

KfW Research

KfW SME Panel 2015

»» Growing optimism is overcoming weak investment trend

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

Copyright cover image
Source: Getty Images / Photographer: YouraPechkin

Frankfurt am Main, October 2015

Growing optimism is overcoming weak investment trend

Executive summary

German SMEs began to break out of the investment slump in 2014. The combination of growing confidence in a sustained recovery in Germany and Europe and favourable financing conditions is making an impact. SMEs will remain on a growth path in 2015 as well. These are the findings of the 2015 KfW SME Panel.

The low-interest environment is leading to a significant rise in credit demand. More enterprises are initiating loan negotiations and requesting higher volumes more frequently. Small businesses and service providers are at the forefront of the demand upturn. Incentives to finance the investment growth with debt capital remain high. Credit continues to be very readily accessible. In a historic comparison, however, the propensity to borrow remains subdued.

2014 failed to bring the major growth impetus that was hoped for. While their turnover increased moderately, SMEs suffered significant declines, especially in markets outside Europe. Large SMEs were particularly hard-hit. Foreign sales in Europe stabilised on a low level. Profitability rose again slightly. The equity ratio also crept up a notch.

German SMEs are fast approaching the next employment record. In combination with subdued turnover growth, however, the consequence is stagnating productivity growth. The required productivity boost across the broad SME sector has yet to arrive. Manufacturing, Germany's 'productivity engine', is running out of steam for the time being.

Still, the outlook is positive, and expectations are improving slightly. Optimism is slowly returning to the SME sector. This gives reason to hope for more growth and further increasing investment. For that to occur, however, SMEs will need to have even more faith in sustained economic development in Germany and Europe, rely on continuing strong domestic demand and have a greater presence abroad.

Germany is growing. For 2015 we expect growth of +1.8%¹, after already +1.6% last year. The phase of economic weakness of the crisis years seems all but forgotten. The labour market is strong. Europe, too, is in recovery mode. But in the long term, prosperity and

competitiveness require investment. Favourable financing conditions and greater confidence in a sustained economic recovery made a positive difference last year: SMEs climbed out of the investment slump.

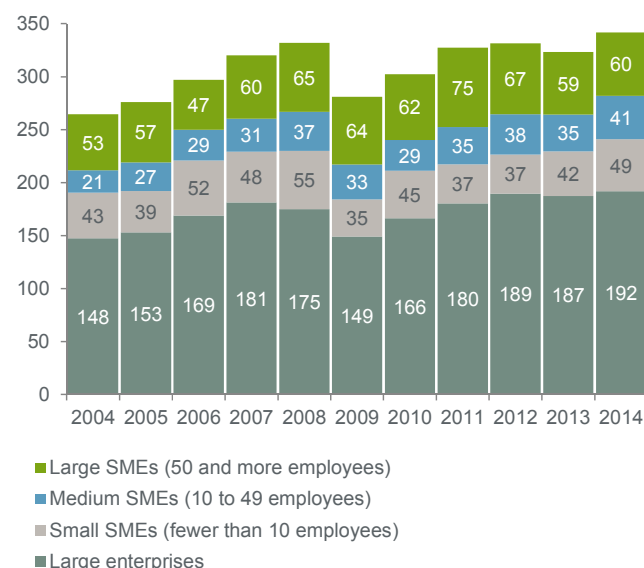
Investment 2014: significantly higher volumes ...

The low-interest environment has provided the expected strong impetus to small and medium-sized enterprises' investment activity. The extremely favourable overall financing conditions in Germany are making a difference.

Investment expenditure in *new* machinery, equipment and buildings (gross fixed capital formation) increased by EUR 14 billion or 10% to EUR 158 billion (2013: EUR 144 billion). SMEs invested EUR 44 billion in *second-hand* goods, slightly less than the previous year (2013: EUR 46 billion). Overall investment expenditure on *new and second-hand* machinery, equipment and buildings thus increased by EUR 12 billion or 6% to EUR 202 billion (2013: EUR 190 billion). That is the highest level since the year 2008.

Figure 1: New investments of enterprises by size class

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



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

Source: KfW SME Panel 2005-2015

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

EUR billions

	2008	2009	2010	2011	2012	2013	2014
SMEs (enterprises with up to EUR 500 million annual turnover)							
Gross fixed capital formation	165	139	143	156	145	144	158
Depreciation	120	116	106	110	125	112	110
Net investment	+45	+23	+37	+46	+20	+32	+48
<i>Investment coverage (in per cent)</i>	137	119	134	142	116	129	144
Large enterprises (annual turnover of more than EUR 500 million)							
Gross fixed capital formation	175	149	166	180	189	187	192
Depreciation	167	176	191	206	189	206	213
Net investment	+8	-27	-25	-26	+/-0	-19	-21
<i>Investment coverage (in per cent)</i>	105	85	87	88	100	91	90

Note: Taking into account the major revision of national accounts and the associated modification to the concept of investment from 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 2 and 4 for further information.

Source: KfW SME Panel 2009-2015

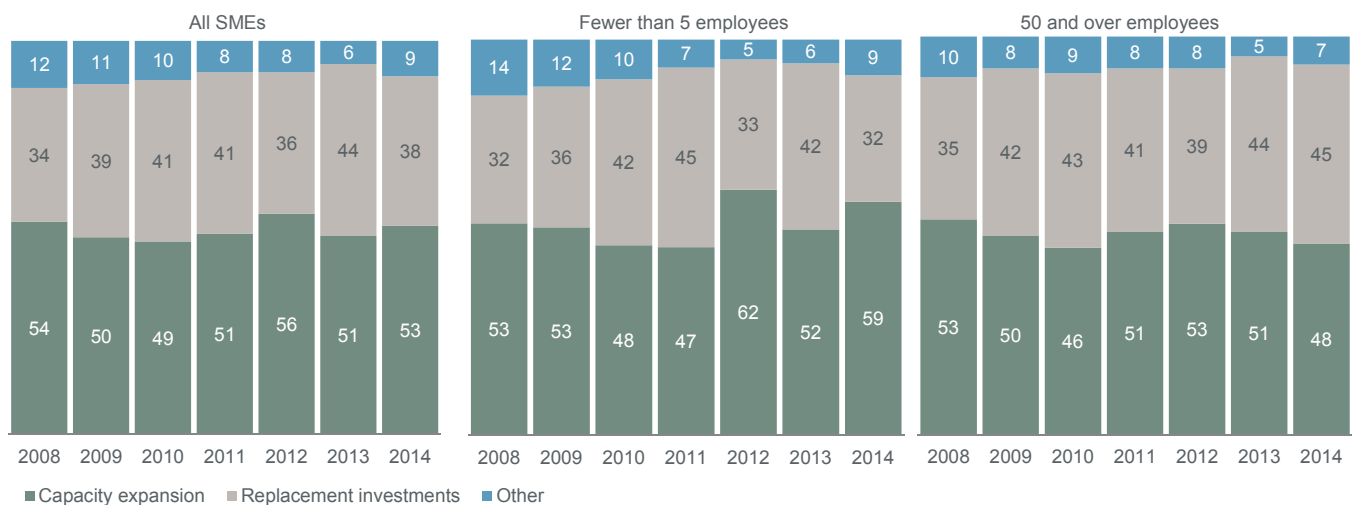
According to calculations by KfW Research (taking into account the revision of the national accounts and, accordingly, the changed concept of investments²), total gross fixed capital formation by enterprises in Germany in 2014 was around EUR 350 billion (+6 % on 2013).³ Large enterprises accounted for EUR 192 billion – an increase of EUR 5 billion or just under 3 % (Figure 1). Thus, the share of SMEs in all corporate investment was 45 % (+2 percentage points on the previous year). The share of small and medium-sized enterprises in total gross fixed capital formation in all of Germany was 27 % (+1 percentage point on the previous year).

... also lead to rising net investment

The strong increase in new investment contrasts with an almost stable loss of value of the SMEs' capital stock (depreciation, Table 1). Net investment⁴ was thus again positive, at +EUR 48 billion in 2014. As a consequence, investment coverage, the ratio of new investment volume to depreciation, increased to a sound level of 144 %. The opposite occurred in large-scale enterprises. Given their significantly increased depreciations – amid expanded investment activity – a loss of substance can again be observed in this segment.

Figure 2: 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 2009-2015

Small SMEs in particular invest in expansion

Growth in new investment is an indicator of enterprises' increasing confidence in the development of the economy. The growth prospects for Germany are positive. As a result, expansion investment is therefore increasing again at the current margin (Figure 2). Fifty-three per cent of the total investment volume was dedicated to capacity expansion (+2 percentage points on 2013). Replacement investments decreased at the same time (-6 percentage points).

At segment level, it is noticeable that in particular small SMEs have increasingly focused on expanding capacity for some years now. Large SMEs, in turn, have tended to be more reluctant and reduced their proportion for the second time in a row.

It is a positive sign that capacities are being increasingly enlarged. It indicates that existing capacity is being fully utilised as a result of growing demand. Expansion measures, which tend to be costly (such as the acquisition of an additional production line), create additional growth and make a significant contribution to SMEs' future competitiveness. The year 2014 also repeatedly illustrated that expansions have a positive effect on overall new investment.⁵ When a business invests in capacity expansion, its overall investment is many times higher than in the case of pure replacement investments (Figure 3). Enterprises that invested in replacements alone invested an average of EUR 70,000 in 2014. Enterprises that invested in both replacements and expansion, on the other hand, invested EUR 206,000 – almost three times as much.

Figure 3: Average investment volume in 2014 by type of investment

Figures representative of the year 2014, EUR

	Expansion YES	Expansion NO
Replacement investments YES	206,000	70,000
Replacement investments NO	133,000	---

Source: KfW SME Panel 2015

... as companies remain reluctant to invest

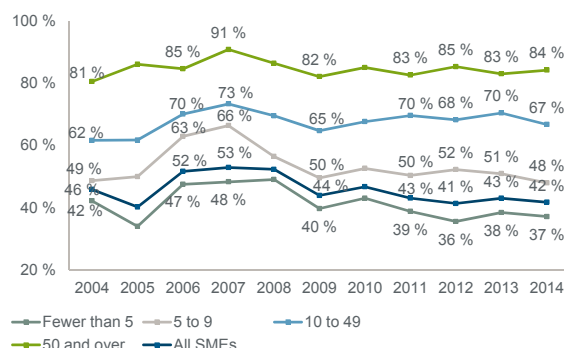
In 2014, 1.5 million SMEs invested in their business, slightly fewer than the year before. The propensity to invest – and the share of SMEs with investment projects – dropped by 1.3 percentage points to 41.7 % (2013: 43 %). The readiness of small and medium-sized enterprises to invest has thus practically stagnated since 2009 (share of investors 2009–2014: around 43 % on average). For comparison: in the years 2007 / 2008 well over half of SMEs made investments.

Small SMEs (with fewer than five employees) displayed a slightly lower willingness to invest (-1.3 percentage points on the previous year to 37.1 %). The biggest SMEs (with 50 and more employees), on the other hand, were able to maintain their already high level from the previous year. Their willingness to invest increased by 1.2 percentage points to 84.2 %. In total, the investor gap between large and small SMEs – as a measure of the structural propensity to invest, which grows with company size – increased to 47 percentage points. The figure was higher only once in the past ten years (in 2012, at almost 50 percentage points).

