

## CREDIT FOCUS

# Sparkassen-Finanzgruppe

Berlin, Germany

### Table of Contents:

SUMMARY RATING RATIONALE	1
GROUP STRUCTURE	3
RECENT RESULTS, DEVELOPMENT WITHIN THE SECTOR AND OUTLOOK	6
ANALYSIS OF DETAILED RATING CONSIDERATIONS	9
COMPANY ANNUAL STATISTICS	18
MOODY'S RELATED RESEARCH	20
APPENDIX: MEMBERS OF THE JOINT-LIABILITY SCHEME OF S-FINANZGRUPPE (HAFTUNGSVERBUND) AS OF DECEMBER 2012	21

### Analyst Contacts:

FRANKFURT +49.69.70730.700

Mathias Kuelpmann, CFA +49.69.70730.928  
Senior Vice President  
mathias.kuelpmann@moodys.com

Katharina Barten +49.69.70730.765  
Vice President – Senior Credit Officer  
katharina.barten@moodys.com

Carola Schuler +49.69.70730.766  
Managing Director – Banking  
carola.schuler@moodys.com

### Summary Rating Rationale

We assign a corporate family rating (CFR) of Aa2 to Sparkassen-Finanzgruppe, based on its standalone bank financial strength rating (BFSR) of C+– which is equivalent to an a2 standalone credit strength – and three notches of uplift as a result of our assumption of a very high probability of external support. Our support assumptions for the CFR take into account a very high probability of (1) regional and local government support; and (2) systemic support from the German government. In our opinion, the levels of support are closely interlinked for public-sector banks, and therefore we use a unified approach of applying support uplift from multiple sources, anticipating concerted support solutions in case of need.

In assigning the BFSR and CFR to S-Finanzgruppe, we assess the group as if it acted as a single entity. This approach takes into consideration the cohesion and solidarity within S-Finanzgruppe – in particular between the savings banks – as well as the high level of co-operation amongst the members, which, in our view, supports the assigned ratings. However, the constituent members of this group do not constitute a single economic entity with centralised management and control at the group level. The BFSR and CFR do not apply to individual members of the group, but only to the creditworthiness of the group as a whole.

The standalone C+ BFSR is based on (1) the group's leading market share in German retail and SME banking; (2) the well-diversified franchises of the majority of its members, which support the group in adverse market conditions; (3) a moderate aggregate financial profile; (4) the strong co-operation and co-ordination within the network of savings banks, which increasingly facilitate synergies; and (5) the progress that S-Finanzgruppe has made towards strengthening the risk-management systems of its group members, especially amongst the savings banks. Furthermore, the C+ BFSR positively considers the group-specific mutual-support mechanisms available to each member of this group.

The C+ BFSR is mainly constrained by the weaker business models, risk profiles and financial results of the *Landesbanken*, and certain portfolio concentration risks and risks related to the winding down of legacy portfolios. In addition, the group displays only modest profitability and a high cost structure compared with that of its global peers, partly caused by redundant functions in the group.

The standalone creditworthiness of the group as reflected in the C+ BFSR continues to be strongly underpinned by the intrinsic strength and robust performance of the savings banks throughout the global financial crisis as well as the sound liquidity of the whole group.

This Credit Analysis provides an in-depth discussion of credit rating(s) for Sparkassen-Finanzgruppe and should be read in conjunction with Moody's most recent Credit Opinion and rating information available on [Moody's website](#).

---

### Strong public ownership and support mechanisms provide uplift to S-Finanzgruppe's Corporate Family Rating

S-Finanzgruppe's CFR of Aa2 is based on the a2 standalone credit assessment and our view that the probability of support in the event of need is very high, both from the responsible public bodies ("Träger") – among them the various German federal states and local municipalities – and from the government of the Federal Republic of Germany (Aaa, negative). In our opinion, the levels of support are closely interlinked for public-sector banks, and therefore we use a unified approach of applying support uplift from multiple sources, anticipating concerted support solutions in case of need.

In our view the individual members of the group would benefit from support from their responsible public bodies (mostly federal states and municipalities) in the event of need. In addition to the ownership considerations, the support assessment is also based on: (1) the fact that the vast majority of the group's members are of vital importance to their respective local retail and SME markets, in particular the *Sparkassen*, which have strong market positions and close links to their local economies; and (2) the often significant contributions of members to the tax revenues of their respective regional and local governments.

---

### S-Finanzgruppe's Corporate Family Rating

A CFR for a banking group (public sector, mutualist or co-operative) is our opinion of a banking group's or an association's ability to honour its financial obligations, and is assigned to a banking group as if it had a single class of debt and a single, consolidated, legal-entity structure. A CFR does not reference an obligation or class of debt and thus does not reflect priority of claim. It does not apply to individual members of the group, but only to the creditworthiness of the group as a whole.

---

### Individual Member Ratings

We note that, given the current level of S-Finanzgruppe's CFR, it is highly likely that a significant part of the savings banks, would be assigned ratings of A1 or above (i.e., no more than two notches below the Aa2 CFR) in the event that they sought their own senior debt and deposit ratings. Taking into consideration the group support that is available to any of the member banks, such an A1 rating is based on the assumption that the financial strength of the vast majority of the members of the group is not below the equivalent of a D- BFSR, and so will explicitly exclude those members that are insolvent and receive external support in order to avoid a default, as well as those that are nearly insolvent and likely to require such support in the near term. At the same time, we would stress that this minimum level of credit quality should no longer be assumed in the event of a material weakening of the group members' aggregate or individual financial strength or the cohesion among the members.

According to Moody's rating methodology, every member bank of S-Finanzgruppe benefits from three support layers: (1) the support available within the group; (2) regional and local government support; and (3) systemic support. In the case of the *Landesbanken*, these levels of support are closely interlinked, and we anticipate concerted support solutions in case of need. Both savings banks and federal states (*Bundesländer*) are not only parents/shareholders of *Landesbanken*, but the federal states under the 'grandfathering' agreement have also guaranteed some outstanding *Landesbanken* debt, and the savings banks are linked to *Landesbanken* through the cross-sector support scheme of Germany's public-sector banks (*Haftungsverbund*). This scheme is designed to ensure the viability of all members, including all *Landesbanken*.

According to our assessment, the probability that support for the member banks would be forthcoming through these three main support layers is very high. At the same time, we consider overall support to have weakened, particularly for some of the *Landesbanken* where large-scale support was provided during the global financial crisis. This reflects a decline in both the willingness and capability of the regional governments to provide support.

EXHIBIT 1

	BFSR / BCA	Senior Unsecured	Outlook	Short-Term
Bayerische Landesbank	D- / ba3	Baa1	Stable	Prime-2
Bremer Landesbank Kreditanstalt Oldenburg GZ	D+ / baa3	A3	Stable	Prime-2
DekaBank Deutsche Girozentrale	C- / baa2	A1	Stable	Prime-1
HSH Nordbank AG	E / caa2	Baa2	Review for Downgrade	Prime-2
Landesbank Baden-Wuerttemberg	D+ / ba1	A3	Stable	Prime-2
Landesbank Berlin AG	D+ / baa3	A1	Stable	Prime-1
Landesbank Hessen-Thuringen GZ	D+ / baa3	A2	Stable	Prime-1
Landesbank Saar	D / ba2	A3	Stable	Prime-2
Kreissparkasse Koeln	C- / baa1	Aa3	Stable	Prime-1
Norddeutsche Landesbank GZ	D / ba2	A3	Stable	Prime-2
Sparkasse KoelnBonn	D- / ba3	A1	Stable	Prime-1
Sparkassenverband Baden-Wuerttemberg	n/a	Aa3 <sup>1</sup>	Stable	n/a
Sparkassenverband Westfalen-Lippe	n/a	Aa3	Stable	n/a

<sup>1</sup> Long-Term Issuer Rating (Domestic)

## Group Structure

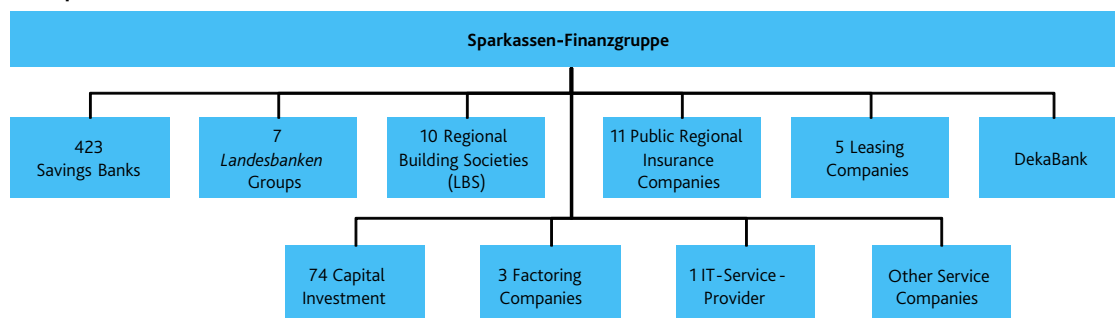
### Public sector banks form the largest group in the domestic market

Public-sector banks – essentially *Sparkassen* and *Landesbanken* – continue to have a leading role in the German banking market and together with several specialised institutions and service providers, form S-Finanzgruppe. At year-end 2012, this association of banks comprised 423 savings banks, seven *Landesbanken* groups, the dedicated mutual fund provider DekaBank, 10 regional building societies or Landesbausparkassen (that provide residential mortgage products) and about 125 other financial service providers, mainly in the life and non-life insurance sectors, central building societies, leasing and factoring, brokerage, asset management and real estate activities. All public sector banks ultimately relate back to different levels of government: (1) most savings banks are public legal bodies of their local municipalities and regional authorities (Kreise/Landkreise); and (2) regional governments together with regional savings banks associations own the *Landesbanken*.<sup>1</sup> At year-end 2011, 360,000 employees worked for the group.

<sup>1</sup> HSH – as an exception – has a minority shareholder outside of the public sector. Unlike the savings banks, most of the *Landesbanken* now have a private sector charter, with the exception of Helaba and NordLB, both of which continue to be run with a public sector charter (*Anstalten des Öffentlichen Rechts*).

