BOND MONITOR
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Creditreform
Rating Agentur

# Corporate Bonds in Germany 2013/14

## A comparison with European bond issuers

## Contents

## Management Summary

1. Measured by the number of issues, the number of corporate bonds increased in 2013, and issuance activity in the current year has also been strong. Having seen 50 and 64 bond issuances in 2009 and 2010 respectively, by 2011 the number had already increased to 82 corporate bonds. In the course of the following two years, nearly 250 bonds had been issued; 118 in 2012, and 130 bonds in 2013. As of August this year, 94 bond issuances by German non-financials had been recorded. The German bond market currently includes a total of 606 bonds issued by 286 non-financial companies.

2. In 2012, the number of corporate bonds had increased significantly. The issue volume increased equally noticeably, which nearly tripled in comparison to the previous year, from €17.0bn to €46.1bn. This level could not be completely maintained in 2013. In all, a total volume of €40.9bn was issued. In the current year, the volume of bond issues was a total of €34.7bn between January and August alone.

3. Issuance activity in the market for SME bonds has been less dynamic in 2014. Since 2010, the nominal issuance volume of corporate bonds in the market for SME bonds has been approx. €5.2bn. The highest issuance volume was recorded in 2011 at €1.51bn. In 2013, bonds were issued at a volume of €1.40bn after a decrease in volume to €1.23bn in 2012. This momentum in issuance volumes could not be maintained during the current year. Thus only six new issuances were listed in the regulated market this year. This has been reflected in the volume of issuances. Corporations issued bonds worth a total of €0.28bn.

4. With the help of our corporate bond database, we have undertaken to benchmark the risk-bearing capacity of bond issuers. Based on the panel data structure, changes and developments taking place in the course of time were analyzed and traced. By gathering information on all available balance sheet data and by means of applying the XBRL data collection structure, the calculation of any conceivable key financial figures - independent of the request - is fundamentally possible. We have placed a focus on the equity ratio, return on assets, the EBIT interest coverage ratio, and the ratio of net financial liabilities to EBITDA.

5. On the whole, we noted that German companies in the Large Cap segment (balance sheet total ≥ €500m) were able to strengthen their equity base. At the same time, their profitability and interest coverage ratio have followed a stable trend. Indebtedness also remained steady compared to the previous year. By contrast, the financial risk-bearing capacity for mid cap issuers, i.e. companies with a balance sheet total of less than €500m, has had a declining trend. The negative trend in equity ratio was stopped; however, equity remains at a relatively low level. The interest coverage ratio and their total return on capital have declined within the year.

6. In the context of our analysis of the corporate bond markets, we have also focused on European issuers of bonds. Here we first focused on the Belgian, Austrian, French, Spanish, Italian, and UK economies.

7. In Europe, the number of bonds issued has risen since 2009. While issuers from the above six economies and Germany issued 137 and 176 bonds in 2009 and 2010 respectively, in 2011 a total of 194 corporate bonds were registered. In the following year, issuance activity was noticeably more dynamic. Thus in 2012 a total of 258 bonds were issued. This level was maintained in 2013 with 268 corporate bonds issued. Considering the fact that 207 bonds were already issued between January and August of this year, we can assume that this mark will be surpassed within the current year. In addition to Germany, the French segment also stands out on the European corporate bond market. The market for French corporate bonds denominated in euros includes a total of 398 bonds issued by non-financials with an outstanding nominal issue volume of €263bn.

8. Our comparison of the risk-bearing capacity among European issuers showed that German issuers had a comparatively low equity base. On the other hand, German bond issuers have a higher profitability; their return on assets shows that they operate more profitably than issuers in other European countries. With regard to interest coverage ratio, the German segment is at a comparable level with other European segments.

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# 1. A European perspective on the development of the corporate bond market

Germany is characterized by a bank-based financing system. Hence, bank loans play a pivotal role in external financing for non-financials. However, corporate financing currently finds itself undergoing change. Without attempting to anticipate the results of the analysis and measured by the number of bonds, corporate bond issuances continued to increase in 2013, and in the current year we have also seen strong issuance activity.

This can certainly be attributed to growing demand on the part of investors with an increased appetite for risk, as well as to yield spreads in other asset classes such as government bonds. In particular, there are changes looming with respect to financing patterns in the German business sector. Thus we discovered, in a joint analysis together with the IKB in August this year, that financing for companies in the larger size categories, whose financing needs have increased and changed due to internationalization and innovation, is in particular undergoing dramatic change. Enterprises require more financial scope which they can flexibly use for implementing their long term business strategy for real investment, acquisitions, and R&D projects. However, another reason for the shift in financing patterns for businesses is that banks are obliged to implement a stricter regulatory framework, while at the same time they are faced with intense competition and overcapacity. These structural upheavals have noticeable repercussions for corporate financing. In addition, conditions for market-based financing have improved significantly in the last few years. Thus the European Central Bank has shown that costs for market-based external financing of non-financial corporations in the euro area fell last year to a level beneath the lending rate of the monetary financial institutions (see ECB Monthly Bulletin, April 2014).

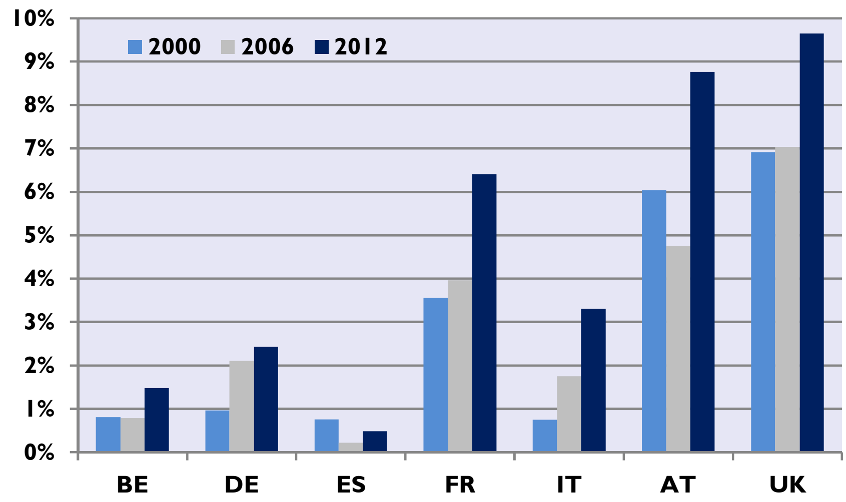
In view of the fact that the market for corporate bonds in Germany is an opaque market in terms of the fundamentals and structural characteristics of issuers, we have created a comprehensive database which includes all relevant information pertaining to German bond issuers regarding structural data and annual financial statements, in addition to issue volumes and maturity dates. By analyzing the information on annual financial statements collected in the database, we are able to provide an exact picture of the issuing company's situation with regard to creditworthiness and risk-bearing capacity.

