowing them to continue their strong performance of the previous year. Buoyed by a robust labour market, domestic demand will remain a reliable source of growth as well. Not least, the demand for residential construction will remain high. It will induce growth and employment in the SME sector in 2016 as well. Already more people are employed in small and medium-sized enterprises than ever before.

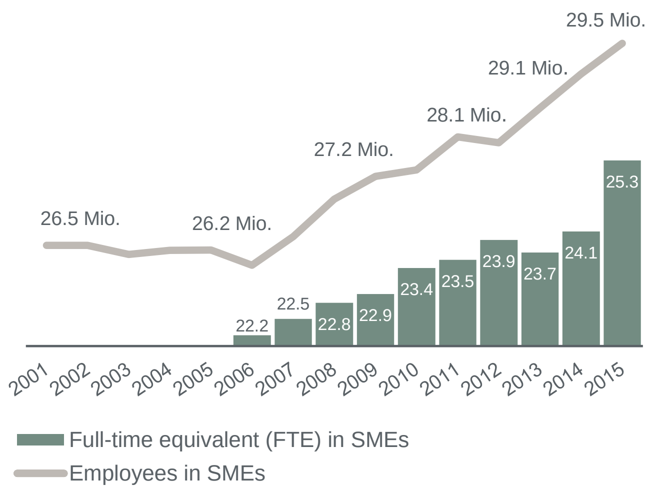
Employment growth continued to soar in 2015

The number of persons employed in the SME sector continued to grow in 2015. A total of 29.5 million persons were employed by small and medium-sized enterprises in the year under review, around 460,000 or 1.6 % more than the year before. The growth in employment that has been observed for more than ten years continued as well. The year 2015 saw the highest level of employment since German unification, with around 43 million persons in employment on an annual average.[1]

The proportion of SMEs in aggregate employment reached an unprecedented 68.7 % (+0.6 percentage points on the previous year). The aggregate year-on-year increase was brought about solely by SMEs. Large enterprises and the public sector reduced their workforce by some 180,000. Based on the current development of the workforce in Germany (43.52 million persons in June 2016)[2], another increase in the SME sector can be expected for this year. At the end of 2016, the number of persons employed in SMEs in all likelihood will exceed 30 million for the first time ever.

Figure 1: Workforce in the SME sector

In millions



Source: KfW SME Panel 2002–2016.

At the same time, the number of full-time equivalent employees[3] (FTEs) grew by an average 2.3 %. The momentum slowed moderately on the previous year in almost all segments of the SME sector (2014: +2.8 %). Only in large SMEs with 50 and more employees, knowledge-intensive service providers[4] and construction firms did the number of FTEs grow more strongly. Among them, SMEs in the construction industry achieved the highest employment growth in eight years (+2 %) – a reflection of expanding residential construction in Germany.

Nine in ten apprentices in SMEs[5]

In the year 2015, the total number of new apprenticeship contracts concluded in Germany hit a new record low of 516,600. Falling student numbers and the persistent trend to tertiary education had an adverse effect. The number of apprentices in Germany declined by around 3 % each year between 2008 and 2015, from 1.61 million to currently 1.34 million. Some 1.2 million young people completed an apprenticeship in small and medium-sized enterprises in the year 2015. Overall, training has thus shifted even more to the SME sector than was already the case, halting the trend of falling numbers of apprentices in SMEs recently observed. The current figures of the KfW SME Panel relating to plans in the SME sector point to a slight decline in numbers of apprentices for the current training year 2016.

Large SMEs (with 50 or more employees) contribute the most to vocational training. Three quarters of companies offer training and almost half of the 1.2 million apprentices are under contract there. Microbusinesses with fewer than five employees, on the other hand, offer training very rarely (7 %). They often lack resources and training authorisations and have greater difficulties filling training places. Since around 80 % of SMEs are micro-businesses, the training ratio across the overall SME sector is 13 %.

Foreign business a bright spot: first increase in three years

The trend of declining foreign turnover observed in the past three years was halted in the year under review. Small and medium-sized enterprises achieved foreign turnover totalling EUR 546 billion in 2015, a EUR 12 billion increase (+2.2 %). But they are still far below former peak levels such as the EUR 590–600 billion foreign turnover achieved in the years 2011/2012. The recovery in Europe is still too weak and the development of the emerging markets and developing economies is not yet robust enough to allow more.

Germany's total exports reached a volume of EUR 1,196 billion in 2015, after EUR 1,134 billion in the previous year[6]. Thus, unlike in the years before, small and medium-sized enterprises also contributed around one fifth of the corresponding 5.5 % growth in the year under review.

SMEs' foreign business can be expected to grow slowly this year. The impacts of the Brexit referendum and the situation in Turkey restrict demand from abroad. The KfW External Trade Barometer for the third quarter of 2016 shows subdued momentum in the overall environment for Germany's foreign trade[7]. This is evidenced by the most recent data on German exports: up to the end of July 2016, goods worth

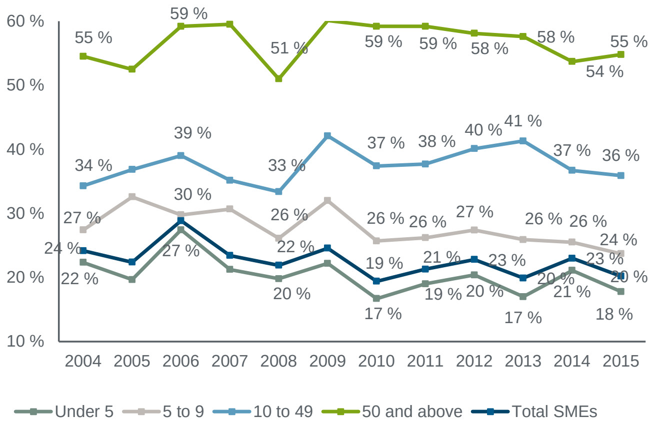
EUR 699 billion were exported, slightly less than in the same period in 2015 (-0.4 %).[8]

Large SMEs lift sector out of “foreign slump”

The direct international integration of SMEs has decreased. Overall, around 628,000 conducted foreign business – nearly 100,000 fewer SMEs than in the previous year. Twenty per cent of all SMEs were thus active abroad (-3 percentage points on 2014).

Figure 2: Share of SMEs with foreign business

Size classes by number of full-time equivalent employees



Source: KfW SME Panel 2005–2016.

The detailed segment analysis shows that only the large SMEs with 50 and more employees were present more often on international markets. Despite all geopolitical tensions, the share of companies in this segment with foreign business operations rose for the first time in six years (+1 percentage point), their foreign turnover grew by EUR 40 billion to EUR 345 billion, and the foreign turnover share rose more than 8 percentage points to some 29 %.

Because of their size, these enterprises characterise SMEs’ total foreign business, by themselves contributing 63 % of the turnover achieved abroad in the year under review. As a consequence, the share of total turnover generated by internationally operating SMEs outside Germany remained steady at around 27 % (Figure 3). This is good news after three consecutive declines.

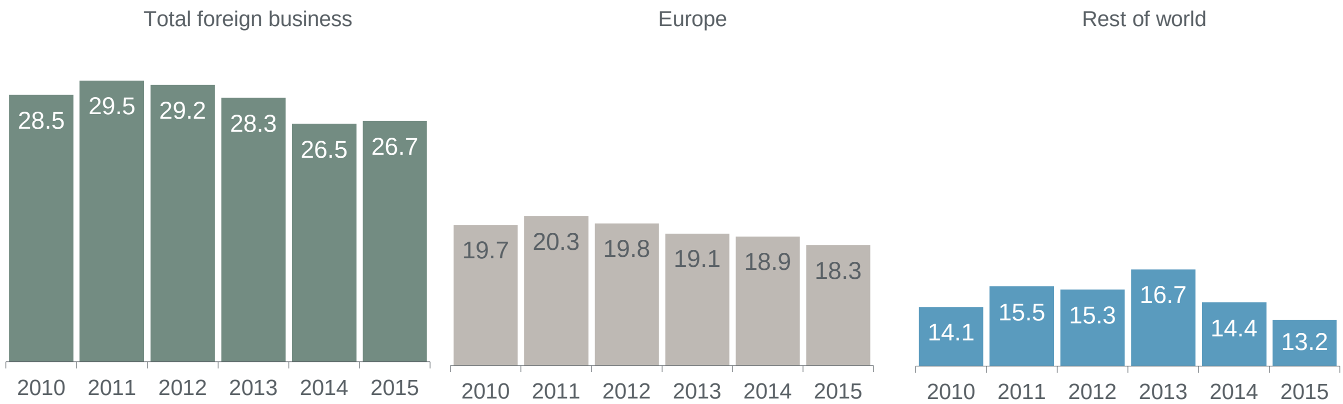
R&D-intensive manufacturing, traditionally firmly integrated into international business, presents a mixed picture. The number of enterprises in this group doing any business abroad fell again in 2015 to now 59 %, although their foreign turnover increased slightly (+EUR 7 billion to EUR 103 billion). For comparison: in 2011 that proportion was still 70 % and total foreign turnover was EUR 140 billion.

European business is expanding

The optimism expressed about Europe in 2015 has been fulfilled. SMEs are benefiting from improved business conditions and growth prospects in many important European economies. SMEs’ foreign turnover in Europe grew by EUR 10 billion to now EUR 366 billion (2014: EUR 356 billion). However, the number of enterprises conducting foreign business dropped as well. Year on year, 90,000 fewer SMEs were conducting business on European markets (592,000 enterprises, or 19 % of all SMEs).

Figure 3: 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 foreign turnover in the corresponding regions. The individual figures for “Europe” and “Rest of world” therefore do not add up to “Total foreign business”.

Source: KfW SME Panel 2011–2016.

Full impact of Brexit fallout is still uncertain

The popular vote in the United Kingdom to leave the EU may slightly dampen SMEs' expanding European business. In 2015 exports to the UK totalled EUR 89 billion in the entire business sector. Assuming that the share of SMEs corresponded with its share of total exports (46 %), around EUR 41 billion of the foreign turnover in the UK would have originated in SMEs.[9] For every 10 % drop in demand (-EUR 4 billion), total annual turnover in the SME sector would fall by 0.10 %. In the long term, much will depend on the trade arrangements that will have to be redefined between the EU and the United Kingdom.

Markets outside Europe remain the problem child

The sales weakness of small and medium-sized enterprises on markets outside Europe continued in 2015 as well. Year on year, sales were down EUR 9 billion (-5 % to now EUR 169 billion). At the same time, the share of turnover outside Europe in overall turnover fell again to now around 13 % (for enterprises doing business there), a decline of more than one percentage point (Figure 3). Only 228,000 SMEs currently generate turnover outside Europe (7.6 % of all SMEs).

Previous KfW studies also found that in addition to direct foreign business, enterprises' integration into international value chains is considerable.[10] The share of indirectly exporting enterprises in larger manufacturing SMEs alone is almost 70 %. Their products go into downstream exports of German customers. Of the large business service providers, some 30 % render their services indirectly to foreign customers.

Turnovers grew on previous year's level, helping to slightly raise returns

Turnover in the SME sector grew by 3.3 % in 2015, as in the year before (Figure 4). Thus, SMEs are back on a growth path comparable to the overall economy (nominal GDP growth in 2015: 3.7 %). According to analyses by KfW Research, it can be assumed that greater demand for goods and services from SMEs generated by demographic processes (ageing and immigration) induced around one fifth of this turnover increase.[11] This volume-driven growth may be a reason for weak productivity growth.