## EXHIBIT 2

## Group Structure



Source: Sparkassen-Finanzgruppe, Moody's

## EXHIBIT 3

## Key Financials

(€ Billion)	Landesbanken	Sparkassen	S-Finanzgruppe
<b>Key Financials 2011<sup>1</sup></b>			
Total assets	1,230.8	1098.0	2,384.2
Total equity	61.9	63.0	127.8
Pre-tax profit <sup>2</sup>	0.4	16.4	17.0
<b>Key Financials 2010<sup>1</sup></b>			
Total assets	1,317.5	1084.3	2,455.7
Total equity	61.1	58.5	122.2
Pre-tax profit <sup>2</sup>	1.8	6.7	8.7
<b>Key Financials 2009<sup>1</sup></b>			
Total assets	1,457.9	1073.3	2,582.8
Total equity	68.0	56.0	126.7
Pre-tax profit	-5.2	4.7	-0.3

1 Aggregated, not consolidated, based on German GAAP (HGB)

2 Including additions to the fund for general banking risks pursuant to Section 340g of HGB

Source: Sparkassen-Finanzgruppe

## Savings banks as anchor for rating positioning

The savings banks' strong credit profile remains the anchor for the positioning of the group's fundamental credit strength at C+/a2 with a stable outlook. Taken together, the financial fundamentals of the savings banks remain very solid, underpinned by a resilient and predictable stream of quality earnings, good liquidity and risk management as well as strong economic capitalisation, which have helped the sector to withstand the financial crisis. Savings banks continue to benefit from very strong and deeply entrenched franchises in their regional retail banking markets, demonstrated by high and well-defended market shares as well as their strong brand value and low risk profiles.

---

### Financial weakness of Landesbanken constrains S-Finanzgruppe's financial profile

While we take comfort from the savings banks' recent strong performance, we note that the Landesbanken are now rated at or below the A1 level. Despite some recent moderate improvements the weak financial fundamentals of several *Landesbanken* continue to exert significant pressure on S-Finanzgruppe's aggregate financial profile. Following numerous BFSR downgrades during the crisis, we now rate the majority of the eight German *Landesbanken* in the D and E ranges; these BFSRs translate into standalone credit assessments of baa3 and below, reflecting not only weak fundamentals but also challenges to their future franchises and concerns about their ability to restore profitability and capitalisation.

The rating levels reflect the varying degrees of challenges and vulnerabilities of those banks' wholesale business profile against a persistently difficult market environment, notably (i) a weakening macroeconomic environment; (ii) costly and constrained market funding; and (iii) pressure on profits as well as (iv) concentration risks inherent in their wholesale-based banking activities that represent considerable tail risk and vulnerability to potential unexpected losses in a more adverse or stressed environment. Moreover, some of the *Landesbanken* continue to undergo severe restructuring that bears considerable execution risks. Given the significant legacy portfolios and the burden imposed on these banks to compensate for government aid, we expect their performance to remain subdued over a medium term rating horizon.

---

### Joint-Liability Scheme Ensures Group Members' Liquidity and Solvency

S-Finanzgruppe's guarantee system is in the form of a joint-liability scheme (Haftungsverbund), which comprises: (1) the 11 guarantee funds of the regional *Sparkassen*; (2) the guarantee fund of the *Landesbanken*; and (3) the guarantee fund of the regional building societies (Landesbausparkassen).

Under this structure, the pre-funded guarantee schemes protect all German *Sparkassen*, *Landesbanken* and regional building societies, and in particular safeguard their liquidity and solvency. However, it is noteworthy that the joint-liability scheme and guarantee funds, whilst providing considerable support for the members of the group, do not constitute a legally binding guarantee that would result in all beneficiaries receiving the same credit rating.

---

### Limited Strength of Mutual Support Arrangements In Times of Crisis

The global financial crisis has shown that the strength of the mutual support mechanisms of Germany's public sector banks – in principle available to all members – is challenged during a financial crisis on the scale recently witnessed; several of their larger members have been, and currently remain, too weak to fend for themselves in times of stress, or indeed to support others.

As a result, we cannot rule out the prospect that the sector will, at some point, review the mutual support mechanisms; however, this is not expected in the short term, and factoring any possible review into our ratings would therefore be premature. The majority of public sector banks will likely continue to benefit from unchanged support in the foreseeable future. In particular, the far smaller and more risk-averse savings banks will almost certainly maintain their mutual support arrangements, which remain not only very strong, but also perfectly viable.

The savings banks remain in need of *Landesbanken* (1) in their capacity as central clearing institutions; and (2) to ensure the availability of products and services that each of the 423 retail members cannot provide (or should, reasonably, not be providing) for themselves. However, fewer central institutions

would suffice for those purposes alone, and mutual support for a smaller number of *Landesbanken* would appear both more reasonable and viable (and thus credible).

As a result, the sector may either seek amendments to the mechanisms or – if that is not considered an option – seek to have fewer *Landesbanken* as members. Alternatively, the savings banks may push for an accelerated consolidation coupled with a major shrinking exercise of the *Landesbanken*; however, their political powers to enforce such a restructuring are limited as, in most cases, they are not the majority owner and hence have to coordinate with the regional governments as the majority owners. We therefore expect that it may take many years before material progress is achieved.

---

### Sector Support May Weaken For Exit Candidates

We will continue to monitor and may reassess the strength and reliability of cross-sector support for individual banks, if further developments suggest that single members could be asked to leave the association. We note that the regional savings banks did not contribute to the bailout of HSH Nordbank (HSH); the rescue package was ultimately borne by the regional governments. In the case of Bayerische Landesbank (BayernLB) the savings banks only contributed upon intervention of the EC.

Whether these banks will exit the associations at some point will depend on future ownership. If these banks succeed in repositioning their franchises and re-establishing viable business models, the regional governments – as their current majority owners – may want to privatise them, which would probably result in an exit from the public sector support schemes. We also note that there is a two-year fade-out period for banks that exit the cross-sector support agreements of the group.

---

### Recent Results, Development within the Sector and Outlook

#### Recent Results

S-Finanzgruppe reported a pre-tax profit (according to aggregated financials under audited German GAAP) of EUR5.1 billion as at year-end 2011 which was only slightly below the record high of EUR5.7 billion in 2010. On an aggregate basis, the main driver for the decrease in pre-tax profit in 2011 was a trading loss of EUR539 million in 2011 after a trading gain of EUR500 million the preceding year. In 2011, S-Finanzgruppe reported total net interest income of EUR35.5 billion (up 0.8% year-on-year) and net commission income of EUR7.3 billion (up 1.4%). Administrative expense fell slightly (0.5%) to EUR26.0 billion. On an aggregate basis, the group posted net income of EUR1.6 billion in 2011 compared with EUR3.1 billion in 2010 as taxes rose by almost EUR1 billion to EUR3.5 billion.

The performance of the savings banks – accounting for 46% of the sector's balance sheet and 56% of its risk weighted assets – remained very strong, posting record pre-tax profits of EUR4.7 billion in 2011 (2010: EUR4.5 billion). The *Landesbanken* posted weaker results in 2011 with aggregate pre-tax profits at EUR200 million (2010: EUR1.0 billion), mainly due to the negative impact of the euro area sovereign debt crisis on their assets. The performance of the *Landesbanken* during H1 2012 recovered after a very weak H2 2011 although to varying degrees and lagging behind the generally strong performance of H1 2011.

The factors weighing most on the performance of the banks in 2012 included increased risk charges on their sizeable exposures in the shipping and the commercial real estate sectors, and in Eastern Europe, where applicable. For H2 2012, we expect banks' results to improve, aided by the more benign funding environment and decreased credit spreads for the euro area periphery. Both the savings banks and the *Landesbanken* have continued to benefit from the strong performance of the German economy. Perspectives over the next 12-24 months rating horizon will depend considerably on

macroeconomic developments in Germany which will eventually also be more affected by the broader euro area developments.

Whilst the savings banks maintained a relatively stable balance sheet of around EUR1.1 trillion throughout the global financial crisis, the *Landesbanken* have deleveraged significantly, offloading more than EUR330 billion or 21% of their total assets between 2008 and 2011. As a result, S-Finanzgruppe's total balance sheet declined to EUR2.4 trillion in 2011 (excluding derivatives in the trading book) from EUR2.7 trillion in 2008. In 2011, equity increased to EUR128 billion from EUR122 billion in 2010, also as a result of the strong 2010 results of the savings banks.

---

### Evolution, not revolution on the basis of a further strengthening of the group's core operations

In 2012, S-Finanzgruppe further streamlined its operations against the background of a continued strengthening of the performance of the group's core operations. The savings banks continued to grow moderately. The *Landesbanken* sector deleveraged, although the pace of this development slowed down in 2012 also as a result of increased liquidity reserves. At year-end 2011, the savings banks accounted for 56% of the group's RWA (up from 46% in 2008), while the complementing share of the *Landesbanken* diminished accordingly.

The weaker credit profiles of some of S-Finanzgruppe's member banks weigh on its credit profile. The restructuring of the *Landesbanken* sector continues under the constraints imposed by the EC for the five institutions that received state aid (HSH, BayernLB, Landesbank Baden-Wuerttemberg (LBBW), and Norddeutsche Landesbank (NordLB), while the business activities of former WestLB were put into wind-down). At the same time, Landesbank Hessen-Thuringen (Helaba) moved closer to the centre of S-Finanzgruppe as it now acts as central bank for almost 40% of all German savings banks. In addition, the group announced further streamlining of capital market and retail banking activities of Landesbank Berlin AG (LBB, A1/Prime-1/D+) and DekaBank in which S-Finanzgruppe has become the sole owner.

**EC approval for state aid cases.** All *Landesbanken* that received state aid also obtained EC approval for their restructuring plans; however, this approval comes at a high price. These banks must comply with harsh deleveraging targets, discontinue some business lines, and divest various participations. At the same time, the aforementioned requirements enable them to continue operating under state ownership. We regard the restructuring cases that were agreed with the EC as ambitious, particularly in the cases of BayernLB and HSH.