Last year we analyzed the German bond market for the first time (Corporate Bonds in Germany, September 2013), pointing out increased utilization of bond markets as a way for companies to finance their business and tracing the development of the issuers' financial risk-bearing capacity. In a follow-up study, we focused on the development of the SME bond market and issuers (SME Bond Markets in Germany 2010-13, March 2014). The present analysis is a continuation of this series. Here, in addition to the development of the market through August this year, we highlight the risk-bearing capacity of issuers based on annual financial statements for the years 2009-2013, for the total market as well as for SME bond segments.

The third component of this study consists in the analysis of the European bond market, as it is not only corporate financing for German non-financials which is changing. In Europe, the ratio of financing based on debt securities to the total sum of financial liabilities has increased markedly in the course of the last few years, although it continues to remain relatively low (see fig. 1).

**Figure 1: Share of debt securities in NFCs total liabilities**

Non-financial corporations




Source: Eurostat, non-consolidated financial accounts, own calculations

We have expanded the Corporate Bond Database, which is updated on a continual basis with respect to each further issue and issuer, with data regarding European bond issuers. This includes exclusively corporate bonds by non-financials which are publicly listed and denominated in euros. While information regarding the risk-bearing capacity of issuers is derived from annual financial statements, annual reports, and bond prospectuses, information regarding corporate bonds taken from the websites of stock exchanges in Frankfurt, Stuttgart, Düsseldorf and Hamburg-Hannover as well as the stock exchanges in Berlin and Munich. Determinant for the categorization as a corporate bond from Germany, France, etc. was, in addition to the location of the issuer, the country code contained in the International Securities Identification Number (ISIN). In the context of this analysis we will first look at the German Corporate Bond market before proceeding with a comparison to issuers in Belgium, Austria, France, Spain, Italy, and the UK. A future expansion of the database to include the total European bond market is planned.

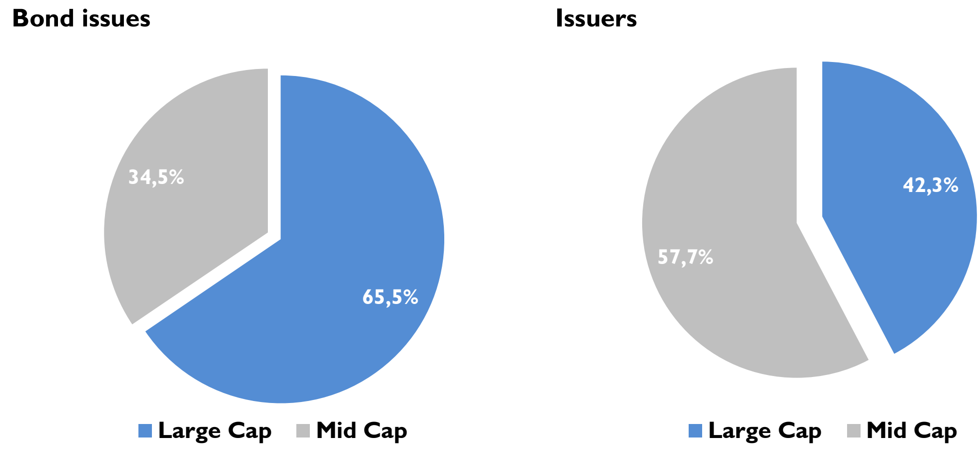
## 2. The corporate bond market in Germany

In this study we distinguish between different bond issuers based on corporate balance sheet totals, focusing on large scale enterprises or large caps, and medium-sized companies or mid caps. Here we have defined enterprises belonging to the Mid Cap segment as companies with a balance sheet total of less than €500m. Thus large cap companies will have a balance sheet total of €500m or more. Usually, bond market studies are carried out assuming a minimum size with respect to the size of the company or issue volume. However, without segmentation according to the size of the corporation, when analyzing German corporate bonds, we usually receive only a distorted or blurred impression. The structured data in our database enable segmentation of issuers, thus providing results which, in other analyses, are not sufficiently proven by statistical data. In the context of the present analysis, all outstanding bonds up to 31.08.2014 were examined.

### Market development

The German bond market currently includes 606 bonds issued by non-financial corporations. The total number of issuers amounts to 286 companies. Among these issuers we have registered a total of 121 large caps. This means that two out of five issuers (42.3%) are large cap corporations. At the same time, the vast majority (65.5%) of corporate bonds in Germany are issued by corporations in the large cap segment (see fig. 2).

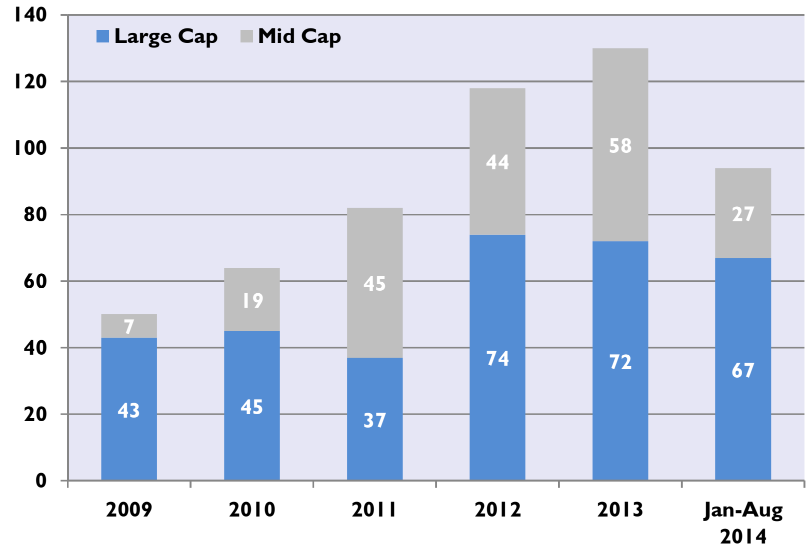
**Figure 2: Bond issues and issuers in Germany**




The number of bonds issued per year has risen steadily since 2009. Particularly remarkable is the fact that issuance activity has become noticeably more dynamic since 2012 (see fig. 3). Having seen respectively 50 and 64 bond issuances in 2009 and 2010, by 2011 the number had already increased to 82 corporate bonds. In the course of the following two years, almost 250 bonds had been issued; 118 in 2012 and 130 bonds in 2013. This momentum was confirmed throughout the current year. By August of this year, 94 bond issuances by German non-financials were recorded. What is striking in this context is that this development has not been sustained solely by the large caps. The issuance of bonds also seems to be gaining appeal among mid caps. While there was a tendency toward decline in issuance activity among large cap corporations between 2009 and 2011, the circulation of mid cap bonds has gradually been on the increase since 2009. In 2013, the number of bonds issued by mid caps amounted to 58 (Jan.-Aug. 2014: 27 bonds).

