Creditreform Rating

Default Study

Default Rates in the German Economy
2018

Market analyses
May 2019

Creditreform Rating

Management Summary

1.

The empirical default rate of German companies fell again slightly in 2018. After 1.44% in 2017, 1.41% of the approximately 2.8 million German companies went out of business last year. Thus, the default rate has followed its declining trend since 2009 (2.17%). As in the previous year, however, the decline was relatively moderate, indicating that the default risk of German companies is gradually bottoming out.

2.

The negative correlation between company size and probability of default was reaffirmed last year. For companies with sales of up to EUR 0.5 million, a default rate of 1.48% was observed in 2018. The default rate of companies with an annual turnover of more than 250 million euros amounted to only 0.14%. A decline in the default risk compared to 2017 was noticed in almost all company size segments. The most significant improvement was identified for small companies with annual sales between EUR 10 and 20 and EUR 20 and 50 million.

3.

The comparison of individual economic sectors shows significant differences in the probability of default. As in the previous year, the primary industry was the most solidly positioned in 2018 with a default rate of 0.69%. In contrast, the transport and logistics sector had the highest default risk at 2.52%. The metal and electrical industry recorded the largest decline in the default rate, while the consumer goods industry experienced a marked downturn.

4.

In 2018, the corporate sector in city states continued to be subject to elevated default risks. Berlin, for example, recorded the highest default rate in a federal state comparison at 2.01%, closely followed by Bremen (1.93%). In contrast, the lowest default rates were measured in Thuringia (1.03%) and Saxony (1.15%). In addition, Saxony recorded the strongest year-on-year decline of all federal states.

Contact

Dr. Benjamin Mohr
Chief Economist

Creditreform Rating
Hellersbergstraße 11
41460 Neuss

B.Mohr@creditreform-rating.de

5.

After the default rate in 2018 once again marked a historic low, we are unlikely to see any more significant declines going forward. The German corporate sector is currently facing a slowdown in external demand and continuing economic uncertainty. Nevertheless, the default probability of German companies is likely to remain at a low level in the current year. According to our baseline scenario, we expect the default rate to fall marginally to 1.40% in 2019.

1. Definition and Database

This study aims to examine the current risk position of German enterprises, based on empirical default rate data. The data used in this study is based on the Creditreform Business Database, containing approximately three million active companies and self-employed persons based in Germany, as well as data related to crisis-prone and insolvent enterprises. This database presents a complete view of the German corporate sector, and is considered to be the most comprehensive database on the German corporate sector worldwide. The database contains up-to-date information on corporate finances and creditworthiness, as well as a set of structural characteristics. Characteristics include, among others, data related to the number of employees of the company, as well as revenue figures, business activities, legal structure, and existing negative judicial characteristics of companies (see details in the appendix).

For this study, we have chosen a definition of a default event which conforms to that provided by Basel III. Existing hard negative entries such as (i) corporate insolvency procedures, (ii) consumer insolvency procedures regarding persons conducting business, or (iii) an arrest warrant or an affidavit leading to an enterprise being assessed as bankrupt. Furthermore, a company can be considered to be in default when, based on Creditreform information, it is deemed highly unlikely that the enterprise will be able to meet its payment obligations. Thus, this definition of default, which is commonly applied in the banking sector, includes more than the corporate insolvencies shown in official statistics (e.g. payment arrears of 60 to 90 days).

This study depicts one-year default rates. Thus, companies assessed as being in default are those which, as of 31 December 2018, have either defaulted on payments or display negative entries, while having been classified as solvent one year earlier (31.12.2017). At the end of December 2018 there were approximately 2.797 million active businesses in Germany. This figure comprises companies with active business relations and which have requested financing. All of the following stratifications are representative samples, independent of the respective structural characteristic under analysis.

2. Defaults in the German Corporate Sector

Last year, the German economy recorded positive growth for the ninth year in a row. However, economic growth eased in 2018, coming in at only 1.5% (2017: 2.5%). After an initially strong first half with growth rates of 2.3% (Q1) and 2.1% (Q2) y-o-y respectively, economic development slowed significantly in the second half of the year. In view of a weakening global economy, high economic policy uncertainty, and sectoral one-off effects, the economy was unable to sustain the momentum of the first half of the year, with growth rates of 1.1% and 0.6% in the third and fourth quarter.

