The role and impact of external support in bank credit ratings

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Introduction

Since 2008, the banking and sovereign debt crises have pushed credit rating agencies to revise their bank rating methodologies. One of the main objectives of these revisions has been to increase transparency relating to the impact of external factors on banks’ creditworthiness, such as the probability that they will receive support if they encounter difficulty. Massive government interventions during the banking crisis have indeed confirmed that government support can lower the probability that a bank will default. More recently, in the European countries at the centre of the sovereign debt tensions, the link between major banks’ creditworthiness and the perceived problems of their respective sovereign has also been evident (1).

One type of rating which has received substantial attention in this context – aside from the well-known sovereign ratings – are the so-called bank support ratings. These ratings generally measure the “ability” and “willingness” of a state (or a parent company) to provide support to a bank (subsidiary) when it experiences problems. Support ratings are used by credit rating agencies in combination with stand-alone ratings (which are based on variables reflecting the viability of an institution on its own) in order to derive banks’ long-term ratings. These, in turn, are commonly relied upon by market participants in making their investment decisions, often as a consequence of ratings-related mandates. To the extent that the likelihood of support is incorporated into banks’ long-term ratings, it also has an impact on their cost of funding. Banks with a high probability of support may be able to maintain lower capital buffers – above the minimum required levels – than banks that are unlikely to receive external support.

Bank support ratings also affect banks’ regulatory minimum capital requirements for claims on other banks through their impact on long-term ratings. This is true not only for banks which use the standardised approach of the Basel framework, which makes direct use of banks’ long-term ratings, but also for banks which use the internal ratings-based approach, since these banks often take account of the likelihood of support in their internal assessments of their bank counterparties.

The probability of government or parental support for banks and the resulting impact on the banks’ ratings are therefore important issues. In fact, the relevance of support for bank ratings was vividly illustrated by Moody’s announcement in the autumn of 2011 that the subordinated debt ratings of 88 European banks were being placed on review for downgrade, on the grounds that “systemic support for subordinated debt in Europe is becoming ever more unpredictable, due to a combination of anticipated changes in policy and financial constraints” (Moody’s, 2011). Yet, the impact of support ratings on long term ratings has not been studied in detail, except by Packer and Tarashev (2011) who discuss rating methodologies for banks on the basis of descriptive statistics pertaining to a sample of 60 large internationally active banks.

In this article, we provide information on how credit rating agencies factor the notion of “support” into their bank ratings, and on the determinants of support in view of the rating agencies’ most recent methodological changes. In

(1) A recent CGFS report (BIS, 2011) discusses the main channels through which a deterioration in the creditworthiness of a sovereign can have an impact on the banking system.
addition, we investigate empirically the impact of support on the long-term rating of a sample of 245 European commercial banks. Our results suggest that the positive impact of support on the long-term rating of banks with relatively weak stand-alone profiles is quite substantial, averaging between 2.0 and 2.8 notches, depending on the agency whose rating is considered. As one might expect, the prospect of support does not appear to have a significant impact on the rating of banks with strong stand-alone ratings.

These results are important because they help us understand not only how banks’ ratings have been affected by the likelihood of government support in the past, but also how banks’ ratings might be affected in the future by reforms aimed at improving bank resolvability and reducing the likelihood that taxpayer funds will be used to bail out banks. If these reforms succeed in reducing the probability of government interventions, it is likely that they will lead to a reassessment of sovereign support in rating agencies’ methodologies, with an associated reduction in the impact of support on banks’ long-term credit ratings. A decrease in some banks’ long-term ratings would then be expected.

The remainder of the article is organised as follows. Section 1 explains how the three main credit rating agencies include the notion of support in their bank ratings, and illustrates the relevance of this concept for the main Belgian banks. Section 2 provides some stylised facts on support ratings: link with support/parent rating and bank size, as well as changes over time. Section 3 quantifies the impact of support ratings on the long-term rating of a sample of European commercial banks. Section 4 summarises our findings and offers some policy conclusions.