**Figure 3: Development of issuance activity**

Number of bond issues per year




Measured on issue volume, the market for German corporate bonds denominated in euros had dwindled by 2011 (see fig 4). Thus the annual issue volume in 2011 amounted to only €17.0bn, after seeing €24.9bn in 2010 and €36.2bn in 2009. While the number of bonds issued increased during this period, the increase in 2011 is, however, due to the issuance activity of mid caps whose bonds have on average (median) a significantly lower issue volume (€25m vs. €500m). In 2012, the number of large cap bonds almost doubled. Accordingly, the issue volume increased noticeably, which nearly tripled in comparison to the previous year, from €17.0bn to €46.1bn. This level could not be completely maintained in 2013. In all, the total volume of bonds issued was €40.9bn. In the current year, the volume of bond issues was a total of €34.7 bn between January and August alone, so that the figures of 2013 may well be surpassed in 2014. In 2013, the market for mid cap bonds was able to surpass its all-time high of 2011. In total, bonds were issued at a nominal issue volume of €2.2bn, having been at

€1.8bn in 2011 and falling to €1.5bn in 2012. Until August this year, mid cap companies were able to gain a total of €1.0 bn in resources by issuing corporate bonds. In total, the outstanding volume of German corporate bonds (non-financials) amounts to approx. €247bn, whereby the total circulation of large cap bonds is at approx. €239.3bn and the circulation of mid cap bonds is at €7.5bn.

**Figure 4: Issuance volume on the corporate bond market**

Nominal issue volume in € bn

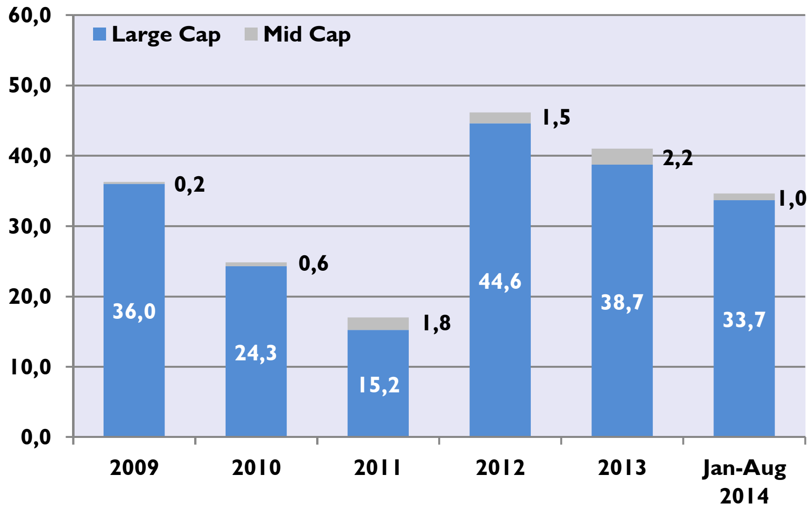
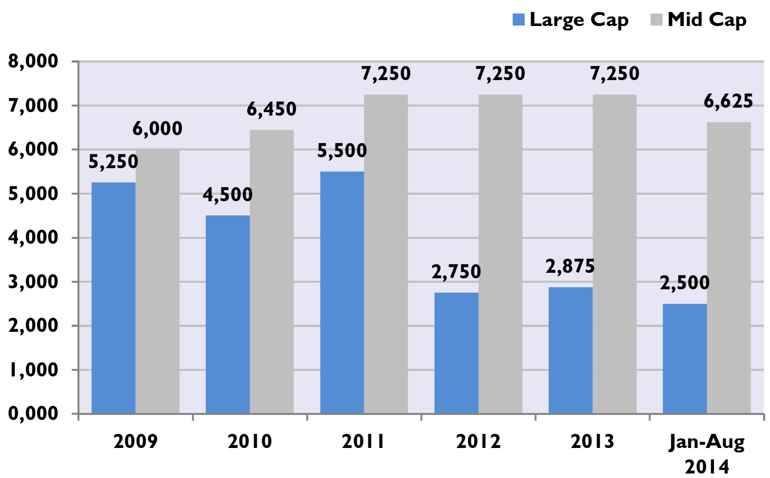



**Figure 5: Development of the nominal interest rate**

Average coupon (median) in %



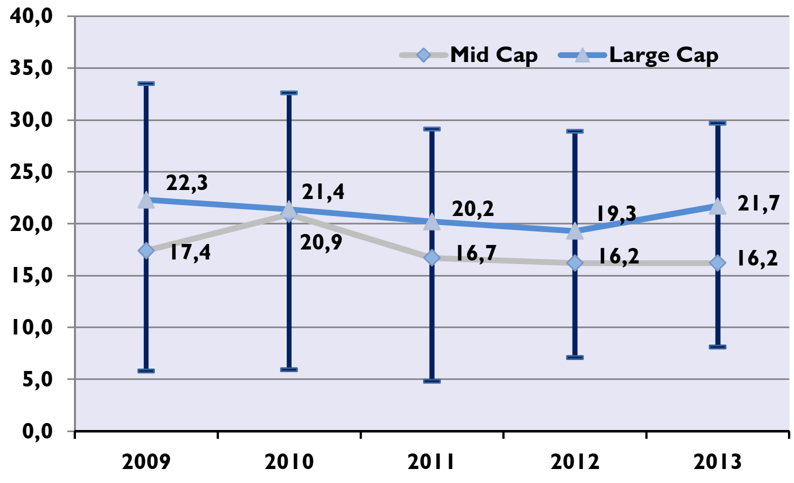

Categorization according to company size makes apparent significant differences in the development of the nominal interest of the issued bond (see fig. 5). While the average coupon (median) of mid cap bonds fluctuated between 2009 and 2013 within a range of 6.000% to 7.250%, the level of the coupon on bonds issued by large cap corporations has noticeably fallen since 2011; from an average of 5.500% in 2011 to 2.875% in 2013. In the current year, the average coupon has fallen slightly with regard to both mid cap (6.625%) and large cap (2.500%).

## Risk-bearing capacity of the issuers

In the following we analyze the development of key financial figures relevant to the assessment of issuers' risk-bearing capacity. Depending on the respective company size segment we will look at key figures related to capital structure, profitability, and financial strength. In continuation of our previous analyses we will focus on equity ratio, return on assets, the EBIT interest coverage, and the relationship between net financial liabilities and the EBITDA (see appendix for a definition of key figures). This analysis is based on all enterprises which issued a bond between 2009 and August 2014 and on published annual accounts and securities prospectuses for these years. In order to guarantee the statistical comparability of annual financial statements, the annual accounts were structured and prepared so as to be applicable to all principles of accounting. Insolvent companies are also included in the totality inasmuch as the bond which they issued is still being traded. A comparable key figure result can also be reached without the inclusion of these companies.