**HSH Nordbank.** We note the continued risks regarding the future of HSH, given the ongoing crisis in the shipping market and uncertainty in the commercial real estate market. We put HSH's ratings on review for downgrade on 26 September 2012, triggered both by weak H1 2012 results which showed deterioration in HSH's operating performance, and by the erosion of Core Tier 1 capitalisation which fell below the EC's minimum recommendation of 10%.

On 18 January 2013, we downgraded HSH's standalone BFSR to E/caa2, from E+/b3. The lower BFSR reflects the significant challenges faced by the bank in its efforts to stabilise its franchise and comply with compensation measures for any previously awarded state aid. Asset-quality deterioration and the resulting pressure on capital have triggered renewed requirements for capital strengthening which we expect to include additional support from the bank's owners. HSH's long- and short-term debt and deposit ratings of Baa2 and Prime-2, remain on review for downgrade, as the size and exact terms of the capital strengthening measures are yet to be determined.

**WestLB/Portigon.** In 2012, we witnessed the first instance of a final wind-down of a *Landesbank* as a result of EC intervention after multiple instances of state support. On 17 September 2012, the break-up of the commercial banking activities of Portigon (unrated, formerly known as WestLB) became effective. In this transaction, Frankfurt-based Helaba legally assumed a portfolio with a total business volume of approximately EUR40 billion, transferred from Portigon. EAA Erste Abwicklungsanstalt (EAA, Aa1 negative, Prime-1), which is the state-supported, dedicated wind-down vehicle of the former WestLB, assumed Portigon's remaining commercial assets and liabilities. Portigon will continue to exist as a service provider with focus on supporting the unwinding of EAA's assets. The servicing operations will have to be unwound completely if the company cannot be sold by year-end 2016, as agreed with the European anti-trust authorities.

This transaction is significant in three ways. Firstly, it illustrates that the performance of banks which received state aid remains under scrutiny from the EC and may be forced to wind down if their future business case is deemed non-viable. Secondly, the transaction brings Helaba closer to the centre of S-Finanzgruppe as the bank now operates as the central bank for almost 40% of all German savings banks. Thirdly, and most importantly, S-Finanzgruppe has limited the liability for the remaining operations because most of WestLB's previous assets are now part of EAA and Portigon. The surviving entity is owned both by Land North-Rhine Westphalia (Aa1 negative/Prime-1) and by its development bank NRW.BANK (Aa1 negative/Prime-1) who, as the owners, have the prime responsibility to supplement any capital shortfall.

**Landesbank Berlin / DekaBank.** On 12 December 2012, the German Savings Banks Association (Deutsche Sparkassen- und Giroverband or DSGV) announced that it was considering realigning and consolidating the commercial real estate, capital market and retail banking activities of two of S-Finanzgruppe's directly owned major financial institutions. The realignment has become possible given that DSGV became the sole owner of LBB and DekaBank. The realignment would be credit positive for S-Finanzgruppe because it would generate cost savings, eliminate redundant operations and intragroup competition, and sharpen its strategic focus. However, initial charges arising from the restructuring may negatively affect the profitability of these entities during 2013-14. This impact on profitability would limit their ability to strengthen capital levels from retained earnings when phasing in the higher capital requirements under Basel III.

In our opinion, mergers among *Landesbanken* may also materialise, and we have recently observed increased political support for such consolidation – e.g., Helaba's acquisition of WestLB's core business related to the sector. Further merger activity could lead to accelerated de-risking and significant synergies, which could positively affect the strength of S-Finanzgruppe as a whole. Nevertheless, we do not expect any large-scale consolidation in the near future and note the risk that potential losses from non-core portfolios might be a burden for any merger negotiations, particularly if they are not contained by already existing government-guarantee schemes. As a result, we expect further consolidation to materialise only over a longer-time rating horizon.

---

## Outlook

The performance of the group continues to be linked to the performance of the German economy. As we expect the German economy to slow down in 2013, depending on the dynamics in the broader euro area, we caution that higher costs of risk will weigh on the profitability of the group. We expect liquidity to continue to be a strength for the saving banks which enables them to achieve a favourable debt-to-deposit ratio of 89% and excess liquidity from their deposit base compared to their loan book of more than EUR80 billion. For their transition to Basel III, the savings banks can rely on significant amounts of undisclosed equity reserves (according to sub-section 340f of the German Commercial



Code or HGB) which they started to reclassify in 2011 towards reserves that are fully recognised as Tier 1 capital in order to comply with the higher regulatory capital requirements under Basel III.

The *Landesbanken* remain subject to potential further pressure arising from the euro area periphery. Their aggregate exposure to these countries, as of June 2012, accounted for EUR30.2 billion or 11.4% of their Tier 1 capital. We also note their exposure to the global shipping sector and international commercial real estate which add to the banks' vulnerability. Although the *Landesbanken* have access to the excess liquidity of the savings banks, they are, to a degree, dependent on wholesale funding to close the remaining funding gap of EUR70 billion.

In the past three years, the *Landesbanken* used their deleveraging to successfully lower their funding dependence on banks (EUR366 billion at year-end 2011, down from EUR542 billion in 2008) and the wholesale market (EUR347 billion at year-end 2011, down from EUR440 billion in 2008). An important driving force in transforming the *Landesbanken* franchises is the expiration of EUR289 billion 'grandfathered' debt outstanding by year-end 2015. By that time, the *Landesbanken* will have to be self-sufficient in terms of market funding and able to achieve adequate returns to compensate for the cost of risk.

Given the existing mutual support arrangements, the support of the financially weaker (and, at the same time, larger) members of S-Finanzgruppe places a heavy burden on the stronger members of the group, although most of the external support required during the global financial crisis was provided by German federal states. We note positively that the pressure on *Landesbanken* to de-risk and to reform business models continues to be extremely high and should – in our view – yield positive results over the next few years. Moreover, as several of the weaker *Landesbanken* are downsized, S-Finanzgruppe should become stronger – in line with the greater weight attached to the more stable savings banks. We also note that the individual risk culture, risk profiles and the size of the largest surviving institutions will continue to represent important rating drivers – and potentially rating constraints – for the group.

## Analysis of Detailed Rating Considerations

### Discussion of Qualitative Rating Drivers

#### FRANCHISE VALUE – Well-entrenched franchise of the savings banks is in sharp contrast to the fragility of several *Landesbanken*

Public-sector banks – essentially savings banks and *Landesbanken* – continue to have a leading role in the German banking market and together form S-Finanzgruppe. At year-end 2012, this association of banks comprised 423 savings banks, seven *Landesbanken* groups, DekaBank and about 125 other financial service providers, mainly in the life and non-life insurance sectors, central building societies, leasing and factoring, brokerage, asset management and real estate activities. At year-end 2011, 360,000 employees worked for the group.

S-Finanzgruppe's franchise is one of the strongest in the German market, driven largely by the strong positioning of the local savings banks. With around 50 million customers and leading market shares of approximately 38% for deposits and 34% for residential mortgage lending, the savings banks benefit from their very strong and deeply entrenched franchises in their regional retail and SME banking markets, and a strong brand value.

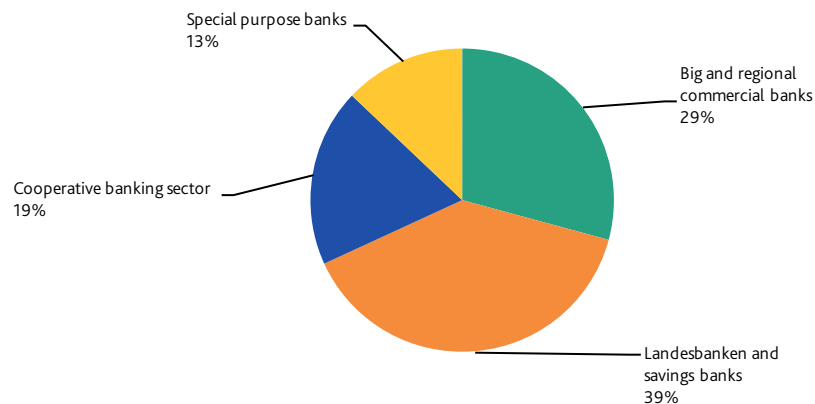
Whilst S-Finanzgruppe maintained its market share in lending to domestic non-banks at 39%, we observed a slight reduction in its market share in deposits to 38% in 2011 from 40% in 2008, mainly driven by a lower market share in corporate deposits which tend to be more price-sensitive. At the same time, the savings banks' earnings continue to mainly rely on interest income which has

consistently accounted for roughly four fifths of their earnings. In our opinion, S-Finanzgruppe has additional earnings potential, particularly in fee-based business; in order to explore this potential, the group seeks to streamline its operations and to leverage its strong market position, thus expanding its somewhat less developed wealth management and brokerage activities for retail customers.

Our assessment of franchise value also reflects major challenges for some of the *Landesbanken* franchises, which account for approximately 52% of the assets of the total group. Since 2007, large-scale and costly support measures have been necessary in order to stabilise four of the formerly eight *Landesbanken* groups. The fact that much of the losses were incurred on secondary market investments (today mostly classified “non-core”) continues to reflect negatively on the value and stability of their franchises. The institutions that received state aid remain under the scrutiny of the EC to adapt their business models and divest major parts of their assets, which implies significant challenges for their franchises, and – for some – could even raise doubts about their future viability.