Online business is worth EUR 150 billion

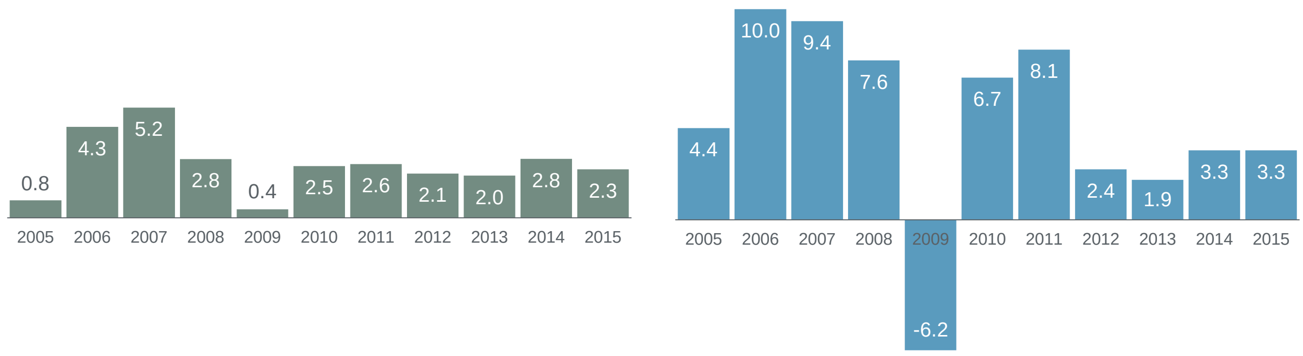
Total turnover in the SME sector was just over EUR 4 trillion in 2015. A good 4 % of this (EUR 150 billion) was generated online, for example through businesses' own web shops, auctioning or e-commerce platforms. Around 16 % of all SMEs achieve turnover through these sales channels, which means 84 % of SMEs currently use no online sales channels to sell their products or services. But to the extent an SME generates turnover using online sales channels, the average contribution of 20 % to total turnover is substantial. A special evaluation of online sales will follow in the spring of 2017.

Profitability continues to grow

The robust turnover growth rates have moderately raised SMEs' profitability. The average returns on sales[12] of small and medium-sized enterprises increased by 0.3 percentage points to now 7.3 % (2014: 7.0 %). In the past ten years the profitability of SMEs improved by more than one third (+1.9 percentage points, or +36 %, from 2005 to 2015).

Figure 4: Annual employment (left) and turnover (right) growth rates

In per cent



Note: Values extrapolated from the number of employees. Extrapolations include other sectors. Missing data on employees were imputed.

Source: KfW SME Panel 2006–2016.

The stable increases in turnover and profit of the past years are having a visible impact. In 2015, only 8 % of SMEs had a negative profitability, a four percentage-point decline on the previous year. The enduring robust domestic economy has continuously led to a declining share of businesses reporting losses. For comparison: in 2009 the proportion of SMEs generating negative profitability was still 16 %.

Compared with the previous year, 38 % of SMEs reported falling profitability for 2015. Only 16 % reported two consecutive years of falling profitability (2014: 17 %; 2013: 21 %), while only 7 % reported three consecutive years of falling profitability. Around 59 % of SMEs reported comparatively high profitability of more than 10 % (+2 percentage points on the previous year). In 2006, by contrast, this proportion hit a temporary low of 43 %. For the overall sector, these indicators speak a clear language: SMEs are increasingly profitable. The numbers on the development of productivity suggest, however, that SMEs mainly generate returns to scale.

Growth expectations very positive up to 2018

Growth is likely in the near future as well. The share of SMEs with a positive outlook on both turnover and returns increased. At the same time, the proportion of SMEs with negative expectations declined (Figure 6).

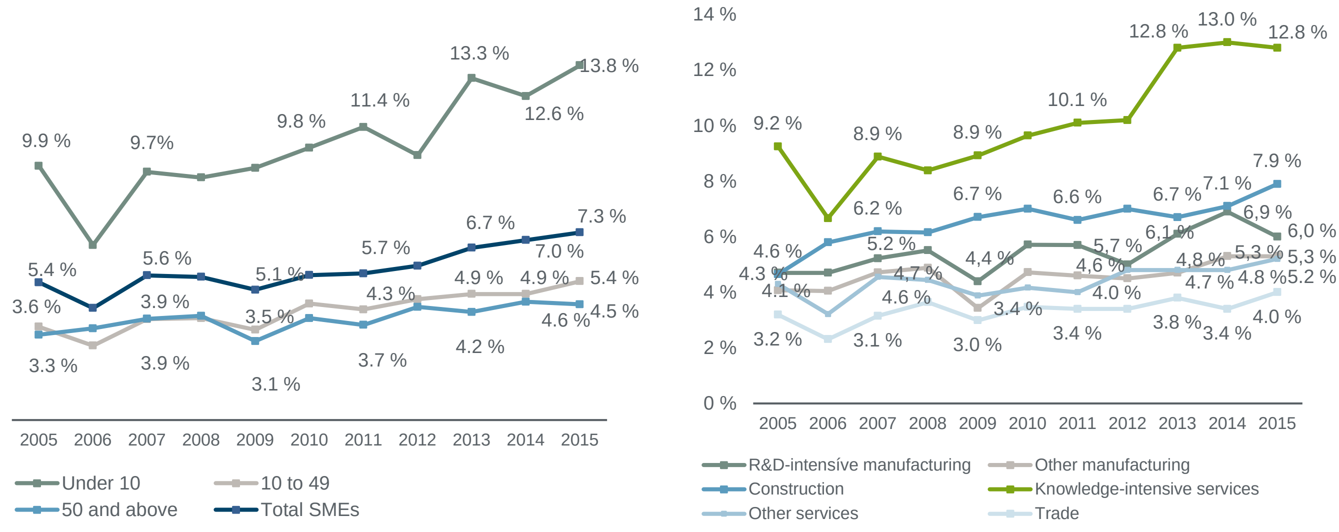
Measured by the enterprises' assessments, which have proven to be reliable predictors of actual developments in the past – slightly higher growth momentum can be expected. Alternative sentiment indicators[13] for small and medium-sized enterprises also point to a good year 2016.

With regard to turnover, positive expectations were 21 percentage points higher on balance than negative expectations (+4 percentage points). For earnings expectations the balance was positive with 18 percentage points (+5 percentage points). Business expectations[14] as an aggregate indicator composed of turnover and earnings expectations also presented a clear picture. The balance between optimistic and pessimistic SMEs rose by 4 to 22 percentage points.

In the detailed segment analysis, it is particularly the R&D-intensive manufacturers (balance: +38), larger SMEs with 50 and more employees (+50), young businesses (+62) and economically more active enterprises (innovators, investors and exporters) that have an above-average positive view of the years ahead. Established enterprises, by contrast, almost traditionally tend to be guardedly optimistic about the future (+3). Overall, the improvement in sentiment pervades the entire SME sector (for detailed results see Table 6 in the Volume of tables).

Figure 5: Returns on sales by size class (left) and sector (right)

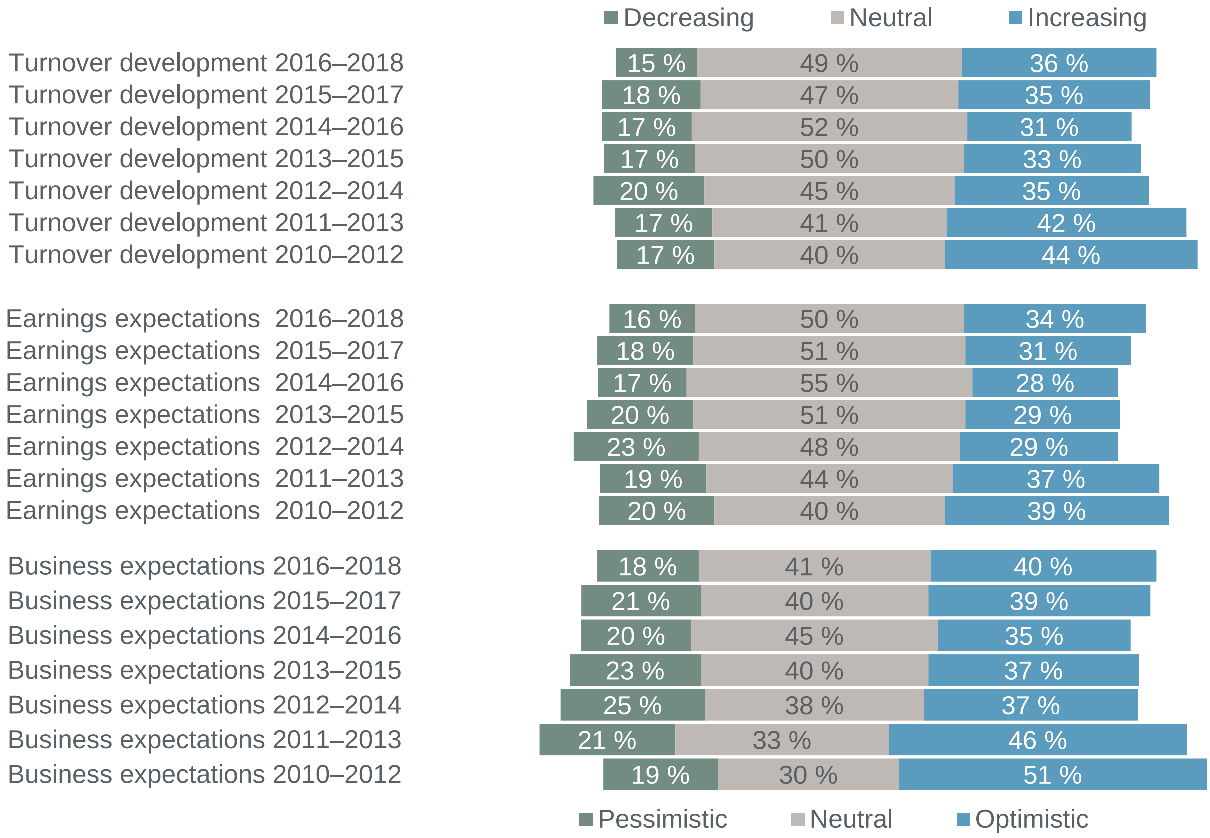
Size classes by number of full-time equivalent employees



Note: Extrapolated from the number of employees. Mean values weighted against turnover.

Source: KfW SME Panel 2006–2016.

Figure 6: SMEs' business expectations up to 2018



Source: KfW SME Panel 2010–2016.

The Achilles' heel: productivity

SMEs did not experience a productivity surge in 2015. SMEs' turnovers failed (so far) to adequately keep pace with the strong employment growth. The labour productivity growth rate in SMEs fell by a significant 3.3 % in 2015 (Figure 7).[15] Expressed in index points: against the base year (2003=100 index points), SMEs achieved an average of just 91 index points (2014: 94). This decrease by three index points can be equated to an average EUR 4,000 decline in turnover per FTE employee to now EUR 119,000 per FTE.

Small SMEs with fewer than five employees experienced particularly strong year-on-year declines, achieving only 88 index points on average (down 7 index points). The productivity of large SMEs with 50 and more employees fell by 3 index points to 114. The structural productivity gap between small and large SMEs[16] resulting from advantages in fixed costs, specialisation and efficiency thus widened moderately to 37 % year-on-year (2014: 34 %).

In sector terms, R&D-intensive manufacturing SMEs saw their productivity slip further. Although the 7.4 % drop in 2015 was less pronounced than the year before (-17.3 %), this remains the only sector posting losses in two consecutive years.