**Figure 6: Equity ratio by size segment**

In %, median and 1/3. quartile

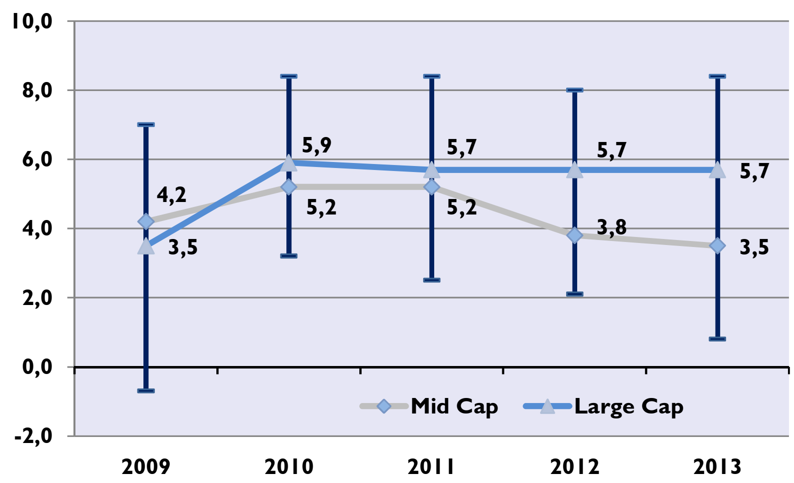



The equity ratio of large cap companies had been in continuous decline between 2009 and 2012 (see fig 6). During this period, the average equity ratio fell by three percentage points from 22.3% to 19.3%. Recently, companies for the large cap segment were able to substantially strengthen their equity base. Thus the equity ratio in 2013 was an average of 21.7%. In contrast, the average equity ratio of mid cap bond issuers has remained at its low 2012 level. While adjusted equity accounted for an average of 20.9% of the adjusted balance sheet total in 2010, in 2011 the equity ratio totaled only 16.7%. In 2012 and 2013, mid cap companies had an equity ratio of only 16.2%.

Bond issuers in the large cap segment were able to stabilize their profitability in the period under review at a reasonable level (see fig. 7). The average return on assets for the large caps improved in 2010 from 3.5 to 5.9%. The return on assetswas somewhat lower in 2011 at 5.7%; however, the larger bond issuers were able to maintain this level during the following two years. In contrast, mid-sized bond issuers were not able to achieve any sustainable profits with the assets available to them. While mid caps were able to achieve a return on assets of 5.2% in 2011, thus placing them at the same level with large cap enterprises, during the following two years mid cap enterprises deteriorated to 3.8% (2012) and 3.5% (2013).

**Figure 7: Return on assets by size-segment**

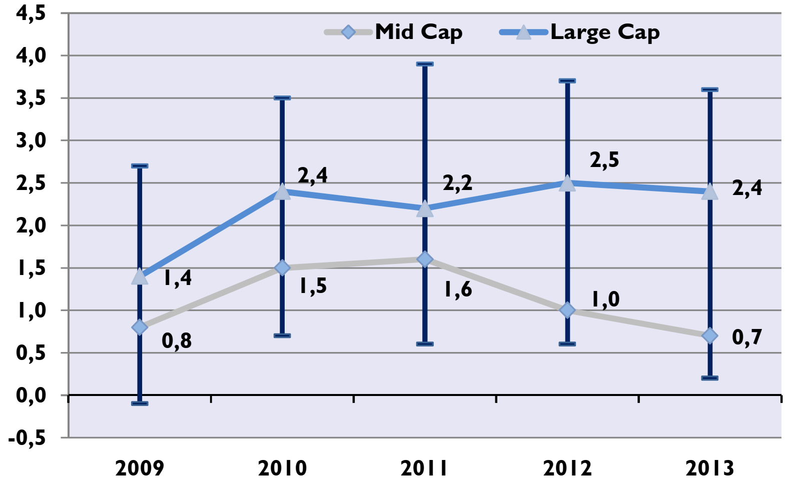
In %, median and 1/3. quartile




Analysis of the EBIT interest coverage ratio reveals serious differences between companies in the large and mid cap segments (see fig. 8). The interest coverage ratio had improved for large caps from 1.4 in 2009 to 2.4 in 2010. Since then, the EBIT interest coverage has remained within the 2.2 to 2.5 range. In 2013 it amounted to 2.4. By contrast, the mid cap issuers do not currently seem to be able to carry out their interest payments from business operations. While the ratio of EBIT to interest expenditure had risen from 0.8 in 2009 to 1.6 in 2011, the interest coverage ratio dropped in 2012 to 1.0. Last year, interest expenditure for the bond issuers in the mid segment was, at 0.7, no longer covered by their business operations.

## Figure 8: EBIT interest coverage ratio by size-segment

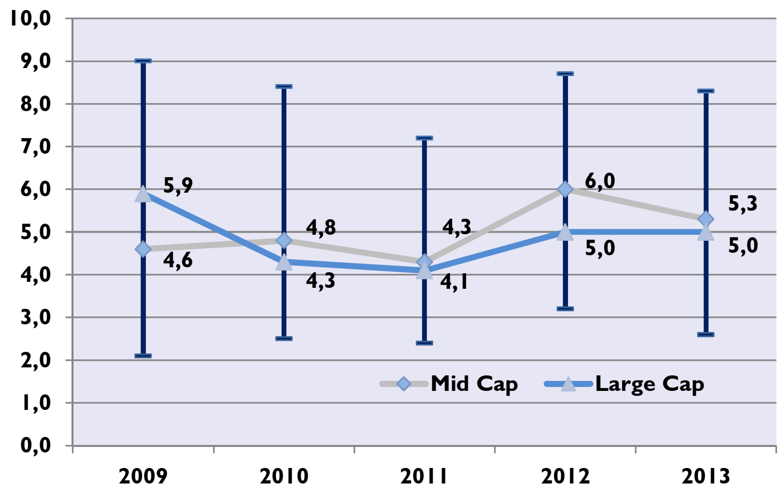
Median and 1/3. quartile




The German companies were able to gain further resources; however, the ratio of net liabilities to EBITDA suggests that their indebtedness also simultaneously increased. During the last two years in particular, the indebtedness of the companies has increased markedly. The key figure net debt/ EBITDA is at a comparable level for both large cap and mid cap corporations (see fig. 9). In 2012 there was a noticeable increase in comparison to the previous year's period for both large caps and mid caps of respectively 4.1 and 4.3 in 2011, and in 2012 of 5.0 and 6.0 respectively. In 2013, mid-sized bond issuers were able to improve their ability to make repayments (5.3), for large caps the ratio of net debt to EBITDA remained steady (5.0).