1. Role of support in credit rating agencies’ methodologies

Leaving aside short-term ratings, which refer to short-term financial obligations and, in general, are not the main reference for market participants, rating agencies generally produce three types of assessments of bank issuers (which they may or not communicate to the public): stand-alone ratings, support ratings and long-term ratings:

- Stand-alone ratings reflect the intrinsic financial strength of an institution in the absence of any external support;
- Support ratings measure the possibility and the probability that a bank may receive external support. Fitch is the only agency that currently discloses a separate support rating. While the other rating agencies incorporate the probability of potential support in their methodologies, they do not publish separate bank support ratings;
- Long-term ratings, which are derived from stand-alone and support ratings, reflect the issuers’ ability to meet all of their most senior financial obligations on a timely basis over the term of the obligation (an implication of this methodology is that while a bank’s stand-alone rating might migrate significantly in times of stress, its long-term rating might not, depending on the rating agency’s assessment of the potential for support).

We start by presenting the methodology used by Fitch, since this agency has developed a niche in rating banks, and consequently has more bank ratings than Moody’s and S&P. In addition, it is also the only rating agency to publish its support ratings, which are used in Section 3 to evaluate empirically the impact of support on the long-term ratings of all three main credit rating agencies.

1.1 Fitch

Fitch’s view as to the intrinsic – or ‘stand-alone’ – creditworthiness of a given bank is indicated by its viability ratings. Viability ratings, which were introduced in July 2011, are the legacy individual ratings, but with greater granularity and on a more familiar rating scale (‘aaa’ to ‘f’). Rating of debt issues not expected to receive support (e.g. hybrid debt) is notched from these viability ratings.

Fitch’s assessment of support for a given bank is captured in its support ratings, which range from 1 (support almost certain) to 5 (support uncertain). Note that support ratings capture “extraordinary support”, i.e. support that is provided to prevent fundamentally non-viable banks from defaulting, while viability ratings capture “ordinary support”, which includes access to central bank funding, for example (Fitch acknowledges that the distinction between the two can become blurred at times of stress). According to Fitch’s methodology, the main role of support ratings is to set a minimum rating floor below which long term ratings cannot fall (see Table 1).

The long-term issuer default rating is the rating used to notch debt issues expected to receive support (e.g. senior debt). A close look at Fitch’s bank ratings reveals that, for banks with a viability rating higher than or equal to the minimum floor set by their support rating, the long-term issuer default rating is generally equal to the viability rating. For banks with a viability rating below the minimum floor set by their support rating, the long-term issuer default rating is set equal or higher

(1) As of end-2011, there were approximately 2,700 banks in the world with a rating from Fitch, 1,400 with a rating from Moody’s and 2,000 with a rating from S&P.  
(2) This is not true for about 10% of banks with a viability rating above ‘ccc’ and for a majority of banks with a viability rating below ‘ccc’.
than the minimum floor depending on Fitch’s opinion on the propensity of the supporter to provide support. This propensity is determined by a range of factors, including the function of the bank (e.g. commercial versus public), ownership (state versus private) and systemic importance.

The result of Fitch’s methodology is illustrated in Table 2 for the four major Belgian banks, with the notches of long-term issuer default rating uplift due to support in the last column.

A first observation from Table 2 is that support (either from the government or from the parent) is a factor which increases the long-term rating of Belgian banks by 2 to 5 notches. Note that the uplift due to support cannot be calculated for ING Belgium, as the latter does not have its own viability rating (for its parent company, ING Bank, the uplift amounts to 1 notch, from a to A+).

A second observation is that Belfius and KBC Bank have a long-term rating equal to the minimum long-term rating floor set by their support rating (A–), while BNP Paribas Fortis and ING Belgium have a long-term rating exceeding this same floor. This is explained by the fact that, contrary to the former two banks, Fitch expects the latter two to be able to benefit from support provided by their respective parents (BNP Paribas and ING Bank), which can themselves rely on support provided by their respective sovereigns which are highly rated (AAA).

1.2 Moody’s

Moody’s view as to the intrinsic creditworthiness of a given bank is indicated by its bank financial strength ratings, which do not take into account the probability of external support or sovereign risk. Moody’s financial strength ratings have a less granular rating scale (‘A’ to ‘E’, including “+” and “−” qualifiers) than its long-term ratings, but are translated on the same scale (AAA to CCC and below)[2] after which they are called “baseline credit assessments” (see Moody’s, 2008 and 2012). Moody’s then evaluates the potential external support to adjust the baseline credit assessment to a final long-term rating.