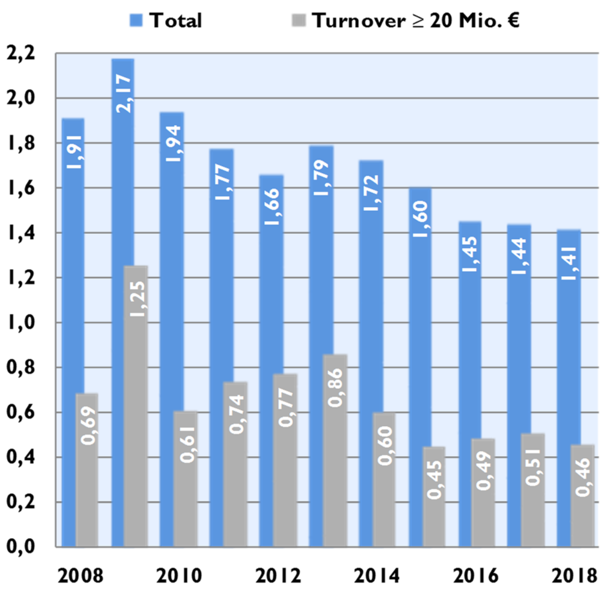
The intensification of the trade dispute between the USA and the EU/China has put a strain on international trade and posed a major challenge for the export-oriented German economy. In addition to increasing protectionist tendencies in international trade, the uncertain outcome of the Brexit negotiations also had adverse effects on the German export industry. As a result, foreign trade dampened economic development and made a negative contribution to growth of 0.5 percentage points (2017: +0.2 percentage points). In view of the economic uncertainties in international trade, exports grew only slightly by 2.0%, while imports expanded by 3.3%.

Thanks to strong domestic demand, the German economy was able to grow solidly – despite the difficult foreign trade environment. Private consumption increased by 1.1%, mainly due to persistently favorable labor market conditions and rising real wages, thus supporting German economic growth (growth contribution +0.7 percentage points). Gross fixed capital formation made an equally strong contribution to GDP growth, with investments in equipment rising by 4.4% year-on-year, while the construction sector also continued to show solid growth (+2.5%).

Against the backdrop of last year's robust economic development, the empirical default rate in the German corporate sector fell further (see Fig. 1). The default rate among German companies was 1.41% last year – corresponding to 39,559 companies out of the total 2.8 million German corporates. The default rate thus developed largely in line with our baseline scenario (April 2018 forecast 1.40%) and fell by 0.03 percentage points year-on-year (2017: 1.44%). It should be noted that the declines in the past three years turned out to be somewhat lower than in the years following the financial crisis due to the historically low level.

Figure 1: Development of empirical default rates

In %



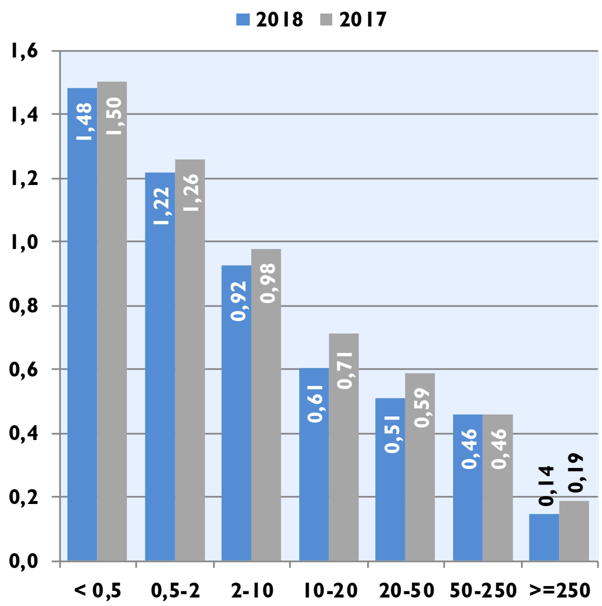
Source: Creditreform Rating

For medium-sized companies with an annual turnover of at least 20 million euros, the development is not as clear-cut. On the contrary, the proportion of failed companies has fluctuated slightly in the last four years, albeit within a relatively narrow range between 0.45 and 0.51%. Last year, the default rate fell to 0.46% and was thus close to its historic low of 0.45% in 2015.