## EXHIBIT 4

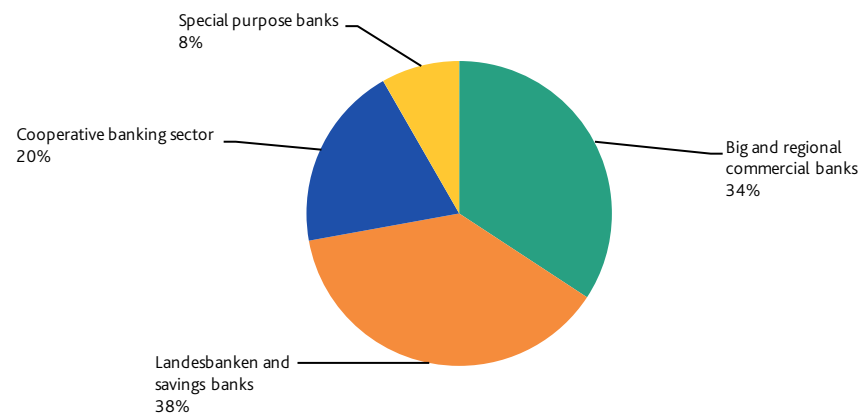
## Market shares – Lending to Non-Banks, December 2011



Source: Moody's Investors Service based on Company's reports

## EXHIBIT 5

## Market shares – Deposits from Non-banks, December 2011



Source: Moody's Investors Service based on Company's reports

### RISK POSITIONING – Decentralised decision making within a strong regulatory and sector framework but vulnerabilities exist due to legacy problems at several *Landesbanken*

The members of S-Finanzgruppe are subject to two levels of supervision. They have always had to comply with German banking regulations and are subject to the supervision of the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht or BaFin). In addition, the group members, as public-sector banks, are also subject to the supervision of their respective federal states (Sparkassenaufsicht) via the Ministry of Finance, the Ministry of Economics, or the Ministry of the Interior (depending on the state).

Risk appetite and positioning is the responsibility of each individual institution. Since neither the DSGV, nor the regional associations have any powers to enforce a centralisation of activities or the use of a specific model, the group relies heavily on aggregated benchmarking and best-practice examples. Pilot projects to explore credit-risk management processes, which are of importance to all savings banks, are increasingly centralised with some or all of the constituent associations and a number of pilot savings banks. This centralisation is aided by a growing awareness and focus on profitability and efficiency by the traditionally lending-focused savings banks.

Due to the decentralised nature of the group, the *Landesbanken* have adopted independent risk management processes which in several cases produced a poor track record of excessive risk appetite and bulk risks in proportion to the banks loss absorption capacities as well as several ill-fated acquisitions and investments. Since the onset of the financial crisis, the institutions that have been most affected by large losses in 2008-09 are gradually improving their risk positioning, risk management and corporate governance, and we recognise the visible progress that has been made. However, we caution that -- given the size and long-term nature of a large portion of the banks legacy portfolios -- it will take time for them to fully de-risk and de-leverage, which continues to weigh on the banks asset quality and require substantial capital.

The liquidity profile and management in the sector is a key strength, given the liquidity surplus of the savings banks that can be made available for the *Landesbanken's* treasury activities.

Our assessment of market risk shows that interest-rate risks are the savings banks' primary source of market risk. This exposure is due to their traditional commercial banking profiles, with maturity mismatches between short-term deposits and longer-term lending in combination with the trading and investment activities of the *Landesbanken*, which leads to considerable market risk for the group. We expect the appetite for market risk to decrease because of the further de-risking and deleveraging of the *Landesbanken*.

---

### Discussion of Quantitative Rating Drivers

Our analysis relies on aggregate financial numbers because consolidated information for S-Finanzgruppe is not available. The *Sparkassen* operate within a well-defined regional and market scope (*Regionalprinzip*) with no or only very limited exposures to each other. As a result we believe that consolidated figures, at least for the *Sparkassen* network, would not differ materially from the aggregate numbers. Nonetheless, the inclusion of the *Landesbanken* in S-Finanzgruppe that maintain intense business and financial ties with the *Sparkassen* naturally results in a divergence between aggregate and consolidated figures. We do not expect S-Finanzgruppe to provide consolidated figures for the foreseeable future, with adverse implications for public disclosure and financial transparency.

### PROFITABILITY – Resilient earnings power benefits from the benign business environment in Germany

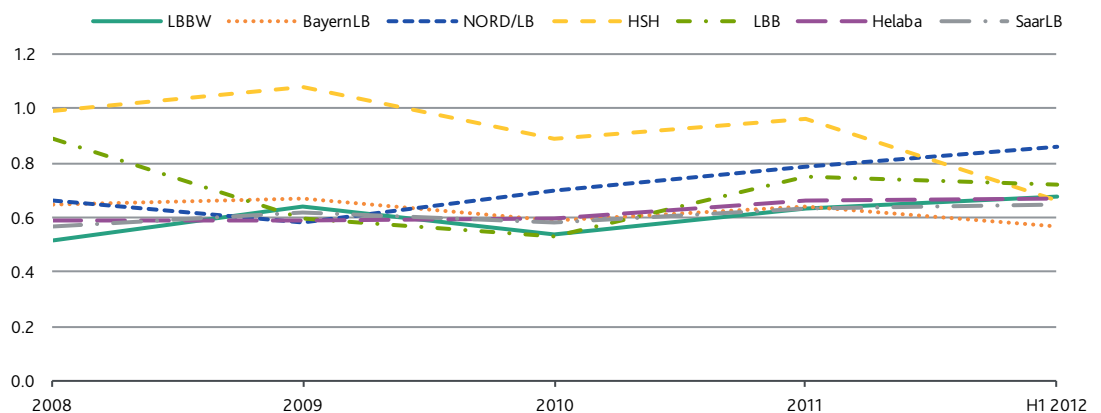
The sector's profitability has historically been sub-par for the assigned rating and remains an important rating constraint. Interest income accounts for the majority of the sector's profits, and net interest margins continue to be under pressure because of fierce competition in the German retail and SME market. The group's earnings potential remains constrained by the prevailing low interest rate environment which continues to put pressure on margins and which we expect to persist for several years. The earnings volatility resulting from a relatively high yield-curve exposure at the savings banks (due to their deposit-funded nature) adds to the various challenges and constitutes a major rating constraint for S-Finanzgruppe.

The weaker and more volatile profitability of the *Landesbanken* continues to be constrained by narrow interest margins due to intense competition in German corporate lending, volatile trading income, legacy asset quality problems, and due to the notably higher cost of the wholesale funding they require. To some extent, this volatility may be partly compensated by the ongoing deleveraging of their balance sheets that mostly focuses on low-yielding asset-based finance and investments. At the same time, the *Landesbanken* face the challenge of reducing operating costs in response to decreasing business volumes and related revenues. Additional pressure will be placed on pre-tax profitability by rising risk charges as a result of the negative impact of austerity measures across Europe on the real economy, given the *Landesbanken's* sizeable (albeit shrinking) international exposures. We also note that the credit cycle in Germany turned in 2012 and expect rising risk charges on domestic assets.

In 2011, almost all *Landesbanken* posted positive results (except for LBB and HSH) on the back of a benign business environment in Germany; this follows several years where significant risk charges impaired their earnings power. At the same time, net interest margins remained largely stable and partially declined (Exhibit 6) amid the competitive market environment in Germany. As a result, the recovery of risk-adjusted profitability at the pre-provision income level stalled during H1 2012 (Exhibit 7). Amid the benign German business climate, banks were able to further reduce their risk provisioning for loans; however, this was partly offset by charges on financial investments and restructuring.

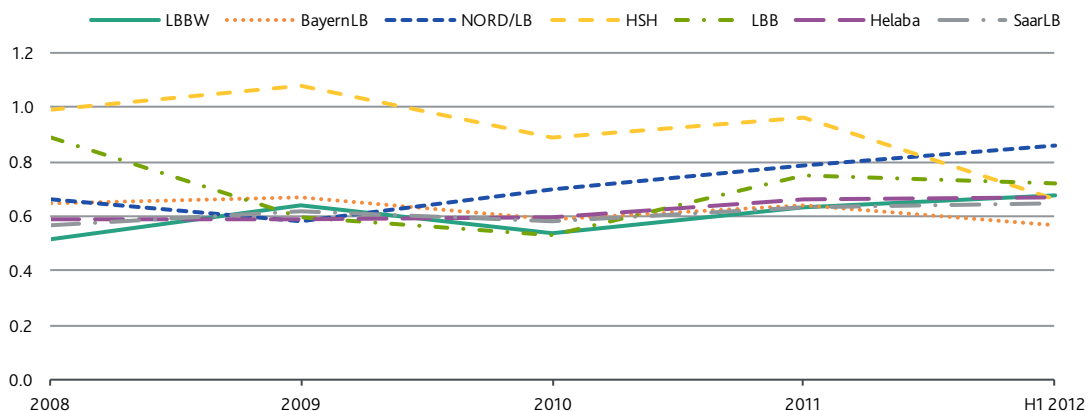
EXHIBIT 6

#### Net interest margin – *Landesbanken*



Source: Moody's Investors Service based on companies' reports

EXHIBIT 7

Pre-provision profit % RWA – *Landesbanken*

Source: Moody's Investors Service based on companies' reports

S-Finanzgruppe shows a satisfactory level of operating efficiency, albeit comparing less favourably with its international peers. As savings banks continue to operate through an extensive branch network – and as their organisational structure remains fragmented – the potential for achieving economies of scale is limited. The target cost-to-income ratio for savings-bank members is 60%. Although the majority of the savings banks have not yet attained this benchmark, we note an improving trend for the group because of the more efficient cost structures.

#### LIQUIDITY – S-Finanzgruppe benefits from strong access to German depositor base

The solid funding profile of the savings banks that strongly benefits from their prime access to German deposits is a key strength of the sector (market share of almost 40%). In contrast, the *Landesbanken* rely to some degree on wholesale funding and will face significant refinancing needs over the coming years. Deposits at the level of the savings banks were EUR759 billion as of year-end 2011, which compares to loans amounting to EUR677 billion. Major parts of the EUR82 billion excess funding are lent on to the *Landesbanken*, helping to partly fill their EUR153 billion funding gap (*Landesbanken* had EUR525 billion loans and EUR372 billion in deposits as of December 2011).

The *Landesbanken* continue to show a degree of wholesale dependence as they fund significant parts of their balance sheet in the interbank and the wholesale market. At the same time, the *Landesbanken* used their deleveraging in the past three years to successfully lower this dependence relating to both funding in the interbank market (EUR366 billion at year-end 2011, down from EUR542 billion at year-end 2008) and in the wholesale market (EUR347 billion at year-end 2011, down from EUR440 billion at year-end 2008).