Moody’s long-term ratings include two types of ratings which are both constructed by factoring support considerations into the baseline credit assessments. First, long-term deposit ratings, which reflect the capacity of the obligor to meet punctually its foreign and local currency deposit obligations. Second, long-term senior debt

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**Table 1**

<table>
<thead>
<tr>
<th>Support Rating</th>
<th>Definition and minimum rating floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A bank for which there is an extremely high probability of external support. The potential provider of support is highly rated in its own right and has a very high propensity to support the bank in question. This probability of support indicates a minimum long-term rating floor of “A−”.</td>
</tr>
<tr>
<td>2</td>
<td>A bank for which there is a high probability of external support. The potential provider of support is highly rated in its own right and has a high propensity to provide support to the bank in question. This probability of support indicates a minimum long-term rating floor of “BBB−”.</td>
</tr>
<tr>
<td>3</td>
<td>A bank for which there is a moderate probability of support because of uncertainties about the ability or propensity of the potential provider of support to do so. This probability of support indicates a minimum long-term rating floor of “BB−”.</td>
</tr>
<tr>
<td>4</td>
<td>A bank for which there is a limited probability of support because of significant uncertainties about the ability or propensity of any possible provider of support to do so. This probability of support indicates a minimum long-term rating floor of “B−”.</td>
</tr>
<tr>
<td>5</td>
<td>A bank for which there is a possibility of external support, but it cannot be relied upon. This may be due to a lack of propensity to provide support or to very weak financial ability to do so. This probability of support indicates a long-term rating floor no higher than “B−” and in many cases, no floor at all.</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>Viability rating</th>
<th>Support rating (minimum floor)</th>
<th>Long-term issuer default rating</th>
<th>Uplift due to support (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfius</td>
<td>bb</td>
<td>1 (A−)</td>
<td>A−</td>
</tr>
<tr>
<td>KBC Bank</td>
<td>bbb−</td>
<td>1 (A−)</td>
<td>A−</td>
</tr>
<tr>
<td>BNP Paribas Fortis</td>
<td>bbb+</td>
<td>1 (2)</td>
<td>A</td>
</tr>
<tr>
<td>ING Belgium</td>
<td>–</td>
<td>1 (2)</td>
<td>A+</td>
</tr>
</tbody>
</table>

(1) Notches of differences between long-term issuer default rating and viability rating.
(2) Minimum long-term rating floor of BNP Paribas Fortis and ING Belgium withdrawn in May 2009 and September 2010 respectively.

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[1] Throughout the article, we use the commercial name of banks.
[2] Throughout the article, we use S&P’s scale for the long-term ratings of all three credit rating agencies.
ratings, which also incorporate support, but which apply to senior bank obligations, and are available for fewer institutions than long-term deposit ratings. (1)

Moody’s recognises that there is a direct linkage between sovereign strength and bank ratings (which depends on the level of direct exposure to domestic sovereign debt, the support element). Moody’s states that the correlating factors can be offset somewhat by foreign ownership, geographically diversified balance sheets and income sources, and product characteristics (Moody’s, 2012). However, in the absence of these mitigating factors outlined above, even the strongest banks will be unable to exceed the rating of the domestic sovereign by more than one notch.

The result of Moody’s methodology is illustrated in Table 3 for the four major Belgian banks.

As shown in Table 3, support contributes once again towards increasing the long-term rating of Belgian banks relative to the rating that would apply if support were not taken into account. According to Moody’s, Belfius and KBC Bank’s long-term ratings indeed reflect its current perception of the Belgian government’s strong willingness to support both banks, while BNP Paribas Fortis and ING Belgium’s long-term ratings both incorporate high support from the parent and high systemic support by Belgium.

### Table 3: Moody’s Credit Ratings of Main Belgian Banks (as of 1 May 2012)

<table>
<thead>
<tr>
<th>Bank</th>
<th>Financial strength rating (baseline credit assessment)</th>
<th>Long-term deposit rating</th>
<th>Long-term senior debt rating</th>
<th>Uplift due to support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfius</td>
<td>D (BB)</td>
<td>A−</td>
<td>A−</td>
<td>+5 notches</td>
</tr>
<tr>
<td>KBC Bank</td>
<td>C− (BBB+)</td>
<td>A+</td>
<td>–</td>
<td>+3 notches</td>
</tr>
<tr>
<td>BNP Paribas Fortis</td>
<td>C− (BBB+)</td>
<td>A+</td>
<td>–</td>
<td>+3 notches</td>
</tr>
<tr>
<td>ING Belgium</td>
<td>C+ (A)</td>
<td>AA−</td>
<td>–</td>
<td>+2 notches</td>
</tr>
</tbody>
</table>

(1) Notches of differences between long-term deposit rating and baseline credit assessment.