The structurally negative correlation between company size and the empirical default rate remains intact. While the default rate for microenterprises with an annual turnover of less than 0.5 million euros was 1.48%, it amounted to only 0.14% for large firms with an annual turnover of at least 250 million euros (see Fig. 2).

Figure 2: Default rates by company size

In %, turnover categories in million Euro



Source: Creditreform Rating

Compared to the previous year, the default rate in most size segments declined - at the upper and lower end of the company size spectrum. The strongest declines in the default rate of minus 0.10 and 0.08 percentage points were identified in the group of small companies with revenues of 10 to 20 million and 20 to 50 million euros respectively. The declines were much smaller in the case of microenterprises, where the share of failed enterprises fell by only 0.02 percentage points (<0.5 million euros annual turnover) and 0.04 percentage points (0.5-2 million euros). Our calculations show an almost constant default rate of 0.46% (rounded) in the company classification of 50 to 250 million annual sales. This means that 46 defaults were incurred by 10,000 companies in this category in both 2017 and 2018.

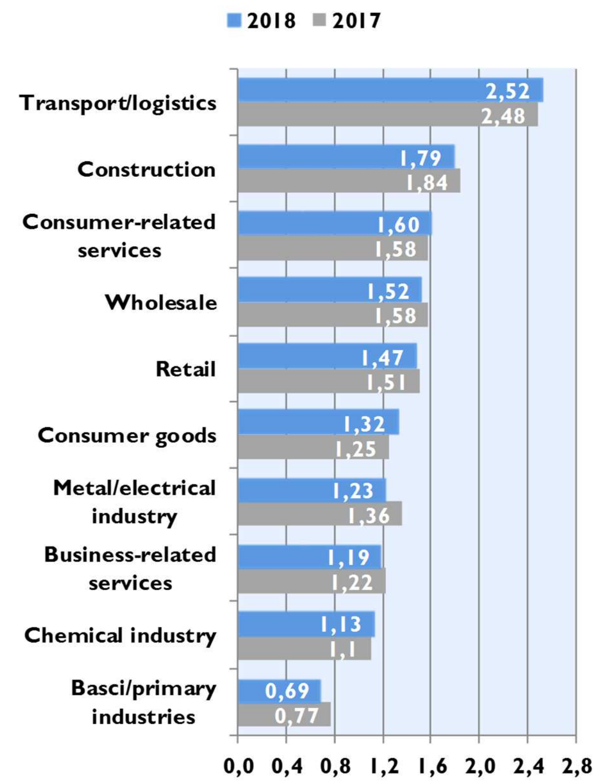
The default rate of German companies does not only vary between different company sizes, there are also significant differences between the economic sectors. While companies in the primary industry continue to show the highest resilience with a rate of 0.69%, this was 2.52% in the transport and logistics industry - equivalent to the highest default risk (see Fig. 3). We also see an unfavourable risk profile in the construction industry, where 1.79% of companies failed last year.

The primary industry thus maintains its top position in the industry ranking, displaying a wide gap of 0.44 percentage points ahead of the second-ranked chemical industry (1.13%). In addition to the economic sectors already mentioned, the business-related services with a default rate of 1.19% and the metal and electrical industry with 1.23% proved to be particularly robust in 2018.

In general, most branches of the economy can be said to have improved their creditworthiness. The largest decline was observed in the metal and electrical industries, with a minus of 0.13 percentage points. The respective declines in the share of defaults were also relatively pronounced in the primary industry (minus 0.08 percentage points) and in wholesale trade (minus 0.06 percentage points).