Our Market Fund Ratio (MFR) – defined as market funds minus liquid assets as a percentage of total assets – has yielded an average of approximately 20% over the past three years for S-Finanzgruppe, which is driven by the market funding dependence of the *Landesbanken*. With the deleveraging of the *Landesbanken* the MFR has gradually improved to 16.7% in 2011, from 19.7% in 2009. Nonetheless, the *Landesbanken* may face refinancing risk during the period 2014-15 when the bulk of their legacy ‘grandfathered’ debt (which was EUR289 billion at year-end 2011) will mature.

### CAPITAL ADEQUACY – Public sector banks are on track to comply with upcoming Basel III regulation

On an aggregated basis, S-Finanzgruppe had a total capital base of EUR173.4 billion as of year-end 2011, up from EUR168.0 billion in 2010, mainly as a result of strong results in 2010 and subsequent profit retention. On an aggregate basis, regulatory capital ratios are comfortable, with total capital amounting to 16.6% of RWA and Tier 1 capital of 11.5%.

The aggregate financial fundamentals of the 423 savings banks are underpinned by strong total capitalisation (15.8%) and limited leverage (5.6%). At year-end 2011, the savings banks' Tier 1 capital amounted to EUR61.5 billion, resulting in a 10.5% Tier 1 ratio. We consider the savings banks' capitalisation to be solid on average and expect them to be able to absorb considerable shocks, partly owing to the sizeable undisclosed, fully taxed reserves that they put aside under local GAAP (section 340f German Commercial Code (HGB)). For banks reporting under local GAAP, these reserves are recognised as Tier 2 (rather than as Tier 1) even though they are of similar quality as common equity and typically constitute the source used first when a bank needs to absorb unusually high or unexpected losses. At year-end 2011, the savings banks had EUR30.6 billion of Tier 2 capital, most of which we consider to constitute 340f reserves.

Most savings banks do not use the Internal Ratings Based Approach which, if applied, would allow them to report a lower risk-weighted asset base. Due to their high quality of Tier 1 capital and limited trading activities, we believe that the savings banks have sufficient capital buffer to manage the transition to Basel III.

The *Landesbanken* have also improved regulatory and economic capitalisation, but display a riskier business profile and higher leverage, which renders them more vulnerable to event risk or any renewed market disruption. Moreover, some of the improvement has been the result of capital support measures, which became necessary given substantial shortfalls at four *Landesbanken* during the global financial crisis. Related costs will weigh on their future ability to internally generate and retain capital. Significant strengthening of the *Landesbanken's* quality of capital was achieved during 2012 as several banks addressed the previously high content of hybrid capital in order to comply with raised core Tier 1 targets set by the European Banking Authority (EBA).

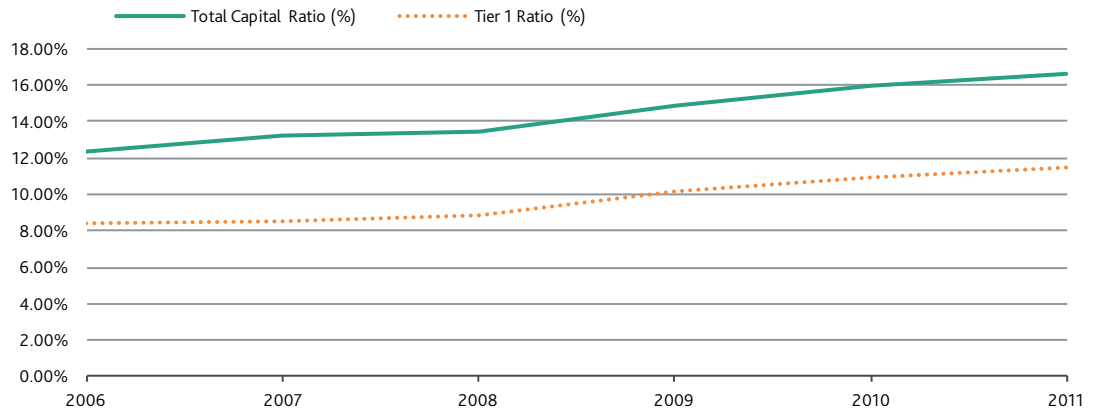
With a Tier 1 ratio of 12.7% (2010: 10.5%), the reported regulatory capitalisation of the *Landesbanken* at year-end 2011 was higher than that of the savings banks; however, this was mainly due to their (less conservative) approach to calculating RWA, as well as the ongoing benefit from significant risk shields provided by stake holders, namely at HSH, BayernLB and LBBW. We consider risk shields to be low-quality (capital substituting) instruments given (1) their costs, which need to be paid regardless of a bank's profitability; and (2) the fact that these cannot be reallocated towards new business.

As S-Finanzgruppe has been able to increase its capital base and capital ratios throughout the financial crisis, capital levels remain sound and are still capable of absorbing major credit losses. At the same time, risks to the downside have increased as a reflection of uncertainties emanating from the Euro area sovereign debt crisis and increased tail risks on certain asset classes such as shipping and commercial real estate. Despite the solid capitalization of the group it is important to note that capital cannot be freely allocated to single members within the group, and that the risk of renewed cases of distress due to capital shortfalls cannot be ruled out. Also we consider that there is limited political appetite for further capital injections, partly due to required austerity at the level of the regional governments which may make it more difficult for them to afford capital measures in the future.

EXHIBIT 8

**Capital Ratios (%)**

S-Finanzgruppe



Source: Moody's Investors Service based on Company's reports

### ASSET QUALITY – The key risk drivers are gradually changing, with the focus switching to the vulnerability of the German economy from the *Landesbanken's* international exposures

S-Finanzgruppe has a strong focus on the domestic market, with diverse lending exposures including public sector finance, financial institutions, residential mortgages (which form the lion's share of retail lending), consumer loans and corporate lending with a strong focus on SMEs. Additionally, the *Landesbanken* are exposed to diverse international lending and asset-based finance activities as well as large investment portfolios, which led to major valuation and credit losses during the global financial crisis. Although we believe that the bulk of the risks related to structured credit products will likely be written-off or provided for, the group remains vulnerable in the context of their sizeable commercial real estate and ship-financing exposures; the latter may generate elevated credit losses during 2013-14.

S-Finanzgruppe's asset quality has continued to benefit from the strong performance of the German economy in the period 2010-12. At the same time, the group has been adversely affected by the weakened credit profiles of many of S-Finanzgruppe's counterparties as a result of eroding investor confidence and a weakening of many regional economies across Europe. In 2011, the *Landesbanken* group took substantial losses on their sizeable public finance books and credit default swaps (CDS, as protection sellers). According to our estimates, aggregate gross exposures to euro area periphery countries still amounted to EUR30.2 billion as of June 2012, down from EUR56.6 billion as of June 2011, mainly relating to Italy and Spain. Risk charges increased again in 2012 as a result of deteriorating conditions in global ship-financing and uncertainty in the international commercial real estate sector. We continue to note the risks associated with the still vulnerable macroeconomic environment, particularly in the economies of Germany's main trading partners.

A very high proportion of the loan book is backed by conservatively valued residential property, particularly in retail business, where most loans have loan-to-value ratios below 80%, partly due to the relatively stable conditions in the German housing market to date. We recently observed a significant price increase in residential property which, however, is confined to certain metropolitan areas in Germany. Unless we witness an acceleration of the recent trend, we expect related risks to be contained because rents have not increased beyond historical rent-to-income levels. Within the corporate customer segment of SMEs and self-employed clients, a significant proportion of lending is

also supported by collateral, with unsecured lending mainly consisting of shorter-term facilities for working capital.

We believe that the loan portfolio is increasingly well managed, due to (1) prudent lending criteria of most savings banks; (2) the work-out of legacy portfolios accomplished by the *Landesbanken*; and (3) the good degree of diversification across a large number of sectors and borrowers. However, risk concentrations – both for the savings banks and for the *Landesbanken* – reflect the structure of the German economy, and include concentrations in export-driven industries, such as the automotive, as well as the cyclical construction sector. Germany's weak growth prospects for 2013-14 are only partly mitigated by the relatively sound credit metrics of the majority of German corporates. Given the unresolved euro area sovereign debt crisis and Germany's role and interconnectedness within Europe, a renewed recession and/or an extended period of economic stagnation could weaken the group.



## Discussion of Support Considerations

Support considerations for S-Finanzgruppe result in a three-notch uplift for the group's Aa2 CFR from its a2 standalone credit assessment (which is mapped from the C+ BFSR, see Exhibit 9). See the Summary Rating Rationale at the beginning of this report for a detailed discussion of the support considerations.

EXHIBIT 9:

### Mapping the BFSR to the Baseline Credit Assessment (BCA)

The discussions of qualitative and quantitative rating drivers presented in this report forms the analytical basis for assigning a Bank Financial Strength Rating (BSFR) of "C+" to Sparkassen-Finanzgruppe.

BFSRs are Moody's opinions on the intrinsic safety and soundness of a bank enterprise and, in effect, address the susceptibility of a particular institution to financial distress.

The BFSR array of ratings is not on Moody's traditional rating scale (Aaa, Aa, etc.). However, there is a useful method for translating BFSRs to Moody's traditional scale – the baseline credit assessment – which, in effect measures a bank's standalone default risk assuming there is no systemic or other external support.

Sparkassen-Finanzgruppe's "C+" BFSR is equivalent to a standalone credit assessment of a2, yet, considering external support factors, its corporate family rating is Aa2.