1.3 S&P

S&P’s methodology follows three steps (S&P, 2011). First, S&P determines the stand-alone rating (called “Stand-Alone Credit Profile” or SACP) of an institution. The SACP is based on six factors. The first two, economic risk and industry risk, represent the strengths and weaknesses of the broader operating environment that “anchor” the SACP. The other four factors represent bank-specific strengths and weaknesses. Based on the analysis of these factors, the SACP is notched up or down relative to the anchor. The rating scale of the SACP ranges from aaa to cc.

S&P then combines the SACP and the conclusions from the evaluation of the group or government support in the assignment of an indicative Issuer Credit Rating (ICR). This indicative ICR is the same as the SACP unless the bank is likely to receive additional capital, liquidity, or risk relief from the government or the parent group in a crisis. The “final” ICR is set one-notch up or down from the indicative ICR on the basis of the relative creditworthiness of the bank in its peer group (banks with similar SACP).

The result of S&P’s methodology is illustrated in Table 4 for the four major Belgian banks.

The main observation from Table 4 is that support contributes towards increasing the long-term rating of Belfius and KBC Bank by 3 and 1 notches, respectively. Note that the uplift due to support cannot be calculated for BNP Paribas Fortis and ING Belgium as they don’t have their own SACP. For their parent companies, the uplift amounts to 1 notch, from a+ to AA− for BNP Paribas and from a to A+ for ING Bank.

### Table 4: S&P’s Credit Ratings of Main Belgian Banks (as of 1 May 2012)

<table>
<thead>
<tr>
<th>Bank</th>
<th>Stand-alone credit profile rating</th>
<th>Issuer credit rating</th>
<th>Uplift due to support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfius</td>
<td>bbb−</td>
<td>A−</td>
<td>+3 notches</td>
</tr>
<tr>
<td>KBC Bank</td>
<td>bbb+</td>
<td>A−</td>
<td>+1 notch</td>
</tr>
<tr>
<td>BNP Paribas Fortis</td>
<td>−</td>
<td>AA−</td>
<td>−</td>
</tr>
<tr>
<td>ING Belgium</td>
<td>−</td>
<td>A+</td>
<td>−</td>
</tr>
</tbody>
</table>

(1) Notches of differences between issuer credit rating and stand-alone credit profile rating.

(1) As of end-2011, there were approximately 500 banks in the world with a long-term senior debt rating and 1,000 with a bank deposit rating from Moody’s.
According to S&P, Belfius gets a three-notch upgrade to A– from bbb– because it considers that Belfius has “high” systemic importance in Belgium and that the government is willing to provide short-term extraordinary liquidity in case of stress. The issuer credit rating of KBC Bank is one notch higher than the SACP, reflecting the bank’s high systemic importance for Belgium, and S&P’s assessment of the Belgian government as “supportive” in a crisis.

The following section provides more details on the support ratings of Fitch, the only rating agency to publish such ratings.

2. Support ratings

The analysis in this section as well as in Section 3 is based on a sample including all 245 European commercial banks which had a support rating from Fitch as of 1 February 2012. As mentioned earlier, Fitch (like the other rating agencies) bases its assessment of the likelihood of support on both the ability and the willingness of the sovereign and/or the parent to provide such support. We therefore first compare support ratings with sovereign or parent ratings (taking the sovereign or parent rating as a proxy for the ability to intervene) before comparing them with the size of banks scaled by GDP (taking this variable as a proxy for the government’s or parent’s willingness to intervene). Next, we compare the distribution of bank support ratings in 2007 and 2012 to see if Fitch’s opinion on the likelihood of support for European commercial banks has changed following the banking and sovereign crises.

2.1 Distribution of support ratings

2.1.1 By sovereign and parent rating

Table 5 reveals that there is a clear link between banks’ support ratings and the long-term rating of the country in which they are located. While the average support rating is equal to 1.6 for banks located in countries rated AAA–AA, it is equal to 2.0 in countries rated A, 3.3 in countries rated BBB, 2.8 in countries rated BB, and 4.7 in countries rated B and below. In addition, the absolute correlation between support ratings and sovereign ratings (with the latter converted on a numerical scale ranging from AAA = 17 to CCC and below = 1) is equal to 0.56 and is highly significant.