Figure 3: Rate of default by industrial sector

In %



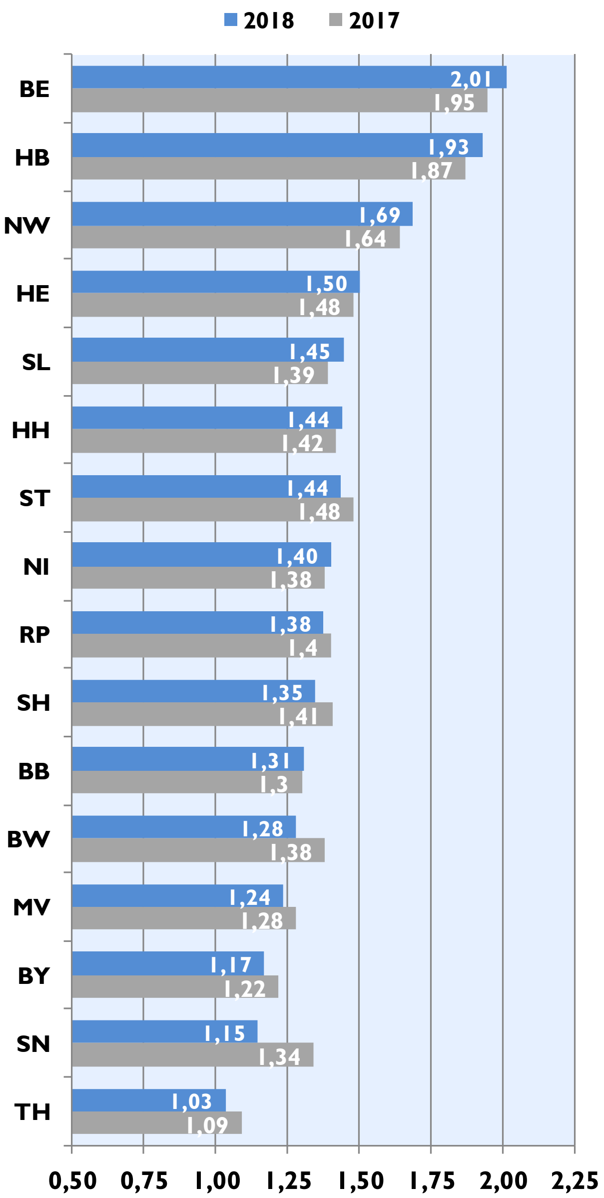
Source: Creditreform Rating

In 2018, however, there were also economic sectors in which default risks increased, although this only applies to a few industries. Default rates have worsened or increased in four sectors, including consumer goods, consumer-related services, chemicals and transport and logistics. These experienced an increase in their default rates of 0.02 to 0.07 percentage points. The deterioration in the default rate was particularly pronounced in the consumer goods industry and in the transport and logistics sector, where the rate rose from 1.25 to 1.32% and from 2.48 to 2.52% respectively.

A breakdown by federal states shows stark differences in the individual regions. Last year, Eastern Germany was again characterised by relatively low default risks (see Fig. 4). Berlin leads the ranking of the federal states with a default rate of 2.01%, closely followed by Bremen with 1.93% and North Rhine-Westphalia (1.69%).

Figure 4: Default rates by federal state

In %, as of 31. Dec. 2018



Source: Creditreform Rating

With the exception of Saxony-Anhalt (1.44%), which is close to the national average of 1.41%, the default rates in the Eastern German states (excl. Berlin) are all below the national average. Among the three federal states with the lowest default rates in 2018, Thuringia (1.03%) and Saxony (1.15%) were two Eastern German states, while Bavaria ranks third with 1.17%. In Mecklenburg-Western Pomerania, in fourth place, only 1.24% of the companies had failed last year. If one excludes the federal capital Berlin, the average default rate of the Eastern German states amounts to only 1.21%. For comparison: the average default rate in West Germany was 1.42%.

If we look at the development of the default rate between 2017 and 2018, we see that the risk of default has tended to decline in the federal states with a relatively high creditworthiness, while rather increasing in those with a certain catching-up potential. The largest decline in the default rate compared with 2017 was recorded by Saxony, where it fell from 1.34 to 1.15% (minus 0.19 percentage points). The second-highest decline was observed in Baden-Württemberg with minus 0.10 percentage points to 1.28%. Looking at the other end of the spectrum, the picture is different. The probability of default in Berlin, Bremen and Saarland has increased by 0.06 percentage points to 2.01, 1.93 and 1.45%, respectively, compared with 2017. In North Rhine-Westphalia, too, the increase was quite high with an increase of 0.05 percentage points to 1.69%.