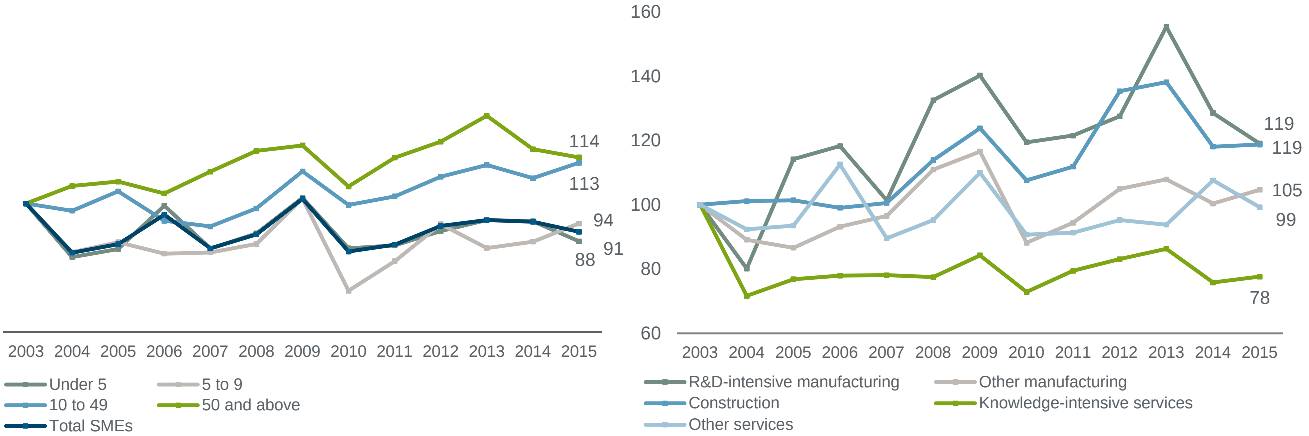
Productivity gap between SMEs and overall economy is widening

Weak productivity development affects not just small and medium-sized enterprises. Productivity growth overall has been far below its former dynamic for quite some time now. Whereas average annual growth rates of 3.8 % were still achieved from 1971 to 1980, this value dropped to an average 0.8 % between 2011 and 2015 (real GDP per hour worked). In part, this is the downside of the continuing record employment.[17] Also responsible is the progress made in employing persons with basic qualifications and long-term unemployed persons from the mid-2000s.[18] Another factor is that employment expanded in sectors where productivity tends to be below-average, such as the public service and commerce, transport and hospitality.[19]

It is striking that SMEs' productivity remains significantly behind aggregate productivity (Figure 8). Whereas labour productivity increased by 43 % between 2003

Figure 7: SME productivity by size class (left) and sector (right)

Size classes by number of full-time equivalent employees



Note: The figure shows indexed values (2003=100) of labour productivity (turnover per full-time equivalent employee). Missing data on turnover and employees were imputed. Extrapolated from the number of employees.

Source: KfW SME Panel 2004–2016.

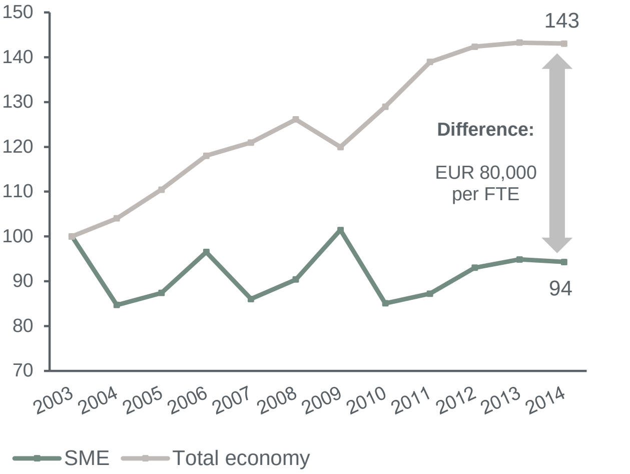
and 2014 across the overall economy, it fell by 6 % in the SME sector during the same period. The cause? Higher employment growth in SMEs than in the aggregate economy – but at the same time much lower gains in turnover. Between SMEs and the aggregate economy, both values were largely in lockstep up until around 2008/2009, but they drifted apart considerably in the years after the crisis (Figure 8). The productivity gap between small and medium-sized enterprises and the economy as a whole subsequently grew roughly fourfold from EUR 20,000 per FTE employee in 2003 to now EUR 80,000 per FTE employee. KfW Research will publish a special study on this issue in recognition of its high importance.

Investment upswing was only short-lived

Investment remained stagnant in 2015. The favourable borrowing conditions provided only minor additional investment incentives. It is true that investment expenditure of small and medium-sized enterprises in new machinery, equipment and buildings (gross fixed capital formation and new investments) increased slightly by EUR 3 billion or 1.9 % to EUR 161 billion in 2015. But after the strong growth of EUR 14 billion in the previous year (to EUR 158 billion), this subdued growth must be seen as a damper – expectations were higher. Investments in second-hand goods also fell by

Figure 8: Labour productivity in SMEs and the overall economy

Indexed values (2003=100) of labour productivity (turnover per full-time equivalent employee); no data for the aggregate economy for 2015

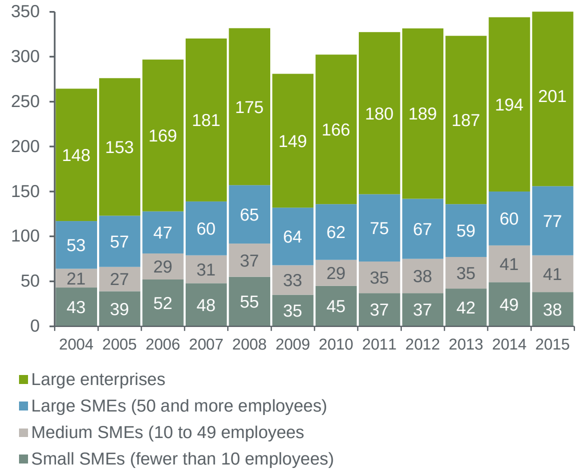


Sources: KfW SME Panel 2004–2016, Destatis, Deutsche Bundesbank.

EUR 6 billion to EUR 38 billion (-14 %). SMEs' investment expenditure on new and second-hand machinery, equipment and buildings thus decreased overall by EUR 3 billion or 1.5 % to EUR 199 billion (2014: EUR 202 billion).

Figure 9: New investments of enterprises by size class

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



Note: The extrapolations by employment size class do not include companies from other sectors. The individual data from the SME size classes therefore do not add up to the total sum of gross fixed capital formation shown in the text.

Source: KfW SME Panel 2005–2016.

Total gross fixed capital formation by all enterprises in Germany[20], increased, however, by 2.8 %, to EUR 362 billion in 2015 (calculations by KfW Research)[21]. This was due to the increase of EUR 7 billion, or close to 4 %, in new investment by large enterprises, to EUR 201 billion. The share of SMEs in total gross fixed capital formation in the enterprise sector thus dropped to 44 % (2014: 45 %).

The average investment volume also remains stalled. On average, SMEs invested around EUR 131,000 on each project (down EUR 1,000 on the previous year). In the short term, digitisation will provide little additional impetus here.[22] Around four in five SMEs did carry out digitisation projects in the past three years. But they have been investing comparatively low amounts, with half investing less than EUR 10,000 a year in their digitisation. Overall, SMEs' investments in digitisation projects currently total around EUR 10 billion a year. Assuming conditions remain the same, they can be expected to rise to around EUR 13 billion annually up to the year 2018.

Table 1: Investment volume, depreciation and net investment in the corporate sector

In EUR billions

	2009	2010	2011	2012	2013	2014	2015
SMEs (enterprises with up to EUR 500 million annual turnover)							
Gross fixed capital formation	139	143	156	145	144	158	161
Depreciation	116	106	110	125	112	110	117
Net investment	+23	+37	+46	+20	+32	+48	+44
Investment coverage (in per cent)	*119*	*134*	*142*	*116*	*129*	*144*	*137*
Large enterprises (annual turnover of more than EUR 500 million)							
Gross fixed capital formation	149	166	180	189	187	194	201
Depreciation	176	191	206	189	206	213	218
Net investment	-27	-25	-26	+/- 0	-19	-19	-17
Investment coverage (in per cent)	*85*	*87*	*88*	*100*	*91*	*91*	*92*

Note: Taking into account the major revision of national accounts and the associated modification to the concept of investment since the 2015 reporting year. The revision cannot be applied to the investment and depreciation volumes of SMEs. Investment coverage describes the ratio of investment volume to depreciation. See endnotes 21 to 23 for further information.

Sources: KfW SME Panel, Destatis.

SMEs' net investment again positive

New investments have grown slightly. At the same time, SMEs posted a higher loss in value (depreciation) of their capital stock (Table 1). Net investments,[23] however, were still clearly positive, at EUR 44 billion.

The ratio of new investment volume to depreciation (investment coverage) again achieved a very healthy level of 137 %. Large enterprises were able to raise their investment coverage to 92 % but are still below the 100 % threshold, so they are experiencing a loss of substance.

Large SMEs offset investment drop in small ones – size differences also in capacity expansions
Large SMEs with 50 and more employees in particular expanded their investment volume in 2015. They reported a huge leap in new investments (+EUR 17 billion, or +28 %, to EUR 77 billion) and overall investments (+EUR 13 billion or +18 % to EUR 84 billion). Average investment expenditure per project also rose in this size segment (up 16 % to EUR 1.55 million). The increase was 6 % already in the previous year.

However, this segment has now reduced its share of expansion investments for the third consecutive year (Figure 10). Only 44 % of the total investment volume was spent on capacity expansion (down 4 percentage points on 2014). This means that larger SMEs invested higher volumes but continued to exercise restraint in expanding their capacities. It is possible that the existing capacities are largely sufficient at this time. An alternative explanation is that a catching up process is taking place in which enterprises are making necessary investments they put off in the past.

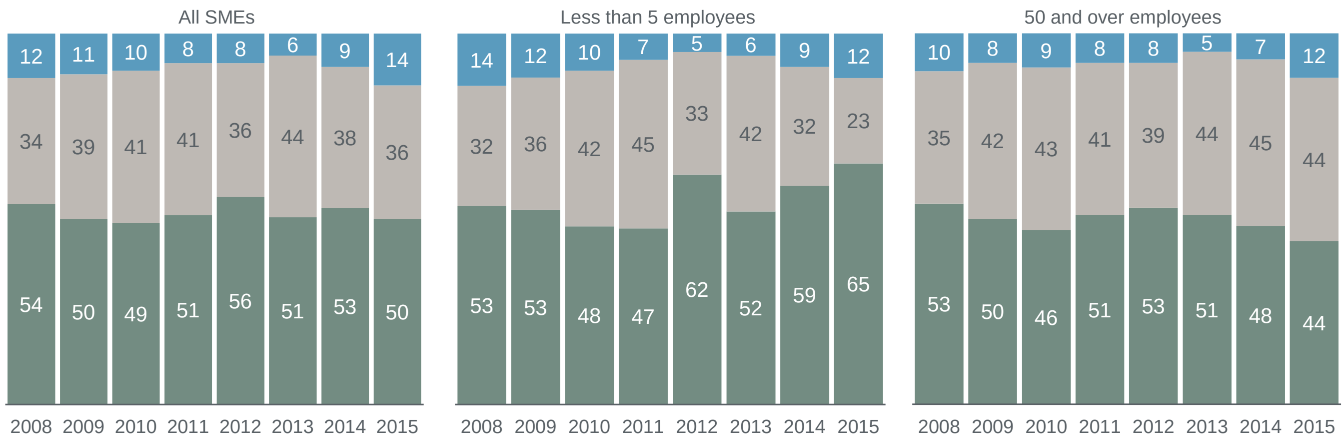
An opposing development is apparent in micro-businesses with fewer than five employees. These SMEs reduced not just their new investments (-EUR 11 billion or -28 % to currently EUR 28 billion) but also their overall investments (-EUR 8 billion or -15 % to currently EUR 45 billion). Investment projects fell by 12 % to EUR 41,000 on average. What must be rated positively is that micro-businesses invest in capacity expansion more frequently (+6 percentage points on 2014).

Investment propensity is moving sideways with only a slight upward trend
In total, around 1.5 million SMEs made investments last year. The willingness of small and medium-sized enterprises to initiate investment projects has de facto stagnated since the year 2009 (Figure 11). Their share in the overall SME sector rose by a mere 0.8 percentage points last year to 42.5 % (2014: 41.7 %).

The proportion of SMEs willing to invest stagnated particularly among micro-businesses (with fewer than five employees) at around 37 %. By contrast, the investment propensity among SMEs in larger employment size classes generally rose, with increases of around 2 to 5 percentage points. The largest SMEs (with 50 and more employees) further increased their already high level (+2.3 percentage points to nearly 87 %). The difference in investment propensity between small and large SMEs thus widened to just over 50 percentage points (+3 percentage points on the previous year). Never before has this gap between investors been wider. It is generally a known fact that investment propensity grows structurally with the size of the enterprise and a certain difference is normal. But if the gap is too wide, it acts as a stumbling block for overall investment activity since micro-businesses significantly influence the overall trend in the SME sector because of their large numbers.

Figure 10: Types of investment in the SME sector

Types of investment by number of full-time equivalent employees (share of investment volume in per cent)



Note: Extrapolated from the number of employees to the investment volume in the SME sector. The category “Other” comprises, among others, innovation, rationalisation, renovation, restructuring and repairs.

Source: KfW SME Panel 2009–2016.