In 2014 the investment projects were again more extensive on average than in the previous years. Enterprises invested an average of around EUR 132,000 per project in 2014 – some 8 % more than the year before. Small SMEs increased their average investment volume by 21 % to some EUR 46,500, while the biggest SMEs invested 6 % more, or around EUR 1.34 million. Investment intensity (investment

Figure 4: Proportion of SMEs that made investments

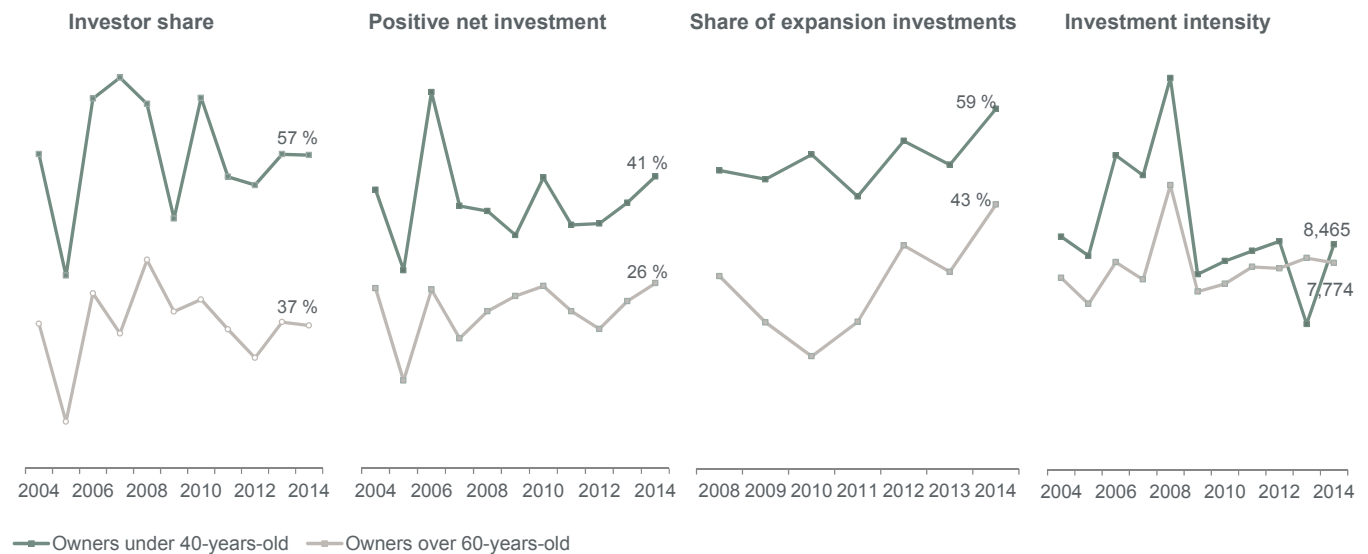
Size classes by number of full-time equivalent employees



Source: KfW SME Panel 2005-2015

Figure 5: Key investment parameters by age of enterprise owner

Shares in per cent; investment intensity in EUR per full-time equivalent employee



Source: KfW SME Panel 2005-2015

volume per full-time equivalent employee) also increased by 5 %.

So while volumes were still lower in the previous year, the positive financing environment is now being used increasingly for high-volume investments (for detailed figures, including a comparison over time, see the Volume of tables relating to the *KfW SME Panel 2015*⁶).

Declining propensity to invest is also a demographic problem

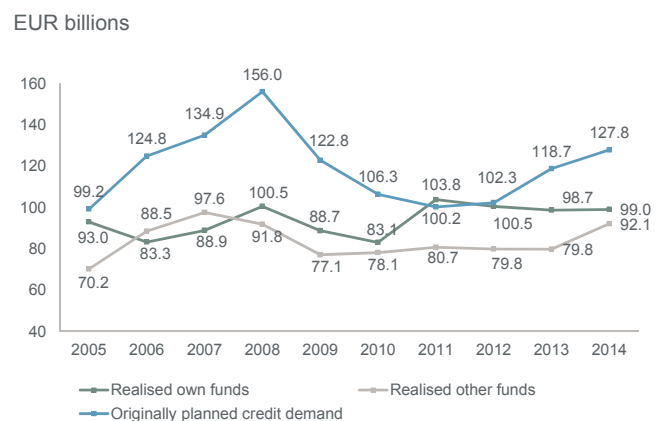
The process of demographic change is altering small and medium-sized enterprises.⁷ The propensity to invest declines with the age of the business owner. This trend is also confirmed for the year 2014 (Figure 5). In the year under review, 57 % of owners below the age of 40 made investments but only 37 % of the over 60-year-olds did. Furthermore, older entrepreneurs wear down the capital stock more often. Only 26 % of older business owners make new investments that exceed the depreciation of their capital stock. They also invest in replacements much less often.

The average project size, however, differs only slightly between older and younger business owners. If older owners invested more, a stronger leverage effect would set in. However, as owners age, their planning horizon becomes shorter, hampering the process. In 2014, 35 % of business owners were 55 years old or older. The average age of owners is 50.3 years. From the perspective of the owner, many investments then have an excessively long amortisation period (process innovations also decrease as owners grow older⁸). That reduces incentives and the more long-term an

investment is, the lower the incentive. As a result, it is precisely those projects that would make the company more competitive that are implemented less often.

Timely succession arrangements for managing the business after the owner has retired therefore still remain important. Around 17 % of small and medium-sized enterprise owners (+/-2 percentage points) were planning to hand over or sell the company to a successor by the year 2018 (2013: 16 % / 2012: 15 %).⁹ The number of planned successions has thus increased slightly to around 618,000 (2013: 580,000 / 2012: 540,000).

Figure 6: Originally planned borrowing requirements and realised financing volume

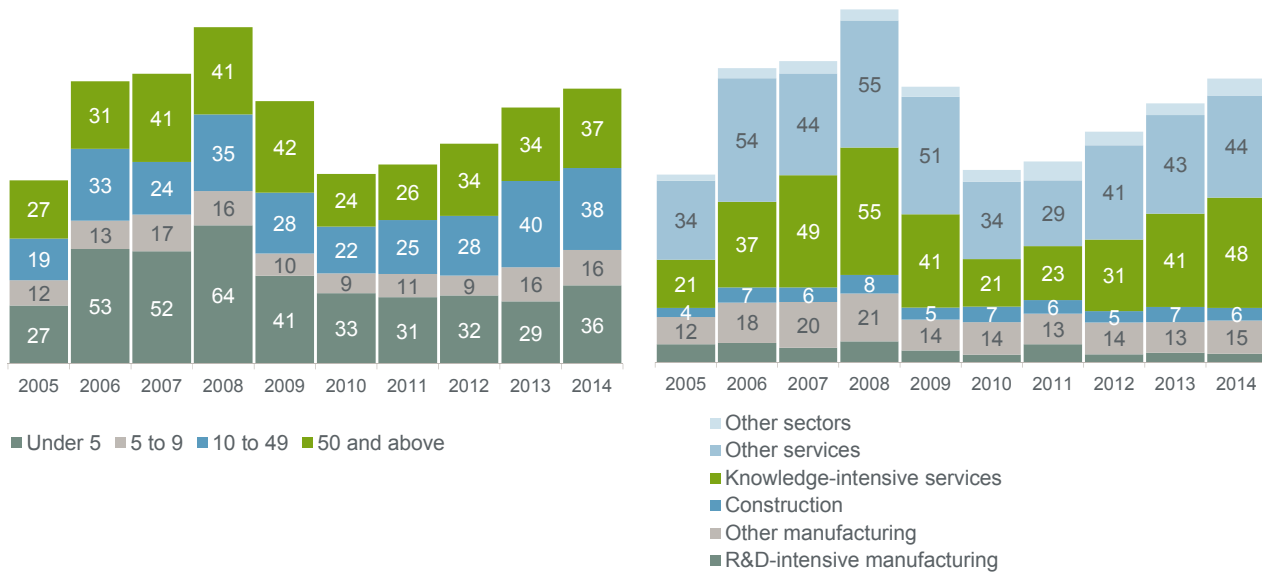


Note: Volumes extrapolated from the number of employees. Extrapolations include other sectors. It must be taken into account that the originally planned borrowing requirements are almost never fully realised. Plan revisions due to changed business strategies must be taken into account above all. SMEs' actual demand for credit is therefore lower.

Source: KfW SME Panel 2006-2015

Figure 7: Demand for credit in the SME sector by size class and sector

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



Notes: Volumes extrapolated from the number of employees. Owing to slight variations in calculation methods, the total demand for credit shown in Figure 6 for the overall SME sector does not fully match the presented cumulative sum per year. Extrapolations include other sectors.

Source: KfW SME Panel 2006-2015

Demand for credit has increased noticeably

SMEs are increasingly turning to banks and savings banks to finance their higher investments. The upturn in credit demand for investments accelerated again in 2014. The original borrowing requirements reported by small and medium-sized enterprises increased for the third consecutive year. After a EUR 16 billion increase that was already apparent in the previous year (+16%), their demand for loans in 2014 rose again by EUR 9 billion or +8% to approximately EUR 128 billion (Figure 6).

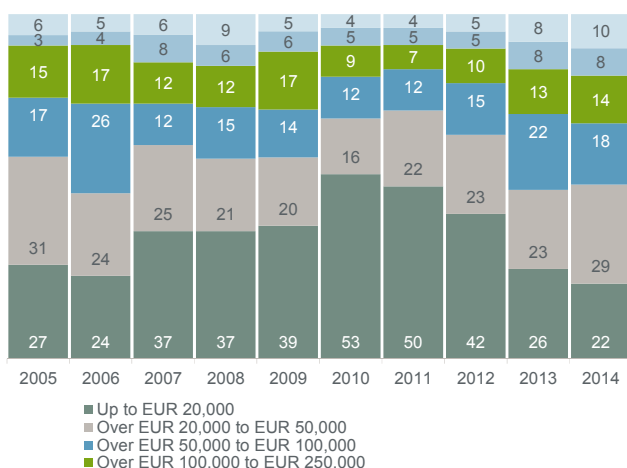
Small SMEs and service companies account for a large portion of the additionally planned credit de-

mand. Small SMEs with fewer than five employees and a demand increase of nearly EUR 8 billion and enterprises that provide knowledge-intensive services¹⁰, with a plus of EUR 7 billion, stand out in this segment (Figure 7).

The momentum on the credit market will continue in 2015. The KfW Credit Market Outlook for the first quarter of 2015 shows a 4.5% increase in new lending business between credit institutions and enterprises and self-employed persons.¹¹ Lending conditions have improved yet again on last year, indicating continuing strong momentum.

Figure 8: SMEs' borrowing requirements

Proportion of SMEs with borrowing requirements in per cent

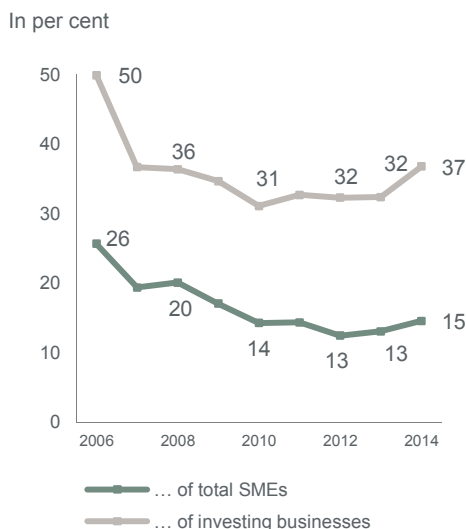


Source: KfW SME Panel 2006-2015

More loan negotiations were held

The higher demand for loans reflects the significant growth in investment volume last year. Given the historically low borrowing costs, a strong incentive exists to finance investment projects with debt capital. In 2014, more small and medium-sized entrepreneurs again made their way to banks and savings banks to apply for investment loans (Figure 9). A total of 537,000 SMEs conducted loan negotiations, which is nearly 37% of all investors (and just under 15% of all SMEs). That is an increase of 4 percentage points or 64,000 enterprises on the previous year. But this should not hide the fact that, in a historic comparison, they are still reluctant to borrow. In 2008, for example, 737,000 SMEs conducted loan negotiations (see *Volume of tables*, Table 19).

Figure 9: SMEs with loan negotiations



Source: KfW SME Panel 2007-2015

Trend towards demand for higher loan volumes stabilises

Demand for large loans of more than EUR 500,000 increased yet again in 2014 (Figure 8). In the smaller size categories, demand for loans between EUR 20,000 and EUR 50,000 rose significantly. Demand for very small loans of up to EUR 20,000, on the other hand, was at an all-time low. Never before had fewer SMEs requested loans in this size class (down by 4 percentage points to 22%). The average loan requirement of an SME was about EUR 256,000.