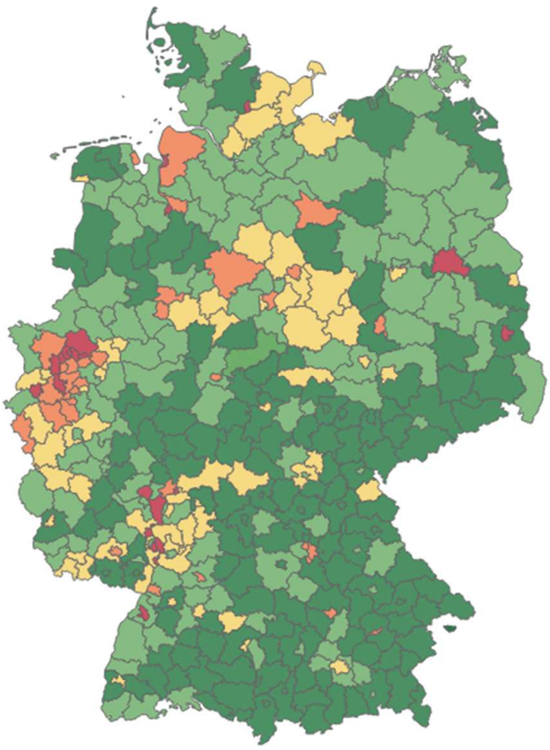
If one goes one level lower in geographical terms, a decline in default rates can be observed in the majority of German cities and districts. In 220 cities and administrative districts, the default rate declined, whereas 181 recorded an increase.

Rural regions still show a fundamentally more favourable risk structure than metropolitan areas and large cities (see Fig. 5). As an example, the default rate in the ten largest cities in Germany is above the national average, and in some cases significantly so. Berlin and Düsseldorf exhibit the highest default risk, with 2.01% each, followed by Frankfurt with 1.93%. In contrast, the default rate in Hamburg was 1.44%, only slightly above the national average.

The lowest default probabilities were recorded in more rural areas in 2018. With a default rate of 0.47%, the independent city of Pirmasens leads our ranking of the most solid cities and districts, followed by Kronach and Freyung-Grafenau with 0.59% each. Pirmasens also recorded the highest reduction in the default rate in 2018. While 148 out of 10,000 companies failed in the analysis period 2017, only 47 companies failed in 2018. This corresponds to a decline of 1.02 percentage points. There were also pronounced declines in Herne, by 0.87 percentage points to a still high 2.23%, and in Kaufbeuren (minus 0.76 percentage points to 0.83%) followed by Nordhausen (minus 0.71 percentage points to 0.81%). Both the lowest default probabilities and the largest declines could thus be identified in areas that tend to be rural.

Figure 5: Default rates by district in 2018

Percentage of companies in default, in %



< 1,20%	1,50% - 1,74%	2,00% - 2,49%
1,20% - 1,49%	1,75% - 1,99%	>=2,50%

Source: Creditreform Rating

Relatively large increases in the default rate compared to 2017 were recorded in Wunsiedel (Fichtelgebirge) and in Brandenburg. Here the default rate in 2018 exceeded the previous year's level by 0.79 and 0.83 percentage points respectively (2018: 1.63 and 1.0%). A higher increase could only be observed in Baden-Baden, where the default rate of local enterprises increased by 0.84 percentage points to 2.34%. At the end of 2018, Baden-Baden thus ranked 8th in the city and district ranking. Concurrently, the highest default rate was assessed in Offenbach am Main last year (3.04%) – followed by Duisburg (2.85%), Ludwigshafen on the Rhine (2.70%), and Gelsenkirchen (2.64%).