What is pleasing is the significant increase of around 6 percentage points in the propensity to invest reported by each of the two manufacturing sub-segments (see Volume of tables for detailed results over time[24]). It rose to 56 % in R&D-intensive manufacturing[25] and to 57 % in other manufacturing. Enterprises in these segments are of immense importance to Germany's (international) competitiveness.[26] That made the development of their investments over the past years all the more disconcerting.[27]

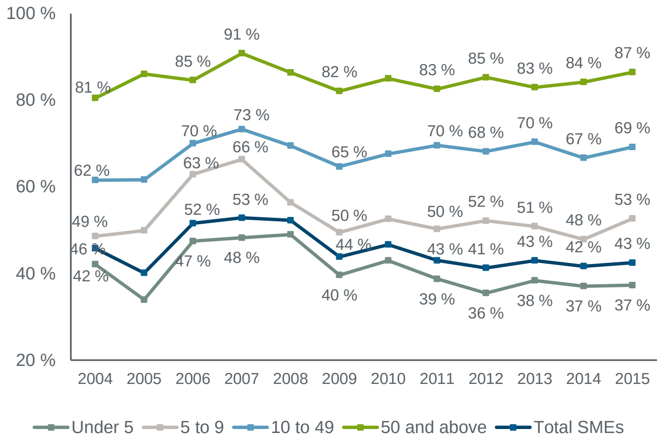
Investments in 2016: signs of very soft growth

Investment can be expected to grow slightly in 2016. KfW Research currently forecasts that total investments by enterprises will rise by 2.5 % (1.5 % adjusted for prices). This would amount to a modest rise of EUR 2 billion in new investments for SMEs.

This estimate is confirmed by the additional survey to the KfW SME Panel conducted in September 2016 (see explanatory box at the end of this report). Thus, 20 % of SMEs will invest more this year than in the previous year. By contrast, 18 % of SMEs expect to invest less. The vast majority of SMEs expect to invest a similar volume (62 %). A year ago, when SMEs were still more willing to invest, the balance between enterprises expanding and reducing investments was +8 percentage points; now it is down to just +2 percentage points.

Figure 11: Proportion of SMEs that made investments

Size classes by number of full-time equivalent employees

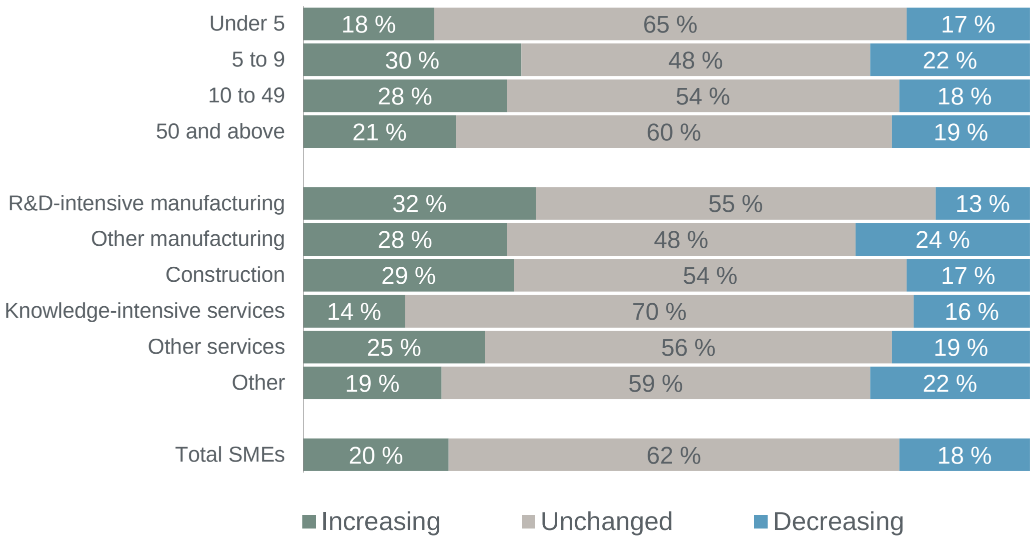


Source: KfW SME Panel 2005–2016.

Micro-businesses and large SMEs in particular want to raise their investment expenditure only moderately (Figure 12). Knowledge-intensive service providers will actually achieve a negative balance, that is, more enterprises want to reduce than increase their investments. By contrast, the propensity to invest in manufacturing will probably increase again. This year it is mainly R&D-intensive manufacturing enterprises that are expanding their investment activity (balance of +19 percentage points).

Figure 12: Investment plans for 2016 by enterprise size and sector

Size classes by number of full-time equivalent employees



Source: KfW SME Panel 2016 (additional survey conducted in September 2016)

The results also indicate that enterprises are still planning conservatively. By mid-September 2016, only 29 % of SMEs had postponed, reduced or completely abandoned at least one investment project planned for the current year. That proportion was higher at the same date in the previous years (2015: 30 %; 2014: 45 %). Given the SMEs' cautious planning, the question remains whether far-reaching investment plans remain "on the shelf".

Credit demand by SMEs slightly higher

Credit demand for investment purposes in the SME sector increased for the fourth time in a row. The demand for loans originally reported by SMEs increased by EUR 4 billion to around EUR 132 billion (+3 % on the previous year). Credit demand by SMEs thus increased by over EUR 30 billion or 32 % since 2011 (Figure 13).

For the ongoing year, credit demand is expected to decrease slightly. KfW Research estimates new lending from banks to enterprises and self-employed persons to have been 2.4 % lower in the first quarter of 2016 than in the previous year's first quarter[28]. The corporate lending market has contracted since autumn 2015. It is questionable whether a further reduction in lending rates would entail a tangible recovery. Interest rates on corporate loans are a major criterion for enterprises' decisions. But SMEs' demand for loans has traditionally been rather muted and current interest rates are already on historically low levels.

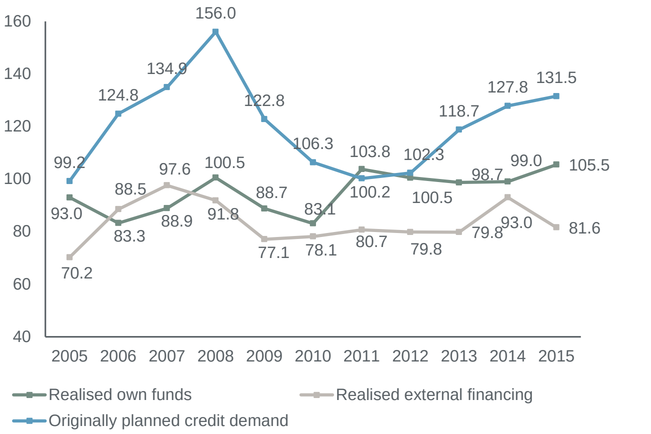
Readiness to negotiate is generally declining

Credit demand was spread across roughly 26,000 fewer enterprises than in the previous year (Figure 14). In 2015, around 511,000 SMEs conducted negotiations with banks and savings banks on investment loans, representing some 35 % of all investors (-2 percentage points) and 14 % of all SMEs (-1 percentage point). To be sure, more enterprises still made their way to credit institutions than in the years 2010–2013 when demand was suppressed (the annual average was 500,000 SMEs, or 32 %). But the propensity of SMEs to borrow has remained below earlier levels (2006–2009: 740,000 SMEs on an annual average, or 40 %).

The decline in readiness to negotiate affects all size classes: micro-businesses' propensity to negotiate fell by 3 percentage points, in the medium size classes it dropped by 4 percentage points each, and large SMEs with 50 and more employees by 1 percentage point. The continuing favourable financing environment does not appear to have provided additional incentives for negotiating investment loans with banks and savings banks.

Figure 13: Originally planned credit demand and realised financing volume

EUR in billions

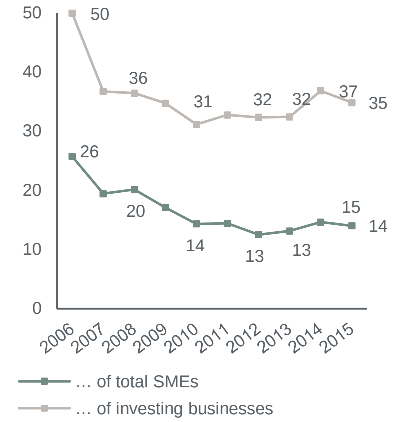


Note: Volumes extrapolated from the number of employees. Extrapolations include other sectors. It must be taken into account that the originally planned credit demand is almost never fully realised. Plan revisions due to changed business strategies must be taken into account above all. SMEs' actual demand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

Source: KfW SME Panel 2006–2016.

Figure 14: SMEs with loan negotiations

In per cent



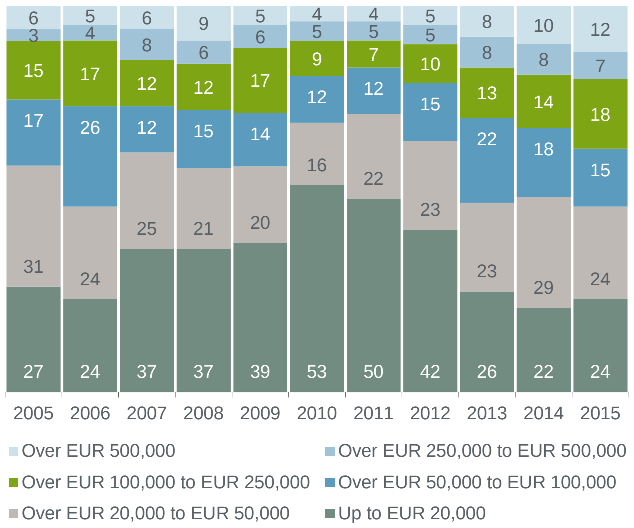
Source: KfW SME Panel 2007–2016.

More demand on average, but only because large volumes are in demand

The average loan amount requested rose noticeably by 13 % to around EUR 289,000 (2014: EUR 256,000). Demand for smaller loan volumes remained on a very low level (Figure 15). By contrast, demand for loans between EUR 100,000 and EUR 250,000 in particular increased by 4 percentage points.

Figure 15: SMEs' borrowing demand

Proportion of SMEs with borrowing demand in per cent



Source: KfW SME Panel 2006–2016.

In 2015 the significance of very large loan volumes was higher than ever before. Enterprises with very high demand of at least EUR 1 million alone accounted for EUR 78 billion or 60 % of total loan demand in the SME sector. Thus, even more than in the years before, a very small segment of borrowers characterised SMEs' overall loan demand (only 8 % of all SMEs requesting loans, or 38,000 enterprises).

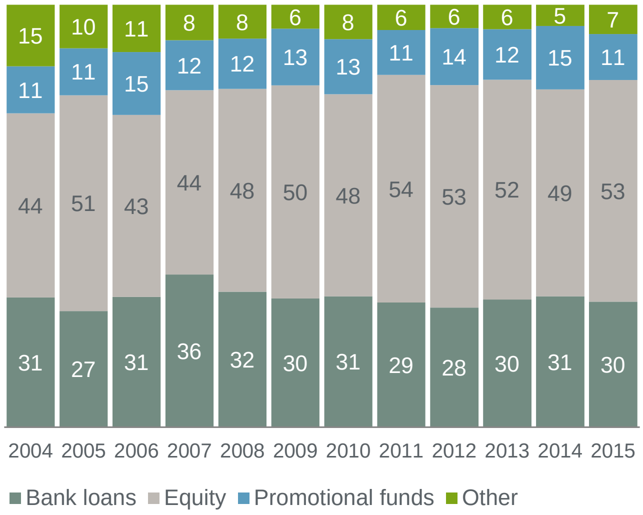
This dominance of large-volume credit demand shifted the mean value upward. The median, in contrast, was just over EUR 50,000, which means that half the SMEs requesting a loan had a demand not exceeding this amount (see also Figure 15). For the sector as a whole, this still means that most SMEs' loan demand is moderate.

High demand, but less use of borrowed funds for investments

In 2015 the slight rise in credit demand was not reflected in the composition of investment finance. The share of bank loans dropped by one percentage point 30 %. That was roughly EUR 60 billion, EUR 3 billion less than in 2014.

Figure 16: Investment finance

Financing sources by number of full-time equivalent employees (percentage of investment volume)



Note: Extrapolated from the number of employees to the investment volume. Other includes private equity and mezzanine capital, among others.