## Figure 9: Net debt/EBITDA by size-segment

Median and 1/3. quartile



## 3. The market for SME bonds

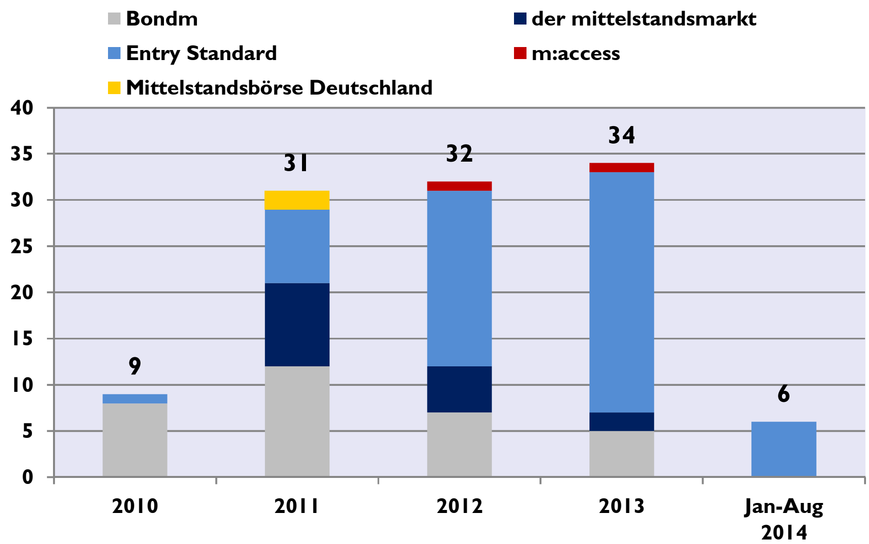
Since 2010, corporations have the possibility to borrow capital in the course of a bond issue via the stock market segments in Düsseldorf (der mittelstandsmarkt), Frankfurt (Entry Standard), Hamburg-Hanover (Mittelstandsbörse Deutschland), Munich (m:access), and in Stuttgart (Bondm). Taken as a whole, we call these segments the 'regulated market'. These stock market segments are primarily orientated towards small and medium-sized enterprises (SME) wanting to issue bonds at relatively low volumes.

### Market development

In the SME bond markets in Germany, a total of 112 bonds have been issued until August of this year (see fig. 10). The total number of issuers amounts to 101 corporations. Of these 112 bonds, more than half (60 bonds) were issued on the Entry Standard in Frankfurt. A further 32 bonds were issued at the Bondm in Stuttgart. Measured by the number of issues, 'der mittelstandsmarkt' in Düsseldorf ranks third with 16 bonds. However, the number of bonds currently listed on these markets has dropped and deviates from the above figures due to delistings and defaults on the part of issuers. Currently a total of 93 bonds are listed on the regulated market.

**Figure 10: Issuance activity on SME bond markets**

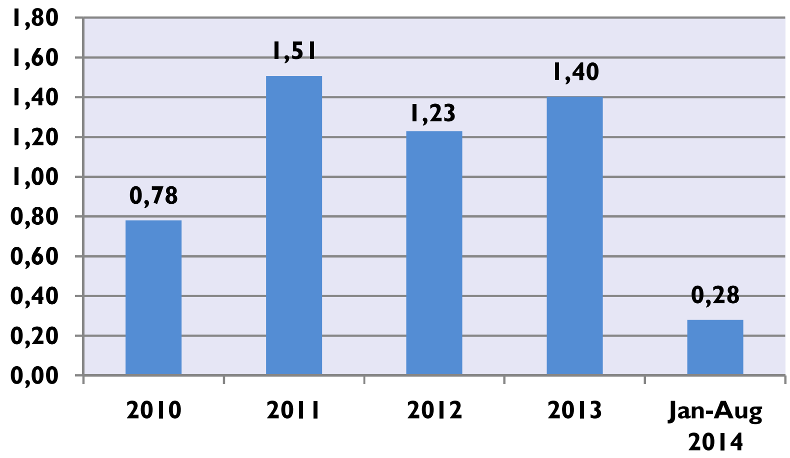
Number of bond issues per year




Since 2010 corporate bonds have been issued on the SME bond markets at a nominal issue volume of approx. €5.2bn, with an average issue volume amounting to €30m (median). In 2011, the largest volume of bond issuances was registered since the implementation of the bond market segments in 2010 with €1.51bn (see fig. 11). In 2013, bonds were issued at a volume of €1.40bn after a decrease in volume to €1.23bn in 2012. This momentum in issue volumes could not be maintained during the current year. Thus only six new issues were listed in the regulated market this year. This has been reflected in the volume of issuances. Corporations issued bonds worth a total of €0.28bn this year.

**Figure 11: Issuance volume on SME bond markets**

Nominal issue volume in € bn

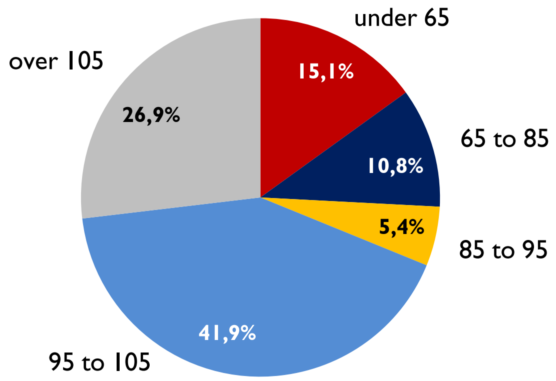



The average coupon has risen in the trend. In 2010 the average coupon (median) was at 7.000%. In the following year a bond issued in the SME bond segment offered an average of 7.375% and was situated at a comparable level in 2012 at 7.250%. In the current year the average coupon is at 7.3125% having been at 7.500% in 2013.

Of the bond issuers active in the regulated market since 2010, a total of 15 companies had defaulted as of August 2014; four in 2012 and seven in 2013. An additional four defaulted in 2014 with Zamek, Rena, MIFA, and Mox Telekom. However, the bond defaults on the regulated market do not have any implications for the solidity or sustainability of the new bond market segments. Thus the price trend with regard to the listed bonds on the newly created exchanges shows that the majority of issues on the market have been evaluated positively (see fig. 12). Over one quarter of the bonds (26.9%) were, as of August 2014, priced significantly higher than at the time of issue. More than two thirds (68.8%) of the bonds listed over 95%. Issues with current prices below 65% are primarily by corporations for which either insolvency proceedings have been initiated or which are presently restructuring.