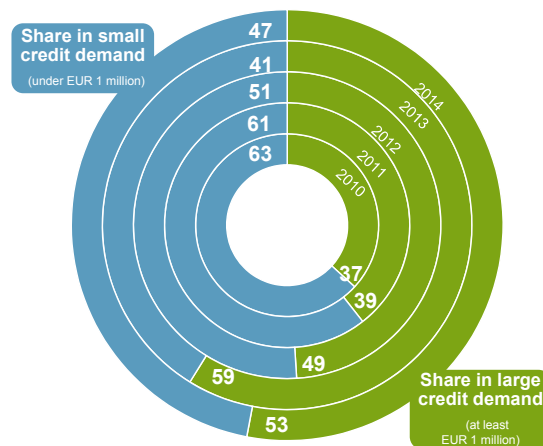
The spread in demand for loans by SMEs established by KfW Research in the spring of 2015 has decreased slightly but remains clearly visible.¹² In 2014, companies with very large borrowing requirements of at least EUR 1 million represented only 2.6% of all applicants but accounted for 53% of the entire volume of loans applied for, or EUR 67 billion. This measurable segment (around 36,000 SMEs in 2014) continues to significantly shape SMEs' demand for investment loans (Figure 10).

Small SMEs and service providers – the most prominent borrowers

SMEs' demand for loans has grown noticeably in the last two years. More SMEs are initiating loan negotiations and requesting significantly higher volumes. Three segments in particular stand out: small SMEs with fewer than five employees and both sub-segments of the service sector. They are shaping the shift in credit demand among SMEs. They are pre-

Figure 10: Importance of large loans as a proportion of credit demand

Share in total loan volume requested in the corresponding year in per cent



Source: KfW SME Panel 2011-2015

sumably the ones that feel the strongest incentives to take up loans in order to make use of the favourable financing conditions. Various indicators illustrate this.

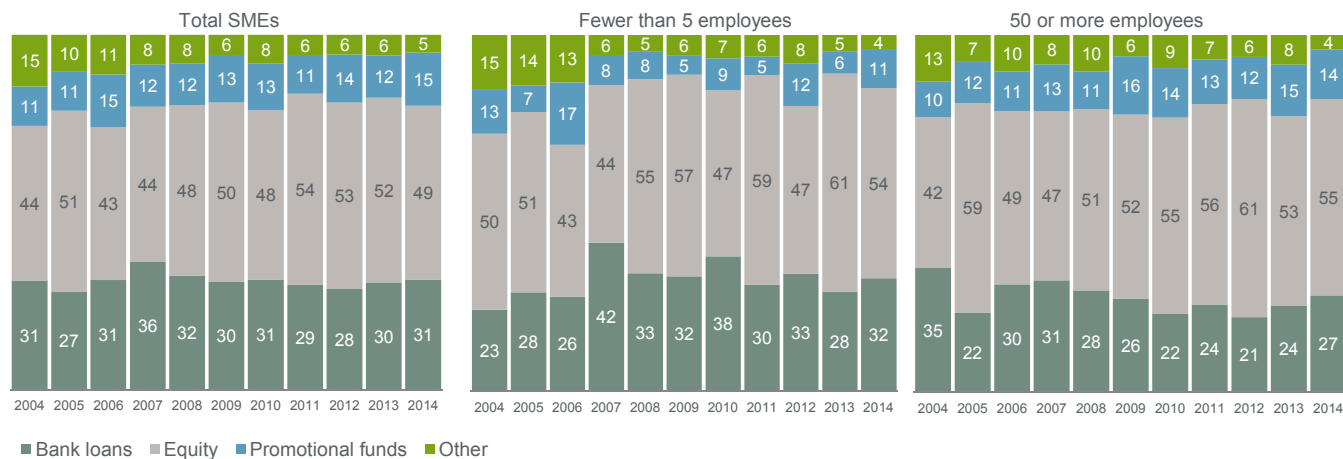
The share of investors in each of these segments who initiate negotiations on an investment loan with banks and savings banks has risen by 7 percentage points since the year 2012. The increase was from 22 to 29% for the segment of small SMEs, from 28 to 35% for knowledge-intensive service providers and from 34 to 41% for other service providers in 2014.

Not just the propensity to enter into loan negotiations has increased but so has the loan amount requested, shifting noticeably to higher volumes. Whereas three years ago 45% of the enterprises in these three segments were applying for loans of no more than EUR 20,000, that share dropped to only 26% in 2014. At the same time, the proportion of enterprises in these segments that had higher loan requirements upwards of EUR 100,000 climbed from 7% in the year 2012 to now 12%.

In other words: the average loan requirement of a small SME increased by 63% between 2012 and 2014 (2014: EUR 105,000/long-term average since 2004: EUR 78,000), of an SME in the segment of other services by 38% (2014: EUR 216,000/since 2004: EUR 154,000) and of a knowledge-intensive service provider by as much as 110% (2014: EUR 377,000/since 2004: EUR 216,000).

Figure 11: SME 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 2005-2015

Trend towards bank loans continues

The rise in demand is apparent in the composition of investment finance. The share of bank loans in the total volume of investment finance rose by 1 percentage point to 31 % in the year 2014 (Figure 11). This corresponds to roughly EUR 63 billion (+ EUR 6 billion on 2013). Demand for *short-term* bank loans with maturities of up to 5 years and *longer-term* bank loans with maturities of more than five years is roughly the same – taking 14 % (long-term average over the years 2005–2014: 16 % or EUR 30 billion) and 16 % (long-term average for 2005-2014: 15 % or EUR 28 billion), respectively, of the total volume.

Larger SMEs with 50 and more employees again increased the share of bank loans in their financing mix (+3 percentage points). Smaller SMEs also took advantage of the favourable credit environment (see above), increasingly opting for financing from banks and savings banks (+4 percentage points).

Promotional funds accounted for 15 % of the investment volume (some EUR 30 billion). This raised the overall volume of borrowed funds taken up by EUR 12 billion. Another 5 % of the SME investment volume was financed from other sources (such as private equity or mezzanine capital).

The self-financing capacity of SMEs has remained consistently strong. In 2014 they generally financed 49 % of their investment expenditure with funds of their own. Despite a slight drop on the previous year (-3 percentage points), the volume remained on a

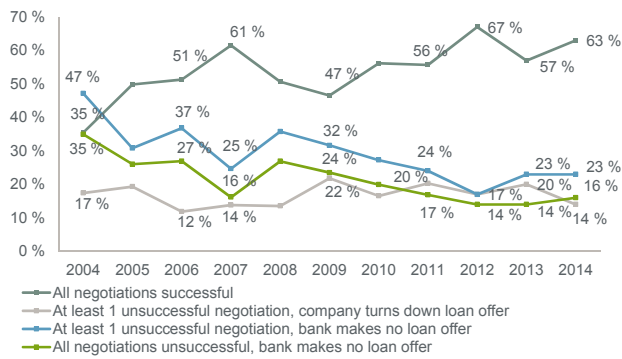
consistently high level of EUR 99 billion as a result of increased investment expenditure. Most of the increase in investments in 2014 was thus financed not from the companies' own funds but largely through debt. The conditions for this were favourable, which is evidenced, among other things, by the EUR 15 billion drop since 2009 in SMEs' annual interest expenses (2014: EUR 38 billion). So SMEs' reserves are likely to continue growing.

In 2014, the enterprises no longer required EUR 29 billion of the EUR 128 billion in bank loans they had originally planned to finance their investments (see Figure 6). This revision of borrowing plans as a result of changes to investment or financing plans reached a quota of 23 % (2013: 22 %). This relatively low ratio, which was similar to that of last year, reflects a good economic situation. In contrast, during the crisis years of 2008 and 2009, a very high 32 % of planned credit requirements were revised downward.

Investment loans are still easy to access ...

High demand met with good supply. Banks and savings banks continued to impose few restrictions on lending (Figure 12). The share of SMEs that were successful in all loan negotiations stabilised at 63 % after a slight damper in the previous year (2013: 57 %). While the share of SMEs that were unsuccessful in all negotiations due to lack of loan offers from their bank increased slightly to 16 % in 2014 (14 % in 2013), by and large investment loans remained easily accessible nonetheless.

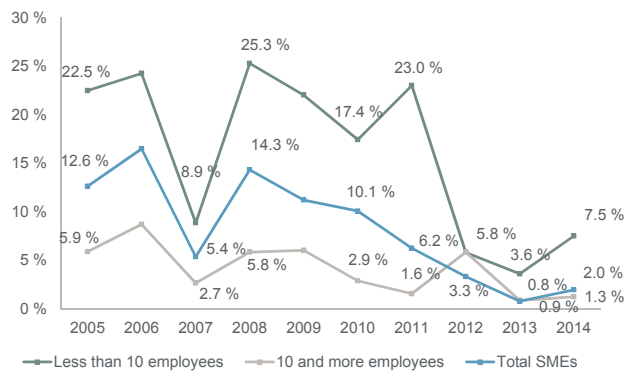
Figure 12: Outcome of loan negotiations



Note: Extrapolated from the number of companies.

Source: KfW SME Panel 2005-2015

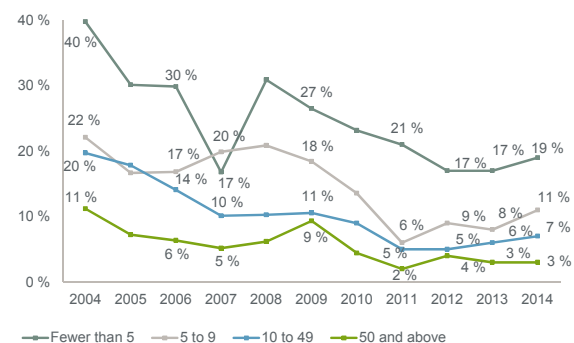
Figure 13: Estimated credit demand not realised for lack of loan offer from the bank as a percentage of actual credit demand ('credit supply gap')



Note: The percentages are based on loan volumes extrapolated from the number of employees. They were calculated by subtracting the sum no longer needed from the enterprise's original credit requirement. The resulting 'actual credit demand' is compared with the realised financing volume. The difference is defined as the 'credit supply gap'.

Figure 14: Failed loan negotiations by company size

All negotiations failed – bank presented no offer; size classes by full-time equivalent employees



Note: Extrapolated from the number of companies.

Source: KfW SME Panel 2005-2015

The *credit supply gap* is a mirror image of the favourable conditions (Figure 13). In 2014 banks were unable to meet credit demand totalling EUR 1.5 billion due to lack of loan offers (2013: EUR 0.5 billion). This is a quota of 2% of the actual credit demand (which was calculated by subtracting the sum no longer needed from the initial credit requirement). A comparison with the long-term average – 9% for the period from 2005 to 2014 – again underscores the comfortable situation in credit availability.

Smaller SMEs were also able to benefit from the favourable conditions in their loan negotiations last year. The credit supply gap for SMEs with fewer than ten employees did increase to 7.5% (Figure 13) but this was a moderate increase in relation to the very strong rise in credit demand of 16% on the previous year in this sub-segment (Figure 7). Banks and savings banks are hardly likely to meet this additional credit demand in full. For SMEs with fewer than five employees, the proportion of all successful negotiations with banks and savings banks in 2014 increased to 61% (+7 percentage points – see Table 20 in the Volume of tables for details and long-term values).

Nevertheless, these partial findings should not hide the fact that their loan negotiations overall clearly failed more often than for larger SMEs – despite relatively open access to credit (Figure 14). The rate of loan denials among enterprises with fewer than five employees was 19% in 2014, while for SMEs with 50 and more employees it was just 3%. Small SMEs often lack well-established relationships that have grown over time between them and credit institutions. The information differentials are relatively high as a result.