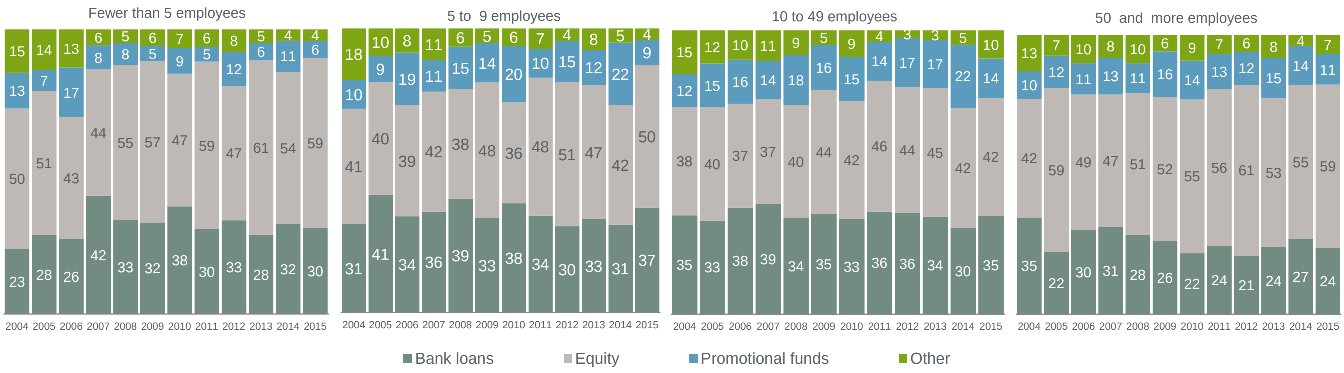
Source: KfW SME Panel 2005–2016.

The share of loans in the funding volume declined because micro-businesses and very large SMEs in particular used a smaller portion of bank loans to finance their investments (Figure 17) – and this despite the further reduction in interest expense (Figure 19). It continued to fall and amounted to EUR 35 billion last year (down EUR 3 billion or 8 % on 2014).

While roughly 7 % of the SME investment volume (approx. EUR 14 billion) was financed from other sources (such as private equity or mezzanine capital), fewer promotional funds were used in all size classes of the SME sector. Promotional funds accounted for 11 % of the total investment volume (around EUR 22 billion, down EUR 8 billion on 2014). The total volume of bank loans actually realised and used to finance investments was around EUR 82 billion, much lower than the EUR 92 billion in the previous year. Figure 18 compares the volume of originally intended credit demand and bank loans ultimately used to finance investments.

Figure 17: SME investment finance by size class

Financing sources by number of full-time equivalent employees (percentage of investment volume)



Note: Extrapolated from the number of employees to the investment volume. Other includes private equity and mezzanine capital, among others.

Source: KfW SME Panel 2005–2016.

A gap between demand (left) and realisation (right) is normal. Generally, enterprises almost never fully realise their originally planned credit demand. They adapt their investment and financing plans to changed business strategies in the course of the year. Loan negotiations, for example, may reveal a lower need for external finance than originally estimated. Besides, enterprises unexpectedly reduce or defer investment projects repeatedly ("only" around 70 % of all investment projects planned at the start of the year are fully implemented). These revised plans then form the basis for SMEs' actual borrowing demand – which is usually significantly lower. In 2015, for example, it was EUR 73 billion, while the long-term average from 2005 to 2015 was EUR 77 billion).

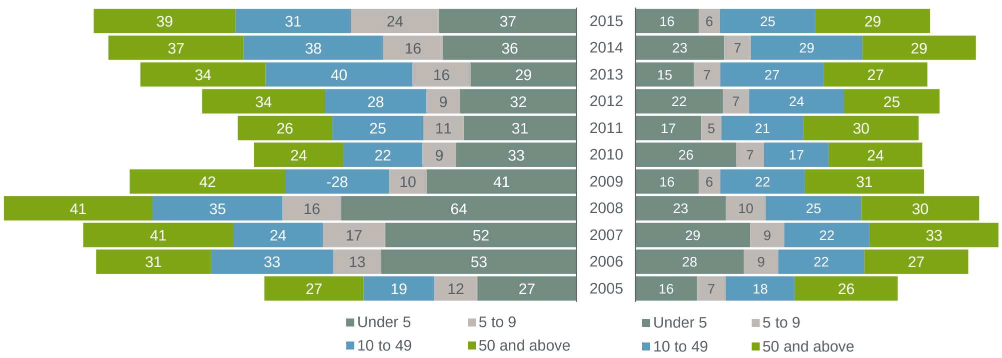
SMEs are using more equity than ever

In 2015 the volume of investment expenditure funded from businesses' own resources was EUR 105 billion – higher than ever before. SMEs invested using reserves they had built up in the past years. Their own resources made up 53 % of their investment funding, an increase of 4 percentage points. A reduction of these high reserves was to be expected, but would have been more likely in a phase of cyclical weakness. The fact that it should occur precisely in an environment of sound economic growth and relatively attracttive financing opportunities is therefore somewhat surprising.

This development can be seen in almost all size classes and sectors. Among the enterprises that increased the proportion of own resources in investment funding were, in particular, micro-businesses (+5 percentage points), SMEs with five to nine employees (+8 percentage points), other manufacturing firms (+5 percentage points) and construction firms (a high +14 percentage points).

Figure 18: Original credit demand (left) and external financing actually realised (right)

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

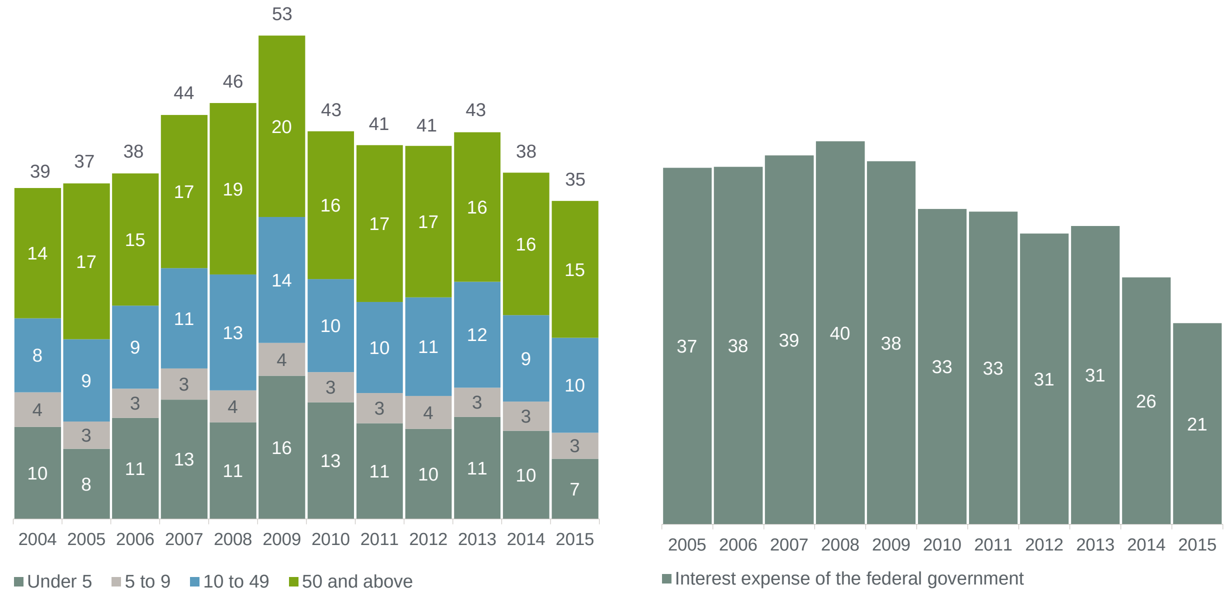


Note: For reasons of methodology, the volumes of the external financing actually realised (bank loans and promotional funds) are calculated by FTE employment size classes without the enterprises in other sectors. The individual data from the size classes therefore do not add up to the total value shown in the text and Figure 13.

Source: KfW SME Panel 2006–2016.

Figure 19: Interest expense of SMEs and the federal government

Interest expense by full-time equivalent employees (and total) and interest expense of the federal government in EUR billions



Sources: KfW SME Panel 2005–2016, Federal Ministry of Finance.

Self-funding capacity remains strong; equity ratio steady at a high level

The average equity ratio[29] in the year under review was 29.7 % (Figure 20) and remained steady on a high level as in the previous year. For comparison: in 2002 the average equity ratio was around 18 %. Enterprises achieved major improvements since then by retaining most of their profit gains and building up financial buffers.

The equity ratio of small enterprises recently declined by 1.2 percentage points and that of construction firms by 0.6 percentage points. Nonetheless, the average equity ratio of small enterprises in particular remains on a healthy, above-average level of 20.9 %.

Other parameters relating to the equity base also remained steady on the previous year's level. A negative equity ratio was reported by 11 % of SMEs (2014: 10 %). The share of SMEs with a relatively low equity ratio of less than 10 % was 32.5 % (2014: 32.1 %), while 40 % of SMEs reported a relatively high equity ratio of at least 30 % (2014: 39.9 %). The development of these last two indicators between 2002 in 2015 once again demonstrates the strong equity base of small and medium-sized enterprises (Figure 21).

Credit has become less accessible for micro-businesses

The lending behaviour of banks and savings banks failed to present a clear picture in 2015. With respect to the SME sector as a whole, access to investment loans appears to have become more difficult than in the previous year (Figure 22). The share of enterprises for which all loan negotiations went successfully fell to 57 % (63 % in 2014), settling near the long-term average of around 54 % between 2004 and 2014.

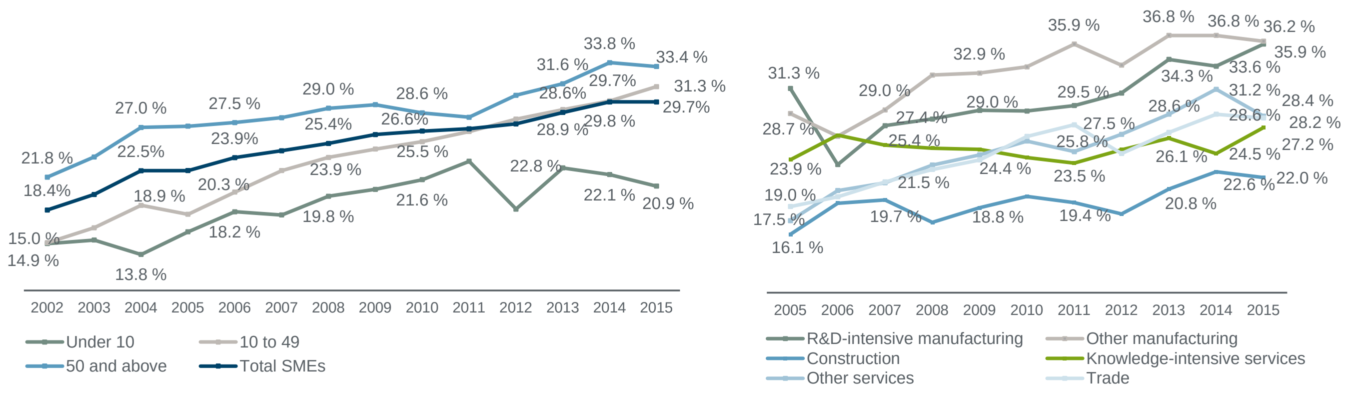
At the same time, the share of enterprises for which all investment loan negotiations failed rose from 16 % in 2014 to 20 %. This value is also close to the long-term average of approximately 21 % from 2004 to 2014. The proportions of SMEs with at least one failed negotiation increased as well – either because the enterprise itself rejected the offer (+6 percentage points to 20 %), or because the bank failed to make an offer (+1 percentage point to 24 %).

The detailed analysis shows, however, that only micro-businesses with fewer than five employees had more difficulty accessing loans. For SMEs in all other size categories, credit access remained at least on the very good level of the previous year, and the trend was rising again (see also Volume of tables, Table 20).

The largest SMEs continued to have historically good access to loans. There were almost no cases in which an application was denied by a bank (Figure 24) and the credit supply gap was very narrow at around 2 % (Figure 23). Since SMEs in the smallest size category represent the vast majority of SMEs in Germany (82 %), their development has an impact on the values for SMEs overall.