### Figure 12: SME bonds by price

Share in %, as of Aug-14



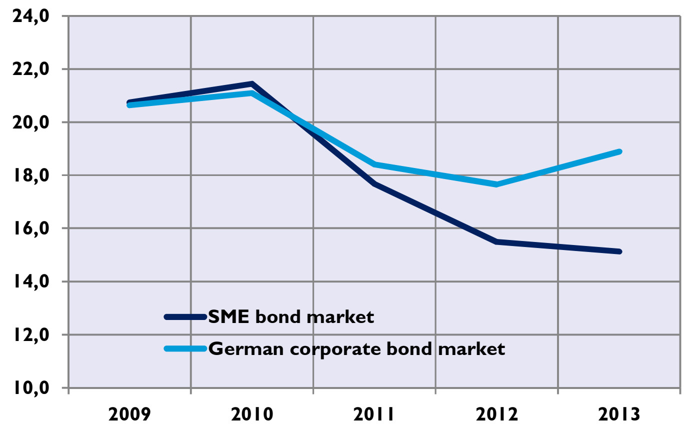

Source: Bond magazine, own calculations

## Risk-bearing capacity of the issuers

The analysis is based, as in chapter 2, on corresponding data from published annual financial statements and bond prospectuses by issuers in our corporate bond database, with the inclusion of bond issues whose price are currently listed at under 65%. This does not blur the result, as it does not significantly change the key figures. Rather, it provides a more precise picture of the SME bond market, as these bonds continue to be traded. In order to create a basis for comparison of the issuers in the SME bond market, it is compared with the overall market for corporate bonds issued by German non-financials.

### Figure 13: Equity ratio compared to the overall market

In %, median




The average equity ratio (median) of issuers in the regulated market decreased substantially between 2010 and 2013, from 21.5% to 15.1% (see fig. 13). By contrast, the totality of all German non-financials who issued a bond was able to strengthen their equity in 2013. After the equity ratio had already fallen to a lesser degree in 2012 (2012: 17.7%) in comparison to the regulated market for SME bonds (2012: 15.5%), the proportion of adjusted equity in the balance sheet total increased to 18.9% in 2013.

Measured on the return on assets, German bond issuers were able to stabilize their profitability last year. Thus the level of profitability in 2013, as in the previous year, was at 4.9% (see fig. 14). For issuers of SME bonds, the return on assets continued to fall. After the return on assets of 5.7% in 2011 fell to 4.6% in 2012, the profitability benchmark was decreased in 2013 to 4.0%. The comparison was all the more extreme in the case of return on sales (EBT margin, see fig. 15). Here, the return on sales fell within the year from 0.9% in 2012 to -1.8% in 2013. The benchmark for all issuers on the German bond market last year was at 1.5% - down from 1.9% in 2012.

**Figure 14: Return on assets compared to the overall market**

In %, median

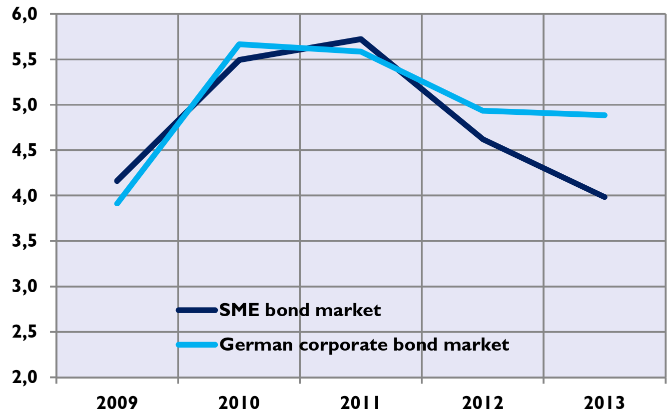
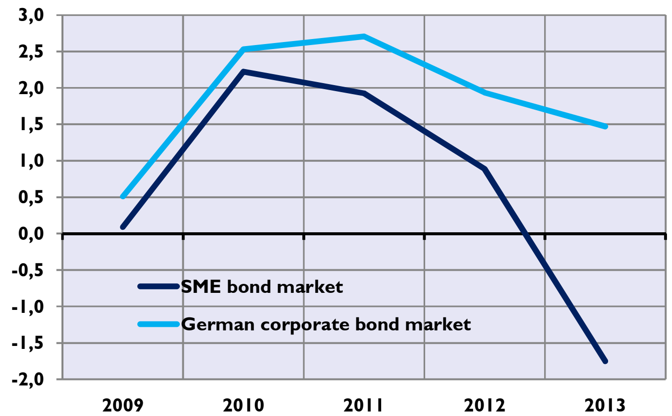



**Figure 15: Return on sales compared to the overall market**

In %, median

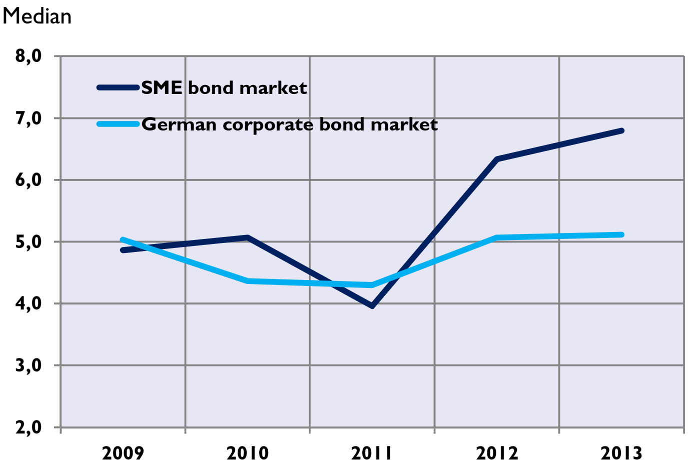


The EBIT interest coverage of issuers of SME bonds could be increased in 2010 from 1.0 to 1.6, and in the following year it was maintained (see fig. 16). Since then, however, the interest coverage ratio has been falling. After a decrease to 1.2 in 2012, the EBIT interest coverage ratio dropped in 2013 below the threshold of 1.0 (0.7) so that interest is no longer covered by operating earnings. As a comparison: in the total corporate bond market, the EBIT interest coverage is at 1.5 (2012: 1.7).

**Figure 16: EBIT interest coverage ratio compared to the overall market**


The key figure net debt/EBITDA deteriorated noticeably (see fig. 17). After a decrease from 5.1 to 4.0 in 2011, the ratio of net liabilities to EBITDA rose to 6.3 in 2012 and to 6.8 in 2013. By contrast, the ratio of net debt to EBITDA, for all German non-financials who have issued a bond, remained steady at 5.1, while in 2010 and 2011 it had still been at 4.4 and 4.3, respectively.