Next, we turn to a comparison of support ratings of banks and long-term ratings of their parents. Among the 245 sample banks, 175 have a parent and 105 have a parent which is another bank (the other parents being mainly states and public authorities as well as non-financial companies). Of these 105 sample banks, 91 have a parent which is bank with a credit rating. In Table 6, we compare the support ratings of these 91 banks with their parent’s credit rating. We do not consider the ratings of other types of parents because they are already included in Table 5 (when the parent is the state or the public authority) or simply because we don’t have the data (e.g. when the parent is a non-financial company).

Table 6 shows that there is a clear link between the support rating of banks and the rating of their parent, with the absolute correlation between the two ratings equalling 0.69 and being highly significant. Overall, Tables 5 and 6 demonstrate that there is a clear relation between support ratings of banks and the ability of their sovereign

### Table 5

<table>
<thead>
<tr>
<th>Support rating</th>
<th>AAA-AA</th>
<th>A</th>
<th>BBB</th>
<th>BB</th>
<th>B and below</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>68</td>
<td>15</td>
<td>3</td>
<td>–</td>
<td>–</td>
<td>86</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>16</td>
<td>26</td>
<td>10</td>
<td>–</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>10</td>
<td>10</td>
<td>11</td>
<td>–</td>
<td>34</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>9</td>
<td>–</td>
<td>18</td>
<td>3</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>43</td>
<td>66</td>
<td>25</td>
<td>15</td>
<td>239</td>
</tr>
</tbody>
</table>

(1) 6 banks out of 245 sample banks are located in a country without sovereign rating.
and/or parent – as measured by their long-term rating – to rescue them.

2.1.2 By bank size

In Table 7, we show the distribution of support ratings by classes of bank size (total assets as a % of country GDP), with the latter taken as a proxy of the willingness of a sovereign or parent to rescue its banks (subsidiaries).

Although positive and highly significant, the correlation between support ratings and bank size (0.35) is lower than the correlation between support ratings and sovereign/parent ratings (0.56 and 0.69, respectively).

On the one hand, this result may suggest that Fitch puts more emphasis on the ability of sovereigns (or parents) to rescue their banks (subsidiaries) than on their willingness to do it. On the other hand, the willingness of a sovereign to rescue a bank might be determined by considerations other than the institution’s size, such as its business model, its interconnectedness or its ‘substitutability’ within the system, i.e. criteria which are not considered here. Similarly, the willingness of a parent to support one of its subsidiaries may have little to do with its size, as even the failure of a small banking entity may damage a group’s reputation. In addition, a broader question is whether size only explains the willingness of a sovereign (or parent) to intervene, or whether it also has an impact on its ability to do so, with the largest institutions being potentially “too big to be rescued” (in which case we would indeed expect a much lower correlation between support ratings and bank size than between support ratings and sovereign/parent ratings).

Finally, it is worth mentioning that an ordered probit model with the support rating as the dependent variable, and the three variables considered in this section (sovereign rating, parent rating and bank size as a % of country GDP) as explanatory variables, classifies 52% of the banks in the sample in the correct support rating category and 36% of them in the support rating category immediately above or below the actual support rating. While these statistics show that a simple model based on three variables is already very good at predicting support ratings, they also indicate that these variables do not perfectly explain support ratings.

(1) Fitch (2011a) confirms that it takes into account a wide-range of factors when assessing the propensity to support a bank: for support by the sovereign, the state guarantees and commitments, the relationship of the bank with the state, and the bank’s importance to the state; for support by institutional owners, the guarantees and commitments, the percentage control, the nature of the owner, and the bank’s importance to the owning institution(s).
2.2 Pre- and post-crisis view on support

While there are reasons to believe that the banking and sovereign crises have affected bank support ratings, the exact nature of this impact is unclear. On the one hand, it is plausible that support ratings have been modified to reflect an increased probability of support over recent years. Indeed, the massive government interventions which occurred during the banking crisis of 2008-2009 demonstrated states’ ability and willingness to rescue their ailing banks. On the other hand, it appears equally likely that support ratings may have been modified to reflect lower support, since the sovereign crisis which started in 2010 has affected the public finances of a number of countries, having an impact, in turn, on states’ ability to intervene. A recent CGFS report (BIS, 2011) observes that even in countries where sovereign support initially had a stabilising effect on the banks, the growing fiscal impact and the perceived decreasing ability of the sovereign to provide future support has intensified the downward pressure on the banks’ ratings.