Figure 20: SMEs' equity ratios by size class (left) and sector (right)

Size classes by number of full-time equivalent employees

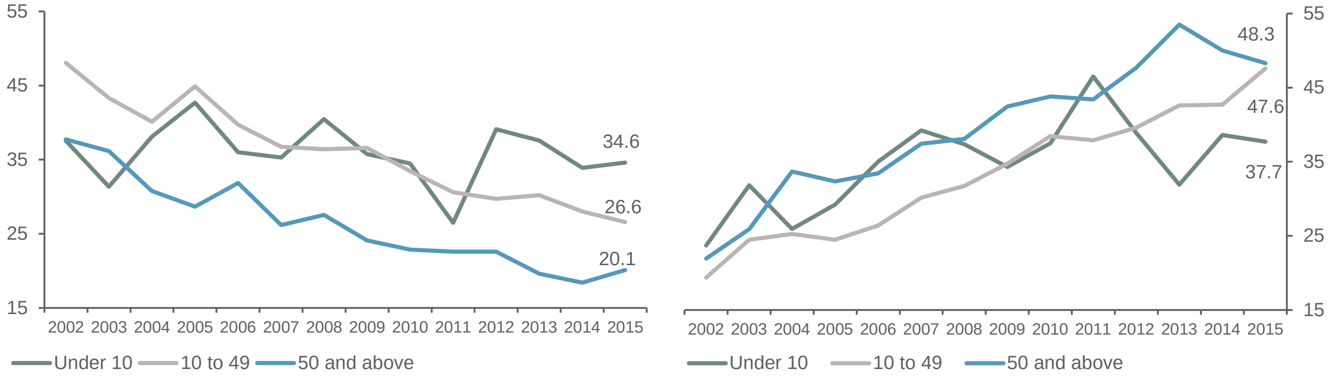


Note: Extrapolated from the number of employees. Mean values weighted against turnover.

Source: KfW SME Panel 2003–2016.

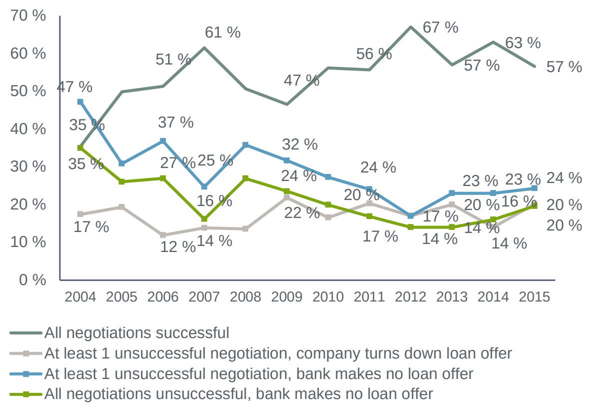
Figure 21: Proportion of SMEs with a low equity ratio (below 10 % – left) and with a high equity ratio (at least 30 % – right)

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



Source: KfW SME Panel 2003–2016.

Figure 22: Outcome of loan negotiations



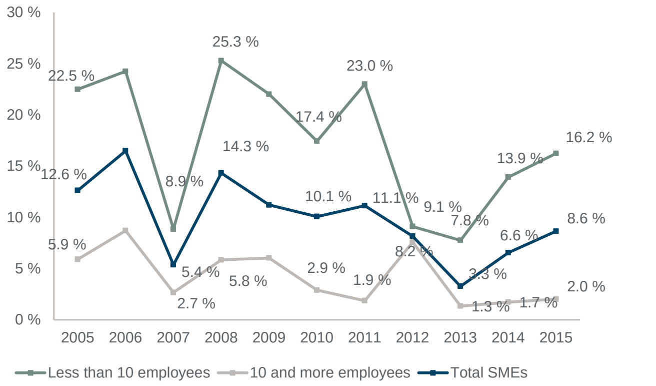
Source: KfW SME Panel 2005–2016.

Micro-businesses are increasingly challenged by their fragmentation, credit rating and own denials

Access to credit had already deteriorated slightly for micro-businesses in the previous year and this trend continued in 2015 (Figure 24). This is evidenced by the development of the credit supply gap, that is, the rate of SMEs' actual borrowing demand that was not satisfied because of banks' denial. The credit supply gap for small enterprises with fewer than ten employees has widened to currently around 16 % (Figure 23).

The explanation for this is partly structural. Micro-businesses in particular often lack well-established relationships with credit institutions, which leads to information differentials. When the loan amounts they apply for are then (too) low from the banks' or savings banks' point of view (see above), they often shy away from the large effort involved in reducing these differentials. Among other things, this can result in risk premiums on interest or high collateral requirements – precisely the reasons SMEs' loan negotiations fail most frequently.[30]

Figure 23: Estimated credit demand not realised because the bank did not make a loan offer as a percentage of actual credit demand ('credit supply gap')



Note: The percentages are based on loan volumes extrapolated from the number of employees. They were calculated by subtracting the enterprise's revised credit demand from its original credit demand. The resulting 'actual credit demand' is compared with the realised external financing volume. The difference is defined as the 'credit supply gap'. Values for the years 2011–2014 were partly corrected in the reporting year 2015.

Source: KfW SME Panel 2006–2016.

In this context it is advisable to look at the development of their credit worthiness as a factor. Credit worthiness is crucial to accessing debt capital as it expresses an enterprise's ability to meet its payment obligations.However, it was particularly the credit rating of smaller SMEs and service providers that was not able to keep pace with the general improvement since the crisis years. The proportion of enterprises with a very weak credit rating rose sharply in these segments between 2009 and 2014.[31] Detailed analyses show that the overwhelming majority of smaller SMEs with fewer than five employees for which all investment loan negotia-tions failed in 2015 fall into this segment (83 %).

This trend may also be reflected in the latest findings because banks and savings banks have been required to maintain adequate capital to cover credit risks ever since the introduction of Basel II. Loans to SMEs with a low credit rating (and a higher probability of default) imply higher risk and higher capital requirements. This, in turn, increases financing costs and requires higher collateral. Both increasing regulation and the enduring low-interest policy are putting banks under greater pressure to recover their transaction costs for smaller loan volumes.

This trend may also be reflected in the latest findings because banks and savings banks have been required to maintain adequate capital to cover credit risks ever since the introduction of Basel II. Loans to SMEs with a low credit rating (and a higher probability of default) imply higher risk and higher capital requirements. This, in turn, increases financing costs and requires higher collateral. Both increasing regulation and the enduring low-interest policy are putting banks under greater pressure to recover their transaction costs for smaller loan volumes.

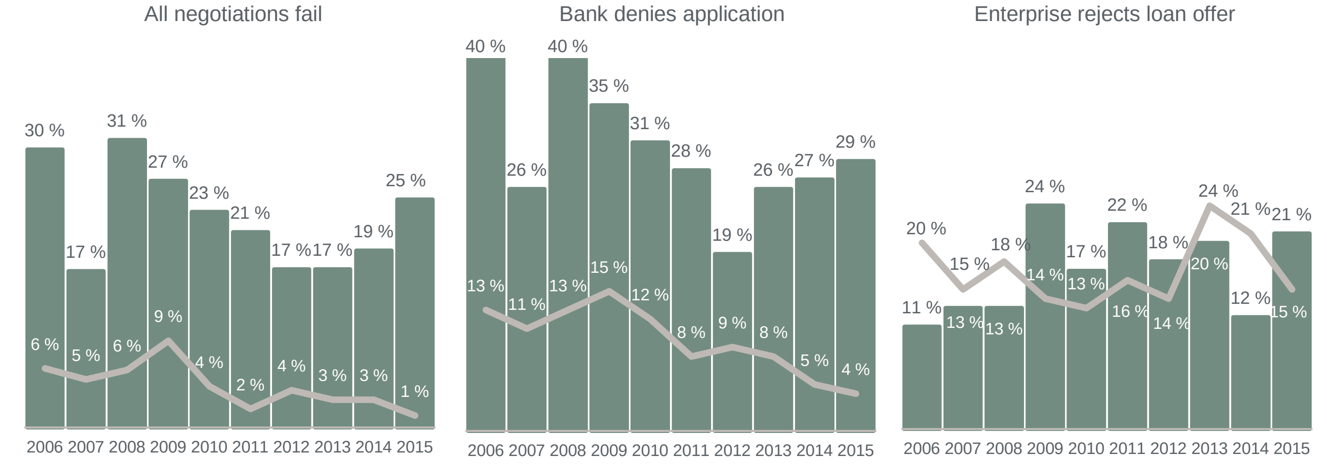
On balance, this may lead to a situation in which SMEs with a smaller credit demand are offered unfavourable conditions by credit institutions (exemplified by high interest rates or collateral requirements). Our findings corroborate this view. For micro-businesses the results are currently driven to a substantial extent by enterprises' denials to offers from banks (Figure 24). They have increased significantly year-on-year. There is much to indicate that the loan offers made contained terms and conditions unacceptable to SMEs much more often than before.

Across the SME sector, a borrowing demand of EUR 6.3 billion could not be satisfied in 2015 because bank loan offers were lacking (EUR 5.3 billion in 2014). That was around 9 % of actual borrowing demand (which was calculated by subtracting the revised credit demand from the initial credit demand). Compared with the long-term average of just over 10 % for 2005 to 2015, this was still a good ratio.

Demographics: Owners are ageing more rapidly

The general demographic development has not left small and medium-sized enterprises unscathed either. In fact, KfW Research has demonstrated that demo-graphic change is occurring there at a faster pace.[32] Most recent data now illustrate that this trend has accelerated yet again. In the year 2015, 40 % of all business owners were already aged 55 or older. This means the proportion has doubled in the last 12 years (20 % in 2002). At the same time, fewer and fewer SMEs are under the direction of young owners. Only 23 % are now younger than 45, but in the year 2002 it was still 48 % (Figure 25). The average age of a small or medium-sized business owner is currently around 52 years, higher than ever before (45 years in 2002).

Figure 24: Outcome of loan negotiations for micro-businesses with fewer than five employees (bar) and large SMEs with 50 and more employees (line)



Guide: The proportion of micro-businesses for which all investment loan negotiations failed in 2015 was 25 %, while that of large SMEs was 1 % (graph on the left). The proportion of micro-businesses for which at least one negotiation failed as a result of the bank's denial in 2015 was 29 % (graph in the middle), while the proportion of micro-businesses for which at least one negotiation failed because they rejected the bank's offer was 21 % (graph on the right).

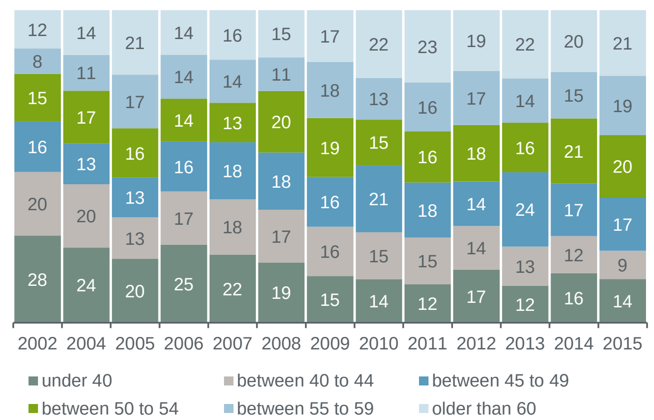
Source: KfW SME Panel 2007–2016.

Succession remains an issue

The process of rapid ageing in SMEs is being exacerbated by the lack of successors. Fewer and fewer young entrepreneurs are moving up (Figure 26). According to the KfW Start-up Monitor, roughly three fourths of all business founders are below the age of 45 and thus relatively young overall (average age in 2015: 37 years).[33]

Figure 25: Age of SME owners (2002–2015)

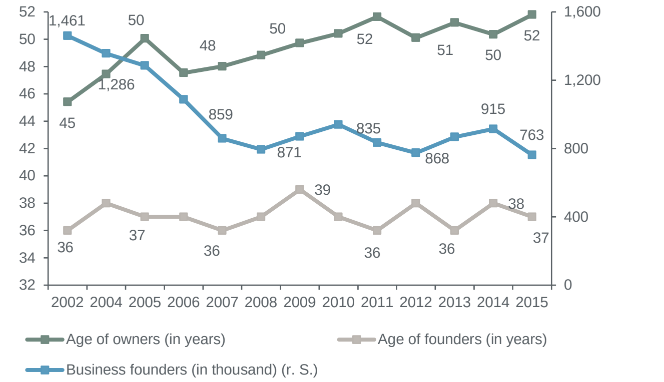
Proportions of enterprises per age group in per cent



Notes: Extrapolated from the number of companies. Including only those enterprises that were newly entered in the dataset in the respective survey year. Regular survey participants were excluded because the owners' age increased by definition. No data are available on the age of business owners for the year 2003.