#### BFSR/Baseline Credit Assessment Equivalence for Sparkassen-Finanzgruppe

BFSR	Baseline Credit Assessment (BCA)
A	aaa
A-	aa1
B+	aa2
B	aa3
B-	a1
C+	a2
C	a3
C-	baa1
C-	baa2
D+	baa3
D+	ba1
D	ba2
D-	ba3
E+	b1
E+	b2
E+	b3
E	caa1
E	caa2
E	caa3

## Company Annual Statistics

### Sparkassen-Finanzgruppe

	31-Dec-2011 EUR millions Basel II Local GAAP	31-Dec-2010 EUR millions Basel II Local GAAP	31-Dec-2009 EUR millions Basel II Local GAAP	31-Dec-2008 EUR millions Basel II Local GAAP	31-Dec-2007 EUR millions Basel I Local GAAP
<b>Analyst-Adjusted - Consolidated Financials</b>					
<b>BALANCE SHEET</b>					
<b>ASSETS</b>					
Cash and Balances with Central Bank	30,968	27,369	31,572	32,986	27,729
Due from Other Financial Institutions	500,605	544,914	615,887	731,111	788,376
Securities and Investments	551,125	586,244	621,286	596,573	604,483
Loans to Customers - Net of Unearned Income and Allowance for Loan Losses	1,227,933	1,214,282	1,200,468	1,207,665	1,160,191
Loans to Customers (Gross)	1,227,933	1,214,282	-	-	-
Allowance for loan losses	-	-	-	-	-
Fixed Assets, net	12,342	12,610	12,993	13,389	13,946
Investments in unconsolidated subs & affiliates	17,013	17,688	19,687	25,285	24,698
Other assets - Total	228,287	198,588	80,889	77,959	63,935
<b>Total Assets</b>	<b>2,568,273</b>	<b>2,601,695</b>	<b>2,582,781.99</b>	<b>2,684,968</b>	<b>2,683,358</b>
<b>LIABILITIES</b>					
Due to Customers	1,176,563	1,164,694	1,160,142	1,146,259	1,067,457
Due to Other Financial Institutions	550,774	598,468	649,465	754,127	829,671
Senior Bonds, Notes and Other Long-term Borrowings	368,272	403,048	458,370	482,621	496,983
Subordinated Debt	40,868	43,735	47,255	51,645	55,009
Other liabilities - Total	303,969	269,502	140,872	135,009	124,188
<b>Total Liabilities</b>	<b>2,440,446</b>	<b>2,479,455</b>	<b>2,456,103.99</b>	<b>2,569,661</b>	<b>2,573,308</b>
<b>CAPITAL/SHAREHOLDERS' EQUITY</b>					
Minority interest	-	-	-	-	-
Retained earnings - Total	-	-	-	-	-
<b>Total Capital / Shareholders' Equity</b>	<b>127,827</b>	<b>122,240</b>	<b>126,678</b>	<b>115,307</b>	<b>110,050</b>
<b>Total Liabilities, Mezzanine and Shareholders' Equity</b>	<b>2,568,273</b>	<b>2,601,695</b>	<b>2,582,782</b>	<b>2,684,968</b>	<b>2,683,358</b>
<b>INCOME STATEMENT</b>					
Interest income	97,191	94,179	109,257	148,834	145,665
Interest expense	61,657	58,920	74,278	114,774	112,887
<b>Net interest income (expense)</b>	<b>35,534</b>	<b>35,259</b>	<b>34,979</b>	<b>34,060</b>	<b>32,778</b>
Loan Loss Provisions	-6,266	5,739	10,582	13,530	6,571
Non-interest income	6,887	7,929	8,669	7,857	7,922
Net Fees and commissions	7,294	7,191	6,949	8,098	8,296
Income from Trading Activities	-539	500	1,079	-1,478	-1,576
Other income	132	238	641	1,237	1,202
<b>Total non-interest income</b>	<b>6,887</b>	<b>7,929</b>	<b>8,669</b>	<b>7,857</b>	<b>7,922</b>
Other operating (non-interest) expense	26,024	26,146	26,896	26,917	27,282
Personnel Expense	15,000	15,190	15,874	15,553	15,425
Administrative and Other Operating Expense	11,024	10,956	11,022	11,364	11,857

## Sparkassen-Finanzgruppe

Analyst-Adjusted - Consolidated Financials	31-Dec-2011 EUR millions Basel II Local GAAP	31-Dec-2010 EUR millions Basel II Local GAAP	31-Dec-2009 EUR millions Basel II Local GAAP	31-Dec-2008 EUR millions Basel II Local GAAP	31-Dec-2007 EUR millions Basel I Local GAAP
Non-recurring charges / unusual items (as reported)	17,551	5,601	7,999	5,124	2,159
Total other operating expenses / charges	43,575	31,747	34,895	32,041	29,441
Pre-tax income (loss)	5,112	5,702	-1,829	-3,654	4,688
Income tax (benefit) expense	3,488	2,644	2,561	1,747	1,959
Net Profit (Loss) After-tax Before Unusual Items	1,624	3,058	-4,390	-5,401	2,729
Net income (loss)	1,624	3,058	-4,390	-5,401	2,729
Cumulative effect of Moody's unusual items adjustments to net income (loss), net of tax	-	-	-	0	0
Net income (loss) after unusual items adjustments	1,624	3,058	-4,390	-5,401	2,729
Income available / (Loss attributable) to common shareholders	1,624	3,058	-4,390	-5,401	2,729

## RATIOS

## ASSET QUALITY

Loan Loss Provisions / Gross Loans	-	-	-	-	-
Loan Loss Provisions / Pre-Provision Profit	-38.21%	33.68%	63.17%	90.20%	48.97%
Allowance for Loan Losses / Gross Loans	-	-	-	-	-
Problem Loans & Leases / Gross Loans	-	-	-	-	-
Problem Loans & Leases / Shareholders' Equity + Loan Loss Reserves	-	-	-	-	-

## PROFITABILITY

Return on Average Assets (after Tax before Unusual Items)	0.06%	0.12%	-0.17%	-0.20%	0.10%
Return on Average Shareholders' Equity (after Tax before Unusual Items)	1.30%	2.45%	-3.62%	-4.79%	2.54%
Net Income / Average RWA - Basel I	-	-	-	-	0.22%
Net Income / Average RWA - Basel II	0.16%	0.27%	-0.36%	-0.43%	-
Pre-Provision Income / Average RWA - Basel I	-	-	-	-	1.08%
Pre-Provision Income / Average RWA - Basel II	1.57%	1.53%	1.38%	1.20%	-

## CAPITALIZATION

Tier 1 Capital / RWA - Basel I	-	-	-	-	8.50%
Tier 1 Capital / RWA - Basel II	11.47%	10.93%	10.12%	8.82%	-
Total Capital / RWA - Basel I	-	-	-	-	13.24%
Total Capital / RWA - Basel II	16.60%	16.00%	14.86%	13.47%	-
TCE / RWA - Basel I	-	-	-	-	-
Shareholders' Equity / Total Assets	4.98%	4.70%	4.90%	4.29%	4.10%

## EFFICIENCY

Cost / Income Ratio	61.35%	60.54%	61.62%	64.21%	67.03%
---------------------	--------	--------	--------	--------	--------

## LIQUIDITY AND FUNDING

(Market Funds - Liquid Assets) / Total Assets	16.68%	18.18%	19.65%	19.53%	21.08%
Total Liquid Assets / Total Assets	20.70%	22.00%	25.07%	28.46%	30.41%

Source: Moody's

## Moody's Related Research

### Credit Opinion:

- » [Sparkassen-Finanzgruppe](#)

### Banking System Outlook:

- » [Germany, October 2012 \(145492\)](#)

### Banking Statistics:

- » [Sparkassen-Finanzgruppe, January 2012 \(139153\)](#)

### Bank Credit Strength Assessment:

- » [Solidarity and Strength of Public-Sector Banks in Germany Continue to Underpin Their Credit Quality, March 2006 \(97005\)](#)
- » [Assessing Germany's Public Sector Banks and Their Cross-Sector Support Mechanisms, December 2004 \(90338\)](#)

### Special Comments:

- » [Germany's Extension of SoFFin's Bank Rescue Fund Is Credit Positive, January 2013 \(148902\)](#)
- » [DSGV's Proposal to Realign LBB's and Deka's Activities Is Credit Positive, December 2012 \(148559\)](#)
- » [Key Drivers of German Bank Rating Actions, June 2012 \(142787\)](#)
- » [Germany's Macro-Prudential Regulation Will Be Credit Positive for Bank Bondholders and the Sovereign, May 2012 \(142061\)](#)
- » [Financial Stability Report Highlights Credit-Negative Pressure Points for German Banks, November 2011 \(137520\)](#)
- » [Moody's Reduces Support Assumptions for German Landesbanken, November 2011 \(137301\)](#)

### Industry Research:

- » [Global Banking Outlook – 2013, January 2013 \(149053\)](#)
- » [Euro Area Debt Crisis Weakens Bank Credit Profiles, January 2012 \(137981\)](#)
- » [European Banks: How Moody's Analytical Approach Reflects Evolving Challenges, January 2012 \(139207\)](#)

### Rating Methodology:

- » [Moody's Consolidated Global Bank Rating Methodology, June 2012 \(143152\)](#)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

## Appendix: Members of the joint-liability scheme of S-Finanzgruppe (Haftungsverbund) as of December 2012

**Please note:** In assigning the ratings to S-Finanzgruppe, Moody's assesses the group as if it acted as a single entity, basing the analysis on the group's aggregated credit profile. The BFSR and CFR do not apply to individual members of the group, but only to the creditworthiness of the group as a whole.