In order to investigate this issue, Table 8 compares Fitch’s support ratings in July 2007 and in February 2012 for 196 EU commercial banks which had a support rating in both periods. A number of caveats apply to these data, however. First, Table 8 only compares banks which received a rating in both periods. Second, over the period under consideration, a number of banks in the sample have undergone mergers and restructuring, hence the 2007 and 2012 samples are not fully comparable. Third, Table 8 fails to show the dynamics of a number of support ratings which have changed more than once between 2007 and 2012 (these changes, however, generally go in the same direction).

Bearing these limitations in mind, Table 8 shows that 66% of banks (129 out of 196) had the same support rating in 2012 as in 2007, while 21% of them (42 out of 196) have seen their rating change to a higher number (implying lower support) and only 13% (25 out of 196) have seen their rating change to a lower number (greater support). Overall, the average support rating for European commercial banks has remained stable, changing only from 2.3 to 2.4.

A closer look at the 42 banks which are seen in 2012 as less likely to get support reveals that 30 (71%) had their support rating modified for the last time in 2010 or later, with Fitch mentioning for the vast majority of them the downgrade of their respective sovereign or parent as the reason behind these changes. Among the 25 banks which have seen their view of support increase, 19 (76%) had their support rating modified for the last time in 2009 or earlier, with Fitch mentioning state rescues as the primary reason. These results thus confirm the conjecture expressed at the beginning of this section: while the banking crisis had a positive impact on Fitch’s view of support, the sovereign crisis had the opposite effect.

Finally, looking at Fitch’s reports, it is worth mentioning that none of the recent changes in support ratings seems to already reflect a belief that financial reforms will have a highly positive impact on the resolvability of banks and an associated decline in the likelihood of support (see Section 4).

3. Impact of support ratings on long-term ratings

As explained in Section 1, all three main credit rating agencies take into account the notion of support when assigning long-term ratings. While Fitch publishes separate support ratings which set floors below which
long-term ratings cannot fall, thereby enabling an indirect calculation of the number of notches of uplift from stand-alone ratings to the long-term rating. S&P publishes directly the number of notches of uplift due to (sovereign) support. In contrast, Moody's publishes neither separate support ratings nor the number of notches of uplift.

In order to quantify the impact of the notion of support on the long-term ratings issued by the three main credit rating agencies and to take a consistent approach across them, we use an econometric regression where Fitch's support ratings are used as a proxy to represent the opinion of all three rating agencies regarding the probability of external support for a bank. We argue that this is a realistic assumption, given that rating agencies are less likely to disagree regarding the probability that a bank will receive support than regarding its creditworthiness. (1)

We thus estimate the following equation by ordinary least squares, (2) separately for Fitch, Moody's and S&P:

\[ \text{Long-term rating}_i = \alpha + \beta \times \text{Fitch's support rating}_i + \gamma \times \text{stand-alone rating}_i + \epsilon_i \]

where:
- the subscript \( i \) identifies the sample bank considered,
- the long-term rating is the long-term issuer default rating (Fitch), the deposit rating (Moody's) or the issuer credit rating (S&P) translated into the quantitative 1 to 17 scale, with AAA = 17, AA+ = 16, AA = 15, ..., B+ = 4, B = 3, B− = 2, CCC and below = 1,
- Fitch’s support rating has its scale inverted (i.e. 5 refers to banks with the highest probability of support and 1 refers to banks with the lowest probability of support),
- the stand-alone rating is the viability rating (Fitch), the baseline credit assessment (Moody's) or the stand-alone credit profile rating (S&P) on a 1 to 17 scale.

In the above equation, the coefficients \( \beta \) and \( \gamma \) represent, respectively, the impact of a one-notch increase in the support rating and the stand-alone rating on the long-term rating of banks. For instance, if we estimate \( \beta = 3 \) and \( \gamma = 1 \), this means that, all other things being equal, a one-notch increase in Fitch’s support rating will translate into a three-notch increase in the bank’s long-term rating, while a one-notch increase in the stand-alone rating will translate into a one-notch increase in the long-term rating.