Source: KfW SME Panel 2003–2016.

Figure 26: Start-ups, age of business founders and owners (2002–2015)



Sources: KfW SME Panel 2003–2016, KfW Start-up Monitor 2003–2016.

However, since the turn of the millennium the total number of business founders has dropped sharply from more than 1.5 million each year in 2001 to only 763,000. Founders who use the structures of existing enterprises account for roughly one third of total start-up activity (30 %), representing around 230,000 takeover entrepreneurs and entrepreneurs who acquire participations in companies in Germany – a number that has been falling lately.[34]

This will pose major challenges for SMEs in the medium term. After all, 15 % of all SMEs are planning to transfer or sell their enterprise to a successor by the year 2019.[35] The number of planned successions thus remains at around 500,000 to 600,000. What is clear is that not all imminent successions will be able to take place in the form of a takeover or participation. Possibilities may exist for closing the remaining gap, at least in part, through succession arrangements that have hitherto received little attention. For example, takeovers by existing employees or management could play a role. They are familiar with the strengths and weaknesses of the enterprise, which can enable a smoother transition process.

What remains important, as before, is to address the necessary steps of successful business succession early on. However, many enterprises still initiate the necessary processes much too late.[36] Besides, they perceive the bureaucracy involved as a key impediment. Progress has already been made in this regard (with the Bureaucracy Reduction Act, for example), but further potential for dismantling bureaucratic hurdles remains (for instance in online data exchange with authorities).

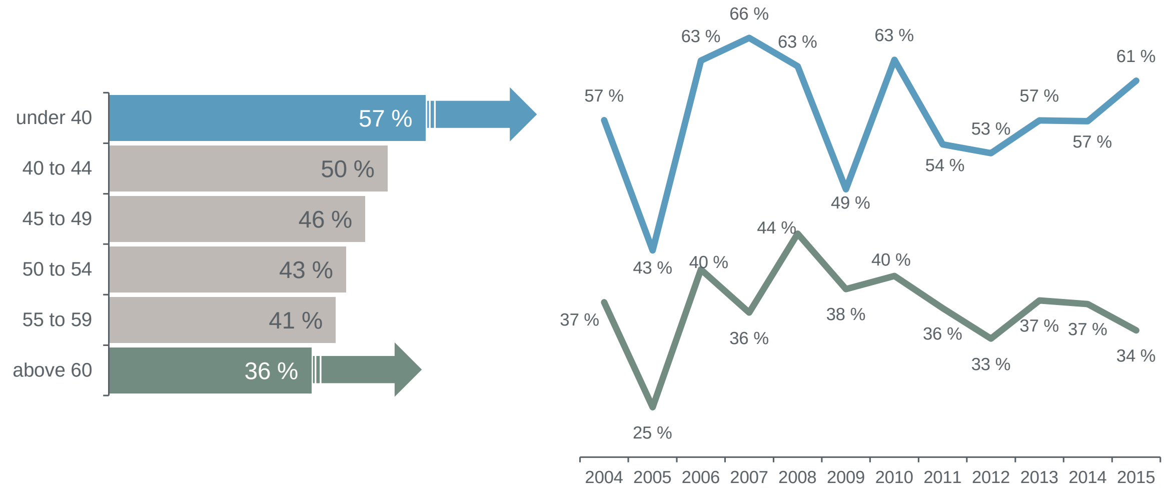
Age gap in investments widens further ...

The imminent generational transition of ownership, coupled with the generally rising age of owners, is blocking investments. On the one hand, existing owners of SMEs contemplating retirement are uncertain whether a potential successor rates the future profit of an investment equally highly and factors it into the purchase price accordingly.[37] On the other hand, many mature-aged business owners believe investments have an excessively long payback period. Having reached a high age, they have a strong desire to avoid long-term financial obligations (another reason older owners approach credit institutions significantly less often, although they are no less successful as negotiators)[38]. Their incentives are therefore lower, and the more long-term an investment project is, the lower the incentive. These patterns are clearly visible.

In 2015, 61 % of owners below the age of 40 made investments, but only 34 % of over 60-year-olds (Figure 27). This structural “demographic gap” in investment behaviour has been steady over the past 12 years and is currently 27 percentage points. Besides, for some years now older business owners have been increasingly reluctant to invest at all (see Volume of tables).

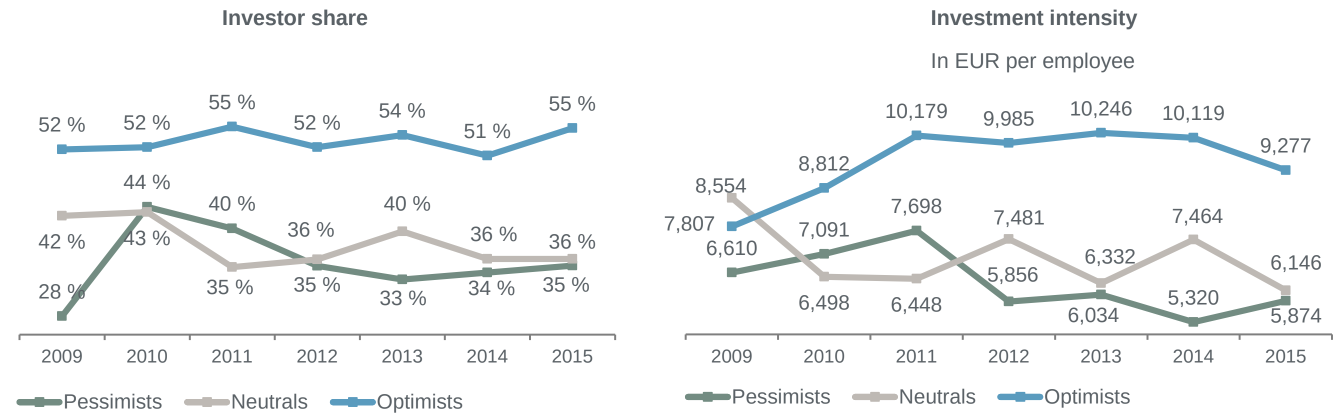
This jeopardises enterprises’ assets because older entrepreneurs thus wear down their capital stock more often. Only 23 % of older business owners make new investments that exceed depreciation. There is a big difference to under 40-year-old owners. They achieve positive net investments for their businesses in 47 % of cases. In addition, the share of SMEs investing in expansion is noticeably higher when their owners are younger.

Figure 27: Share of investors by age of owner – average in the period 2004–2015 (left) and development over time (right)



Source: KfW SME Panel 2005–2016.

Figure 28: Relationship between business expectations and investment activity (2009–2015)



Source: KfW SME Panel 2010–2016

... also because older owners have a less optimistic view of the future

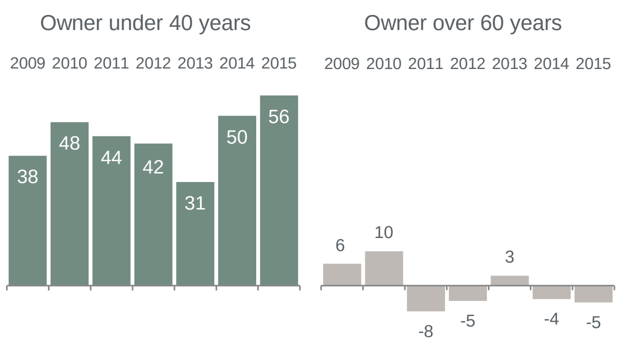
Older business owners are significantly more pessimistic than younger ones (Figure 29). This hampers investments because a strong correlation exists between positive business expectations and the propensity to invest.[39] The following applies to the SME sector as a whole:

1. Optimists are more likely to invest (Figure 28). In 2015, 55 % of SMEs with positive expectations for their business invested, but only 35 % of those with a negative outlook.

2. Optimists invested around EUR 9,300 per FTE employee in 2015, while owners with pessimistic or neutral expectations invested EUR 5,900 and EUR 6,200 respectively – significantly less.

3. Optimists invest in capacity expansion almost twice as often as pessimists, thereby improving their competitiveness in the long term.

Figure 29: Balance of positive and negative business expectations by age of business owner



Source: KfW SME Panel 2010–2016.

These structural patterns are of particular relevance given the increasing demographic change in SMEs. The rising number of older business owners will provide only little impetus for investment. It is crucial that their confidence be strengthened on a sustainable basis. ■

The structure of SMEs in 2015

The SME sector covers all enterprises in Germany with an annual turnover of not more than EUR 500 million. According to this definition there were around 3.65 million SMEs in Germany in the year 2015. 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 30). A proportion of 87 % of them (3.16 million) generate an annual sales turnover of less than EUR 1 million. Less than 0.4 % of SMEs (close to 11,000) generate an annual sales turnover of more than EUR 50 million.

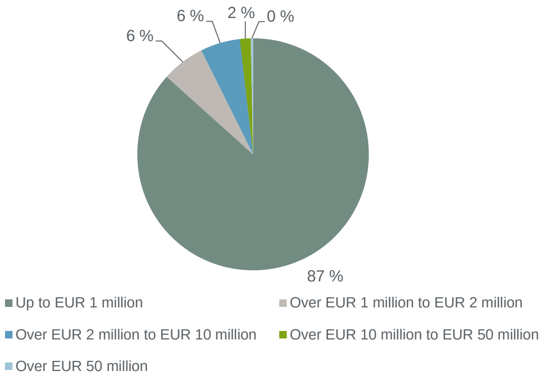
The fragmented nature of the SME sector is also reflected in the numbers of employees (Figure 31). Eighty-two per cent of SMEs have fewer than five employees (3.0 million), and 2.1 % of SMEs have 50 and more employees. The SME sector has become more fragmented in the past years, mostly as a result of increasing tertiarisation.

… and service-oriented

The majority of German SMEs are service enterprises (Figure 32), with 2.75 million – 76 % of all SMEs – operating in service industries, and 1.39 million of these providing knowledge-intensive services, a trend that is increasing. In 2015 around 1.4 % of all SMEs were R&D-intensive manufacturers (some 53,000 enterprises).

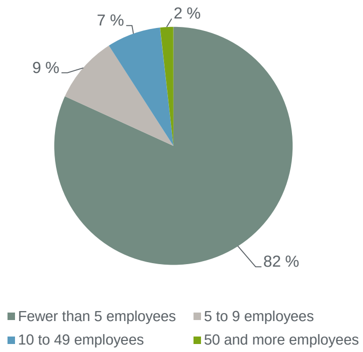
Around 3 million SMEs are domiciled in the western German states (82 %), while 673,000 (18 %) are domiciled in eastern Germany.