### Sparkassen

1	Bezirkssparkasse Reichenau	142	Sparkasse Dachau	282	Sparkasse Vorpommern
2	Bordesholmer Sparkasse AG	143	Sparkasse Deggendorf	283	Sparkasse Waldeck-Frankenberg
3	Erzgebirgssparkasse	144	Sparkasse der Homburgischen Gemeinden	284	Sparkasse Werl
4	Förde Sparkasse	145	Sparkasse der Stadt Iserloh	285	Sparkasse Werra-Meißner
5	Frankfurter Sparkasse	347a	Sparkasse der Stadt Stadtlohn und Sparkasse Westmünsterland merged to Sparkasse Westmünsterland	286	Sparkasse Weserbergland
6	Hamburger Sparkasse	146	Sparkasse der Stadt Straelen	287	Sparkasse Oder-Spree
7	Harzsparkasse	294a	Sparkasse Detmold and Sparkasse Paderborn merged to Sparkasse Paderborn-Detmold	288	Sparkasse Offenburg/Ortenau
8	Herner Sparkasse	147	Sparkasse Dieburg	289	Sparkasse Olpe-Drolshagen-Wenden
9	Hohenzollerische Landesbank Kreissparkasse Sigmaringen	148	Sparkasse Dillenburg	290	Sparkasse Osnabrück
10	Kasseler Sparkasse	149	Sparkasse Dinslaken-Voerde-Hünxe	291	Sparkasse Osterode am Harz
11	Kreis- und Stadtparkasse Dillingen a. d. Donau	150	Sparkasse Donauwörth	292	Sparkasse Ostprignitz-Ruppin
12	Kreis- und Stadtparkasse Dinkelsbühl	151	Sparkasse Donnersberg	293	Sparkasse Ostuntermfranken
13	Kreis- und Stadtparkasse Erding-Dorfen	152	Sparkasse Dortmund	294	Sparkasse Detmold and Sparkasse Paderborn merged to Sparkasse Paderborn-Detmold
14	Kreis- und Stadtparkasse Kaufbeuren	153	Sparkasse Duderstadt	295	Sparkasse Parchim-Lübz
15	Kreis- und Stadtparkasse Speyer	154	Sparkasse Duisburg	296	Sparkasse Passau
16	Kreis- und Stadtparkasse Wasserburg am Inn	155	Sparkasse Düren	297	Sparkasse Pfaffenhofen
17	Kreissparkasse Ahrweiler	156	Sparkasse Eichstätt	298	Sparkasse Pforzheim Calw
18	Kreissparkasse Altenkirchen	157	Sparkasse Einbeck	299	Sparkasse Pfullendorf-Meißkirch
19	Kreissparkasse Altötting-Mühlendorf	158	Sparkasse Elbe-Elster	300	Sparkasse Porta Westfalica
20	Kreissparkasse Anhalt-Bitterfeld	159	Sparkasse Elmshorn	301	Sparkasse Prignitz
3a	Kreissparkasse Aue-Schwarzenberg, Sparkasse Erzgebirge and Sparkasse Mittleres Erzgebirge merged to Erzgebirgssparkasse	160	Sparkasse Emden	302	Sparkasse Radevormwald-Hüceswagen
21	Kreissparkasse Augsburg	161	Sparkasse Emsland	303	Sparkasse Rastatt-Gernsbach
22	Kreissparkasse Bautzen	162	Sparkasse Engen-Gottmadingen	304	Sparkasse Regensburg
23	Kreissparkasse Bersenbrück	163	Sparkasse Ennepetal-Breckerfeld	305	Sparkasse Rhein Neckar Nord
24	Kreissparkasse Biberach	164	Sparkasse Erlangen	306	Sparkasse Rhein-Haardt
25	Kreissparkasse Birkenfeld	165	Sparkasse Erwitte-Anröchte	307	Sparkasse Rhein-Nahe
26	Kreissparkasse Bitburg-Prüm	3b	Sparkasse Erzgebirge, Kreissparkasse Aue-Schwarzenberg and Sparkasse Mittleres Erzgebirge merged to Erzgebirgssparkasse	308	Sparkasse Rietberg
27	Kreissparkasse Böblingen	166	Sparkasse Essen	309	Sparkasse Rosenheim-Bad Aibling
28	Kreissparkasse Börde	167	Sparkasse Finnentrop	310	Sparkasse Rotenburg-Bremervörde
29	Kreissparkasse Döbeln	168	Sparkasse Forchheim	311	Sparkasse Rothenburg
30	Kreissparkasse Düsseldorf	169	Sparkasse Freiburg-Nördlicher Breisgau	312	Sparkasse Rottal-Inn
xx	Kreissparkasse Ebersberg and Kreissparkasse München Starnberg merged to Kreissparkasse München Starnberg Ebersberg	170	Sparkasse Freising	313	Sparkasse Saarbrücken
31	Kreissparkasse Eichsfeld	171	Sparkasse Freyung-Grafenau	314	Sparkasse Salem-Heiligenberg
32	Kreissparkasse Esslingen-Nürtingen	172	Sparkasse Fröndenberg	315	Sparkasse Schaumburg
33	Kreissparkasse Euskirchen	173	Sparkasse Fulda	316	Sparkasse Schaeßel
34	Kreissparkasse Freudenstadt	174	Sparkasse Fürstenfeldbruck	317	Sparkasse Schönaue-Todtnau
35	Kreissparkasse Garmisch-Partenkirchen	175	Sparkasse Fürth	318	Sparkasse Schopfheim-Zell
36	Kreissparkasse Gelnhausen	176	Sparkasse Gelsenkirchen	319	Sparkasse Schwäbisch Hall - Crailsheim
37	Kreissparkasse Göppingen	177	Sparkasse Gengenbach	320	Sparkasse Schwarzwald-Baar
38	Kreissparkasse Gotha	178	Sparkasse Gera-Greiz	321	Sparkasse Schweinfurt
39	Kreissparkasse Grafschaft Bentheim zu Nordhorn	179	Sparkasse Germersheim-Kandel	322	Sparkasse Siegen
40	Kreissparkasse Grafschaft Diepholz	180	Sparkasse Geseke	323	Sparkasse Singen-Radolfzell
41	Kreissparkasse Groß-Gerau	181	Sparkasse Gießen	324	Sparkasse Soest
42	Kreissparkasse Halle	182	Sparkasse Gifhorn-Wolfsburg	325	Sparkasse Sonneberg
43	Kreissparkasse Heidenheim	183	Sparkasse Gladbeck	326	Sparkasse Spree-Neiße
44	Kreissparkasse Heilbronn	184	Sparkasse Goslar/Harz	327	Sparkasse Sprockhövel
45	Kreissparkasse Heinsberg	185	Sparkasse Göttingen	328	Sparkasse St. Blasien
46	Kreissparkasse Herzogtum Lauenburg	186	Sparkasse Gronau	329	Sparkasse Stade-Altes Land
47	Kreissparkasse Hildburghausen	187	Sparkasse Grünberg	330	Sparkasse Starkenburg
48	Kreissparkasse Höchststadt a. d. Aisch	188	Sparkasse Gummersbach-Bergneustadt	331	Sparkasse Staufen-Breisach
49	Kreissparkasse in Walsrode	189	Sparkasse Günzburg-Krumbach	332	Sparkasse Stockach
50	Kreissparkasse Kaiserslautern	190	Sparkasse Gütersloh	333	Sparkasse Südholstein
51	Kreissparkasse Kelheim	191	Sparkasse Hagen	334	Sparkasse Südliche Weinstraße in Landau
52	Kreissparkasse Köln	192	Sparkasse Hamm	335	Sparkasse Südwestpfalz
53	Kreissparkasse Kusel	193	Sparkasse Hanau	336	Sparkasse Tauberfranken
54	Kreissparkasse Limburg	194	Sparkasse Hanauerland	337	Sparkasse Trier
55	Kreissparkasse Ludwigsburg	195	Sparkasse Hannover	338	Sparkasse Uckermark
56	Kreissparkasse Mayen	196	Sparkasse Harburg-Buxtehude	339	Sparkasse Uecker-Randow
57	Kreissparkasse Melle	197	Sparkasse Haslach-Zell	340	Sparkasse Uelzen Lüchow-Dannenberg