Since there are reasons to believe that the impact of support is different across banks, with the banks with the weakest stand-alone rating benefiting most from support, we have performed the regression analysis for two groups of banks: those with a relatively low stand-alone rating (i.e., stand-alone rating lower than or equal to the minimum floor set by Fitch’s support rating) and banks with a relatively high stand-alone rating (i.e., stand-alone rating higher than minimum floor set by Fitch’s support rating). (3) We expect \( \beta \) to be larger for the former group of banks. The results of the regression analysis are shown in Table 9 (all regressions have an adjusted R-squared greater than 0.80).

The results of Table 9 show that European commercial banks with a support rating floor (as implied by Fitch’s support rating) greater than or equal to their stand-alone rating have their long-term rating primarily determined by their support rating: the impact of an increase of one notch in support ratings on long-term ratings is on average between 2.0 notches (S&P) and 2.8 notches (Fitch), ceteris paribus. The impact of support found for Fitch is not surprising given that support floors generally increase by 3 notches for every one-notch increase in support ratings (cf. Table 1). The impact of support found for Moody's and S&P, which is somewhat smaller, may reflect slight differences of opinion on the likelihood of support or simply differences of methodology compared

### Table 9: Impact of Support and Standalone Ratings on Long-Term Ratings of European Commercial Banks

<table>
<thead>
<tr>
<th>Credit rating agency (number of banks)</th>
<th>Impact of a one notch increase in the support rating on the long-term rating ((= \beta))</th>
<th>Impact of a one notch increase in the stand-alone rating on the long-term rating ((= \gamma))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitch (72 banks) . . . . . .</td>
<td>+2.8 notches **</td>
<td>+0.1 notches *</td>
</tr>
<tr>
<td>Moody’s (87 banks) . . . .</td>
<td>+2.3 notches **</td>
<td>+0.7 notches **</td>
</tr>
<tr>
<td>S&amp;P (39 banks) . . . . . .</td>
<td>+2.0 notches **</td>
<td>+0.6 notches **</td>
</tr>
<tr>
<td>Banks for which Fitch’s support rating floor ≤ credit rating agency’s stand-alone rating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fitch (74 banks) . . . . . .</td>
<td>+0.2 notches *</td>
<td>+0.9 notches **</td>
</tr>
<tr>
<td>Moody’s (60 banks) . . . .</td>
<td>+0.6 notches</td>
<td>+1.0 notches **</td>
</tr>
<tr>
<td>S&amp;P (30 banks) . . . . . .</td>
<td>+0.2 notches</td>
<td>+1.4 notches **</td>
</tr>
</tbody>
</table>

* and ** denote statistical significance at the 1 % and 5 % levels respectively.

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(1) However, a comparison of support ratings issued by Fitch and Capital Intelligence, a smaller credit rating agency active essentially in emerging markets, reveals that agencies sometimes disagree on the likelihood of support.

(2) Since the long-term rating variable takes a large range of values (17), we choose to treat it as a continuous rather than discrete variable for ease of interpretation. Results of an ordered probit model (not shown here) confirm those obtained with the OLS regressions.

(3) By splitting the sample in this way, we also try to address the non-linear effects of support ratings implied by the fact that, at least in the case of Fitch, these ratings work as effective floors to long-term ratings.
Although statistically significant, the impact of a one-notch increase in stand-alone ratings on long-term ratings is much lower than that of support ratings, as it never exceeds 0.7 notches across rating agencies. This result is consistent with the expectation that banks with relatively low stand-alone ratings should see their long-term rating primarily determined by their support rating. Note that the impact of stand-alone ratings found for Moody’s and S&P is higher than for Fitch, once again probably due to differences in methodology.

The results for European banks with a support rating floor lower than their stand-alone rating show that long-term ratings are not economically (Fitch) or statistically (Moody’s and S&P) affected by support ratings, but that they tend rather to be determined by stand-alone ratings: an increase of one notch in stand-alone ratings translates into a gain of almost 1 notch in the long-term rating (Fitch) and up to 1.4 notches (S&P). This result is in line with the intuition that for banks which cannot rely on external support, their long-term rating is determined by their stand-alone rating.

4. Conclusions and policy implications

This article reviews rating agencies’ bank rating methodologies, focusing in particular on how they incorporate into their bank credit ratings the likelihood that a financial institution will receive external support (either from the government or from the parent) in a crisis. Rating agencies’ assessments of support generally reflect two factors: the potential supporter’s ability to provide support and its willingness to do so.