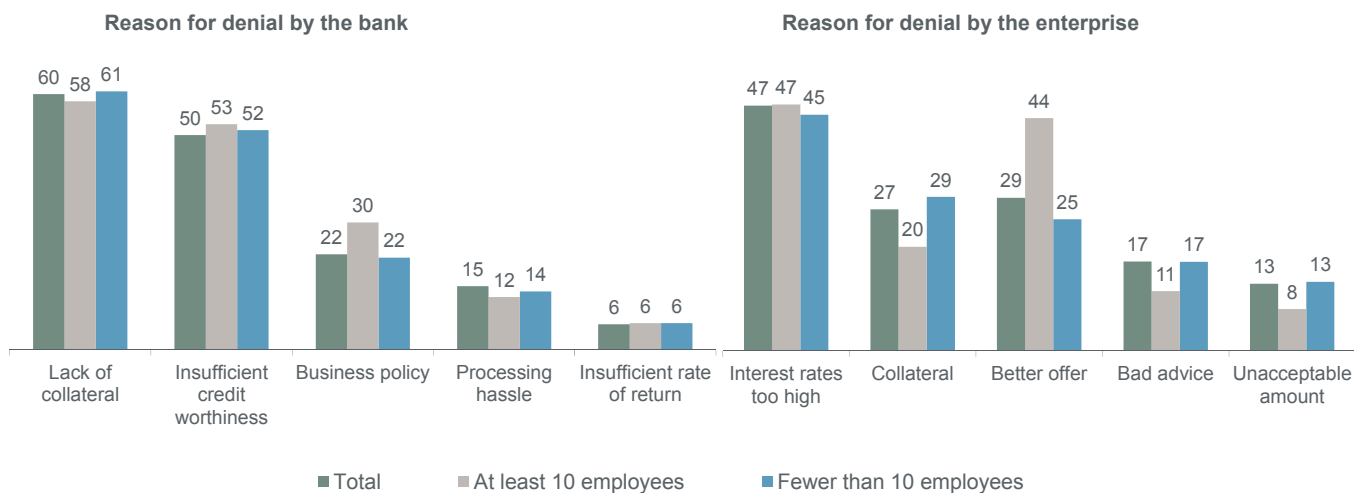
The situation is similar for very young enterprises that have been in business for up to five years.¹³ Their rate of loan denials in 2014 was 23% (2013: 24%) – only 54% of young SMEs were successful in all negotiations (2013: 50%). If the loan amounts applied for are (too) low from the point of view of banks or savings banks, lenders often shy away from the large effort involved in reducing these information differentials. This can result in, among other things, risk premiums on interest or high collateral requirements.

Focus on rejected loan applications: causes ...

Loan negotiations have been failing for similar reasons for years (Figure 15). The currently easy access to credit has also done little to change this. Between 2006 and 2014 the main reason for a bank or savings bank to refuse to make a loan offer was lack of collateral (60%). Insufficient credit worthiness or equity frequently led to a denial of requests for credit by SMEs as well (50%). Recently, however, a trend has been

Figure 15: Causes of failures in loan negotiations 2006 to 2014

Size class by number of full-time equivalent employees (percentage of enterprises); the chart shows the mean value for each reason for denial from the extrapolated individual values for the years 2006 to 2014



Note: Database for denials by enterprises: all enterprises that turned down a loan offer from a bank themselves on at least one occasion and whose negotiations therefore failed. Database for denials by banks: all enterprises that received no offer from a bank on at least one occasion and whose loan negotiations therefore failed. Values extrapolated from the number of SMEs. Extrapolations without enterprises from other sectors. Multiple answers were possible.

Source: KfW SME Panel 2007-2015

emerging. While insufficient collateral remained a major reason for denial, the importance of insufficient creditworthiness is decreasing from the perspective of credit institutions. This reflects how SMEs' returns on sales and equity ratios have developed positively for years now as major indicators for lending decisions. The 2015 Business Survey also attests to the fact that creditworthiness of enterprises in Germany has improved on a broad front.¹⁴

SMEs, for their part, most often decline offers made to them on the grounds of excessively high interest rates (47%). This ratio has even increased slightly in the past two years. Many SMEs, particularly the smaller ones, are unable to furnish the required collateral (27%). Major differences arise where enterprises have received a better offer, with larger SMEs then declining an offer significantly more often (44%) than smaller SMEs (25%). This difference has grown in the past years. It indicates that larger SMEs increasingly have more financing options available than smaller ones, which have fewer options and are more likely to accept loan offers that impose unfavourable conditions on them.

... and consequences

When negotiations on investment loans fail, traditionally SMEs present themselves as strong investors nevertheless. This is due to the long-standing practice of building up own reserves. They have often retained

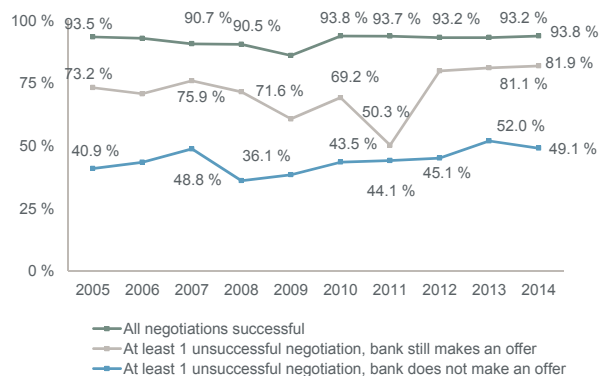
profits and increased their financial buffer, thus reducing their dependence, as it were. Their high capacity to invest confirmed this in the year 2014 as well (Figure 16).

Where loan negotiations were unsuccessful because the bank failed to provide an offer, the SMEs invested around 49% of the original investment sum – the highest value ever measured, after 52% in 2013. Accordingly, 'only' 51% of the planned investment volume was not invested as a result of the bank's refusal to offer finance (EUR 7.7 billion – three quarters of which represented SMEs with fewer than ten employees). Where the enterprises for their part declined offers, they nevertheless succeeded in realising 82% of the planned investment volume (with the volume not invested amounting to EUR 4.5 billion). Where negotiations were successful, almost the entire sum initially intended was then also invested (94%).

But growth surge failed to materialise in 2014 as well

Small and medium-sized enterprises were able to grow in 2014 as well, if only on a moderate level. The momentum increased slightly on the previous year, with an average turnover growth rate of 3.3% (2013: 1.9%). Despite stable positive growth overall, SMEs have been treading a path of rather subdued growth for around three years now (Figure 17). No sector or size class reached the level of 2011.

Figure 16: Realised investment volume as a percentage of planned investment volume after failed loan negotiations



Note: The percentages are based on loan volumes extrapolated from the number of employees.

Source: KfW SME Panel 2006-2015

International business subdued again – large enterprises continued to lose ground

The enterprises recorded a decline in international turnover in 2014 as well. Over the years, the volume of international trade dropped by EUR 11 billion (-2%) to now EUR 534 billion. For comparison: in the years 2011 and 2012, they were still able to turn over EUR 597 billion and EUR 584 billion, respectively. Total German exports amounted to EUR 1,134 billion in 2014, after around EUR 1,100 billion in the two previous years.¹⁵ So while German exports increased by 3.7% overall despite the geopolitical tensions in many parts of the world, SMEs became less relevant on the global market. Hope remains that SMEs will also be able to benefit from the currently high level of exports (increase in German enterprises' overall export volume from January to July 2015 of 6.8% on the pre-

vious year).

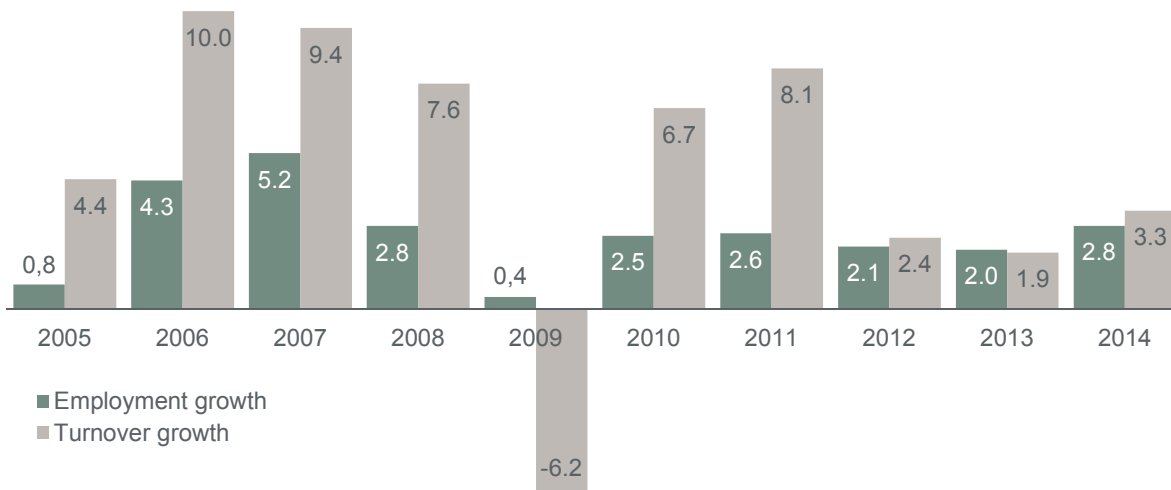
Due to the decline in absolute volume, the share of total turnover generated by internationally operating SMEs outside Germany also fell by 2.2 percentage points to 26.5% (2013: 28.3%). This is the third consecutive decline in this indicator, which has dropped to the lowest level since the KfW SME Panel was first conducted.

Around 735,000 German SMEs operate internationally. That is a share of 23% of all SMEs – and a significant increase on the previous year (2013: 20%). In other words, SMEs are present on international markets more frequently but are losing turnover at the same time. To explain this we just need to look at the segments. In 2014, the small SMEs with fewer than five employees in particular were more strongly represented internationally (share of internationally active SMEs +4 percentage points). But while their high numbers add to the total number of internationally active SMEs, they contribute comparatively little turnover volume. Large SMEs and manufacturing SMEs generate the highest share in international turnover, and these two segments often overlap. Enterprises in both these segments lost much ground in 2014:

- a.) Larger SMEs with 50 and more employees reduced their foreign business for the fifth time in a row; 53.7% of these SMEs generate foreign turnover (-6.4 percentage points from 2009). Their international trade volume fell by EUR 31 billion in 2014 alone (-10 percentage points in the share of total turnover).
- b.) Manufacturing SMEs are also strongly affected. Their international turnover has fallen continuously by a total of EUR 36 billion since 2010. The share of in-

Figure 17: Annual employment and turnover growth rates

In per cent

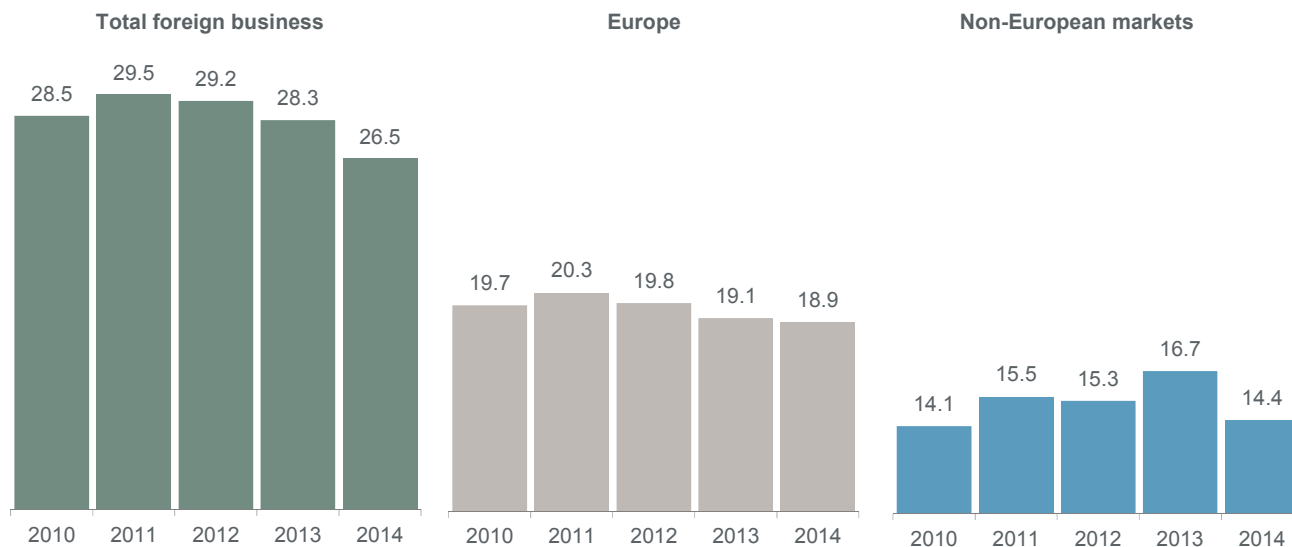


Note: Values extrapolated from the number of employees. Extrapolations include other sectors. Missing data on employees were imputed.