**Figure 17: Net debt/EBITDA compared to the overall market**



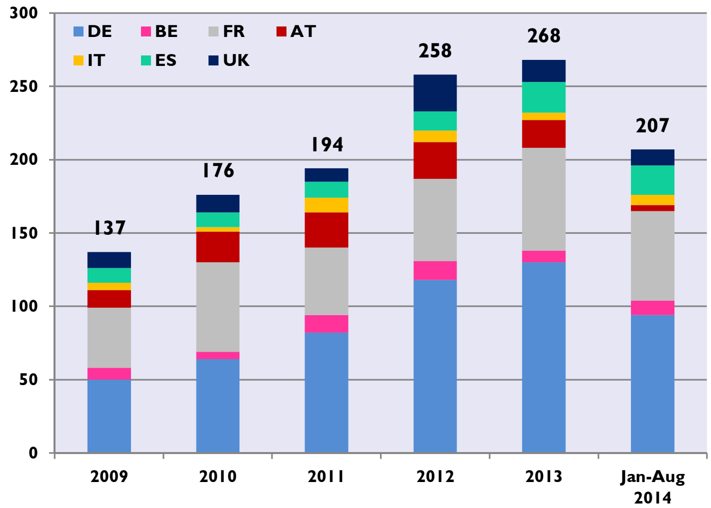
## 4. The risk-bearing capacity of European bond issuers

In this chapter we turn our attention in the context of our analysis of corporate bond markets to the European bond issuers. As a first step, we integrated listings on the Frankfurt stock exchange of corporate bonds by European non-financials which are denominated in euros into our corporate bond database. Analogous to our analysis of the German corporate bond market, we will look at the issue volume and issue activity, as well as the financial risk-bearing capacity, of European issuers. Here we will first focus on the Belgian, Austrian, French, Spanish, Italian, and UK economies. Again, all outstanding bonds as of 31 August 2014 were examined.

In Europe, the number of issuers per year has steadily increased since 2009 (see fig. 18). While issuers from the six economies analyzed as well as from Germany issued respectively 137 and 176 bonds in 2009 and 2010, in 2011 a total of 194 corporate bonds were registered. In the following year, issuance activity was noticeably more dynamic. Thus in 2012 a total of 258 bonds were issued - an increase of approx. 33%. This level was maintained in 2013 with 268 corporate bonds issued. Considering the fact that 207 bonds were already issued between January and August of this year, we can assume that this mark will be surpassed within the current year.

**Figure 18: Issuance activity of European bond issuers**

Number of bond issues per year




Source: Stock Exchange Frankfurt, own calculations

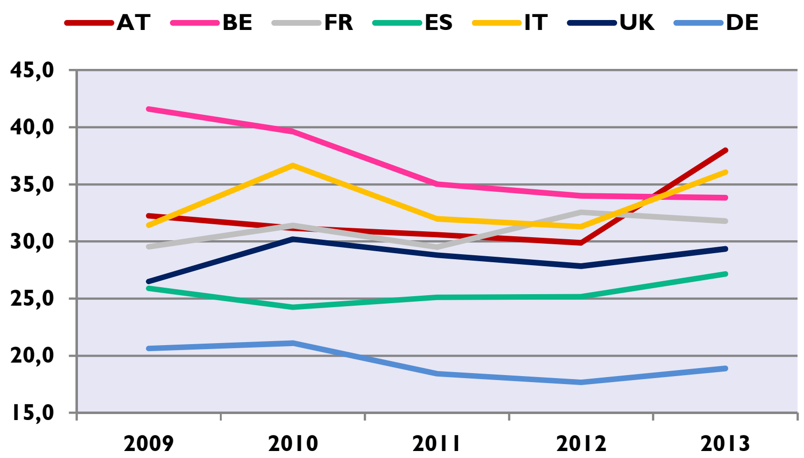
In addition to Germany, the French segment also stands out on the European corporate bond market. The market for French corporate bonds denominated in euros includes a total of 398 bonds issued by non-financials with an outstanding nominal issue volume of €263bn. The outstanding issue volume for

Spanish corporate bonds at the cutoff date was €67.6bn (98 bonds). Corporate bonds from the UK (108) amount to a total of €80.1bn. Italian corporate bonds by non-financials came to somewhat less than half of that with €36.6bn. What is remarkable here is that the number of outstanding bonds amounts to just about 41. Belgian and Austrian bond issuers issued 65 and 135 bonds respectively, with volumes of €23.5bn and €44.3bn.

Measured by the average equity ratio (median), the bond issuers in Austria and Italy are best off with regard to solvency (see fig. 19). The equity ratio here was 38.0% and 36.1% in 2013. With shareholders' equity of 33.8%, the Belgian issuers are close behind. The equity ratio of French bond issuers was on average 31.8% in 2013. In contrast, the equity ratio of Spanish non-financials which have issued a bond was on average at just about 27.2%. The British issuers are also below the 30% mark with an equity ratio of 29.3%. The German enterprises, with an equity ratio of 18.9%, constitute the bottom end of the spectrum. When viewing the development over time, it becomes clear that, with the exception of Belgian (and German) companies, all issuers have been able to strengthen their equity base since 2009.

**Figure 19: Equity ratio of European bond issuers**

In %, median




While German issuers have a comparatively low equity buffer, they operate significantly more profitably than issuers from other European countries - and this over almost the entire period under review (see fig. 20). Return on assets was at an average of 4.9% in 2013. Only issuers from the UK are at a comparable level with respect to their profitability (4.5%). By contrast, non-financials on the corporate bond market in Austria and Belgium are, with a return on assets of 2.1% and 1.9% respectively, relatively weak with regard to earnings. Issuers from Spain and Italy have a significantly lower return on assets on the average with 0.5% and 0.9% respectively. While the returns on Spanish bonds did not fall until recently - the profitability benchmark fluctuated in the range of 2.9% and 3.1% - the Italian returns on assets have been decreasing at a low level since 2009.