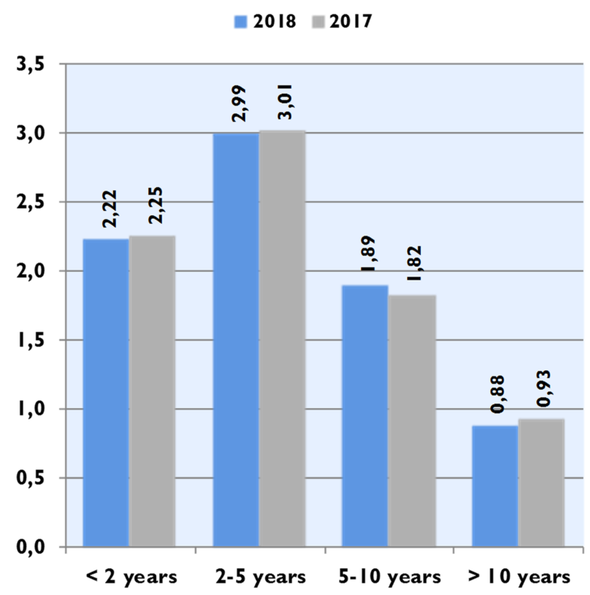
It is also striking from a regional perspective that companies based in the Ruhr region appear to be subject to relatively high default risks. Among the 30 cities and counties with the highest default rates, a total of ten cities and counties from the Ruhr area are found. Duisburg and Gelsenkirchen as representatives of the Ruhr region have already been mentioned in the category of areas with the highest default rates – cities such as Oberhausen (2.42%), Herne (2.23%) or Bottrop (2.11%), however, feature equally high default risks. Overall, the default rate for all cities and districts in the Ruhr region is 1.94% (median). As a comparison: in Germany only 23 cities and districts have a default rate lower than the Ruhr average.

With regard to age segmentation, it should also be noted that older enterprises prove to be more solid and less vulnerable to default risks than younger enterprises (see Fig. 6). The risk of default is particularly high for young enterprises aged between two and five years. With a rate of 2.99%, they were the most vulnerable to default. Even for companies founded less than two years ago, lower but still comparatively high default rates of 2.22% can be documented.

On the other hand, the default rate of the long-established companies, which have been on the market for more than ten years, is by far the lowest at 0.88%. Their default risk is thus not even half as high as that of the established companies in the age classification of five to ten years, which at 1.89% can also be said to have a lower default risk.

Figure 6: Default rates by company age

In %



Source: Creditreform Rating

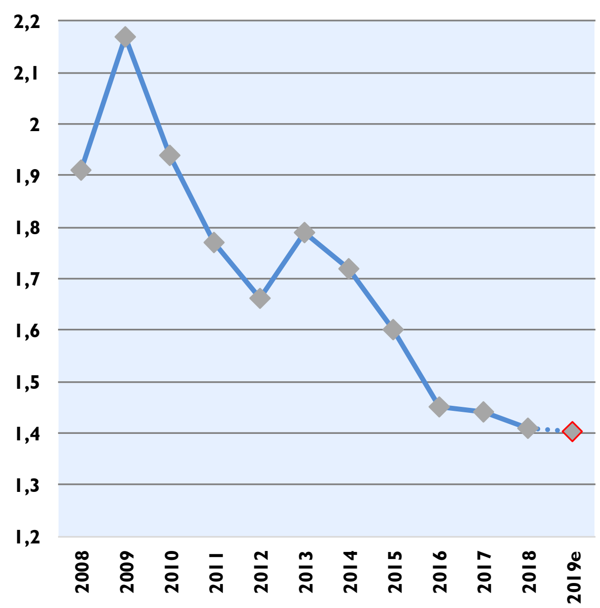
In most age segments, the risk of default has declined over the course of the year - most clearly in the segment of long-established companies. In this respect, our analysis showed a decline in the share of defaulted companies by 0.05 percentage points to 0.88%. At the same time, the risk susceptibility of young companies (two to five years) fell marginally by 0.02 percentage points to just under 3%, while the default rate of start-ups (<2 years) fell by 0.03 percentage points. The only segment to show an increase is that of the established corporates (5-10y old), where the rate rose from 1.82% in 2017 to 1.89% last year.