Source: KfW SME Panel 2006-2015

Figure 18: Share of foreign turnover in overall turnover volume (total and by region)

In per cent; enterprises with international business only



Note: The values shown refer exclusively to those enterprises that have generated foreign turnover in the corresponding regions. The individual figures for “Europe” and “non-European markets” therefore do not add up to “total foreign business”.

Source: KfW SME Panel 2011-2015

ternationally active enterprises fell in both sub-segments in 2014 as well – in R&D-intensive manufacturing¹⁶ by -1.1 percentage points to 64.6 % and other manufacturing by -0.2 percentage points to 32.3 %. We already reported this development last year, which has now intensified again.

European turnover is steady on a low level

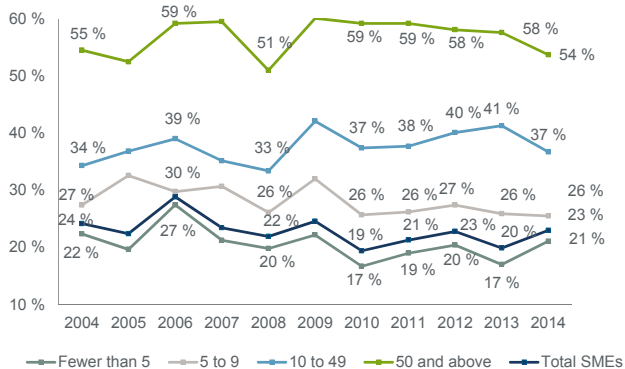
The downward trend in Europe appears to have stopped for the time being (Figure 20). Foreign turnover in Europe stabilised at EUR 356 billion in the year 2014 (- EUR 1 billion on 2013). In addition, the share of German SMEs doing business in Europe increased again, rising by 2 percentage points to 21 %.

For the first time in three years, Europe’s share in German SMEs’ total foreign turnover increased again in 2014, reaching 67 %. Current data also give reason to hope for a stable upswing in the medium term. Growth in the euro area has recovered slightly since the beginning of 2015. Overall conditions are improving, particularly in the crisis-ridden economies. A moderate growth rate of 1.3 % can be expected for the year as a whole.¹⁷

Europe’s relative strength, however, is also the result of weak sales of small and medium-sized enterprises to countries outside Europe in 2014, which were EUR 10 billion lower than the previous year (-5 % to EUR 178 billion). Correspondingly, the turnover of

Figure 19: Share of internationally-active enterprises

Size classes according to FTE employees



Note: Number of enterprises extrapolated

Source: KfW SME Panel 2005-2015

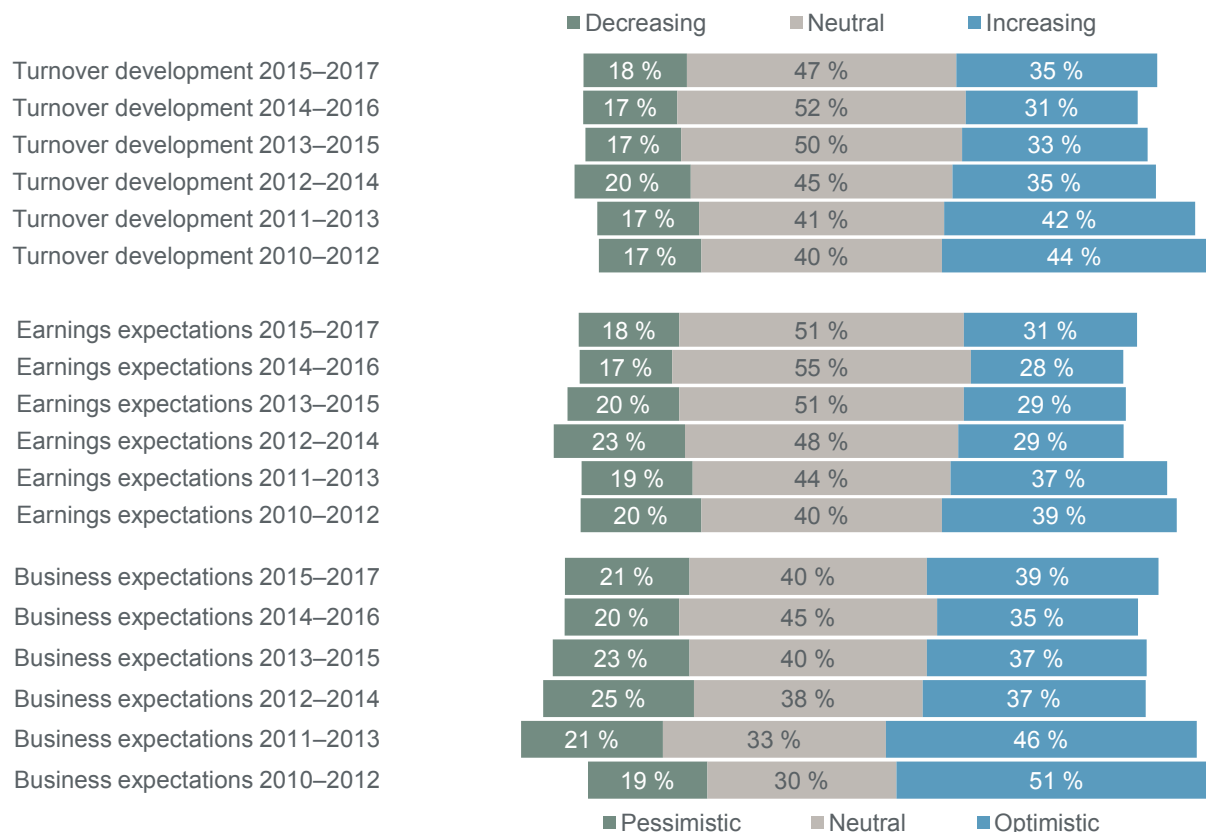
Figure 20: SMEs in Europe

In per cent



Source: KfW SME Panel 2011-2015

Figure 21: SMEs' business expectations up to 2017



Source: KfW SME Panel 2010-2015

German SMEs doing business outside Europe fell by more than two percentage points to 14.4 % of their total turnover. The outlook for SMEs for 2015 is hardly any better. This is primarily due to the most recent developments in China and possible contagion effects on other emerging economies.

But expectations up to 2017 are improving

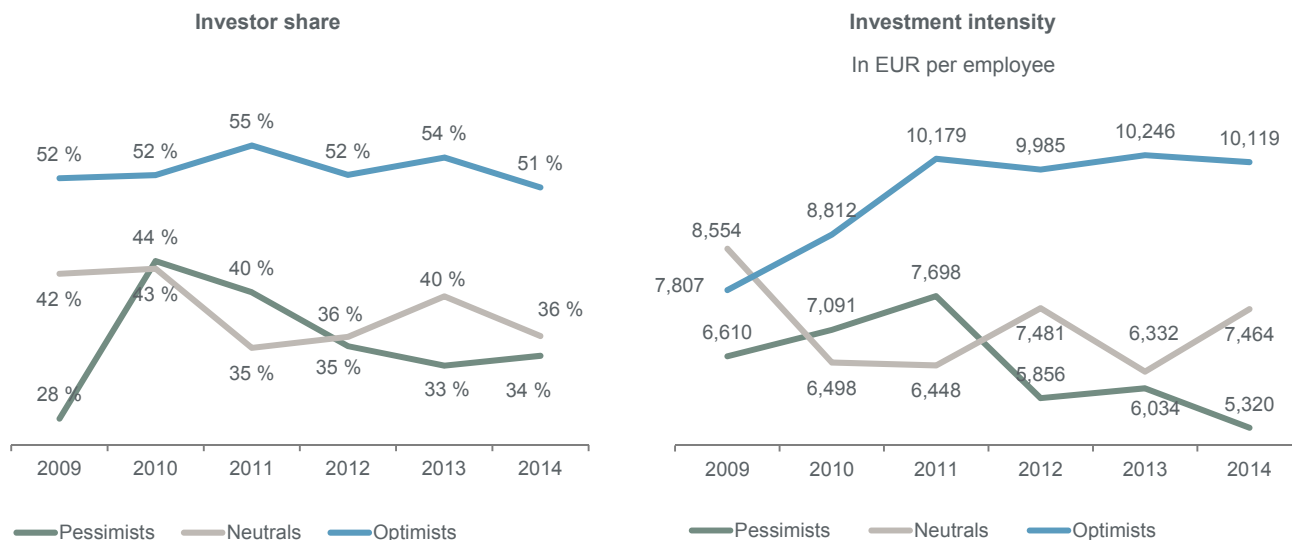
German SMEs' confidence is rising moderately (Figure 21). After a continuous decline in sentiment over the last few years, current results reflect a cautious return to optimism. Turnover and earnings expectations for the years 2015–2017 signal a trend reversal. The KfW-ifo SME Barometer recently signalled a positive mood as well, with the finding that both the current business situation and the expectations of small and medium-sized enterprises have been improving for several months.¹⁸ Neither the developments involving Greece nor the crisis in the Middle East nor the changing relationship of the euro area to Russia have so far depressed the mood. SMEs are expecting the economic upswing to continue. With regard to turno-

ver, positive expectations are 17 percentage points higher on balance than negative expectations (+3 percentage points). With regard to earnings, the balance is +13 percentage points in positive territory (+2 percentage points). Business expectations as an aggregate indicator of turnover and earnings prospects¹⁹ also indicate that SMEs are more optimistic about the future than in previous years. The balance between optimistic and pessimistic expectations improved by 3 percentage points to +18 in 2014. Nevertheless, this is still a far cry from the +25 percentage points reached in the year 2010.

Confidence is rising – a positive sign for growth and investment

The business expectations articulated by the enterprises in the past have proven to be an accurate predictor of their actual business development. On that basis, business growth can be anticipated to accelerate. Furthermore: KfW Research has shown that positive turnover and earnings expectations are instrumental for determining SMEs' willingness to invest.²⁰

Figure 22: Correlation between business expectations and investment activity (2009-2014)



Note: The indicator for business expectations is calculated in accordance with the procedure described in endnote 19.

Source: KfW SME Panel 2010-2015

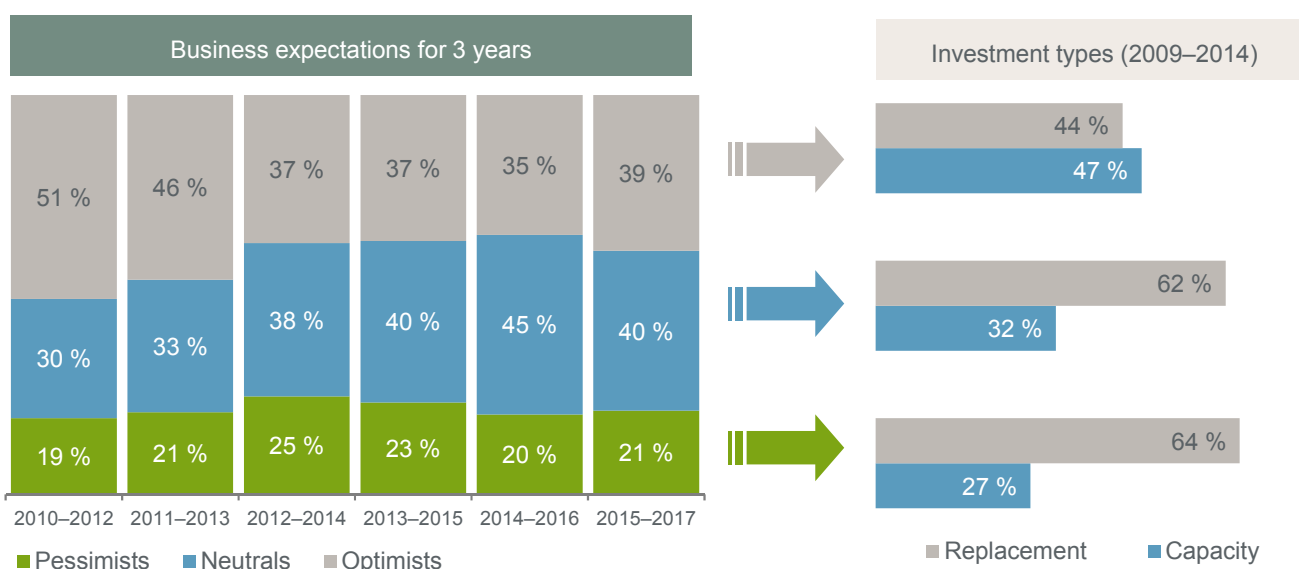
When SMEs are more optimistic about the future, the proportion of investors among them is significantly higher (Figure 22). In 2014, more than half of SMEs (51%) with positive business expectations for the years 2015–2017 made investments. In contrast, only around one third of SMEs with negative business expectations were willing to invest (36%). Of those SMEs that expected no change in their business, only 34% invested. Differences were equally clear in the amounts invested. Optimistic enterprises invested

around EUR 10,100 per full-time equivalent employee in 2014, while pessimistic SMEs invested only about half as much – around EUR 5,300. Enterprises with unchanged business expectations invested around EUR 7,500, which was also significantly less.