**Figure 20: Return on assets of European bond issuers**

In %, median

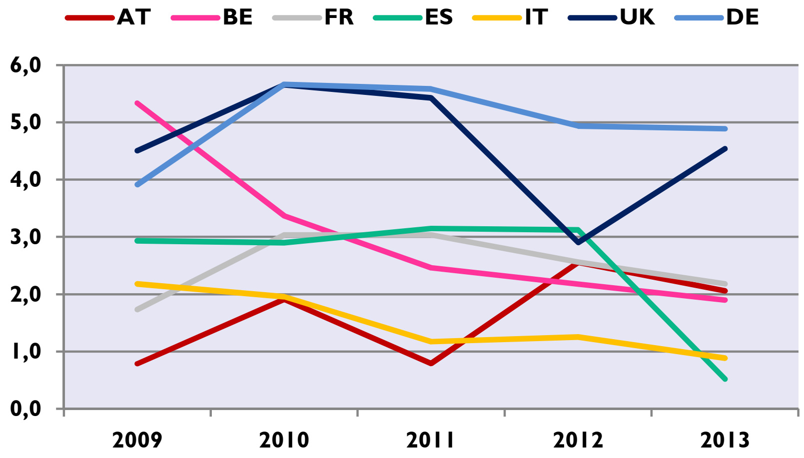
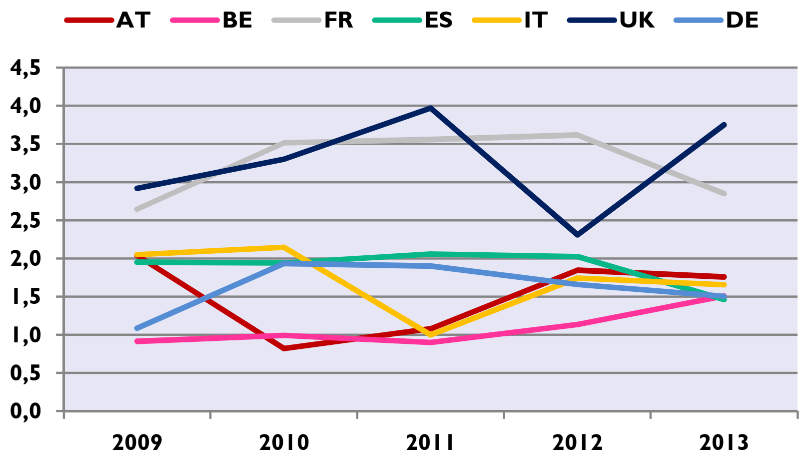



**Figure 21: EBIT interest coverage of European bond issuers**

Median




Bond issuers from the UK and France show the highest interest coverage ratio in comparison to other European countries (see fig. 21). Thus the EBIT interest coverage of British issuers amounted to 3.8 in 2013, while the ratio of operating income to interest expenditure for French non-financials was an average of 2.9. In the previous year, French issuers had higher interest coverage at 3.6 (UK 2.3). For issuers from other European countries, interest coverage is at a comparable level, ranging between 1.5 and 1.8, whereby differences can be seen in medium-term development. For issuers in Belgium, Italy and Austria, the interest coverage ratio has improved since 2011, while there is a falling trend in the ratio of EBIT to interest expenditure in Germany and Spain.

## 5. Conclusion and outlook

Experience shows that a transparent depiction of key financial figures which provides insight into the financial risk-bearing capacity of a company is, unfortunately, not the rule. In addition, it is common for key financial figures for bonds to be defined in different ways, thus providing no basis for comparison.

With the help of our corporate bond database, we have undertaken to benchmark the risk-bearing capacity for bond issuers. Based on the panel data structure, changes and developments taking place in the course of time were analyzed and traced. By gathering information on all available balance sheet data and by means of applying the XBRL data collection structure, the calculation of any conceivable key financial figures - independent of the request - is fundamentally possible. We have placed an emphasis on the equity ratio, return on assets, the EBIT interest coverage ratio, and the ratio of net financial liabilities to the EBITDA.

On the whole, we can see that German companies in the large cap segment have been able to strengthen their equity base. At the same time, their profitability and interest coverage ratio have followed a consistent trend. Indebtedness also remained consistent compared to the previous year. By contrast, the financial risk-bearing capacity of mid cap issuers, i.e. companies with a balance sheet total of below €500m, has seen a declining trend. The negative trend in equity ratio was stopped; however, equity remains at a relatively low level. The interest coverage ratio and their total return on investments have fallen once again within the year. In our analysis in March 2014 we already showed that the key figures for issuers in the market for SME bonds had noticeably deteriorated up to 2012. In 2013, the situation had further deterioriated with respect to the risk-bearing capacity of issuers.

Within the context of our analysis of corporate bond markets, we also focused on European bond issuers. The comparison between European bond issuers has shown that German bond issuers have a comparatively low equity ratio. In contrast, the German issuers stand out with respect to their profitability; measured on the return on assets, they operate more profitably than issuers in other European countries. With regard to interest coverage ratio, the German segment is at a comparable level with other European segments.

In light of the increasing Europeanization of its business activity, Creditreform Rating shall place an even stronger emphasis on the European market in its analysis of corporate bond markets. Accordingly, the database will expand further to include all European bonds in addition to the present country samples consisting in Belgium, Austria, France, Spain, Italy, and the UK. The significant added value consists in the fact that the database, in addition to relevant bond-related data, contains in particular information from issuers' annual financial statements as well as structural data. This provides a clear and detailed picture of the financial risk-bearing capacity of bond issuers in Europe. In this context we will be integrating the Creditreform balance sheet ratings into our corporate bond database in future. In addition, within the framework of analyzing the financial risk-bearing capacity of corporations in the many European economies, we will be putting the structural differences related to aspects such as accounting, the structure of financial systems, as well as the economic structure of the business sector (industries, size of the company) into a substantiating context.

# Appendix

## Definition of adjusted equity

| | |
|---|---|
| **Adjusted equity** | Nominal capital, capital account I<br>+ Capital account II.<br>-pending deposits on subscribed capital<br>+ Capital reserve<br>+ Retained earnings/reserves in partnerships<br>-Expenses for implementation and expansion of business operations and for the procurement of equity<br>-enabled goodwill<br>-internally generated intangible assets<br>-other adjusted items in relation to the reclassification of IAS(IFRS) /US GAAP positions (EK)<br>- Disagio<br>-capitalized deferred taxes<br>+ negative deferred tax<br>+ Grants (incl. 2/3 construction grants)<br>+ Expense provisions<br>+ 1/2 special items with a reserve component<br>+ Adjustments to the consolidated balance sheet<br>+ Liabilities to shareholders with EK character (postponement of priority)<br>+ Profit participation rights<br>+ Minority interest in equity<br>+ other equity<br>+ Profit carried forward/ -loss carried forward<br>+ annual surplus / - annual deficit<br>+ net earnings / -net loss |
| **Adjusted balance sheet total** | Adjusted equity<br>+ Total borrowed capital |

## Definition of key figures

$$\textbf{Equity ratio (\%)} = \frac{\text{Adjusted equity}}{\text{Adjusted balance sheet total}} \times 100$$

$$\textbf{EBIT Interest Coverage} = \frac{\text{Operating income}}{\text{Interest and other expenses}}$$

$$\textbf{EBT-Margin (\%)} = \frac{\text{Operating income}}{\text{Sales revenues}} \times 100$$

$$\textbf{Return on assets (\%)} = \frac{\text{Annual surplus + interest and other expenses}}{\text{Adjusted balance sheet total}} \times 100$$

$$\textbf{Net debt / EBITDA} = \frac{\text{(Borrowed capital – trade payables - cash and cash equivalents)}}{\text{(Operating income + depreciation)}}$$