3. Outlook

In our analysis of this year's default rates of German companies we observed a new historical low. The empirical default rate of German companies fell by 0.03 percentage points to 1.41% in 2018. This largely confirmed our forecast from last year's report, as well as our thesis that default rates will not change as much as they did in the years following the financial crisis. Within the last three years, a stabilisation at a historically low level can be observed. This trend should continue in the current year. In view of a deteriorating macroeconomic environment and weaker economic growth, the default rate of German companies should continue to gradually bottom out. In our baseline scenario for Germany's overall economic development in 2019, we assume a default probability of 1.40% (see Fig. 7).

Figure 7: Forecast for the default rate for 2019

In %



Source: Creditreform Rating

Looking ahead to 2019, the currently available leading indicators indicate that the German economy will continue to cool down. We anticipate a cyclical slowdown after the German economy had clearly outstripped its potential growth in recent years. Although the extraordinarily high growth rates of 2016/17 are unlikely to be reached in the near future, we nevertheless expect the German economy to remain on its growth path for the tenth year in succession in 2019. Supported by a still robust domestic economy, real GDP should grow by 0.9% this year. We view the continuing weakness of the domestic industry and a further deterioration in export prospects as the main reason for slower growth in 2019.

The purchasing managers' index for the manufacturing sector fell below the threshold of 50 points in January, signaling a decline in industrial production, before we saw first signs of stabilization in April, when the index recorded a slight increase from 44.1 to 44.5 points. Nevertheless, German industrial production fell for the fourth consecutive month. The overall disappointing development of the purchasing managers' index fits into the picture of weak new orders at the beginning of the year. On a monthly basis, industrial orders fell in January and February by 2.1% and 4.2% respectively year-on-year, while orders from abroad dropped even more sharply by -2.6% and -6.0% respectively, hinting at modest external demand in 2019. We currently expect economic growth from Germany's main trading partners (euro area, USA and China) to have peaked.

On the other hand, the latest export figures from the automotive sector give us some hope. Motor vehicle exports appear to be recovering noticeably from their sharp slump in the third quarter of 2018. The number of cars exported in February 2019 was only slightly (-1.5%) down on the previous year. Nonetheless, we assume that foreign trade will again weigh on growth in 2019, as numerous sources of uncertainty (e.g. China, Brexit, and US trade policy) are likely to remain for the time being alongside the cyclical weakening of the global economy.

Alongside weaker export expectations, the investment outlook has deteriorated in recent months. Especially in the manufacturing sector, which accounts for the majority of equipment investments, companies are increasingly sceptical about the future. The ifo business climate index for the manufacturing sector fell steadily in the first four months of this year, reaching its lowest level since December 2012 in April at 4.0 points (March: 6.7 points). Against the backdrop of considerable economic uncertainty, the German corporate sector is therefore likely to be reluctant to invest in new plant and equipment. Nevertheless, the still high level of capacity utilization in a long term comparison and extensive investment requirements in the automotive sector (e-mobility, autonomous driving) should support investment in capital goods.

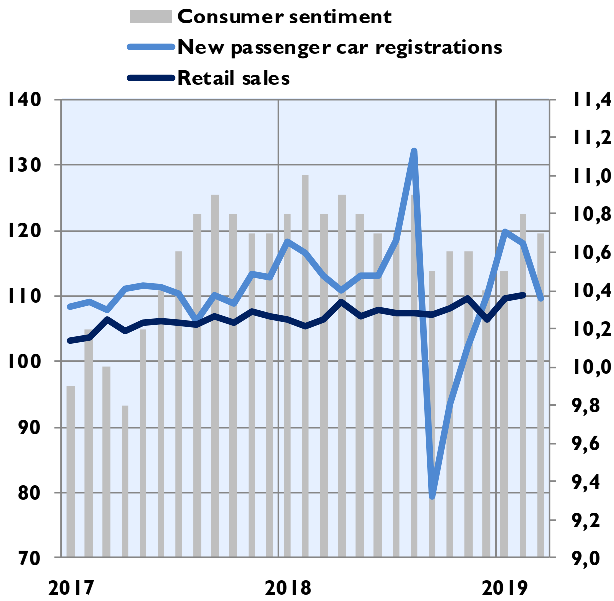
Meanwhile, monetary policy conditions for investments should continue to be supportive. In view of the weaker economic outlook, the ECB decided to put the normalization of monetary policy on hold. At its March meeting, the Governing Council decided to keep its main rate at its current record low (0.0%) at least until the end of 2019. Accordingly, we expect continued robust growth in construction investment - especially in residential construction. However, a significant strengthening in construction investment appears unlikely, as there is still a shortage of building land, especially in metropolitan areas, and the construction industry has in many cases already reached its capacity limits.