Figure 30: SMEs by annual turnover in 2015



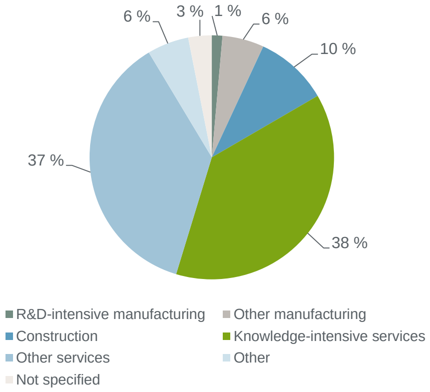
Source: KfW SME Panel 2016

Figure 31: SMEs by number of employees in 2015



Source: KfW SME Panel 2016

Figure 32: SMEs by sector in 2015



Source: KfW SME Panel 2016

SMEs at a glance – key figures

	2009	2010	2011	2012	2013	2014	2015
Investments							
Total share of investors	44	47	43	41	43	42	43
Share of investors < 5 full-time-equivalent employees	40	43	39	36	39	37	37
Share of investors ≥ 50 full-time-equivalent employees	82	85	83	85	83	84	87
Total investment volume (EUR in billions)	176	177	195	191	190	202	199
Investment volume < 5 full-time-equivalent employees (EUR in billions)	43	55	48	50	44	53	45
Investment volume ≥ 50 full-time-equivalent employees (EUR in billions)	72	67	80	75	69	71	84
Volume of investment in new machinery, equipment and buildings (EUR in billions)	139	143	156	145	144	158	161
Investment finance							
Initially planned credit requirements (EUR in billions)	118	106	100	102	119	128	132
Total debt capital realised (EUR in billions)	77	78	81	80	80	92	82
Credit supply gap (EUR in billions)	8	7	4	2	1	2	6
Net profit ratio							
Average return on sales	5.1	5.6	5.7	6.0	6.7	7.0	7.3
Average return on sales < 10 FTE employees	9.8	10.6	11.4	10.3	13.3	12.6	13.8
Average return on sales ≥ 50 FTE employees	3.1	4.0	3.7	4.4	4.2	4.6	4.5
Proportion of SMEs with losses	16	13	12	11	11	12	8
Equity base							
Average equity ratio	26.3	26.6	26.9	27.4	28.6	29.7	29.7
Average equity ratio< 10 FTE employees	20.6	21.6	23.5	18.5	22.8	22.1	20.9
Average equity ratio ≥ 50 FTE employees	29.4	28.6	28.1	30.4	31.6	33.8	33.4
Proportion of SMEs with negative equity ratio	9	6	6	12	10	10	11
Employment trends							
Total employment growth rate	1.5	2.5	2.6	2.1	2.0	2.8	2.3
FTE growth rate < 5 FTE employees	2.5	2.5	3.2	1.2	2.1	2.6	1.7
Development of turnover							
Total turnover growth rate	-6.2	6.7	8.1	2.4	1.9	3.3	3.3
Turnover growth rate < 5 FTE employees	-4.5	6.0	7.0	2.0	2.3	2.3	2.9

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. Due to the fact that it is representative for SMEs of all sizes and from all branches in Germany, the KfW SME Panel offers projections for even the smallest companies with fewer than five employees. A total of 10,535 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. The KfW SME Panel gives a representative picture of the current situation, and the needs and plans of SMEs in Germany. It focuses on annually recurring information on business 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 or equity ratios.

The basic population used for the KfW SME Panel comprises all SMEs in Germany. These include private-sector companies from all sectors of the economy with annual turnover of no more than EUR 500 million. The population does not include the public sector, banks or non-profit organisations. There are currently 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 2015 and the population of employees at SMEs in 2015, the German Company Register (Unternehmensregister) and the official employment statistics (Erwerbstätigenrechnung) were used for the 2016 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 look at the distribution in the net sample (in line with the four group characteristics) in relation to their distribution in the population as a whole. Two extrapolation factors are determined in total: an unlinked factor for the 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 at SMEs in Germany.

The survey is conducted by the Financial Services Division of GfK SE on behalf of KfW Bankengruppe. The project received expert advice from the Centre for European Economic Research (ZEW) in Mannheim. The main survey of the 14th wave of the KfW SME Panel was conducted in the period from 15 February 2016 to 10 June 2016.

A ***Supplementary Autumn 2016 Survey to the KfW SME Panel*** was also conducted by GfK SE in the form of an online survey during the period from 13 to 23 September 2016. 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 2,211 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

[1] Cf. Destatis (2016), Press release 001/2016-01-04.

[2] Data on persons in employment in Germany from the employment accounts of the Federal Statistical Office.

[3] The employment growth rate is calculated on the basis of full-time equivalents (FTEs). In difference to the concept of employee numbers, it depicts the actual demand for labour. Full-time equivalent employees are calculated by adding the number of full-time employees (including business owners) to the number of part-time employees multiplied by the factor 0.5. Apprentices are not included.

[4] Knowledge-intensive services comprise service industries with an above-average share of university graduates, or services with a strong focus on technology. These include, for example, architecture and engineering firms, law firms, tax and management consultancies, and real estate and housing services.

[5] For details on this thematic complex, see: Leifels, A. and M. Schwartz (2016), Neun von zehn Auszubildenden lernen im Mittelstand – Handwerk geht voran, (‘*Nine in ten apprentices are trained in SMEs – handicrafts are leading the way’* – our title translation, in German), KfW Research, Economics in Brief no. 114, Frankfurt am Main. See also details on the topics of training in SMEs and recruitment of skilled workers: Leifels, A. (2015), Immer weniger Azubis: Mittelstand arbeitet an Attraktivität der Berufsausbildung (‘*Fewer apprentices: SMEs working to make training more attractive’* – our title translation, in German), Economics in Brief No. 82, KfW Economic Research, Frankfurt/Main.

[6] Destatis, Foreign trade, as at 31 August 2016.

[7] Ullrich, K. (2016), KfW External Trade Barometer: 3rd quarter 2016. Germany’s external trade environment remains subdued, KfW Research, Frankfurt/Main.

[8] Cf. Destatis (2016), Press release 315/2016-09-09.

[9] This comprises both direct exports by SMEs to the UK and supplies for exports of downstream products of other German enterprises (indirect export).

[10] Abel-Koch, J. (2016): SMEs’ value chains are becoming more international – Europe remains key, KfW Research, Focus on Economics no. 137, Frankfurt am Main. The underlying study was prepared by IW Consult GmbH on behalf of KfW Group. It involved a representative telephone interview among 600 small and medium-sized industrial and service enterprises as well as a special evaluation by the IW Future Panel. The focus was on larger SMEs with 20–499 employees – and thus on a more narrowly defined parent population compared with the KfW SME Panel.

[11] Schwartz, M. and A. Leifels (2016), Demographic change bolsters private consumption and SME growth, KfW Research, Focus on Economics no. 128, Frankfurt/Main.

[12] Profitability is defined as the ratio of pre-tax profit to turnover. The figure shows the mean values of profitability weighted against turnover.

[13] DZ Bank (2016), Mittelstand im Mittelpunkt: Ausgabe Frühjahr 2016 (‘*Focus on SMES: spring 2016 edition’* – our title translation, in German). – Creditreform Wirtschaftsforschung (2016), Wirtschaftslage und Finanzierung im Mittelstand: Frühjahr 2016 (‘*Economic situation and financing in the SME sector: Spring 2016’* – our title translation, in German). EY (2016), SME Barometer January 2016.

[14] In order to assess entrepreneurs’ expectations, two indicators can be formed on the basis of the KfW SME Panel: turnover expectations and earnings expectations. These were surveyed for the respective next three years and can express the following three levels of expectation: falling turnover / earnings compared with the survey year (-1=negative expectations), unchanged earnings / turnover (0=neutral expectations), increasing earnings/turnover (1=positive expectations). The two indicators were subsequently combined into one indicator of business expectations. The following categories were defined for this purpose: ‘pessimists’: -2 ≤ (turnover expectations + earnings expectations) ≤ -1 / ‘neutral’ (turnover expectations + earnings expectations) =0 / ‘optimists’: 1 ≤ (turnover expectations + earnings expectations) ≤ 2.

[15] Measured as indexed values (2003=100) of labour productivity (turnover per full-time equivalent employee). Missing data on turnover and employees were imputed. Adjusted and extrapolated values.

[16] Measured as the difference of absolute labour productivity between large SMEs and small SMEs in relation to the value of large SMEs.

[17] Borger, K. (2016), Weak productivity growth in Germany – is it a problem? Economics in Brief No. 102, KfW Research, Frankfurt/Main.

[18] Cf. Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2015), Jahresgutachten 2015/2016: Zukunftsfähigkeit in den Mittelpunkt, (German Council of Economic Experts) (2015) (Focus on sustainability, annual report 2015/16 – our title translation, in German), Wiesbaden.

[19] Cf. Wagner, M. (2016), Economic Insight: The German productivity disaster, Commerzbank Economic Research, 29 September 2016.

[20] Gross fixed capital formation in the corporate sector comprises private sector investment in machinery and equipment plus construction (without residential construction).

[21] 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.

[22] Cf. Saam, M., Viete, S. and S. Schiel (2016): Digitalisierung im Mittelstand: Status Quo, aktuelle Entwicklungen und Herausforderungen (‘*Digitisation in SMEs: status quo, current trends and challenges’* – our title translation, in German). Research project on behalf of KfW Group. Centre for European Economic Research (ZEW), Mannheim. For a summary of the findings see Zimmermann, V. (2016): SMEs and digitalisation: The current position, recent developments and challenges, Focus on Economics no. 138, KfW Research, Frankfurt/Main.

[23] 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.

[24] The Volume of tables relating to the KfW SME Panel is available at: https://www.kfw.de/KfW-Konzern/KfW-Research/KfW-Mittelstandspanel.html#1 (in German only).

[25] Research- and development-intensive (R&D-intensive) manufacturing covers those manufacturing sectors whose average research and development intensity (R&D intensity: ratio of R&D expenses to turnover) is higher than 3.5%.

[26] Cf. Tchouvakhina, M. and M. Schwartz (2013), Diversity is crucial: how the SME sector in Germany compares with others in Europe , Focus on Economics No. 24, KfW Economic Research, Frankfurt/Main.

[27] See KfW SME Panel 2014 for more details.

[28] Cf. Wanke, S. (2016), KfW Credit Market Outlook: June 2016. Mix of light and shade, KfW Research, Frankfurt/Main.

[29]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.

[30] For details cf. Schwartz, M. (2015): KfW SME Panel 2015. Growing optimism is overcoming weak investment trend, KfW Economic Research, Frankfurt/Main.

[31] Gerstenberger, J., Zimmermann, V. and M. Bretz (2016), Unternehmensbonität – eine nicht zu vernachlässigende Größe (*'A company's credit rating – a factor not to be neglected'* – our title translation, in German) , KfW Research und Creditreform, Studien und Materialien, Frankfurt/Main.

[32] Gerstenberger, J. and M. Schwartz (2014), Mittelstand altert im Zeitraffer (*'SMEs are ageing fast'* – in German only), Economics in Brief No. 63, KfW Economic Research, Frankfurt/Main.

[33] Metzger, G. (2016), KfW Start-up Monitor 2016: Labour market greatly lowers appetite for self-employment, innovative entrepreneurs hold their own, KfW Research, Frankfurt am Main (forthcoming).

[34] Metzger, G. (2016), Transfer-planning entrepreneurs outnumber takeover entrepreneurs 3 to 1, KfW Research, Focus on Economics No. 133, Frankfurt/Main.

[35]Information on a planned company succession is collected only in the year of first inclusion in the dataset. This question is not posed repeatedly to the relevant enterprises in the following years. Data on planned company successions are available from the survey years 2012 to 2016. Confidence intervals of 95 % were calculated for the reporting year 2015 as well. The interval for the share of SMEs seeking intra-family leadership succession oscillates between 7 and 9 %. The interval for the proportion of SMEs seeking external leadership succession oscillates between 6 and 8 %. If we take into account the lower margin (some 13 % overall) and the upper margin (some 17 % overall), the interval width is around 480,000 to 620,000 enterprises that are planning to hand over or sell the company to a successor by the year 2019.

[36] For details: Leifels, A. (2016), Ageing boosts SMEs' need for successors – 620,000 business transitions by 2018, KfW Research, Focus on Economics No. 132, Frankfurt/Main.

[37] Schwartz, M. and J. Gerstenberger (2015), Ageing in SMEs is putting a damper on investments, Focus on Economics No. 85, KfW Economic Research, Frankfurt/Main.

[38] Gerstenberger, J. (2016), Zurückhaltung beim Bankkredit – Finanzierungsverhalten älterer Unternehmer (*Reluctance to borrow – financing habits of older entrepreneurs* – our title translation, in German only), KfW Research, Fokus Volkswirtschaft No. 127, Frankfurt/Main.

[39] Gerstenberger, J. and M. Schwartz (2014), Unsicherheit kostet mittelständische Investitionen: Sichere Rahmenbedingungen nötig (*Uncertainty hampers SMEs' investment, a secure framework is necessary* – our title translation, in German only), Fokus Volkswirtschaft No. 66, KfW Economic Research, Frankfurt/Main.