Optimistic enterprises also invest more in expansion (Figure 23). Investments in additional capacity are of particular relevance because they increase production potential and contribute to long-term competitiveness.

Figure 23: Types of investment and business expectations

In per cent



Note: The indicator for business expectations is calculated in accordance with the procedure described in endnote 19. Right column: proportion of the investment sum spent on replacement acquisitions or capacity expansions. Average figures for the respective group. The figure does not include other investments.

Source: KfW SME Panel 2010-2015

Figure 24: Reasons for increasing investments in 2015

In per cent; only enterprises with expansion plans compared with 2014



Note: Multiple responses were possible. The three most important causes for expansion were considered.

Source: KfW SME Panel 2015 (additional survey September 2015)

While enterprises that look to the future with optimism invested an average of 47 % of their investment volume in capacity expansions between 2009 and 2014, that proportion was significantly lower (27 %) in enterprises with negative business expectations. These enterprises, for their part, invested a significantly higher proportion in replacements (64 %).

Thus, uncertainty continues to be a major obstacle to investment. However, SMEs' current optimism is on the rise. This gives reason to hope for increasing growth and accelerating investments over the medium term.

Outlook for 2015: investments are on an upward trend ...

A gentle continuation of the investment upturn is indeed becoming apparent for 2015. This was confirmed by the representative additional survey to the KfW SME Panel conducted in September 2015 (see explanatory box at the end of this report). It found that

in the current year, 26 % of all SMEs will increase their investments on the previous year. In contrast, 18 % of SMEs expect a reduction for the year as a whole. More than half (56 %) will invest roughly the same amount.

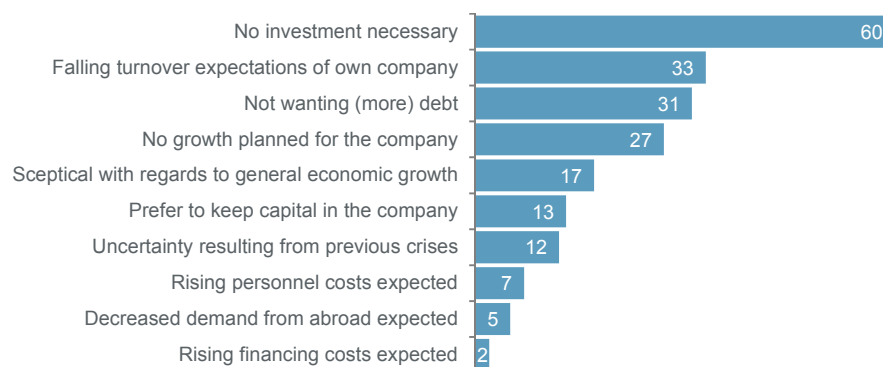
Further evidence is that by mid-September 2015 only 30 % of SMEs had postponed, reduced or abandoned at least one planned investment project (at the same time last year, that proportion still stood at 45 %). For the current year, the investments originally planned but ultimately not realised would thus amount to an aggregate of EUR 34 billion (previous year: EUR 41 billion).

... because the enterprises (want to) grow and innovate

SMEs invest when their turnover increases: 58 % of SMEs that are increasing their investments in 2015 attribute it to a positive development of their turnover (Figure 24). This illustrates once again the importance

Figure 25: Reasons for decreasing investments in 2015

In per cent; only enterprises with reduction plans compared with 2014



Note: Multiple responses were possible. The three most important causes for reduction were considered.

Source: KfW SME Panel 2015 (additional survey September 2015)

Table 2: Variation in number of employees in the SME sector and number of SMEs between 2004 and 2014 by size class

Employment size classes by number of employees

	Growth 2004 to 2014		Variation number of SMEs
	Absolute	In per cent	Absolute
Fewer than 10 employees	+1,580,000	+19	+178,200
10 to 49 employees	+1,415,000	+27	+7,300
50 and more employees	+1,663,000	+15	+4,900
<i>Total SMEs</i>	<i>+4,658,000</i>	<i>+19</i>	<i>+190,400</i>

Source: KfW SME Panel 2005-2015

of (private) consumption in the German SME sector. If domestic demand is on course, optimism and investments by SMEs follow.

Necessary replacement investments were a further driver of those SMEs that are increasing their investment activity (41 %), although this deserves a closer look. A comparison with Figure 2 confirms the situation shown there – larger SMEs mentioned replacement investments significantly more frequently (53 %) than small SMEs (39 %). This pattern has already been visible over the past years.

More than one third of German SMEs willing to make investments in 2015 are doing this in connection with the introduction of new products or services (39 %). That is a positive sign because the standstill in Europe has recently caused innovation activity in the SME sector to contract several times.²¹ This also gives reason to hope for an end to the barren spell in innovations in the SME sector, which have decreased for the last three consecutive years. KfW Research will present an updated detailed survey of innovation activity in the German SME sector in the KfW SME Innovation Report in early 2016.

Digitalisation offers particularly high investment potential

Digitalisation could play a major role in future investment activity. Modern digital technologies and digital interconnectivity are becoming increasingly important. Managing these changes poses great challenges for all businesses (keywords: industry 4.0, social media, big data). Corporate strategies need to be adapted, requirements and customer preferences are changing. Companies need to respond and many SMEs already are. A special publication of the KfW SME Panel will therefore be dedicated to the steadily increasing importance of this topic. Data protection in SMEs' business practice will be a central theme.

What is slowing down investments? A leaning towards financial independence and limited growth ambitions

Two thirds of the SMEs (60 %) that are reducing their investments in 2015 simply do not see the need for more investment from their individual business perspective. Falling turnover expectations prevent 33 % of SMEs from making additional investments (Figure 25).

In addition, almost the same proportion of SMEs (27 %) is not planning to expand their business. Self-employed professionals in particular very rarely have growth ambitions (49 %). This result reflects the fact that a large number of small enterprises – often sole traders but not exclusively – give greater weight to staying in business than to expansion or quantitative growth. Their main priority is to generate their own income from self-employment. Capacity-expansion strategies that require additional investment (such as venturing abroad, hiring staff) tend to be rare in these cases. Underscoring yet again the dampening effect on investment activity, more than three quarters of SMEs that have no intention to grow (77 %) also indicated that they simply had no need to invest.

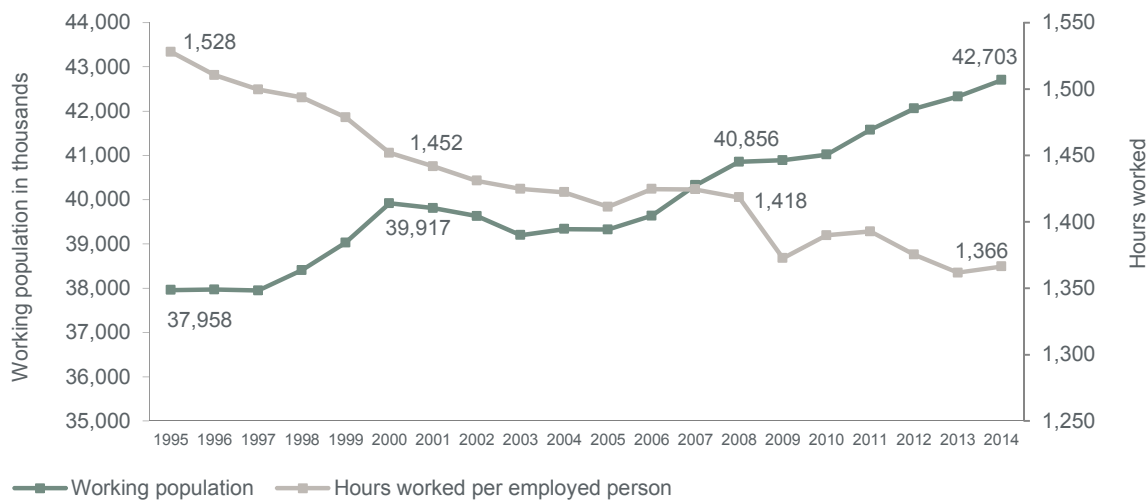
German SMEs generally value their financial independence. That has enabled them to fill their accounts in the past and puts them in the position to respond to current developments with funds of their own. Nevertheless, their reduced penchant for borrowing can also hamper their business development. Thirty-one per cent of SMEs that are reducing their investments in 2015 explained that they did not wish to incur further debt – even in the light of historically low interest rate levels.

The SME sector is fast approaching the next jobs record – employment up 19 % since 2004

The German labour market presented itself in a more than robust condition in 2014 as well, with employ-

Figure 26: Trend towards shorter working hours in Germany

Persons in employment and hours worked per person



Source: National accounts

ment rising significantly. The total number of persons engaged in economic activity was 42.7 million.²² SMEs accounted for a sizeable share of the rise in employment by around 860,000 persons on the previous year, contributing almost two thirds of the increase (+509,000 persons or +1.8 %) and employing around 29.1 million persons. Large-scale enterprises and the public sector also increased their workforce by around 350,000 (+2.7 %). Small and medium-sized enterprises thus account for 68.1 % of employment in Germany.

The data of the past ten years (2004 to 2014) again underscore the contribution of the SME sector to the 'job miracle' of Germany (Table 2). Since the year 2004, 4.7 million persons joined the workforce of small and medium-sized enterprises (+19 %). It was not only large SMEs that created employment. Small SMEs and self-employed professionals employed 1.6 million persons more in 2014 than in 2004. Measured against the base level of 2004, medium-sized SMEs with 10 to 49 employees experienced the strongest growth, with an increase of 27 %.

In line with the rise in the number of persons in employment, full-time equivalent employment²³ grew at a positive rate of +2.8 % in 2014 as well (2013: 2.1 %, see Figure 17). All size classes and sectors experienced higher growth momentum on the previous year. Enterprises in the R&D-intensive manufacturing sector posted the highest growth rate (+3.7 %). Above-average growth rates were also recorded by medium-sized SMEs with five to nine employees, however, (+3.3 %) as well as by companies with ten to 49 employees (+3.4 %).

Part-time employment grew more strongly in relative terms (+4.2 %) than full-time employment (+1.3 %).

Among other reasons, this may reflect the rise in the social importance of more flexible employment arrangements and employees' stronger desire for a balance between work and family life. Part-time employment has been on the rise in Germany for some time now, as the average number of hours worked is decreasing although the total number of persons in employment is growing (Figure 26).²⁴ Small and medium-sized enterprises can hardly ignore this trend either.

Apprentices: SMEs shoulder more and more responsibility

The number of apprentices in SMEs has decreased slightly on the previous year. Their numbers were down 0.7 %, or 9,000 persons, in the year 2014. Apprentice numbers have been falling markedly across Germany for years (2014: -2.3 %). Decreasing student numbers, the general demographic development and a growing orientation to tertiary education are leading to a continuous decline. SMEs can buck this trend (for now), employing more than 1.2 million apprentices in 2014 as well. SMEs thus provide 89 % of all apprenticeships in Germany, which shows that training activity has yet again shifted more to small and medium-sized enterprises (+2 percentage points on 2013). Many SMEs consider in-company training as the core mechanism for responding to possible future skills shortages and securing skilled workers.²⁵

The downside of lower turnover and higher employment: limp productivity growth

SME productivity growth²⁶ has flatlined (Figure 27). At -0.6 %, the annual labour productivity growth rate in 2014 was negative, albeit only slightly. It was the fourth decline in productivity in the last ten years. Expressed in index points: against the base year of 2003 (= 100 index points), SMEs achieved an average of 94 index points in 2014 (2013: 95). This represents a

turnover of around EUR 123,000 per full-time equivalent employee (-1,000 on the previous year).