Against this background, private consumption should play an even more decisive role for growth in 2019 than in previous years. It is therefore positive to note that both the retail trade and car registrations got off to a relatively strong start in the new year, suggesting that the weakness in consumption at the end of 2018 was rather a temporary phenomenon (see Fig. 8). While retail sales (excluding motor vehicles) rose by 3.0 and 4.4% yoy in January and February, new car registrations rose by 13.6% yoy in Q1-19 and remained at the previous year's level overall.

In general, private consumption should be aided by the persistently strong labour market and rising real disposable incomes. Employment growth, posting at +1.1% y-o-y in the final quarter of 2018, should continue in 2019. However, its momentum is likely to weaken somewhat as a result of the tightening labour market conditions. At the same time, real disposable household incomes should grow significantly due to subdued inflation and capacity constraints on the labor market. While HICP inflation is likely to decrease from 1.9 (2018) to 1.4% due to a negative base effect of energy prices, the increasing shortage of qualified personnel should maintain wage pressure in the private corporate sector.

Figure 8: Private consumption in Germany

New car registration and retail sales: each index (2015=100); GfK consumer climate: in points



Source: StBA, EZB, GfK, Creditreform Rating

In addition, additional room for manoeuvre for private household spending should result from fiscal policy measures gradually coming into force under the coalition agreement. Overall, consumer purchasing power should benefit from a somewhat more expansionary fiscal policy. Wages and salaries in the public sector rose by 3.2% in January 2019, the maternal pension was expanded, the minimum wage was raised and employee contributions to health and unemployment insurance were moderately reduced. Families with low incomes were additionally relieved in the form of free childcare, and pensioners will benefit from a noticeable increase (3.18% Western Germany; 3.91% Eastern Germany) in old-age pensions from July onwards.

Appendix

Database and classification of economic sectors

The Creditreform Business Database contains up-to-date financial and credit information, whereby a data set of all active enterprises is archived on a quarterly basis. This data panel can be used, among others, to analyze developments in individual companies and industrial sectors. Characteristics pertaining to the companies stored in the database include:

- full company address, state identification, district identification, and postal code
- information on date of foundation, number of employees, turnover, legal form of the company, and credit information
- owner and shareholder structure, proprietary shares, and further information pertaining to the business owners and founders, e.g. number of, age and gender
- existing negative judicial characteristics pertaining to a company
- industrial sector in the form of a five-digit WZ code, according to the classification of economic activities of the Federal Statistics office of 2008

In accordance with the aforementioned classification of economic activities of the Federal Statistics Office, industrial sector groups were created (see Fig. 9).

Fig. 9: Industrial sector key according to WZ 2008

Industry	WZ 2008
Basic and primary industries	01-09, 19, 23
Business-related services	61-63, 69-74, 77-78, 80-82
Chemical industry	20-22
Construction	41-43
Consumer goods	10-18, 31-32
Consumer-related services	55-56, 79, 86-93, 95-96
Metal / electric goods	24-30
Retail	47
Transport / logistics	49-53
Wholesale	46

Creditreform Rating AG has been registered by ESMA as a European rating agency. We are providers of credit risk assessments and offer our customers a wide range of rating and credit services as well as risk management solutions. We provide high-quality, reliable assessments of credit risks and provide our clients with ratings, credit services and market analyses for their international business activities. We provide asset-based finance ratings in a wide range of asset classes (infrastructure, real estate, renewable energies, logistics and aviation), structured finance ratings, bank ratings and sovereign ratings. We also issue ratings for corporates and their bonds.

Research publications from Creditreform Rating will allow you to keep track of economic and financial developments. We regularly publish studies that analyse the situation on the financial markets and in the national economies of Germany as well as other euro area countries and beyond. Furthermore, our experts also prepare industry-specific surveys and comment on economic policies as well as new regulations.

For more details, please visit www.creditreform-rating.de