## Sparkassen

58	Kreissparkasse Miesbach-Tegernsee	198	Sparkasse Hattingen	341	Sparkasse Ulm
59	Kreissparkasse München Starnberg and Kreissparkasse Ebersberg merged to Kreissparkasse München Starnberg Ebersberg	199	Sparkasse Heidelberg	342	Sparkasse Unna
60	Kreissparkasse Nordhausen	200	Sparkasse Henstedt-Wesselburen	343	Sparkasse Unstrut-Hainich
61	Kreissparkasse Northeim	201	Sparkasse Hilden-Ratingen-Velbert	344	Sparkasse Vest Recklinghausen
62	Kreissparkasse Ostalb	202	Sparkasse Hildesheim	345	Sparkasse Vogtland
63	Kreissparkasse Osterholz	203	Sparkasse Hochfranken	346	Landsparkasse Schenefeld and Sparkasse Westholstein merged to Sparkasse Westholstein
64	Kreissparkasse Peine	204	Sparkasse Hochrhein	347	Sparkasse der Stadt Stadtlohn und Sparkasse Westmünsterland merged to Sparkasse Westmünsterland
65	Kreissparkasse Ravensburg	205	Sparkasse Hochsauerland	348	Sparkasse Wetzlar
66	Kreissparkasse Reutlingen	206	Sparkasse Hochschwarzwald	349	Sparkasse Wilhelmshaven
67	Kreissparkasse Rhein-Hunsrück	207	Sparkasse Hohenlohekreis	350	Sparkasse Witten
68	Kreissparkasse Rhein-Pfalz	208	Sparkasse Hohenwestedt	351	Sparkasse Wittenberg
69	Kreissparkasse Rottweil	209	Sparkasse Holstein	352	Sparkasse Wittgenstein
70	Kreissparkasse Rügen	210	Sparkasse im Kreis Herford	353	Sparkasse Wolfach
71	Kreissparkasse Saale-Orla	211	Sparkasse im Landkreis Cham	354	Sparkasse Worms-Alzey-Ried
72	Kreissparkasse Saalfeld- Rudolstadt	212	Sparkasse im Landkreis Neustadt a. d. Aisch - Bad Windsheim	355	Sparkasse Zollernalb
73	Kreissparkasse Saarlouis	213	Sparkasse im Landkreis Schwandorf	356	Sparkasse zu Lübeck AG
74	Kreissparkasse Saarpfalz	214	Sparkasse Ingolstadt	357	Sparkasse Zwickau
75	Kreissparkasse Schlüchtern	215	Sparkasse Jena-Saale-Holzland	358	Sparkasse-Regen-Viechtach
76	Kreissparkasse Schongau	216	Sparkasse Jerichower Land	359	Stadt- und Kreis-Sparkasse Darmstadt
77	Kreissparkasse Schwalm-Eder	217	Sparkasse Kamen	360	Stadt- und Kreissparkasse Moosburg a.d. Isar
78	Kreissparkasse Soltau	218	Sparkasse Karlsruhe Ettlingen	361	Städtische Sparkasse Offenbach am Main
79	Kreissparkasse St. Wendel	219	Sparkasse Kierspe-Meinerzhagen	362	Städtische Sparkasse zu Schwelm
80	Kreissparkasse Stade	220	Sparkasse Kleve	363	Städtische Sparkasse Aichach
81	Kreissparkasse Steinfurt	221	Sparkasse Koblenz	364	Städtische Sparkasse Augsburg
82	Kreissparkasse Stendal	222	Sparkasse KölnBonn	365	Städtische Sparkasse Bad Honnef
83	Kreissparkasse Syke	223	Sparkasse Kraichgau	366	Städtische Sparkasse Bad Oeynhausen
84	Kreissparkasse Traunstein-Trostberg	224	Sparkasse Krefeld	367	Städtische Sparkasse Bad Pyrmont
85	Kreissparkasse Tübingen	225	Sparkasse Kulmbach-Kronach	368	Städtische Sparkasse Bad Sachsa
86	Kreissparkasse Tuttlingen	226	Sparkasse Landsberg-Dießen	369	Städtische Sparkasse Barsinghausen
87	Kreissparkasse Verden	227	Sparkasse Landshut	370	Städtische Sparkasse Blomberg/Lippe
88	Kreissparkasse Vulkaneifel	228	Sparkasse Langen-Seligenstadt	371	Städtische Sparkasse Bocholt
89	Kreissparkasse Weilburg	229	Sparkasse Laubach-Hungen	372	Städtische Sparkasse Borken
90	Kreissparkasse Wesermünde-Hadeln	230	Sparkasse LeerWittmund	373	Städtische Sparkasse Burgdorf
91	Kreissparkasse Westerwald	231	Sparkasse Leipzig	374	Städtische Sparkasse Cuxhaven
92	Kreissparkasse Wiedenbrück	232	Sparkasse Lemgo	375	Städtische Sparkasse Delbrück
93	Kyffhäuserparkasse Artern-Sondershausen	233	Sparkasse Leverkusen	376	Städtische Sparkasse Dessau
94	Landessparkasse zu Oldenburg	234	Sparkasse Lippstadt	377	Städtische Sparkasse Düsseldorf
346a	Landsparkasse Schenefeld and Sparkasse Westholstein merged to Sparkasse Westholstein	235	Sparkasse Lörrach-Rheinfelden	378	Städtische Sparkasse Emmerich-Rees
95	Mittelbrandenburgische Sparkasse in Potsdam	236	Sparkasse Lüdenscheid	379	Städtische Sparkasse Felsberg
96	Müritz-Sparkasse	237	Sparkasse Lüneburg	380	Städtische Sparkasse Freudenberg
97	Nassauische Sparkasse (NASPA)	238	Sparkasse Lünen	381	Städtische Sparkasse Gevelsberg
98	Nord-Ostsee Sparkasse	239	Sparkasse Mainfranken Würzburg	382	Städtische Sparkasse Grebenstein
99	Ostächsische Sparkasse in Dresden	240	Sparkasse Mainz	383	Stadt-Sparkasse Haan
100	OstseeSparkasse Rostock	241	Sparkasse Mansfeld-Südharz	384	Städtische Sparkasse Haltern am See
101	Rhön-Rennsteig-Sparkasse	242	Sparkasse Marburg-Biedenkopf	385	Städtische Sparkasse Hameln
102	Saalesparkasse	243	Sparkasse Markgräflerland	386	Städtische Sparkasse Herdecke
103	Salzlandsparkasse	244	Sparkasse Märkisches Sauerland Hemer-Menden	387	Städtische Sparkasse Hilchenbach
104	Spar- und Leihkasse zu Bredstedt AG	245	Sparkasse Märkisch-Oderland	388	Städtische Sparkasse Kaiserslautern
105	Sparkasse Aachen	246	Sparkasse Mecklenburg-Nordwest	389	Stadt-Sparkasse Langenfeld
106	Sparkasse Allgäu	247	Sparkasse Mecklenburg-Schwerin	390	Städtische Sparkasse Lengerich
107	Sparkasse Altenburger Land	248	Sparkasse Mecklenburg-Strelitz	391	Städtische Sparkasse Magdeburg
108	Sparkasse Altmark West	249	Sparkasse Meißen	392	Städtische Sparkasse Mönchgladbach
109	Sparkasse am Niederrhein	250	Sparkasse Memmingen-Lindau-Mindelheim	393	Städtische Sparkasse München
110	Sparkasse Amberg-Sulzbach	251	Sparkasse Merzig-Wadern	394	Städtische Sparkasse Oberhausen
111	Sparkasse Arnsberg-Sundern	252	Sparkasse Meschede	395	Städtische Sparkasse Rahden
112	Sparkasse Arnstadt-Ilmenau	253	Sparkasse Miltenberg-Obernburg	396	Städtische Sparkasse Remscheid
113	Sparkasse Aschaffenburg-Alzenau	254	Sparkasse Minden-Lübbecke	397	Städtische Sparkasse Rheine
114	Sparkasse Attendorf-Lennestadt-Kirchhundem	255	Sparkasse Mittelfranken-Süd	398	Städtische Sparkasse Schmallingen
115	Sparkasse Aurich-Norden	256	Sparkasse Mittelholstein AG	399	Städtische Sparkasse Schrobenhausen
116	Sparkasse Bad Hersfeld-Rotenburg	257	Sparkasse Mittelmosel - Eifel Mosel Hunsrück	400	Städtische Sparkasse Schwalmstadt
117	Sparkasse Bad Kissingen	258	Sparkasse Mittelsachsen	401	Städtische Sparkasse Schwedt
118	Sparkasse Bad Neustadt a. d. Saale	259	Sparkasse Mittelthüringen	402	Städtische Sparkasse Schwerte
119	Sparkasse Bad Tölz-Wolfratshausen	3c	Sparkasse Erzgebirge, Kreissparkasse Aue-Schwarzenberg and Sparkasse Mittleres Erzgebirge merged to Erzgebirgssparkasse	403	Stadt-Sparkasse Solingen
120	Sparkasse Baden-Baden Gaggenau	260	Sparkasse Muldentale	404	Städtische Sparkasse Versmold
121	Sparkasse Bamberg	261	Sparkasse Mülheim an der Ruhr	405	Städtische Sparkasse Völklingen
122	Sparkasse Barnim	262	Sparkasse Münden	406	Städtische Sparkasse Wedel
123	Sparkasse Battenberg	263	Sparkasse Münsterland Ost	407	Städtische Sparkasse Wermelskirchen
124	Sparkasse Bayreuth	264	Sparkasse Neckartal-Odenwald	408	Städtische Sparkasse Werne
125	Sparkasse Beckum-Wadersloh	265	Sparkasse Neubrandenburg-Demmin	409	Städtische Sparkasse Wetter
126	Sparkasse Bensheim	266	Sparkasse Neuburg-Rain	410	Städtische Sparkasse Wunstorf

## Sparkassen

127	Sparkasse Berchtesgadener Land	267	Sparkasse Neumarkt i.d.OPf.-Parsberg	411	Stadtsparkasse Wuppertal
128	Sparkasse Bergkamen-Bönen	268	Sparkasse Neunkirchen	412	SWN Kreissparkasse Waiblingen
129	Sparkasse Bielefeld	269	Sparkasse Neuss	413	TaunusSparkasse
130	Sparkasse Bochum	270	Sparkasse Neu-Ulm - Illertissen	414	Verbandssparkasse Goch-Kevelaer-Weeze
131	Sparkasse Bodensee	271	Sparkasse Neuwied	415	Verbands-Sparkasse Wesel
132	Sparkasse Bonndorf-Stühlingen	272	Sparkasse Niederbayern-Mitte	416	VerbundSparkasse Emsdetten-Ochtrup
133	Sparkasse Bottrop	273	Sparkasse Niederlausitz	417	Vereinigte Sparkasse im Märkischen Kreis
134	Sparkasse Bremen	274	Sparkasse Nienburg	418	Vereinigte Sparkassen Eschenbach i. d. Opf.
135	Sparkasse Bremerhaven	275	Sparkasse Nördlingen	419	Vereinigte Sparkassen Gunzenhausen
136	Sparkasse Bühl	276	Sparkasse Nürnberg	420	Vereinigte Sparkassen im Landkreis Weilheim i. OB
137	Sparkasse Burbach-Neunkirchen	277	Sparkasse Oberhessen	421	Vereinigte Sparkassen Stadt und Landkreis Ansbach
138	Sparkasse Burgenlandkreis	278	Sparkasse Oberlausitz-Niederschlesien	422	Wartburg-Sparkasse
139	Sparkasse Celle	279	Sparkasse Oberpfalz Nord	423	Zweckverbandssparkasse Höxter
140	Sparkasse Chemnitz	280	Sparkasse Odenwaldkreis		
141	Sparkasse Coburg-Lichtenfels	281	Sparkasse Vorderpfalz Ludwigshafen a. Rh. - Schifferstadt		

## Fund Manager

DekaBank Deutsche Girozentrale

## Landesbanken

Bayerische Landesbank

Bremer Landesbank Kreditanstalt Oldenburg - Girozentrale

HSH Nordbank AG

Landesbank Baden-Württemberg

Landesbank Berlin AG

Landesbank Hessen-Thüringen Girozentrale

Landesbank Saar

Nord/LB Norddeutsche Landesbank Girozentrale

## Bausparkassen

LBS Bausparkasse Schleswig-Holstein-Hamburg AG

LBS Bayerische Landesbausparkasse

LBS Landesbausparkasse Baden-Württemberg

LBS Landesbausparkasse Bremen AG

LBS Landesbausparkasse Rheinland Pfalz

LBS Landesbausparkasse Hessen-Thüringen

LBS Landesbausparkasse Saar

LBS Norddeutsche Landesbausparkasse Berlin - Hannover

LBS Ostdeutsche Landesbausparkasse AG

LBS Westdeutsche Landesbausparkasse

## Other

Weberbank Aktiengesellschaft

S Broker AG & Co. KG

DEG Deutsche Investitions- und Entwicklungsgesellschaft mbH

Berlin-Hannoversche Hypothekenbank Aktiengesellschaft

Deutsche Hypothekenbank (Actien-Gesellschaft)

---

 Report Number: 150116

---

 Author  
 Mathias Kuelpmann

---

 Production Specialist  
 Kerstin Thoma

© 2013 Moody's Investors Service, Inc. and/or its licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

**CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.**

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

For Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail clients. It would be dangerous for retail clients to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.