In the case of the four main Belgian banks, a comparison of credit ratings which refer to their stand-alone creditworthiness with the final long-term ratings which take into account the “support” reveals that support contributes to an increase in the bank’s long-term rating of up to 5 notches. The empirical investigation of the impact of “support” on long-term ratings for a sample of 245 European commercial banks shows that, for banks with a relatively weak stand-alone credit profile, support ratings appear to have a significant impact on the final long-term rating of the institution.

Whether and how external support is taken into account in banks’ ratings is an important issue, in particular because bank credit ratings are widely used by market participants for their investment decisions. As support can have an impact on banks’ probability of default, incorporation of the prospect of support into banks’ long-term ratings also has an impact on their cost of funding.

Our analysis not only contributes to the understanding of how banks’ ratings have been affected by the prospect of external support in the past, but also indicates how banks’ ratings might be affected in the future by recent international, regulatory initiatives aimed at ensuring the resolvability of banks without government support (e.g., resolution regimes and recovery and resolution plans). In the UK, for instance, structural reforms relating to the organisation of banks’ activities have been introduced with the goal of reducing the need for the government to feel compelled to intervene to support banks.

A question that arises in the context of our analysis is, in fact, what the impact of such reforms on banks’ credit rating will be. If these reforms succeed in reducing the likelihood of government interventions, they are likely to lead to a reassessment of sovereign support in rating agencies’ methodologies, reducing the impact of support in banks’ credit ratings. This will potentially imply a decrease in some banks’ long-term ratings.

Rating agencies recognise that implementation of new legislation will take a long time, so that a withdrawal of sovereign support would be gradual. Consequently, it is too early to assess the rating implications of the new resolution regimes for individual entities. Additional credit rating actions may be triggered over the medium term, depending on the funding and capital positions of banks. At the same time, banks’ stand-alone creditworthiness could improve in countries that follow more prudent policies. The overall effect on banks’ long-term ratings will also depend on the effect of the resolution regimes on the funding profiles of banks, as mentioned above.

Yet, as events since 2008 have demonstrated, public support is a current reality. Indeed, in S&P’s view, sovereigns will continue to intervene to support systemically important banks in a crisis situation, to protect the economy. Fitch also observes that it is critical for regulators to develop market confidence that large complex banks can receive support. According to S&P, sovereign support would be gradual. Consequently, it is too early to assess the rating implications of the new resolution regimes for individual entities. Additional credit rating actions may be triggered over the medium term, depending on the funding and capital positions of banks. At the same time, banks’ stand-alone creditworthiness could improve in countries that follow more prudent policies. The overall effect on banks’ long-term ratings will also depend on the effect of the resolution regimes on the funding profiles of banks, as mentioned above.

(1) In the case of S&P, the results might also be due to the limited number of banks on which the analysis is based.
(2) It may be tempting to ascribe the lower impact of stand-alone ratings to the fact that they are on a more granular scale (1 to 17) than support ratings (1 to 5), hence that any change in these ratings is likely to matter “less”. However, the results of the second part of Table 8 show that, for banks with relatively high stand-alone ratings, changes in these ratings have a bigger impact than changes in support ratings.
(3) Moody’s has already taken several rating actions to review systemic support currently factored in its ratings of banks, and potentially remove it. Following the recent legislative reforms for the banking sector in the UK, Fitch has also taken some rating actions and reduced the number of US banks that it believes will receive support. According to S&P, the new criteria (see S&P, 2011) in its banks’ rating methodology allow it to take into account the impact of new resolution regimes; if these regimes are successfully implemented, that may lead to rating revisions and potentially to downgrades, if S&P decides that sovereign support is no longer likely in certain cases. However, rating agencies do not yet appear to have taken any additional measures to review banks’ ratings as a consequence of the new reforms (in the UK, for instance).
(4) The Bank of England (2011) discusses the impact of a permanent reduction in the perceived probability of public support on earnings and higher borrowing costs for UK banks.

(1) In the case of Moody’s, the results might also be due to the limited number of banks on which the analysis is based.
effectively be resolved without support, and this is not straightforward.

If the ongoing reforms are successfully implemented and government intervention gradually disappears, more volatility in bank ratings over the next decade may be expected. This will be important, in light of the impact that credit ratings have on the actions of investors, borrowers, issuers, and governments. Such a potential outcome of regulatory reforms further emphasises the need to reduce any automatic use of ratings in financial decisions relating to banks. This is indeed one of the objectives of the newly proposed EU regulation on credit rating agencies.
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