The reduced productivity gap between small SMEs and large SMEs looks positive at first glance. Given the advantages they have in regard to fixed costs, specialisation and efficiency, large SMEs generally have a structural advantage over small SMEs, as the latter can only benefit from these to a limited extent. From this perspective, it would be positive for the small enterprises to close in on the large ones. However, it has become evident that the productivity differential²⁷ between small enterprises with fewer than five employees and large SMEs with 50 and more employees, which has shrunk to 34 % (2013: 39 %), is not due to the desired strength of small enterprises. Rather, the cause is the relative weakness of large SMEs. Expressed in index points: small SMEs have maintained their level of 95 from the previous year (2013 to 2014: -0.4 %) while large SMEs experienced a significant decline of ten index points from 127 to 117 (growth rate from 2013 to 2014: -8.2 %).

The R&D-intensive manufacturing sector, which used to be the ‘productivity engine’ of the SME sector, so to speak, ran out of steam in 2014 (for the time being). The labour productivity growth rate fell sharply into negative territory (-17.3 %) but not only there. SMEs in the construction industry (-14.5 %) and knowledge-intensive services (-12.2 %) experienced a decline as well. Other manufacturing enterprises also recorded a 7 % drop.

It remains to be seen whether R&D-intensive manufacturing enterprises and large SMEs specifically will be able to again play the role of long-term drivers of SME productivity growth. Efficiency is an important

factor for these segments as they face much more international competition than other segments.

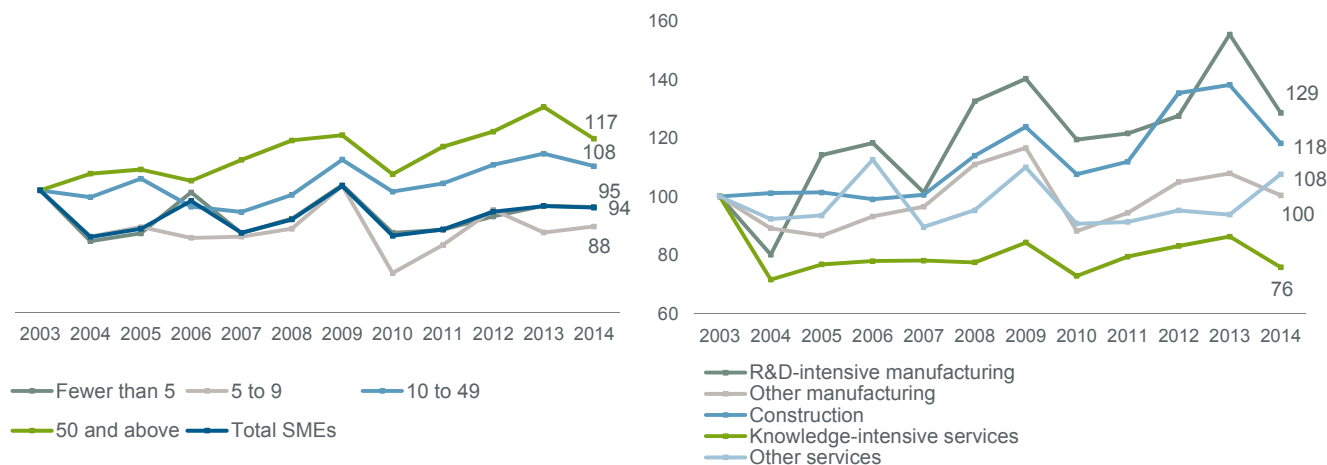
The necessary productivity boost across the SME sector failed to materialise in 2014. SMEs are not the only ones affected, however, as Germany’s productivity overall has stagnated noticeably in recent years. Labour productivity (measured as real GDP per person employed) as an internationally acknowledged measure for an economy has largely moved sideways since the year 2006.²⁸ It has flatlined at an index value of about 105 (base year 2003=100 index points). Thus, German labour productivity was lower in 2014 than in many comparable countries and regions, with Italy being the only country to perform more poorly (index value of 97). The USA and Sweden, for example, achieved a productivity level of 113, France 107 and Japan 108.

Returns on sales have risen slightly

The turnover growth in the SME sector has had a positive impact on enterprises’ profitability (Figure 28). The average returns on sales²⁹ of German SMEs rose by 0.3 percentage points to 7.0 % in 2014 (6.7 % in 2013). The proportion of SMEs with negative returns on sales rose only slightly to 12 % in 2014 (11 % in 2013), down from a rate of 16 % in 2009. However, 44 % of SMEs had to accept lower returns on sales (2013: 38 %; long-term average: 41 %). The returns on sales for these SMEs dropped by 2.9 percentage points on average (in the crisis years of 2008 and 2009, the decline was 4-5 percentage points). Two consecutive years of falling returns on sales was reported by 17 % (2013: 21 %), while three consecutive years of falling returns on sales was reported by only 7 % (2013: 9 %). These two crisis indicators thus signal what may be termed a generally reduced threat po-

Figure 27: SME productivity by size class (left) and sector (right)

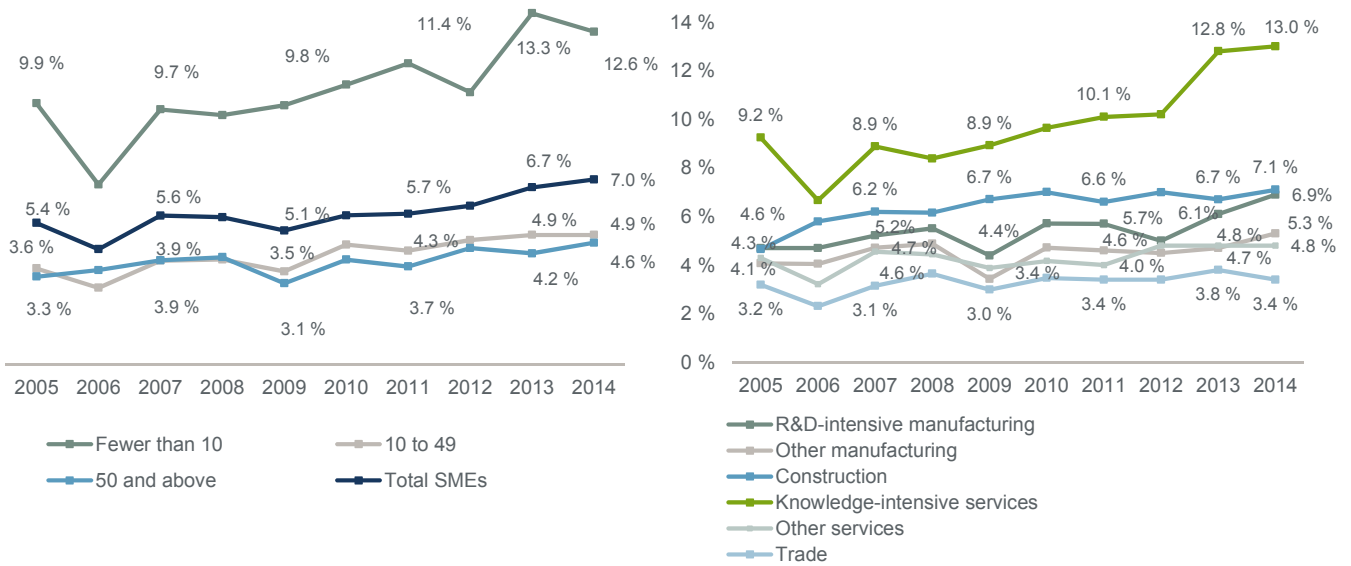
Size classes by number of full-time equivalent employees



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.

Figure 28: SME 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 2006-2015

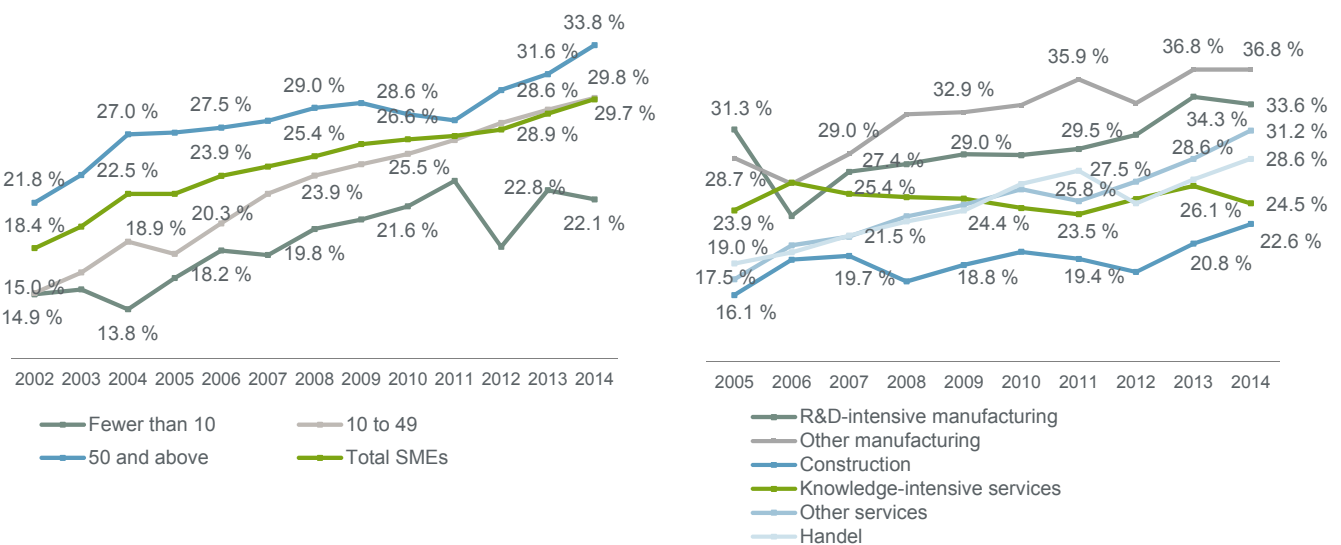
tential in the SME sector. Roughly 57 % of enterprises reported a comparatively high profitability of more than 10 % (2013: 60 % / 2012: 56 %).

The profitability of small SMEs was slightly lower in 2014 (down 0.7 percentage points to 12.6 %). Large SMEs were able to improve their profitability moderately to 4.6 %, an all-time high for this size class.

A look at the performance of German SMEs over a ten-year period again underscores their robust profitability. Since the year 2004, profitability increased across all segments. Most prominent is the increase in profitability of SMEs providing knowledge-intensive services (increase of approx. 4 percentage points) and smaller SMEs with fewer than ten employees (around 3 percentage points). In contrast, retail and wholesale enterprises have shown virtually no change

Figure 29: 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 2003-2015

for the past ten years. Their returns on sales have stalled at a low level of around 3 %.

Equity ratio through retention of profits remained strong in 2014

The improved turnover and profit situation was again responsible for an increase in the equity base of small and medium-sized enterprises. The average equity ratio³⁰ climbed again to now 29.7 %, an increase of 1.1 percentage points (2013: 28.6 %). Overall, SMEs thus achieved a new all-time high in 2014 as well (Figure 29).

Nevertheless, not all segments were able to improve their equity base. Those that reported a lower equity base on average in 2014 than in the previous year were small SMEs with fewer than five employees (-0.7 percentage points), R&D-intensive manufacturing enterprises (-0.7 percentage points) and knowledge-intensive service providers (-1.6 percentage points). As in the previous year, 10 % of SMEs reported a negative equity ratio in 2014.

The strong equity base of German SMEs is particu-

larly evident in a long-term comparison (2002 to 2014, Figure 30). Over the past twelve years, the mean equity ratio increased substantially in each size class surveyed. In addition, the share of SMEs with a relatively low equity ratio of less than 10 % fell last year (2014: 32 % / -4 percentage points on 2013) while the share of SMEs with a relatively high equity ratio of at least 30 % rose significantly (2014: 40 % / +9 percentage points on 2013).

In other words, profit increases were largely retained in the companies to enhance their self-financing capacity in 2014 as well. The analysis of enterprises' financing behaviour in their investment activities revealed that although they made significantly more investments in 2014, the use of their own funds for financing remained stable as they were seeking more external financing. SMEs are thus well-positioned to respond to requirements by using more of their own funds.

Figure 30: Variation in SMEs' equity ratio between 2002 and 2014

Size classes by number of full-time equivalent employees; variation in percentage points



Source: KfW SME Panel 2003-2015

The structure of SMEs in 2014

The SME sector covers all enterprises in Germany whose annual turnover does not exceed EUR 500 million. According to this definition, there were around 3.67 million SMEs in Germany in the year 2014. 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 31). A proportion of 86 % of them (or just under 3.1 million) generate an annual sales turnover of less than EUR 1 million. Fewer than 0.4 % (or almost 14,000) SMEs generate an annual sales turnover of more than EUR 50 million.

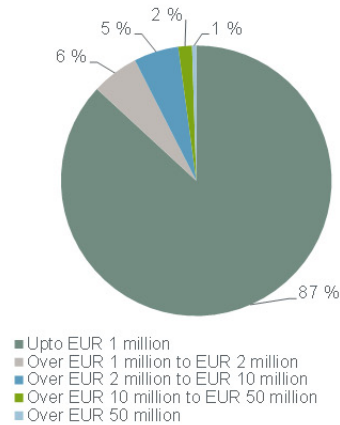
The fragmented nature of the SME sector is also reflected in the numbers of employees (Figure 32). A proportion of 82 % of SMEs have fewer than five employees (3.0 million) while 1.7 % of SMEs have 50 or more employees. The SME sector has become more fragmented in the past years, mostly as a result of increasing tertiarisation.

... and service-oriented

The majority of German SMEs are service enterprises (Figure 33), with 2.76 million – or 75 % of all SMEs – operating in service industries, with 1.33 million of them providing knowledge-intensive services, a trend that is increasing. Around 1.7 % of all SMEs were R&D-intensive manufacturers in 2014 (some 63,000 enterprises).

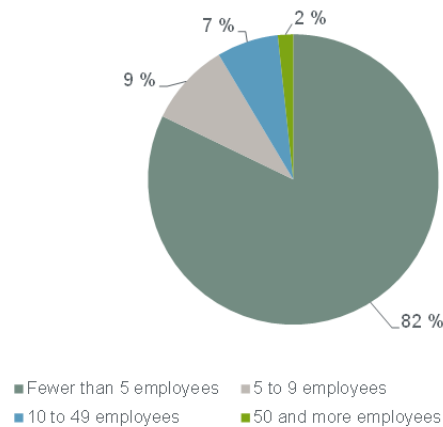
Around 3 million SMEs are domiciled in the western German states (82 %), while 674,000 (18 %) are domiciled in eastern Germany.

Figure 31: SMEs by annual turnover in 2014



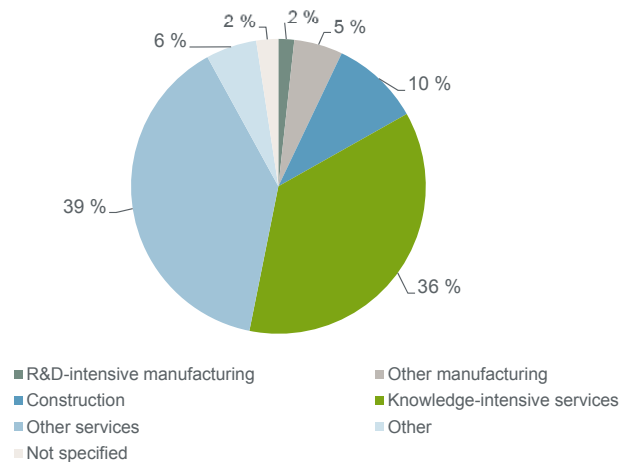
Source: KfW SME Panel 2015

Figure 32: SMEs by number of employees in 2014



Source: KfW SME Panel 2015

Figure 33: SMEs by industry in 2014



Source: KfW SME Panel 2015

SMEs at a glance – key figures

	2008	2009	2010	2011	2012	2013	2014
Investments							
Total share of investors	52	44	47	43	41	43	42
Share of investors < five full-time-equivalent employees	49	40	43	39	36	39	37
Share of investors ≥ 50 full-time-equivalent employees	86	82	85	83	85	83	84
Total investment volume (EUR in billions)	210	176	177	195	191	190	202
Investment volume < five full-time-equivalent employees (EUR in billions)	57	43	55	48	50	44	53
Investment volume ≥ 50 full-time-equivalent employees (EUR in billions)	78	72	67	80	75	69	71
Volume of investment in new machinery, equipment and buildings (EUR in billions)	165	139	143	156	145	144	158
Investment finance							
Initially planned borrowing requirements (EUR in billions)	151	118	106	100	102	119	128
Total debt capital realised (EUR in billions)	92	77	78	81	80	80	92
Credit supply gap (EUR in billions)	13	8	7	4	2	1	2
Net profit ratio							
Average return on sales	5.6	5.1	5.6	5.7	6.0	6.7	7.0
Average return on sales < 10 FTE employees	9.4	9.8	10.6	11.4	10.3	13.3	12.6
Average return on sales ≥ 50 FTE employees	4.1	3.1	4.0	3.7	4.4	4.2	4.6
Proportion of SMEs with losses	15	16	13	12	11	11	12
Equity base							
Average equity base	25.4	26.3	26.6	26.9	27.4	28.6	29.7
Average equity base < 10 FTE employees	19.8	20.6	21.6	23.5	18.5	22.8	22.1
Average equity base ≥ 50 FTE employees	29.0	29.4	28.6	28.1	30.4	31.6	33.8
Proportion of SMEs with negative equity ratio	10	9	6	6	12	10	10
Employment trends							
Total employment growth rate	2.1	1.5	2.5	2.6	2.1	2.0	2.8
FTE growth rate < five FTE employees	3.1	2.5	2.5	3.2	1.2	2.1	2.6
Development of turnover							
Total turnover growth rate	7.6	-6.2	6.7	8.1	2.4	1.9	3.3
Turnover growth rate < five FTE employees	10.0	-4.5	6.0	7.0	2.0	2.3	2.3

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 10,515 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 2013 and the population of employees at SMEs in 2013, the German Company Register (Unternehmensregister) and the official employment statistics (Erwerbstätigenrechnung) were used for the 2014 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 13th wave of the KfW SME Panel was conducted in the period from 23 February 2015 to 26 June 2015.

A **Supplementary Autumn 2015 Survey to the KfW SME Panel** on current investment plans for the year 2015 and the focal area of digitalisation and data protection was also conducted by GfK SE in the form of an online survey during the period from 8 to 18 September 2015. 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 2,192 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 Müller, M. (2015), KfW Business Cycle Compass Germany: Germany's economic engine still purring, 25 August 2015, KfW Research, Frankfurt am Main.

² The major revision of national accounts and the associated modification to the concept of investment will be applied from this reporting period of the KfW SME Panel onwards. 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.

³ Gross fixed capital formation in the corporate sector comprises private sector investment in machinery and equipment plus construction (without residential construction).

⁴ 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 EUR 500 million or more) are determined by subtracting the volumes calculated for SMEs from the corresponding values for the entire corporate sector.

⁵ For details see Gerstenberger, J. and M. Schwartz (2014), Unsicherheit kostet mittelständische Investitionen: Sichere Rahmenbedingungen nötig (Uncertainty hampers SMEs' investment, a secure framework is necessary), Focus on Economics No. 66, KfW Economic Research, Frankfurt am Main (in German only).

⁶ 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).

⁷ Schwartz, M. and J. Gerstenberger (2015), Ageing in SMEs is putting a damper on investments, Focus on Economics No. 85, KfW Economic Research, Frankfurt am Main.

⁸ For details cf. Zimmermann, V. (2013), Have the old still got what it takes? Differences in the innovative output of young and old entrepreneurs, Focus on Economics No. 33, KfW Economic Research, Frankfurt am Main.

⁹ 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 2015. Confidence intervals of 95% were calculated for the reporting year 2014 as well. The interval for the share of SMEs seeking intra-family leadership succession oscillates between 8 and 10%. The interval for the proportion of SMEs seeking external leadership succession oscillates between 7 and 9%. If we take into account the lower margin (some 15% overall) and the upper margin (some 19% overall), the interval width is around 550,000 to 697,000 enterprises that are planning to hand over or sell the company to a successor by the year 2018.

¹⁰ 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 offices, law firms, tax and management consultancies, or real estate and housing services.

¹¹ Schoenwald, S. (2015), Credit Market Outlook June 2015. New lending business: Companies snatch up loans, 10 July 2015, KfW Economic Research, Frankfurt am Main.

¹² Schwartz, M. (2015), SME borrowing: large loans in high demand, Focus on Economics No. 88, KfW Economic Research, Frankfurt am Main.

¹³ The vast majority of enterprises begin their business activity with a manageable size: 89% of all SMEs that have been in business for up to five years have fewer than five employees. However, the overwhelming majority of enterprises remains relatively small in their further development process as well. Thus, only 15% of small enterprises with fewer than five employees are less than five years old, while more than one third of small enterprises has already been on the market for at least 20 years. The average business age of an SME in Germany is just under 20 years. In other words, young SMEs are often small, but small SMEs are seldom young.

¹⁴ Zimmermann, V. (2015), Business Survey 2015: Financing situation better than ever – structural problems continue to affect small and new enterprises,

KfW Economic Research, Frankfurt am Main.

¹⁵ Federal Statistical Office, foreign trade, as at 19 August 2015.

¹⁶ Research and development-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%.

¹⁷ Hübner, M. (2015), KfW Business Cycle Compass Eurozone: Broad-based growth in the Eurozone, 18 June 2015, KfW Economic Research, Frankfurt am Main.

¹⁸ Müller, M. (2015), KfW-ifo SME Barometer: August 2015. German SMEs relaxed, large enterprises nervous, KfW Research, Frankfurt am Main.

¹⁹ In order to assess the entrepreneurs' expectations, two indicators can be formed on the basis of the SME Panel: turnover expectations and earnings expectations. These are surveyed for the respective next three years and can express the following three levels of expectation: falling earnings / turnover compared with the survey year (-1 = negative expectations), unchanged earnings / turnover (0 = neutral expectations), increasing earnings (1 = positive expectations). The two indicators were subsequently combined into one indicator of business expectations. The following categories were defined for this purpose: 'pessimists': $-2 \leq (\text{turnover expectations} + \text{earnings expectations}) \leq -1$ / 'neutral' (turnover expectations + earnings expectations) ≤ 0 / 'optimists': $1 \leq (\text{turnover expectations} + \text{earnings expectations}) \leq 2$.

²⁰ Gerstenberger, J. and M. Schwartz (2014), Unsicherheit kostet mittelständische Investitionen: Sichere Rahmenbedingungen nötig (Uncertainty hampers SMEs' investment, a secure framework is necessary), Focus on Economics No. 66, KfW Economic Research, Frankfurt am Main (in German only).

²¹ Zimmermann, V. (2015), KfW SME Innovation Report 2014: Standstill in Europe is slowing down innovation, KfW Research, Frankfurt am Main.

²² Data on persons in employment in Germany from the employment accounts of the Federal Statistical Office.

²³ 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.

²⁴ Müller, M. and K. Borger (2015), Decline in working hours threatens to exacerbate the consequences of an ageing population, Focus on Economics No. 81, KfW Economic Research, Frankfurt am Main.

²⁵ Details on the topics of training in the SME sector 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 – in German only), Economics in Brief No. 82, KfW Economic Research, Frankfurt am Main. – Leifels, A. (2015), Recruitment of skilled workers in SMEs: Optimism must not distract from qualification problems, Focus on Economics No. 100, KfW Economic Research, Frankfurt am Main.

²⁶ 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.

²⁷ Measured as the difference of absolute labour productivity between large and small SMEs in relation to the value of large SMEs.

²⁸ Sources: Destatis and Feri.

²⁹ Returns on sales are defined as the ratio of pre-tax profit to turnover. The figure shows the mean values of returns on sales weighted against turnover.

³⁰ 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.